

A46 Coventry Junctions (Walsgrave) Scheme number: TR010066

6.5 First Iteration Environmental Management Plan

Appendix A Register of Environmental Actions and Commitments

APFP Regulations 5(2)(a)

Planning Act 2008

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

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Planning Act 2008

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

A46 Coventry Junctions (Walsgrave)
Development Consent Order 202[x]

FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN
Appendix A Register of Environmental Actions and
Commitments

Regulation Number	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010066
Application Document Reference	TR010066/APP/6.5
Author	A46 Coventry Junctions (Walsgrave) Project Team, National Highways

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Table 1 : Register of Environmental Actions and Commitments (REAC) table

Ref	Source of Objective Document Ref	Objective	Action or commitment (including specific location if applicable)	Assumptions (on which the action is based)	Achievement criteria and reporting / monitoring requirement (if applicable)	How the action is to be implemented	Responsible person(s)	When P = Pre-construction C = Construction O = Operation A = All	Completion Record
General (G)									
G1	ES Chapter 2 (The Scheme) (TR010066/APP/6.1) First Iteration EMP	To provide a framework for the implementation of environmental requirements on site.	A Second Iteration EMP will be prepared by the Principal Contractor in advance of construction detailing necessary measures which must be complied with pre-construction and during construction of the Scheme. The Second Iteration EMP will follow the principles and requirements detailed in the First Iteration EMP to ensure necessary mitigation measures required in the ES (TR010066/APP/6.1) are complied with and implemented. The Second Iteration EMP will be approved by the Secretary of State (SoS) following consultation with the relevant planning authorities, the Environment Agency and Natural England, prior to construction works commencing on site. The Second Iteration EMP will provide and adhere to a number of supporting management plans and method statements as detailed in Appendix B and C of the First Iteration EMP (TR010066/APP.6.5).	The Second Iteration EMP will follow the principles and requirements set out in this First Iteration EMP. The Principal Contractor Project Manager and Principal Contractor Environmental Manager will ensure the measures in the Second Iteration EMP are implemented.	Secretary of State for Transport approval of the Second Iteration EMP.	Contractual responsibilities between the Applicant and Principal Contractor Requirement 2 of Schedule 2 of the draft DCO (TR010066/APP/3.1).	Principal Contractor	P	Signed: Date:
G2	ES Chapter 2 (The Scheme) (TR010066/APP/6.1) ES Chapter 11 (Noise and Vibration) (TR010066/APP/6.1).	Hours of working	Construction works will take place mainly during the daytime. Construction works outside of normal construction hours of 07:00-19:00 weekdays and 07:00-14:00 on Saturdays shall be minimised as far as	Information from the Principal Contractor Consultation with the relevant local authority where necessary where certain works	Not applicable	Contractual responsibilities between the Applicant and the Principal Contractor	Principal Contractor	P C	Signed: Date:

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			practicable. Night working may take place from 19:00- 07:00. There may be exceptions to these hours in the case of emergencies or for oversized deliveries, and junction tie-ins. There are likely to be extended working hours in the summer months to take advantage of the daylight or weather. To maximise productivity, a period of up to one hour before and up to one hour after normal working hours may be used for start-up and close down of activities. This will include, but not be limited to, deliveries, movement to place of work, unloading, maintenance and general preparation works. These periods will not be considered an extension of core working hours. Repairs or maintenance of construction equipment that is required to be carried out outside of core working hours will normally be carried out on Sundays between 09:00 and 17:00. Piling works will only take place during the normal construction hours as detailed above. Where works outside of these hours are unavoidable, the Principal Contractor will consult with the local planning authorities, and agree appropriate methods of mitigation that account for the location of works, hours of work and expected duration. In addition any Section 61 of the Control of Pollution Act 1974	are required outside core hours.					

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			consents will be obtained where required.						
G3	ES Chapter 7 (Landscape and Visual Effects) (TR010066/APP/6.1) ES Chapter 8 (Biodiversity) (TR010066/APP/6.1)	Reduce light disturbance for sensitive receptors	During works: Lighting shall be at the minimum luminosity necessary and use low energy consumption fittings. Lighting shall comply with the Institute of Lighting Professionals Guidance Notes for the Reduction of Obtrusive Light GN016 and the provisions of BS 5489 Code of practice for the design of road lighting, where applicable. Lighting will be directional, and positioned sympathetically, to minimise light spill and disturbance for sensitive receptors, in particular into retained habitat (including woodland) and linear features such as Smite Brook and hedgerows. Night lighting will only take place in areas that have had vegetation cleared during the daytime unless supervised by the ECoW, to avoid affecting species which may be present in uncleared areas. Lighting of the River Sowe corridor and Smite Brook would be avoided as far as feasible. Where construction lighting is required, it would be limited in duration and where feasible directed away from retained habitats. During operation: All proposed operational mitigation will be designed to	Assumes lighting of the satellite construction compound and assumes some task lighting would be required.	Ecological Clerk of Works (ECoW) to confirm compliance through discussions with the PC.	Contractual responsibilities between the Applicant and the Principal Contractor	Principal Contractor ECoW	C O	Signed: Date:

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			minimise light spill onto residential properties and habitats which support commuting and foraging bats. Where lighting columns back onto residential properties and/or sensitive receptors, backlight shields or similar mitigation will be required to mitigate significant effects. Lighting at the junction will be designed with backlight shields and LED bulbs to reduce light spill onto habitats which support commuting and foraging bats.						
G4	ES Chapter 2 (The Scheme) (TR010066/APP/6.1) ES Chapter 12 (Population and Human Health) (TR010066/APP/6.1) Outline Traffic Management Plan (TR010066/APP/7.5)	To ensure continued performance of transport network, protect safety for all travellers and minimise disruption to communities. To ensure access to and reduce disruption to residential properties, businesses and community assets.	A Construction Traffic Management Plan would be developed and implemented based on the measures and approaches detailed within the Outline Traffic Management Plan (TR010066/APP/7.5). The Construction Traffic Management Plan would include but not be limited to information on: - Traffic management measures - Carriageway restrictions - Carriageway closures and diversions Where a closure of a Walking, Cycling and Horse riding route is required, safe and appropriate alternative routes would be provided to ensure access is maintained during construction. The Principal Contractor would agree all temporary diversion routes with the local authority. Appropriate signage for all	The assessment assumes that measures outlined in the Construction Traffic Management Plan would be followed during the construction phase.	Compliance with the Traffic Management Plan which will be developed as part of the Second Iteration EMP.	Contractual responsibilities between the Applicant and the Principal Contractor	Principal Contractor	P C	Signed: Date:

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			closures or diversions would be used to provide sufficient notice of such closures or diversions.						
G5	ES Chapter 12 (Population and Human Health) (TR010066/APP/6.1) ES Chapter 11 (Noise and Vibration) (TR010066/APP/6.1) First Iteration EMP Appendix B.5 Outline Construction Communication Strategy (TR010066/APP/6.5)	Ensure positive community relations by keeping landowners, local interest groups and the general public informed of the construction information.	The Principal Contractor would undertake liaison with stakeholders, local communities and businesses (including bus companies) prior to the commencement of construction works, to understand mitigation requirements to ensure their continued operation. Liaison would continue through the construction period to highlight potential periods of disruption. This would be via newsletters / letter drops, the National Highways scheme web-page, and an appointed Community Liaison Officer. The National Highways Customer Contact Centre will be available to deal with queries and complaints from the public. An information line will be staffed and a complaint management system in place, used on other major infrastructure projects, to ensure complaints are investigated, action is taken, and the complainant receives a response.	Local community require daily access to properties and assets. Community likely to be affected by construction activities.	Join the National Considerate Constructor's Scheme. Establish a forum to disseminate construction information to the consultees. Implementation of the Construction Communications Plan, which will form part of the Second Iteration EMP.	Contractual responsibilities between the Applicant and the Principal Contractor	Principal Contractor	P C	Signed: Date:
G6	ES Chapter 12 (Population and Human Health) (TR010066/APP/6.1)	Site restoration	Pre-works photography to be undertaken, where the preconstruction landscape to be reinstated, prior to any construction works to provide a detailed baseline record. Photography to be used to demonstrate site restoration and replanting has been successful.	Maintaining relationships with landowners and maintainers	Monitoring and comparison of the site restoration post construction, which is to be returned to pre-construction conditions.	Undertaking of pre works photography by Principal Contractor	Principal Contractor	C O	Initial: Signed:

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Air quality (AQ)									
AQ1	ES Chapter 5 (Air Quality) (TR010066/APP/6.1) First Iteration EMP Appendix B.1 Outline Air Quality and Dust Management Plan (TR010066/APP/6.5)	To limit and control emissions to air during construction on sensitive receptors	Based on a construction dust risk potential of high for the project, the following activities are recommended to monitor the effectiveness of the proposed mitigation measures which will be included in the Second Iteration EMP: - Development of Construction Air Quality and Dust Management Plan with measures to monitor effectiveness of mitigation as part of the Second Iteration EMP - Requirement for daily onsite and off-site inspections to be included in Second Iteration EMP - Requirement for the Principal Contractor to maintain a record of complaints/exceptional dust events to be included in Second Iteration EMP	Community receptors and ecological designated sites sensitive to changes in dust within the vicinity of the Scheme (as identified in ES Chapter 5 (Air Quality) (TR010066/APP/6.1) and presented in ES Figure 5.1 (Wind rose based on hourly data obtained from Church Lawford monitoring station (2018)) (TR010066/APP/6.2).	No justified complaints of dust nuisance from receptors in the vicinity of the Scheme.	Regular Site Audits Compliance with the Construction Air Quality and Dust Management Plan. Contractual responsibilities between the Applicant and the Principal Contractor.	Principal Contractor	P C	Signed: Date:
AQ2	ES Chapter 5 (Air Quality) (TR010066/APP/6.1)	To limit and control emissions from Non-Road Mobile Machinery (NRMM) to air quality during construction	The relevant NRMM emissions standards set out in the Rugby Local Plan Supplementary Planning Document will be included in the Second Iteration EMP and will be adhered to during the construction phase. In summary: NRMM of net power between 37kW and 560kW will be required to meet the standards based upon the engine emissions standards in EU	NRMM will be in use intermittently on site.	Site audits	Contractual responsibilities between the Applicant and the Principal Contractor	Principal Contractor	P C	Signed: Date:

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			Directive 97/68/EC and its subsequent amendments. This will apply to both variable and constant speed engines for both NOx and PM. From 1 September 2020 the following changes will apply: (a) NRMM used on any construction or demolition site within the Rugby urban area will be required to meet Stage IIIB of the Directive as a minimum. (b) NRMM used on any development will be required to meet Stage IV of the Directive as a minimum. The requirements may be met using the following techniques; (a) Reorganisation of NRMM fleet (b) Replacing equipment (with new or second-hand equipment which meets the policy) (c) Retrofit abatement technologies (d) Re-engining. All eligible NRMM should meet the standards above unless it can be demonstrated that the machinery is not available or that a comprehensive retrofit to meet both PM and NOx emission standards is not feasible.						
Cultural heritage (CH)									
CH1	ES Chapter 6 (Cultural Heritage) (TR010066/APP/6.1)	To limit impacts on the setting and location of heritage assets and historic landscape	Pre-construction historic building recording of a wall at Hungerley Hall Farm will be secured through DCO condition and captured within a WSI. The content of the WSI will be agreed with Coventry City Council. The record will conform to "Level 3" standard according	Environmental Impact Assessment (EIA) - Cultural heritage assessment	Compliance with the Written Scheme of Investigation which will be agreed with Coventry City Council	Implementation of the Environmental Masterplan (Figure 2.4 (TR010066/APP/6.2))	Principal Contractor and specialist	P	Signed: Date:

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			to Understanding Historic Buildings: A Guide to Good Recording Practice (Historic England 2016). Measures will include provision for appropriate reporting, archiving and dissemination.						
CH2	ES Chapter 6 (Cultural Heritage) (TR010066/APP/6.1)	Protection of unexpected archaeological finds	An unexpected archaeological finds protocol (UAFP) will be included in the Second Iteration EMP. The protocol will be secured through DCO condition and captured within an appendix to the Second Iteration EMP. The content of the UAFP will be agreed with Coventry City Council and Rugby Borough Council. Measures will include provision for appropriate archaeological advice as well as minimum standards for any potential archaeological works including reporting, archiving and dissemination.	EIA – Cultural heritage assessment	Compliance with the unexpected finds protocol.	Works in accordance with the unexpected finds protocol	Principal Contractor and specialist	C	Signed: Date:
Landscape and visual effects (LV)									
LV1	ES Chapter 7 (Landscape and Visual Effects) (TR010066/APP/6.1)	To ensure the establishment of the landscape planting, visual mitigation measures, and creation/enhancement of biodiversity habitats	Planting and seeding, proposed as mitigation for landscape and visual effects and biodiversity effects, would be delivered in accordance with the Environmental Masterplan (ES Figure 2.4 (TR010066/APP/6.2) and maintained in accordance with the LEMP in order to achieve their full establishment throughout the construction contract. The maintenance of mitigation such as planting and seeding after the construction period will be the responsibility of National Highways and Coventry City Council ensuring all proposed mitigation reaches maturity and	Sensitive landscape and visual receptors and ecology receptors within close proximity to the Scheme.	Successful implementation of the landscape and visual mitigation measures in accordance with the Environmental Masterplan (ES Figure 2.4 (TR010066/APP/6.2) and compliance with the LEMP (produced at detailed design)	Contractual responsibilities between the Applicant and the Principal Contractor	Principal Contractor Design team Applicant Coventry City Council	C O	Signed: Date:

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			reflects the assessment at year 15, and ensuring the maintenance works are sympathetic to ecology windows related to specific species. This will be detailed in the LEMP produced during detailed design and reported in the Second Iteration EMP.						
LV2	ES Chapter 7 (Landscape and Visual Effects) (TR010066/APP/6.1)	To limit the impact of construction on existing trees and vegetation to be retained	The Principal Contractor will develop the Arboricultural Method Statement (AMS) during detailed design and adhere to the requirements during construction. The AMS to include, but not limited to the following: • Tree protection measures in compliance with BS5837:2012 (Trees in relation to design, demolition, and construction – recommendations) • Maintenance and monitoring requirements of the tree protection measure. • Schedule of trees to be removed and retained in accordance with the detailed design • Tree root protection zones (RPAs). • Contingency plan (chemical spillage, collision, emergency access to the root protection zone) • Process to follow should access be needed within RPAs of existing trees and vegetation identified to remain.	Arboricultural Impact Assessment (AIA). Trees to be retained are within close proximity to the works.	Arboricultural survey. Regular site audits and adherence to the Arboricultural Method Statement (AMS).	To be implemented by the Principal Contractor and the Arboricultural Clerk of Works (ACoW).	Principal Contractor and ACoW	C	Signed: Date:

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			- Tree protection monitoring measures on site. This shall include, but are not limited to the following: - Checking the robustness and positioning of tree protection fencing. - Checking that no materials or plant are stored within the tree root protection areas (RPAs).						
LV3	ES Chapter 7 (Landscape and Visual Effects) (TR010066/APP/6.1)	To reduce the visual impacts of the construction works for nearby sensitive receptors	To reduce visual effects of the Scheme during construction. The Principal Contractor will employ considered approach to minimise visual impact, for example: - keeping a tidy and organised site - temporary storage of soil mounds in linear bunds in locations where this would be beneficial to the visual screening of construction works if practical - soil storage mounds managed in accordance with series 600 to assist visual integration of earthworks protection of retained vegetation in accordance with British Standard (BS) 5837:2012 protection of retained vegetation in accordance with British Standard (BS) 5837:2012	Construction works can be visually intrusive	Compliance with the Second Iteration EMP.	Contractual responsibilities between the Applicant and the Principal Contractor	Principal Contractor	P C	Signed: Date:
Biodiversity (BD)									
BD1	ES Chapter 8 (Biodiversity)	Protection of badgers	A badger mitigation licence would be obtained from Natural	A badger mitigation licence would be	Following the DCO being granted the Applicant will	Mitigation to be implemented by the	Principal	PC	

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	(TR010066/APP/6.1) ES Appendix 8.2 (Badger Report) (TR010066/APP/6.3) ES Appendix 8.13 (Draft Badger Mitigation Licence) (TR010066/APP/6.3) ES Appendix 8.14 (Natural England Letter of No Impediment) (TR010066/APP/6.3)		England for the closure of an active subsidiary sett. The supporting information to the licence (ES Appendix 8.13 (Draft Badger Mitigation Licence) (TR010066/APP/6.3)) details necessary mitigation for closure of the badger sett including: - A pre-exclusion walkover survey to confirm the site baseline at the time of closure - Pre-closure soft-blocking and camera-monitoring - Badger exclusion from the sett, if monitoring identifies the sett as active or partially-active, through the use of fencing and one-way gates and monitoring for a minimum 21-day period with no breaches - Sett destruction under supervision of the accredited agent The Hungerley Hall Farm accommodation bridge will remain open during construction to maintain this commuting route. If any new setts are identified during pre-construction surveys an update to the mitigation licence may be required.	obtained based on the information provided in ES Appendix 8.13 (Draft Badger Mitigation Licence) (TR010066/APP/6.3) and following the issue of the Letter of No Impediment in ES Appendix 8.14 (Natural England Letter of No Impediment) (TR010066/APP/6.3)	submit a badger mitigation licence application. Regular reporting by the ECoW (i.e. in the form of daily record sheets of similar) to record mitigation undertaken.	Principal Contractor while supervised by the Named Ecologist or an Accredited Agent of the licence.	Contractor. Named Ecologist or Accredited Agent on licence. Applicant.	C	

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BD2	ES Chapter 8 (Biodiversity) (TR010066/APP/6.1)	To ensure data on protected species is valid and robust	Pre-construction surveys would be undertaken in the appropriate seasons in 2025 for the following protected species: great crested newt (GCN) <i>Triturus cristatus</i> , barn owl <i>Tyto alba</i> , bats, badger <i>Meles meles</i> , otter <i>Lutra lutra</i> and water vole <i>Arvicola amphibius</i> to ensure the current baseline information is up to date.	Assumes construction commences in 2026. The survey results would be suitable to inform a Natural England mitigation licence, if required.	Completion of surveys and subsequent survey reports. Completion of any required licences following surveys.	Surveys to be commission by the Principal Contractor and completed by the Principal Contractor's Ecologist.	Principal contractor. Applicant. Ecologist.	P	
BD3	ES Chapter 8 (Biodiversity) (TR010066/APP/6.1)	Protection of habitats and protected species during construction	An ECoW would be employed to provide advice and supervision of works The ECoWs roles and responsibilities are set out in Table 2.1 of the First Iteration EMP (TR010066/APP/6.5). The primary roles would be to: - deliver toolbox talks on protected species, habitats and invasive non-native species (INNS) prior to relevant construction activities. - supervise site clearance through pre-works checks, supervision of sensitive felling techniques and supervision of vegetation clearance. - Ensure commuting routes for mammals remain open through the site. Any discovery of an animal in	Assumes works, including vegetation clearance, could be required at any time of year.	Regular reporting by the ECoW (i.e. in the form of daily record sheets of similar) to record mitigation undertaken.	To be implemented by the Principal Contractor and the appointed ECoW.	Principal contractor ECoW. Applicant.	PC C	

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			pipes, trenches and holes, or an incident or injury to an animal must be reported immediately to the ECoW .						
BD4	ES Chapter 8 (Biodiversity) (TR010066/APP/6.1)	Protection of GCN, reptiles and other notable species (including hedgehog)	Where feasible, above-ground vegetation clearance of suitable habitat would be undertaken during the hibernation season (November to February inclusive). No ground-breaking works would be undertaken within areas of suitable hibernation habitat, and no potential hibernacula (for reptiles, hedgehog or GCN (where within 500m of a GCN pond)) impacted, during the hibernation season (November to February inclusive). Where this is not possible, and ground-breaking works and/or works to hibernacula are required during the hibernation season (November to February, inclusive), habitat will be made unsuitable and maintained as such. Habitats will be cleared under the supervision of the ECoW and with appropriate mitigation measures within suitable conditions (dry weather and temperatures >9°C) in the active season (March to October, inclusive). The cleared areas which are to be impacted during the	GCN presence confirmed within two ponds within 500m of Order Limits. Small areas of suitable reptile habitat. Suitable habitat for hedgehog.	Regular reporting by the ECoW (i.e. in the form of daily record sheets or similar) to record mitigation undertaken.	To be implemented by the Principal Contractor and their appointed ECoW.	Principal contractor. ECoW.	C	

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			hibernation season would be kept clear of habitat until works in the area commence to prevent habitat suitable for these species developing and species moving back into the works area prior to works. Works within the active season (March to October) to be undertaken in suitable conditions (dry weather and temperatures >9°C). Vegetation would be cleared in staged cuts, with an initial cut to 15cm, a walkover and destructive search of potential refugia by the ECoW, followed by a second cut to ground level.						
BD5	ES Chapter 8 (Biodiversity) (TR010066/APP/6.1)	Protection of breeding birds	To avoid adverse impacts on breeding birds, habitat clearance should take place outside of the core breeding bird season (March to August inclusive). Where this is not feasible, and habitats are cleared or otherwise directly impacted (including partial felling, tracking over) within the core breeding bird season (March to August inclusive), they would be subject to appropriate checks by the ECoW. Nest checks would be undertaken by the ECoW a maximum of 24 hours prior to clearance with any active nests	Confirmed presence of kingfisher and breeding bird assemblage during surveys.	Regular reporting by the ECoW (i.e. in the form of daily record sheets of similar) to record mitigation undertaken.	To be implemented by the Principal Contractor and their appointed ECoW.	Principal Contractor. ECoW.	C	

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			left <i>in situ</i> with a suitable buffer of undisturbed vegetation around them until all young have fledged as confirmed by the ECoW. Pre-construction checks of suitable habitat would be undertaken for kingfisher for works in the vicinity of the suitable habitat during the core breeding bird season (March to August, inclusive), with appropriate standoff distances in place should active nests be identified. This would mitigate against disturbance to this species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).						
BD6	ES Chapter 8 (Biodiversity) (TR010066/APP/6.1) ES Appendix 8.3 (Breeding Bird and Barn Owl Report) (TR010066/APP/6.3) ES Appendix 8.4 (Barn Owl Survey Report) (TR010066/APP/6.3)	Protection of barn owls	Two barn owl nest boxes will be installed within Coombe Abbey Park, a minimum of 1km from the Order Limits, prior to construction to provide alternative nesting habitat to that of Hungerley Hall Farm. Barn owl box locations and installation shall be in accordance with guidance from The Barn Owl Trust, and agreement sought from Coventry City Council.	Potential presence of barn owl within the Order Limits.	Installation of two nest boxes to be documented by contractor when installed and photographs taken.	Box installation to be completed by the Applicant and by legal agreement with Coombe Abbey Park.	Principal Contractor. Applicant.	PC	
BD7	ES Chapter 8 (Biodiversity) (TR010066/APP/6.1) ES Appendix 8.11 (Wintering Bird	Protection of wintering birds	Vegetation clearance in winter would be staggered to retain availability of natural food sources for foraging birds within the Order Limits. REAC commitments LV1 and G5 of	Confirmed presence of wintering bird assemblage	Regular reporting by the ECoW (i.e. in the form of daily record sheets of similar) to record mitigation undertaken.	Mitigation to be implemented by the Principal Contractor and their appointed ECoW.	Principal Contractor. Highway Management.	C O	

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	Report) (TR010066/APP/6.3)		the First Iteration EMP (TR010066/APP/6.5) detail potential opportunities to provide screening during construction, which if feasible would mitigate against visual disturbance to wintering birds.			Operational management to be implemented by the Highway Management Team.			
BD8	ES Chapter 8 (Biodiversity) (TR010066/APP/6.1) ES Appendix 8.5: Bat Roost Report (TR010066/APP/6.3)	Protection of bats	Five bat boxes, including two suitable for hibernation, would be installed in locations within Coventry City Council land ownership prior to construction to ensure no loss of roosting habitat. Boxes would be in place prior to construction and maintained for a minimum of five years post-construction completion. Locations and installation to be agreed with Coventry City Council. To reduce the risk of harming bats during the maternity and hibernation seasons the trees with bat roosting potential that require felling/pruning should be felled/pruned during September or October. If this is not possible any trees with summer roosting potential only should be felled/pruned during the hibernation season (November to March) and trees with hibernation potential should be felled during the active season (April to October). In the event the above cannot feasibly be adhered to pre-felling inspections should be	There is a bat assemblage present within the Order Limits.	Installation of five bat boxes within Coventry City Council area. Regular reporting by the ECoW (i.e. in the form of daily record sheets of similar) to record mitigation undertaken.	Mitigation to be implemented by the Principal Contractor and their appointed ECoW. Bat box installation to be implemented by the Applicant via a legal agreement with Coventry City Council.	Principal Contractor. Applicant.	PC C	

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			undertaken by a bat licensed ecologist to check for roosting bats. This would comprise endoscope inspections, with aerial assessment where required. Where a feature cannot be fully inspected (for example due to health and safety concerns) the tree should be subject to soft felling techniques under supervision of the licensed ecologist who would then undertake the check for bats at ground level. Where bats are found during pre-felling inspections works would cease and Natural England would be consulted, and a bat mitigation licence applied for. To minimise disturbance to bats, construction lighting would minimise light spill, in particular into retained habitat (including woodland) and linear features such as Smite Brook and hedgerows.						
BD9	ES Chapter 8 (Biodiversity) (TR010066/APP/6.1)	Invasive Non-native Species (INNS)	Measures to prevent the spread of the Wildlife and Countryside Act 1981 (as amended) Schedule 9 species <i>Rhododendron ponticum</i> and Himalayan balsam <i>Impatiens glandulifera</i>. Production of, and adherence to, an INNS Management Plan	INNS presence recorded during surveys	Regular reporting by the ECoW (i.e. in the form of daily record sheets of similar) to record mitigation undertaken.	Implementation of the measures within the INNS Management Plan by the Principal Contractor.	Applicant. Ecologist. Principal Contractor.	PC C	

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			within the Second Iteration EMP.						
Geology and soils									
GS1	ES Chapter 9 (Geology and Soils) (TR010066/APP/6.1)	To ensure identified risks associated with contamination are appropriately managed and minimised	Measures will include (but not be limited to): - Ensuring adequate space for storage of topsoil and subsoil which must be segregated during excavation. - Protection of watercourses from entry of polluting matter. - Stripping, storing, and reinstating of soils using best practice measures to minimise the risk of degradation to soils. - Controls during construction for identification of unexpected contamination (these controls will be identified within the Second Iteration EMP). - Suppression of odour and dust using best practice measures.	EIA – Geology and soils assessment Integration design approach with other topics.	On-site monitoring	Implementation in accordance with the following document that will be produced for the Second Iteration EMP: Soil Handling Management Plan (SHMP) - including a Soil Resource Plan and a Soil Handling Strategy Site Waste Management Plan (SWMP) Materials Management Plan (MMP) if applicable	Principal Contractor.	P C	Signed: Date:
GS2	ES Chapter 9 (Geology and Soils) (TR010066/APP/6.1)	To manage the potential risks associated with made ground and organic deposits underlying the Scheme	Measures will include (but not be limited to): - Monitoring of potential ground-gases and vapours in confined spaces during construction. - Design of in-ground structures to appropriate	EIA – Geology and soils assessment	On-site monitoring	Health and Safety Method Statements	Principal Contractor.	P C	Signed: Date:

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			concrete design class. Suitable Personal Protective Equipment (PPE) and hygiene practices for construction and maintenance workers.						
GS3	ES Chapter 9 (Geology and Soils) (TR010066/APP/6.1)	To manage the impacts on soils from temporary and permanent land take	Measures will be secured in a SHMP and will include (but not be limited to): - Best practice measures for soil stripping, handling and storage - Stripping, storing and reinstating of soils with regard to BS 3882:2015 using best practice measures to minimise the risk of degradation to soils, and where applicable, including reference to the following guidance: - Defra (2018): Construction code of practice for the sustainable use of soils on construction sites. - The British Society of Soil Science (2021): Guidance note benefitting from soil management in development and construction - Specific areas of soils identified shall be protected from earthworks and construction activities. These will be identified in the SHMP	EIA – Geology and soils assessment	On-site monitoring	Production of the following documents to be included in the Second Iteration EMP: Soil Handling Management Plan (SHMP) - including a Soil Resource Plan and a Soil Handling Strategy Site Waste Management Plan (SWMP) Materials Management Plan (MMP) if applicable Implementation in accordance with the Second Iteration EMP.	Design Team Principal Contractor	P C	Signed: Date:

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			- Clear demarcation of the satellite construction compound and working areas to prevent and minimise access onto adjacent areas of agricultural land. Measures will be secured in a Materials Management Plan (MMP) if required and will include (but not be limited to): - Minimisation of over-excavation of soils - Ensure that soils from permanent land take areas are reused within the Scheme where possible, as identified in the MMP. - Where there are excess soils generated, these will be saved and reused outside the Scheme where there are opportunities to do so. - Restoration of temporary land take areas to their former condition, based on pre-construction site surveys.						
GS4	ES Chapter 9 (Geology and Soils) (TR010066/APP/6.1)	The protection of soil structure and quality – to prevent degradation of soils both within and outside the permanent and temporary development areas	Where necessary for protection from earthworks and construction activities, agricultural soils will be stripped, stored and replaced to their baseline condition, as far as practicable. Stripping, storing and reinstating of soils with regard to BS 3882:2015 using best practice	Construction works and earthworks can damage agricultural soils	Detailed in the SHMP	Contractual responsibilities between National Highways and the Principal Contractor	Principal Contractor.	C	Signed: Date:

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			measures to minimise the risk of degradation to soils.						
GS5	ES Chapter 9 (Geology and Soils) (TR010066/APP/6.1)	To protect agricultural land and soils	Construction satellite compound and working areas will include a clear demarcation (fence) of the construction area and prevent access onto adjacent areas of agricultural land that could result in further compaction or damage of soils as far as practicable. Construction vehicles will be confined to designated haul routes to reduce the potential risk of compaction of soil.	Construction works can damage soils or cause compaction	Compliance with the Second Iteration EMP and Traffic Management Plan (TMP).	Contractual responsibilities between National Highways and the Principal Contractor	Principal Contractor.	P C	Signed: Date:
Material assets and waste (MA)									
MA1	ES Chapter 10 (Material Assets and Waste) (TR010066/APP/6.1)	Waste hierarchy implementation	The foundation for waste management is the five-step waste hierarchy of the EU WFD 2008 which establishes an order of preference for managing and disposing of waste where preventing waste is the preferred option and sending waste to landfill is the last resort. The principles of the waste hierarchy will be considered during the design to achieve mitigation of potential impacts within the design process. The Scheme aims to prioritise waste prevention, followed by preparing for re-use, recycling and recovery and lastly disposal to landfill. This will include, but is not limited to: Re-use of suitable fill generated by site excavation as fill material for the new dumb bell junction	EIA - Waste assessment	Appropriate project KPIs A CDW recovery and or recycling rate of 70% (with the aim to achieve 90%) will be set. Use of site-won construction, demolition and excavation waste (with treatment) in accordance with WRAP best practice and quality Protocols. An MMP would be prepared where applicable to provide lines of evidence covering the use of clean site won materials within the Scheme. The MMP would be based on an adequate risk assessment concluding that the objectives of preventing harm to human health and pollution of the environment will be met if	Development of an MMP if applicable as detailed in MA1. Monitoring of waste generation during construction via the SWMP including the quantities and types of waste generated, as well as the duty of care information for the contractors transferring the waste and the sites the waste is taken to for management.	Design Team Principal Contractor Specialist	P C	Signed: Date:

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			earthworks - re-use of site-won materials within the Scheme, for example in an area to the east of the A46 (immediately north of Coombe Pool SSSI), would be placed up to levels permitted by the Limits of Deviation discussed in ES Chapter 2 (The Scheme) (TR010066/APP/6.1) and pursuant to Article 7 (<i>Limits of deviation</i>) of the draft DCO (TRO10066/APP/3.1). - where construction and demolition waste (CDW) and excavation arisings cannot be used in the Scheme, opportunities will be sought where to re-use the materials on other construction projects - if encountered, suitable marketable timber and biomass from clearance of the Scheme will be fed into the markets for timber, chip board and biomass - green waste from the Scheme clearance works (vegetation other than timber and unusable waste wood such as dead trees, stumps and root balls) will be re-used or recycled through on-site landscaping or ecological improvement works, depending on its		materials are used in the proposed manner Implementation of the SWMP.				

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			suitability. This will entail, for example, habitat creation or creation of compost from green waste that can be used as a soil ameliorator for certain types of planting. Off-site disposal through a green waste disposal contractor could also enable composting (recycling) - the re-use of road surfacing, paving, concrete and rubble in temporary haul roads or as make-up for the new road layout - the Principal Contractor will also adopt the good practice in construction waste management principles outlined in Waste and Resources Action Programme (WRAP) guidance document Achieving Good Practice, Waste Minimisation and Management, Guidance for Construction Clients, Design Teams and Contractors (2008) and WRAPs Net Waste Tool						
MA2	ES Chapter 10 (Material Assets and Waste) (TR010066/APP/6.1)	Designing out waste	Designing out waste is one of the key tenets of a circular economy. The Principal Contractor will implement the principles of designing out waste to reduce it and reduce the total material assets demand of the detailed design. This will be accomplished by designing for: waste efficient procurement:	EIA –Material assessment	Appropriate project key performance indicators (KPI) to be set. A construction and demolition waste recovery and or recycling rate of 70% (with the aim to achieve 90%) will be set. Use of renewable materials and materials	Second Iteration EMP to provide detailed information on the duty of care documents that will be needed, such as the waste transfer notes and consignment notes, as well as strategies to be implemented to minimise waste generation and	Design Team Principal Contractor Specialist	P C	Signed: Date

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			by setting resource and waste efficiency requirements into the procurement process; working throughout the design process to select resource efficient construction methods; and when waste does arise, making provision to select the waste contractor who can offer the best overall re-use and recycling performance. • <u>resource optimisation</u>: by designing roads and road infrastructure that can be constructed and used with reduced consumption of material assets, selecting responsibly sourced material assets, and producing minimal waste • <u>off-site construction</u>: by designing prefabricated road structures and components, which offer reduced consumption of material assets and reduced waste; and thinking about how activities on the Scheme can become a process of assembly rather than construction • <u>re-use and recovery</u>: by salvaging and re-use of components and material assets from the Scheme or elsewhere locally; on-site or off-site recycling of materials, and ensuring new materials brought onto the Scheme have a high recycled content where technically appropriate and economically feasible		with recycled content in line with the West Midlands region's 28% target. Measures to encourage local and responsible resourcing of material assets (for example through adoption of Buildings Research Establishment (BRE) developed BES 6001). Where required, import of clean naturally occurring soils and stones from another development site would be undertaken in accordance with a MMP.	increase re-use and recycle. A SHMP will be developed and form part of the Second Iteration EMP. In addition to ensuring soil sustainability during construction, it will detail how all construction phase material assets be managed and identify opportunities to substitute recycled or secondary materials and products for those using primary materials. It will be updated regularly during the construction of the Scheme. The SHMP will guide the re-use of excavated soils during construction and detail the procedures and measures to be implemented to classify, track, store, re-use and dispose of all excavated waste generated during the construction. Where applicable, an MMP would be prepared to monitor and track the movement, storage and placement of imported soils and stones.			

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			<u>deconstruction and flexibility</u>: by considering the potential future uses of the Scheme and incorporating flexibility and adaptability into the design; selecting materials and components to match the intended use and durability; designing the road assets to be easy to maintain and refurbish, and taking into account future needs to update, modernise and eventually deconstruction						
MA3	ES Chapter 10 (Material Assets and Waste) (TR010066/APP/6.1)	Use of secondary or recycled materials	The Principal Contractor will prioritise the use of secondary or recycled materials (and consider alternatives to traditional construction materials) in accordance with the relevant legislation, standards and specification for these works. This will include (but not be limited to) the following with an aim to reduce the requirement to import materials for construction and reduce the need to remove surplus materials from site: the use of suitable CDW and excavation arisings within the Scheme that meets the WRAP Quality Protocol: Aggregates from Inert Waste, End of Waste Criteria for the Production of Aggregates from Inert Waste, (October 2013). re-use of suitable fill generated by site excavation as fill material for the new dumb bell junction earthworks	EIA –Material assessment	Appropriate project key performance indicators (KPI) to be set. A construction and demolition waste recovery and or recycling rate of 70% (with the aim to achieve 90%) will be set. Use of renewable materials and materials with recycled content in line with the West Midlands region's 28% target. Measures to encourage local and responsible resourcing of material assets (for example through adoption of Buildings Research Establishment (BRE) developed BES 6001). Where required, import of clean naturally occurring soils and stones from another development site would be undertaken in accordance with a MMP.	Second Iteration EMP to provide detailed information on the duty of care documents that will be needed, such as the waste transfer notes and consignment notes, as well as strategies to be implemented to minimise waste generation and increase re-use and recycle. A SHMP will be developed and form part of the Second Iteration EMP. In addition to ensuring soil sustainability during construction, it will detail how all construction phase material assets be managed and identify opportunities to substitute recycled or secondary materials and products for those using primary materials. It will be updated regularly during the construction of the Scheme.	Design Team Principal Contractor Specialist	P C	Signed: Date

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			- re-use of site-won materials within the Scheme, for example in an area to the east of the A46 (immediately north of - Coombe Pool SSSI, would be placed up to levels permitted by the Limits of Deviation discussed in ES Chapter 2 (The Scheme) (TR010066/APP/6.1) and pursuant to Article 7 (Limits of deviation) of the draft DCO (TR010066/APP/3.1). - use of green waste from the Scheme clearance works (vegetation other than timber and unusable waste wood such as dead trees, stumps and root balls) through on-site landscaping or ecological improvement works, depending on its suitability. This will entail, for example, habitat creation or creation of compost from green waste that can be used as a soil ameliorator for certain types of planting. - the re-use of road surfacing, paving, concrete and rubble in temporary haul roads or as make-up for the new road layout. - Providing on site facilities to separate out waste to enable the recovery of material through recycling						
MA4	ES Chapter 10 (Material Assets and Waste) (TR010066/APP/6.1)	Local and responsible sourcing of material assets	The principles of local and responsible sourcing of key material assets will be adopted by the Principal Contractor in	EIA –Material assessment	Appropriate project key performance indicators (KPI) to be set.	EMP (second iteration) to provide detailed information on the duty of care documents that will be	Design Team Principal Contractor	P C	Signed: Date

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			accordance with their policies on sustainable procurement . - where feasible, key materials, such as aggregates, asphalt, cement, concrete and steel used within the Scheme will be sourced from suppliers who have a minimum International Organization for Standardization ISO 14001 certification (or equivalent) and, if available, Buildings Research Establishment (BRE) developed BES 6001 (Framework Standard for the Responsible Sourcing of Construction Products) certification for the material - in accordance with the UK government Timber Procurement Policy (TPP), only timber and wood-derived products originating from an independently verifiable legal and sustainable source (which can include from a licensed Forest Law Enforcement, Governance and Trade partner) will be used. Appropriate documentation will be required to prove it. The guidance details what 'legal' and 'sustainable' mean in the context of the TPP - locally sourced materials and suppliers, ideally within 10 kilometres, would be identified and used, where possible		A construction and demolition waste recovery and or recycling rate of 70% (with the aim to achieve 90%) will be set. Use of renewable materials and materials with recycled content in line with the West Midlands region's 28% target. Measures to encourage local and responsible resourcing of material assets (for example through adoption of Buildings Research Establishment (BRE) developed BES 6001). Where required, import of clean naturally occurring soils and stones from another development site would be undertaken in accordance with a MMP.	needed, such as the waste transfer notes and consignment notes, as well as strategies to be implemented to minimise waste generation and increase re-use and recycle. A SHMP will be developed and form part of the Second Iteration EMP. In addition to ensuring soil sustainability during construction, it will detail how all construction phase material assets be managed and identify opportunities to substitute recycled or secondary materials and products for those using primary materials. It will be updated regularly during the construction of the Scheme. The SHMP will guide the re-use of excavated soils during construction and detail the procedures and measures to be implemented to classify, track, store, re-use and dispose of all excavated waste generated during the construction. Where applicable, an MMP would be prepared to monitor and track the movement, storage and placement of imported soils and stones.	Specialist		

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MA5	ES Chapter 10 (Material Assets and Waste) (TR010066/APP/6.1)	Soil handling management plan	A SHMP will be developed and form part of the Second Iteration EMP. In addition to ensuring soil sustainability during construction, it will detail how all construction phase material assets be managed and identify opportunities to substitute recycled or secondary materials and products for those using primary materials. It will be updated regularly during the construction of the Scheme and include, but not be limited to: - procurement and waste management protocols designed to reduce impacts on the environment and increase local procurement of materials and waste management options. - setting out KPIs and the following performance targets for material assets and waste to be achieved by the Principal Contractor (in accordance with DMRB LA 110, the WFD 2008 and the Waste Management Plan for England (January 2021)): - at least 28% (by weight) of aggregates imported for use within the Scheme should comprise alternative (re-used, recycled or secondary) aggregates, for those applications where it is technically and economically feasible to substitute these alternatives to	EIA –Material assessment	Appropriate project key performance indicators (KPI) to be set. A construction and demolition waste recovery and or recycling rate of 70% (with the aim to achieve 90%) will be set. Use of renewable materials and materials with recycled content in line with the West Midlands region's 28% target. Measures to encourage local and responsible resourcing of material assets (for example through adoption of Buildings Research Establishment (BRE) developed BES 6001). Where required, import of clean naturally occurring soils and stones from another development site would be undertaken in accordance with a MMP.	A SHMP will be developed and form part of the Second Iteration EMP. In addition to ensuring soil sustainability during construction, it will detail how all construction phase material assets be managed and identify opportunities to substitute recycled or secondary materials and products for those using primary materials. It will be updated regularly during the construction of the Scheme. The SHMP will guide the re-use of excavated soils during construction and detail the procedures and measures to be implemented to classify, track, store, re-use and dispose of all excavated waste generated during the construction.	Design Team Principal Contractor Specialist	P C	Signed: Date

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			primary aggregates. Where primary aggregate materials are mandated within DMRB they would be excluded from the target ○ recovery of at least 70% (by weight) of non-hazardous CDW (excluding naturally occurring soils and stones with LoW Code 17 05 04), with the aim to achieve recovery of 90% (by weight) • where waste must be taken to a recycling or disposal site, the Principal Contractor would ensure that the site has the appropriate permits. In addition, the suitable facility would be located as close to the works as possible (ideally within 10km) to minimise the impacts of transportation, in particular the release of carbon emissions. The Principal Contractor would identify the closest and relevant treatment and disposal sites • best practice materials management methods, such as co-location of temporary haul routes on permanent capping and recovery and re-use of temporary works materials from haul routes, plant and piling mattresses, as well as use of 'just-in-time' delivery to reduce double-handling • material procurement, delivery, storage and						

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			handling will be managed to reduce the potential for damaged or surplus stock. Agreements with suppliers will be pursued to reduce packaging or to agree packaging 'take-back' schemes The SHMP will guide the re-use of excavated soils during construction and detail the procedures and measures to be implemented to classify, track, store, re-use and dispose of all excavated waste generated during the construction. The Scheme is known to intersect areas of historical landfill operations (see section 10.4: Environment Agency consultation). If historical wastes associated with the landfills are encountered during construction, they cannot be retained. They must be removed from the Scheme in a manner that will not cause a detrimental impact to the surrounding environment. Further details are presented in the technical note included as ES Appendix 10.1 (Management of Historical Landfill Sites) (TR010066/APP/6.3). Certain wastes, including but not limited to concrete and brick structures, may require processing in line with permitted controls before they can be considered suitable for re-use as a non-waste.						

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			Excavation arisings should be managed in accordance with CIRIA publication C809: Sustainable Management of Surplus Soil and Aggregates from Construction (2023) and DEFRA's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (September 2009) provides practical guidance on how to improve appropriate soil re-use on construction sites and reducing the volume of soils that are sent to landfill.						
MA6	ES Chapter 10 (Material Assets and Waste) (TR010066/APP/6.1)	Site waste management plan	An outline SWMP has been produced for the Scheme which forms part of the First Iteration EMP. This will be developed and the SWMP will form part of the Second Iteration EMP. It will identify the types and likely quantities of wastes that may be generated, and set out, in an auditable manner, how waste will be reduced, re-used, managed and disposed 'in accordance with the waste hierarchy and other legislative requirements. It will include any appropriate waste minimisation and associated KPI targets and implementation of the SWMP will reduce waste at source, during detailed design and construction, by facilitating measures to increase re-use of materials on-site and reduce the need for new construction materials.	EIA –Material assessment	Monitoring of waste generation during the construction phase would be undertaken by the Principal Contractor in line with the SWMP developed from the Outline SWMP as part of the Second Iteration EMP. The focus of the SWMP will be monitoring the quantities and types of waste generated, as well as the duty of care information for the contractors transferring the waste and the sites the waste is taken to for management. The Outline SWMP as part of the First Iteration EMP (TR010066/APP/6.5) provides information on the requirements for duty of care documents, such as the waste transfer notes and consignment notes, as well as	A SHMP will be developed and form part of the Second Iteration EMP. In addition to ensuring soil sustainability during construction, it will detail how all construction phase material assets be managed and identify opportunities to substitute recycled or secondary materials and products for those using primary materials. It will be updated regularly during the construction of the Scheme. The SHMP will guide the re-use of excavated soils during construction and detail the procedures and measures to be implemented to classify, track, store, re-use and dispose of all excavated waste generated during the construction.	Design Team Principal Contractor Specialist	P C	Signed: Date

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			Regular reviews of, and updates to, the SWMP will enable monitoring of the mitigation measures' effectiveness at minimising waste generation, especially reducing quantity of material disposal to landfill as far as practicable.		strategies to be implemented to reduce waste generation and increase re-use and recycling. Preliminary information included in the Outline SWMP will be updated and used by the Principal Contractor to develop the SWMP at PCF Stage 5 Detailed design.				
MA7	ES Chapter 10 (Material Assets and Waste) (TR010066/APP/6.1)	Materials management plan	An MMP would be prepared where applicable to provide lines of evidence covering the use of clean site won materials within the Scheme. If required, the MMP would be developed and form part of the Second Iteration EMP. The MMP would be based on an adequate risk assessment concluding that the objectives of preventing harm to human health and pollution of the environment will be met if materials are used in the proposed manner.	EIA –Material assessment	TBC	TBC	Design Team Principal Contractor Specialist	P C	Signed: Date
Noise and vibration (NV)									
NV1	ES Chapter 11 (Noise and Vibration) (TR010066/APP/6.1)	To ensure that effects of noise are controlled, and that the measures for controlling noise are implemented accordingly.	An Outline Noise and Vibration Management Plan forms part of the First Iteration EMP (TR010066/APP/6.5). The Principal Contractor shall develop and implement a Noise and Vibration Management Plan (NVMP) to be included in the Second Iteration EMP. This will be based upon the REAC, which will detail the management and monitoring processes to be introduced. It will include best practise noise	EIA - Noise impact assessment	On-site monitoring	Real time noise and vibration monitoring Second Iteration EMP Traffic Management Plan Noise and Vibration Management Plan Construction Communication Strategy	Principal Contractor Specialist	C	

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			and vibration mitigation techniques, such as: • Select quieter plant than the preliminary construction plant used within this assessment. • Ensure equipment is maintained, in good working order, and is used in accordance with the manufacturer's instructions. • Use equipment that is fitted with silencers or mufflers. • Set time restrictions on certain noisy and vibratory activities such as earthworks and surfacing. • Manage deliveries to prevent queuing of site traffic. • Do not leave plant running unnecessarily. • Plant with highly directional sound emissions shall be angled so that the direction of highest sound emissions does not face towards receptors where possible. • Materials to be lowered instead of dropped from height. • Alternative reversing warning systems (such as white noise alarms) shall be employed. • The Principal Contractor shall advise members of the construction team during toolbox talk briefings on quieter working methods. • Any fixed plant such as generators shall be positioned at least 20m from nearest receptor and shall have temporary/mobile						

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			noise screens erected around them where possible and necessary. Where the Principal Contractor's preferred plant departs considerably from the plant types, durations of use, and locations as defined in ES Appendix 11.5 (Construction Noise and Vibration Model and Assessment) (TR010066/APP/6.3), the Principal Contractor will consult with the environmental health department at the Local Authority and agree appropriate methods of mitigation and monitoring that account for the location of works, hours of work and expected duration as necessary. This could form part of a Section 61 prior consent application under the Control of Pollution Act 1974, or a less formal route may be possible pending discussions with the Local Authority. The contractor will assess noise and vibration for the construction stages and locations that have been determined in the ES Chapters 8 and 11 (TR010066/APP/6.1) based on the precise locations of plant and durations of work, and set the location of the barrier/solid site hoarding so that provides screening to the residential receptors that are identified where necessary and possible.						
NV2	ES Chapter 11 (Noise and Vibration) (TR010066/APP/6.1)	Reduction of construction noise	Construction works will take place mainly during the daytime. Construction works outside of the normal construction hours of	EIA - Noise impact assessment	On-site monitoring	Real time noise and vibration monitoring Second Iteration EMP	Design Team Principal Contractor	P C	Signed: Date:

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	ES Chapter 8 (Biodiversity) (TR010066/APP/6.1)		07:00-19:00 weekday and 07:00-13:00 on Saturdays shall be minimised as far as practicable. Night working also may take place between 20:00-06:00, including on Saturdays. Measures in the form of temporary noise barriers or site hoarding shall be provided at the areas represented by the residential receptors. This is only necessary where construction activity in the vicinity of the receptor will exceed 10 days or nights in any 15 consecutive days or nights; or for a total number of days exceeding 40 in any six consecutive months. The precise locations and heights of the temporary barriers is to be determined by the Principal Contractor and confirmed to the local authority as part of the further detailed construction noise assessments. Mitigation measures in the form of temporary noise barriers or site hoarding shall be provided at the areas: - Listed structures at Hungerley Hall Farm - Coombe Pool SSSI (for details refer to ES Chapter 8 (Biodiversity) (TR010066/APP/6.1)) The precise locations and heights of the temporary barriers is to be determined by the Principal Contractor and confirmed to the Local Authority as part of the review of the construction noise assessment			Traffic Management Plan Noise and Vibration Management Plan Construction Communication Strategy	Specialist		

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			during detailed design and the precise locations and heights if required will be included within the Second Iteration EMP. For routing of construction traffic, use of local roads other than Brinklow Road, Clifford Bridge Road, B4082 and the A46, will be avoided where possible. If local roads do need to be used for diversion routes different routes would be chosen for each closure to reduce the exposure of individual receptors where practicable. Residents along routes likely to be affected by night-time traffic diversions with potential for significant noise effects will be notified in advance of arrangements.						
NV3	ES Chapter 11 (Noise and Vibration) (TR010066/APP/6.1)	Limit vibration during construction	For construction activities that could result in vibration levels at nearby receptors that exceed SOAEL (such as compaction works within 30m of residential receptors), the Principal Contractor shall: - inform the occupiers of the likely times and duration of works at least one week prior to works commencing - carry these works out during the daytime if practicable - monitor the vibration levels - subject to securing permission from property owners, (if required) carry out a building condition survey to identify any	EIA – Vibration impact assessment	On-site monitoring	Real time noise and vibration monitoring Second Iteration EMP Traffic Management Plan Noise and Vibration Management Plan Construction Communication Strategy	Design Team Principal Contractor Specialist	P C	Signed: Date:

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			sensitive aspects of the building and to ensure the current status of the building is recorded Piling for the gantry foundation will use rotary piling techniques chosen for low noise and vibration output. For construction activities in the vicinity of the Grade II Listed structures at Hungerley Hall Farm, the Principal Contractor shall: 3. Subject to securing permission from property owners, carry out a condition survey to identify any sensitive aspects of the wall and to ensure the current status of the wall is recorded. 4. Carry out a construction vibration assessment to identify the expected vibration level that will occur during compaction works near to the wall (based on the minimum distance, and the confirmed compactor plant details). • Chose appropriate plant to ensure vibration levels expected to cause building damage do not occur. • Monitor vibration at the location of the wall where compaction works (or equivalent) occur within approximately 10m of any listed structure.						

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NV4	ES Chapter 11 (Noise and Vibration) (TR010066/APP/6.1)	Reduction of operational noise	All areas of new surfacing as part of the Scheme shall be surfaced with a low-noise road surface. Bridges will be surfaced with hot rolled asphalt (HRA). The surface material shall be specified to reduce road traffic noise when compared with conventional surfacing.	Design intervention	Adherence to detailed design drawings and specifications.	Implementation of detailed design in accordance with Schedule 2 Requirement 3 of the draft DCO (TR010066/APP/3.1)	Design Team Principal Contractor Specialist	P C O	Signed: Date:
Population and human health (PH)									
PH1	ES Chapter 12 (Population and human health) (TR010066/APP/6.1)	Minimise disruption to farming operations during construction and operation	The construction programme will be developed in consultation with farm owners to minimise disruption to critical farming activities, such as planting and harvesting periods, and to identify any activities that may disturb livestock. Dust suppression measures will be implemented during construction to minimise impacts on crops and livestock. Temporary land-take during construction will be minimised wherever possible. Any affected farm infrastructure (e.g., fences, gates, utility connections) will be replaced or relocated as appropriate. A temporary water drainage strategy will be produced as part of a Water Monitoring and Management Plan, that will be developed during detailed design for the Second Iteration EMP. This will include	EIA – Population and human health assessment	Implementation of requirements identified in the Second Iteration EMP, including the Water Monitoring Management Plan to be developed at detailed design.	Contractual responsibilities between the Applicant and the Principal Contractor.	Principal Contractor	P C O	Signed: Date:

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			measures to address field drainage issues if they arise during the construction period, and to prevent flooding to adjacent farmland.						
Road drainage and the water environment (RD)									
RD1	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	To minimise the potential impact of accidental spillages and leakages on sediment-sensitive surface water features and protect the aquatic environment during construction.	Appropriate storage of construction materials, including bunding of storage tanks, use of silt fencing and covering stockpiles. Refuelling shall only occur in designated areas. Spill kits will be located on sites near to ordinary watercourses or drainage ditches and within the works satellite compound and staff shall be trained in their use. Emergency response procedures to handle any leakages or spillages of potentially contaminating substances. The satellite site compound drainage, where required, will be managed by a temporary drainage system. No pollution pathways will be created between the construction sites, including material lay down areas, and ordinary watercourses or drainage ditches.	EIA	Second Iteration EMP Temporary surface water drainage strategy within the Water Monitoring and Management Plan. Surface water monitoring prior to and during construction phase due to the presence of sensitive ecological and downstream receptors. Requirements to be confirmed with the Environment Agency.	Surface water monitoring. Adhere to CIRIA guidelines on control of water pollution on linear construction sites (C648) and environmental best practice on site (C741) Second Iteration EMP to be updated with emergency response procedures and temporary surface water drainage strategy.	Principal Contractor Specialist	P C	Signed: Date:
RD2	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	To minimise impacts on the water environment	A temporary culvert is required to watercourse 2 (west of the A46 near the new junction). The temporary culvert design, and associated watercourse diversion where it ties into the existing watercourse, would maintain existing flow and as far	EIA and hydromorphological assessment	On-site monitoring	On-site monitoring	Design Team Principal Contractor Specialist	P C	Signed: Date:

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			as practical sediment conveyance. Best practice construction measures, including undertaking the works when there is no flow in the ephemeral watercourse, alternatively should this not be possible then in-river sediment controls should be used during the construction of the temporary culvert. Outfalls shall be designed to ensure the outfall structure is set back from the channel bank and bed to minimise the impact on flow and sediment conveyance. Proposed outfall and culvert design should include erosion protection measures.						
RD3	ES Chapter 13 (Road drainage and the water environment) (TR010066/APP/6.1)	To minimise the potential to impact on surface water receptors	This will be managed by the implementation of a construction-phase drainage strategy. A temporary surface/foul water drainage strategy must be developed and be incorporated into the Second Iteration EMP (DE Plan) to prevent increased flood risk to people and property elsewhere, and to manage pollution risks. Increased flood risk and negative impacts on surface water receptors caused by an increase in impermeable area, leading to an increase in the peak flow rate, volume or change in the direction of surface water runoff, must be managed by the implementation of a temporary surface water drainage strategy The strategy shall adopt SuDS principles to attenuate runoff to greenfield runoff rates, or as a minimum existing runoff rates as well as	EIA – and supporting assessments	On-site monitoring	Consent requirements	Design Team Principal Contractor Specialist	P C	Signed: Date:

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			provide water treatment; this must be incorporated into the Second Iteration EMP (Water Monitoring and Management Plan)						
RD4	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	To protect the groundwater environment and dependent water features	Dewatering activities shall follow best practice methods to minimise contamination pathways and the generation of suspended solids. These will also be subject to obtaining the relevant licences and permits to ensure no impact to the local environment or other water users. Any non-compliant discharges would be collected and disposed of off-site at a licensed facility. Discharges to ground south of Smite Brook should be avoided to protect Herald Marsh Way SSSI.	EIA – groundwater assessment Any dewatering activities would be subject to approval from the Environment Agency and obtaining the relevant licences and permits.	Further monitoring and impact assessments could be required as part of the licensing process to confirm rates of abstraction and area of influence and identify potential receptors within the area of influence.	Abstraction licence and environmental permit for discharge of groundwater (including groundwater monitoring)	Design Team Principal Contractor Specialist	P C	Signed: Date:
RD5	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	To protect the groundwater environment and dependent water features	The piling design will be selected to appropriately minimise disturbance to groundwater flows, and subsequently supply to indirect receptors. The method of piling shall minimise the generation of suspended solids, which may impact nearby indirect receptors. The piling method shall minimise the creation of preferential pathways between aquifer units, where more than one saturated aquifer unit is likely to be encountered. A piling risk assessment shall be undertaken prior to the start of works, with the relevant Environment Agency regulatory	EIA – groundwater assessment	Piling risk assessment and method statements On-site groundwater level and quality monitoring	Regulatory approval Groundwater monitoring	Design Team Principal Contractor Specialist	P C	Signed: Date:

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			guidance on the minimisation of pilling pollution risk being adhered to (Environment Agency, 2002; 2017d; and Westcott <i>et al.</i> , 2001). Groundwater monitoring (levels and quality) will be undertaken between the piles and down-gradient receptors, namely the River Sowe, to ensure that disturbances to groundwater flow and supply are minimised.						
RD6	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	To protect the groundwater environment and dependent water features	Temporary works including below ground structures such as sheet piling and temporary drainage will be selected to appropriately minimise disturbance to groundwater flows, and subsequently supply to indirect receptors.	EIA – groundwater assessment	Temporary works risk assessment and method statements On-site groundwater level and quality monitoring	Regulatory approval Groundwater monitoring	Design Team Principal Contractor Specialist	P C	Signed: Date:
RD7	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	To protect ordinary watercourses	Necessary land drainage consents to be sought from the Lead Local Flood Authorities (Coventry City Council and Warwickshire County Council) where disapplication sought pursuant to the draft DCO (TR010066/APP/3/1) has not been granted, prior to construction.	EIA – and supporting assessments	On-site monitoring	Consent requirements	Principal Contractor	P C	Signed: Date:
RD8	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	To minimise any operational risk and deterioration of groundwater environment	The permanent design for piled foundations and drainage ponds will be selected to appropriately minimise disturbance to groundwater flows, and subsequently supply to indirect receptors. For example, individual concrete piles must be spaced so as not to impede groundwater flow, and groundwater mounding impacts associated with drainage ponds must be mitigated against	EIA – groundwater assessment	On-site monitoring	Groundwater monitoring Design team to review groundwater level data at detailed design stage	Design Team Principal Contractor Specialist	P A	Signed: Date:

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			through the inclusion of up-gradient subsurface drainage in the design.						
RD9	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	To minimise any operational risk and deterioration of groundwater environment	The use of filter drains and existing unlined drainage ditches in the road drainage design is to be reviewed in detailed design. If no other solutions are identified, these shall include an impermeable liner to avoid untreated discharges to groundwater. There should be no filter drains in catchment 1, due to potential risks to the Herald Way Marsh SSSI. Where filter drains are required for subsurface drainage, road runoff is to be isolated and conveyed to the drainage system via carrier pipes. Groundwater level and quality monitoring before, during and after construction.	EIA – groundwater assessment	On-site monitoring Consultation with Environment Agency on inclusion of filter drains and existing unlined drainage ditches within the drainage strategy.	Groundwater monitoring Design team (drainage) to review groundwater level data at detailed design stage	Design Team Principal Contractor Specialist	A	Signed: Date:
RD10	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	To minimise any operational increase in flood risk and deterioration of aquatic environment / Water Framework Directive status during operation.	The proposed increase in areas of hard standing and alteration of ground elevations due to re-profiling would result in an increase in peak flow rates and volumes discharging Smite Brook and tributaries of the River Sowe. Any increase in surface water runoff shall be attenuated using	EIA – and supporting assessments	Drainage Strategy and Flood Risk Assessment including hydraulic modelling to be approved by the Environment Agency, Lead Local Flood Authority (Coventry County Council and Warwickshire County Council).	Through Permit and Consent Requirements	Design Team Principal Contractor Specialist	O	Signed: Date:

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			a detention basin (catchment 3) or pond (catchment 6). The drainage is designed to attenuate to existing runoff rates and includes a 1 in 100-year storm event plus 20% climate change allowance to allow for changes in peak rainfall intensity. A sensitivity test was undertaken with a 40% climate change allowance. This would ensure there is no increase in peak surface water runoff rates resulting from the Scheme. Further details can be found in the Drainage strategy. Ponds are required to treat highway runoff from catchments 5 and 6 (See Surface water quality assessment). One vegetated detention basin shall be provided as an enhancement, for water quality purposes, for catchment 3. The detention basin and ponds would be designed to allow for minimum 300mm freeboard in the event of rainfall of 100-year return period with 20% climate change. Sensitivity test would be carried out for 40% climate change to ensure the proposed basin and ponds do not flood.						

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RD11	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	To minimise the risk of erosion of the watercourse banks and bed due to the discharge from the proposed outfalls.	Flow rates and velocities must be kept to a minimum. All surface water runoff from road runoff must be attenuated to greenfield runoff rates, or no greater than existing where there is no increase in hardstanding, at source using SuDS systems such as attenuation basins. Scour protection downstream of the outfall must be provided to ensure the risk of erosion is minimised. The proposed outfalls must be set back into the bank to minimise the impact on flow conveyance and minimise the impact of erosion and scouring of river banks.	EIA - water quality assessment, drainage strategy geomorphological assessment	Surface water monitoring prior to and during the construction phase due to the presence of sensitive ecological receptor	Surface water monitoring after the construction phase.	Design Team Principal Contractor Applicant	A	Signed: Date:
RD12	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	Approval of construction method statements	Construction method statements and risk assessments must be approved by the Environment Agency where construction activities are likely to intercept the saturated aquifer, such as at structures S01 and S02, drainage ponds and where temporary sheet piling may be used. The construction method statements must include the use of best practice methods to minimise creation of contamination pathways and generation of suspended solids. Consideration of groundwater levels required in temporary and design, with incorporation of additional drainage to reduce the risk of groundwater mounding and flooding.	EIA - groundwater assessment	Groundwater monitoring prior to, during and after the construction phase	Groundwater monitoring	Design Team Principal Contractor Specialist	A	Signed: Date:

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RD13	ES Chapter 13 (Road Drainage and the Water Environment) (TR010066/APP/6.1)	Monitoring of groundwater features	Monitoring of groundwater features at risk from pollution shall be carried out prior to and during the construction phase, subject to confirmation with the Environment Agency. This would comprise groundwater level and quality monitoring at suitable points between activities on-site that may result in groundwater impacts and the down-gradient receptors identified that are at risk of these impacts. Activities likely to require groundwater monitoring include any construction activities intercepting the saturated aquifer, those identified as having the potential to impact on groundwater quality at down-gradient receptors (such as the placement of piles at the VMS gantry), and any dewatering activities.	EIA - groundwater assessment	Surface water and groundwater monitoring prior to and during and after the construction phase due to the presence of Secondary A aquifers	Groundwater monitoring Surface water monitoring after the construction phase.	Design Team Principal Contractor Specialist	A	Signed: Date:
Climate									
C1	ES Chapter 14 (Climate) (TR010066/APP/6.1)	Reduce carbon emissions	Within the structures design there is also an opportunity to use pre-cast concrete step barriers (CSB) rather than slip formed. As part of the detailed design process, National Highways and its contractors will investigate the feasibility of implementing CSB in the design. In earthworks cut/ fill balance there is an opportunity for horizontal and vertical alignments to be optimised for cut/ fill balance. The retaining walls have been removed from the link road. The retaining walls	Carbon calculations using the HE carbon tool	Carbon savings to be reported	The Design team will review the Carbon calculations at detailed design stage	Design team Principal Contractor Applicant	P C	Signed: Date:

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			on the slip road are to be further reviewed at detailed design. During earthworks there is an opportunity for hydrogenated vegetable oil to be considered as an alternative low emission fuel for plant. Electric or hydrogen powered plant are also to be considered. Within pipe lining for drainage there is an opportunity to use the existing network, where possible. CCTV information is under review to investigate any defects and current conditions to assess the viability of replacing the existing faulty drainage with digital or innovative technology. In narrow widenings pavement low carbon concrete will be used where practicable. In asphalt mixtures pavement the Scheme is looking to use recycled mixes. In pavements there are efforts to ensure that best practice construction processes and materials are applied to designs, so the end result is a durable pavement structure with a maximised life span. In pavements there is an opportunity to use alternative fuels for heating and drying at asphalt plants which the Applicant will explore. In pavements an opportunity to use recycled aggregate is being considered. In pavements there is an opportunity to reduce the moisture content of aggregate feedstocks to reduce the drying						

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			energy demand during asphalt production. In pavements there is an opportunity to use longer-life asphalt materials (using PMB and/or longer life binders, and bio-binders).						
C2	ES Chapter 14 (Climate) (TR010066/APP/6.1)	Evaluate the final carbon emissions	In accordance with the DMRB LA 114, projects shall seek to minimise carbon emissions as far as possible in all cases in order to contribute to the UK's net reduction in carbon emissions. Mitigation of effects on climate (i.e. carbon emissions associated with the Scheme) take place throughout the design process in accordance with the principles of PAS 2080: Carbon Management in Infrastructure, i.e. baselining, target setting and monitoring. Monitoring of carbon emissions associated with the construction of the Scheme will be undertaken as per National Highways requirements to meet their key performance indicator "Carbon dioxide equivalents (or CO2e) in tonnes associated with the Supply Chain's activities" (National Highways 2019). In line with DMRB LA 114 the operation of the Scheme is required to manage, maintain and monitor asset data to ensure the Scheme is operating as intended. Adaptive management would be employed during the operational period where it is necessary to adapt the asset management in response to climate impacts. Where appropriate, additional	Carbon calculations using the HE carbon tool	Carbon savings to be reported	The Design team will review the Carbon calculations at detailed design stage. Ongoing activity which will continue and includes the, recording of construction activity, material deliveries, plant used and fuel consumption.	Design team Principal Contractor	A	Signed: Date:

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			interventions would be determined and implemented. During detailed design a detailed monitoring plan would be determined in line with the requirements for the Scheme and the planned operational procedures.						
C3	ES Chapter 14 (Climate) (TR010066/APP/6.1) Outline Carbon Management Plan, Appendix B.8 of the First Iteration EMP (TR010066/APP/6.5).	Evaluate changes in climate change projections	Climate change projections may potentially change prior to construction of the Scheme, therefore the vulnerability of the Scheme to such changes will be reviewed as and when updated projections become available (prior to construction).	Climate change projections are anticipated to change.	Revised projections as required using the HE Carbon Tool – to be presented in updated Carbon Management Plan.	The Design team will review the Carbon calculations at detailed design stage/prior to construction using the HE Carbon Tool detailed design stage.	Design team Principal Contractor	P	Initial: Signed:
Equality Impact Assessment									
EqIA 1	Equality Impact Assessment (TR010066/APP/7.6)	To produce the Suicide Prevention Strategy	During detailed design the Suicide prevention strategy will be produced.	Equality Impact Assessment	Strategy is produced.	Contractual requirement between the Applicant and the Principal Contractor.	Principal Contractor	P	Initial: Signed:
EqIA 2	Equality Impact Assessment (TR010066/APP/7.6)	To produce the Employment and Skills Strategy.	During detailed design the Employment and Skills Strategy will be produced.	Equality Impact Assessment	Strategy is produced.	Contractual requirement between the Applicant and the Principal Contractor.	Principal Contractor	P	Initial: Signed:
EqIA 3	Equality Impact Assessment (TR010066/APP/7.6)	To produce the Procurement Strategy.	During detailed design the Procurement Strategy will be produced.	Equality Impact Assessment	Strategy is produced.	Contractual requirement between the Applicant and the Principal Contractor.	Principal Contractor	P	Initial: Signed: