

Environment & Social Minimum Requirements - Deliverables

[Guidance Note | Environment]

1 Purpose

The purpose of this document is to clarify the deliverables required during the design process to comply with NR/L2/ENV/015 - Environment & Social Minimum Requirements – Design and Construction from December 2019, including associated activities and responsibilities.

This document should be used as reference for discussions between the Employer’s representative (i.e. the Client) and its Supply Chain with regards to environmental and social activities and deliverables during GRIP 1 to 5 design (or equivalent stages).

2 Abbreviations

BEAP	Build Environment Accessibility Panel
CEM	Contractor Engineering Manager
CIBSE	Chartered Institute of Building Services Engineers
CIEEM	Chartered Institute of Ecology and Environmental Management
CM	Conceptual Model
CRE	Contractor Responsible Engineer
CR-T	Contract Requirements – Technical
DCO	Development Consent Order
DQRA	Detailed Quantitative Risk Assessment
DRA	Design Risk Assessment
DIA	Diversity Impact Assessment
DSF	Design Services Framework
EIA	Environmental Impact Assessment
ESA	Environment & Social Appraisal
DESMP	Design Environment & Social Management Plan
ESP	Environmental Scheme Plan
ESRA	Environment & Social Risk Assessment
GI	Ground Investigation
GQRA	Generic Quantitative Risk Assessment
HazID	Hazard Identification

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IDC	Inter-Disciplinary Check
PEA	Preliminary Ecological Appraisal
PCL	Permits, Licences & Consents
PRA	Preliminary Risk Assessment
RAM	Route Asset Manager
RCT	Rail Carbon Tool
S-P-R	Source-Pathway-Receptor
SCO	Supply Chain Operations
SDP	Sustainability Design Plan
SWMP	Site Waste Management Plan
TWAO	Transport and Works Act Order
WRCCA	Weather Resilience and Climate Change Adaptation
WM3	Guidance on the classification and assessment of waste

3 RESPONSIBILITIES

The Contractor Responsible Engineer (CRE) is responsible for the day-to-day management and coordination of the technical and engineering activities within a specific engineering discipline including reviewing, communicating and integrating environmental and social risks and opportunities into the design process. The Contractor Engineering Manager (CEM) has overall accountability for all engineering activities, including briefing all appointed CRE's about project specific requirements and environmental deliverables. The Designer Project Manager is responsible for the delivery of the Client's design requirements including environmental and social activities and deliverables. The Designer Environment Manager is responsible for maintaining the Designer Environment Management System and for providing staff with the tools, processes and competence to deliver against the requirements. The Designer Environment Manager will also act as Environmental Discipline CRE when required (e.g. IDC).

4 Environment & Social deliverables (mandated)

4.1 Hazards Identification (HazID) & Environment & Social Appraisal (ESA)

A preliminary hazard identification shall be undertaken by the Designer at the early GRIP stages (from pre-GRIP to GRIP 2) using information and data available. The Hazard Log should be used to record the findings and be updated to reflect any changes and/or additional information gathered during the design cycle (e.g. through the Environment & Social Appraisal). The volume and significance of hazards identified should also be used to support discussions with the Employer's representative about environmental and social deliverables to include in the Offer.

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The ESA is part of the Network Rail GRIP Product List and shall be completed and updated by the Client from GRIP 2 to 4 to identify the environment and social risks and opportunities associated with the project. The completed appraisal shall be provided to the Designer to inform the Environment & Social Risk Assessment (ESRA) and Environment & Social Management Plan (ESMP), update the Hazard Log and agree on ownership of subsequent activities and control measures identified (e.g. ecology survey). The Designer will support the Client in reviewing and updating the ESA as when required using knowledge gathered during the Hazard Identification process.

GRIP stage	Responsibilities	Tasks
Pre-GRIP to GRIP 2 (HazID)	Designer	Data collection* (Desktop study) Hazard Log update
2 to 4 (ESA)	Client, supported by the Designer as and when required	Data collection* (Desktop study) ESA review and update Hazard Log update Design Development Review *including liaison with internal stakeholders (e.g. RAM)

4.2 Diversity Impact Assessment (DIA)

A DIA shall be started at Pre-GRIP or GRIP 1 at the latest on every Built Environment project with a public interface and updated at every GRIP stage throughout the whole life of a project. The Client Senior Manager (typically the Sponsor) is accountable for the DIA and having it signed off by a Super-User. The completed assessment shall be provided to the Designer to discuss and incorporate the findings into its design. The Designer will support the Client as and when required by providing technical expertise for completing the DIA form. On some projects, the Designer may be instructed to complete the DIA form on behalf of the Client and/or provide a Super-User for sign-off, as agreed as part of the Offer. Moreover, depending on the impact and size of the scheme/project, the Client may be required to submit the scheme design proposals to the Build Environment Accessibility Panel (BEAP), or equivalent review panel managed by the Local Authority, for compliance assessment against accessibility legislation, and options evaluation. The Designer will provide support and attend the panel as and when required by the Client. Large projects should consider employing a registered Access Consultant as part of the team. This will make the consultation with BEAP more effective and further demonstrate that the project design has considered the requirements to meet NR's legal obligations under the Equalities Act 2010.

GRIP stage	Responsibilities	Tasks
1 to 5	Client (Sponsor), supported by the Designer as and when instructed	Data collection (including Census results) Site walkover DIA Form input and update Superuser sign off Design Development Review BEAP consultation

4.3 Preliminary Ecological Appraisal (PEA) & Biodiversity Accounting

A PEA consists of a desk study and a site walkover survey, also known as an Extended Phase 1 Habitat Survey, carried out by a competent ecologist in line with the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Preliminary Ecological Appraisal'. If the project is likely to significantly affect terrestrial or aquatic habitats (e.g. land take >1,500m²), the PEA Report should also include biodiversity accounting using the Defra Biodiversity Metric 2.0.

The PEA is the Designer's responsibility (unless agreed otherwise with the Client), typically at GRIP 3-4. If carried out by the Client, the report should be provided to the Designer for the findings to be integrated into the design. If recommended by the PEA, further surveys will be commissioned by the Client or Principal Contractor, unless the Designer is instructed to do so.

GRIP stage	Responsibilities	Tasks
3	Designer or Client (to be agreed)	<ul style="list-style-type: none"> Scope of Works (SoW) development Ecology Framework supplier's management Access planning including protection staff Ecologist survey and report PEA Report review Design Development Review

For projects over £20million (capital cost), the Designer will identify opportunities to deliver a Net Gain of biodiversity either on site (i.e. enhancements on NR land) or near the site (i.e. offsetting on 3rd party land). These will be recorded in the Opportunities Register (or equivalent) and discussed with the Client.

4.4 Contaminated Land

4.4.1 Preliminary Risk Assessment (PRA)

The Designer will undertake a desktop risk assessment for contaminated land as well as a site walkover to develop an outline Conceptual Model (CM) using a Source-Pathway-Receptor (S-P-R) pollution linkage approach. If site investigations are recommended by the risk assessment due to potential contamination, sampling and chemical testing will be included into the scope of the Ground Investigations/Track Bed Investigations.

GRIP stage	Responsibilities	Tasks
3	Designer	<ul style="list-style-type: none"> Data collection Site walkover Groundsure Enviro Insight Report (or equivalent) Outline Conceptual Model Ground Investigation scoping for sampling and chemical testing (if applicable) PRA Report Design Development Review

4.4.2 Generic Quantitative Risk Assessment (GQRA) & Detailed Quantitative Risk Assessment (DQRA)

If the PRA identifies that more information is needed to assess the risk to human health and/or controlled water (i.e. watercourses and/or aquifers) from pollution linkages, the Designer will discuss the findings with the Client and undertake a Quantitative Risk Assessment (GQRA and/or DQRA), if instructed to do so by the Client.

GRIP stage	Responsibilities	Tasks
4	Designer, if instructed by Client following PRA	Scoping of Works Site investigations Risk Assessment Report Design Development Review

4.4.3 Remediation Options Appraisal & Remediation Strategy

If the PRA, GQRA and/or DQRA identify that there is unacceptable risk to human health and/or controlled water (i.e. watercourses and/or aquifers) from pollution linkages, the Designer will present and discuss the findings to the Client and develop Remediation Options, if instructed to do so by the Client. Once the option has been agreed with the Client and Regulators, a Remediation Strategy will then be commissioned.

GRIP stage	Responsibilities	Tasks
5	Designer if instructed by Client following PRA, GQRA and/or DQRA)	Scoping of Works Consultation with regulators Options Report Design Development Review

4.5 Designer Environment & Social Management Plan (ESMP)

The Designer will develop an ESMP specific to each scheme based on the output from the hazard identification process and ESA. It will detail how the environmental and social risks and opportunities identified during the early GRIP stages will be controlled and managed as part of single option development and detailed design (GRIP 4 & 5). It will include an Environment & Social Risk Assessment (ESRA), a Site Waste Management Plan (SWMP) and a Permits, Consents & Licences (PCL) Register. A Design Out Waste & Resource Efficiency workshop may form part of the SWMP development to identify waste avoidance, reduction and/or reuse opportunities.

GRIP stage	Responsibilities	Tasks
4 and 5	Designer	ESMP development and update ESRA Register input and update SWMP input and update PCL Register input and update Design Out Waste & Resource Efficiency Workshop + Report ESMP briefing Design Development Review

4.6 Energy & Carbon

4.6.1 Capital Carbon

For schemes over £1million (capital cost), the Designer will undertake a capital carbon assessment using the Rail Carbon Tool to develop a baseline and identify opportunities for carbon reduction.

GRIP stage	Responsibilities	Tasks
3 to 5	Designer	Data collection Rail Carbon Tool input and update Carbon Reduction Workshop + Report Design Development Review

For projects over £20million (capital cost), the Designer will demonstrate savings in capital carbon.

4.6.2 Operational Energy & Carbon

For buildings, the Designer will provide an estimate of in-use operational energy and associated carbon emissions using an industry approved energy assessment methodology such as the Chartered Institute of Building Services Engineers (CIBSE) TM54. This should be used to inform the design options through whole-life costing by considering low carbon and low energy solutions with a higher capital cost but a lower operational cost.

GRIP stage	Responsibilities	Tasks
4 and 5	Designer	Data collection Energy assessment using CIBSE TM54 Energy Reduction Workshop + Report Design Development Review

4.7 Weather Resilience & Climate Change Adaptation (WRCCA) Impact Assessment

The Designer will undertake a climate change impact assessment using relevant data sources and develop a WRCCA Risk Report using the WRCCA Impact Assessment and Climate Change Projections guidance notes. The level of detail of this assessment will vary depending on the GRIP stage and the intention is for knowledge of the current and future weather risk to influence project and asset design options. The WRCCA Cost Benefit Decision Making Tool can be used to develop the prioritisation elements of the business case for different options, aligned with the Route WRCCA Plan.

GRIP stage	Responsibilities	Tasks
3 to 5	Designer	Weather data collection* (Desktop study) Impact assessment based on climate change predictions WRCCA Risk Report including cost benefit analysis Design Development Review *including liaison with internal stakeholders (e.g. RAM)

5 Environment & Social deliverables (Additional)

5.1 Environmental Scheme Plan (Signalling Projects)

If instructed by the Signalling Client in CR-T, the Designer will produce an ESP highlighting the environmental and social constraints on a scheme plan, using information provided by the Client.

GRIP stage	Responsibilities	Tasks
4 and 5	Designer, if included in CR-T	Data input onto scheme plan CAD layer Design Development Review

5.2 Operational Noise & Vibration Assessment

If the scheme is adding additional sources of operational noise and/or vibration (e.g. new electrical substation, additional sidings, new chord, increased traffic), the Designer will liaise with the Client to discuss the requirements for a noise and vibration assessment, including baseline monitoring and predicted levels modelling, to develop and design mitigation measures if required.

GRIP stage	Responsibilities	Tasks
2 to 5	Designer, if instructed by Client	Scoping of Works development Noise monitoring and modelling Assessment Report Design Development Review

5.3 Stakeholders Engagement Plan

A Stakeholder Engagement Plan should be prepared by the Client (Sponsor) at GRIP 1 and updated over the duration of the project. The Designer can support the Client with external stakeholders' engagement as and when required, for example by providing drawings, answering queries and attending public meetings.

GRIP stage	Responsibilities	Tasks
1 to 8	Client with support from Designer as and when instructed	Providing drawings for public consultation Handling technical queries from the public Attending public meetings Design Development Review

5.4 Environmental Impact Assessment (EIA)

The Client Town Planning team will identify the requirements for Transport and Works Act Order (TWAO), Development Consent Order (DCO) or Local Authority Planning Permission and associated EIA. The Designer can manage the delivery of an EIA if instructed by the Client.

GRIP stage	Responsibilities	Tasks
3 to 5	To be confirmed by Client as early in project development/design as possible	Scope development with Client

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		Environmental Statement Review Design Development Review
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5.5 Certified Sustainability Assessment (BREEAM/CEEQUAL)

BREEAM and/or CEEQUAL Assessment will be commissioned by the Client and the expected level of performance notified to the Designer for suitable evidence to be collated. Alternatively, the Designer can be instructed to manage the BREEAM and/or CEEQUAL certification on behalf of the Client.

GRIP stage	Responsibilities	Tasks
3 to 5	To be confirmed by Client as early in project development/design as possible	Scope development with Client BREEAM/CEEQUAL Assessor BRE registration cost Evidence collection Design Development Review

6 REFERENCE DOCUMENTS

Reference Number	Title
NR/L2/ENV/015	Environment & Social Minimum Requirements – Design and Construction

7 ISSUE HISTORY

Version	Description	Author	Date
1.0	First issue in response to queries from DSF supplies with regards to Standard NR/L2/ENV/015 Environment & Social Minimum Requirements – Design and Construction	E. Deschamps	24/01/20