



Sustainability & Environment
Appraisal

LA 104

Environmental assessment and monitoring

(formerly HA 205/08, HD 48/08, IAN 125/15, and IAN 133/10)

Revision 1

Summary

This document sets out the requirements for environmental assessment of projects, including reporting and monitoring of significant adverse environmental effects.

Application by Overseeing Organisations

Any specific requirements for Overseeing Organisations alternative or supplementary to those given in this document are given in National Application Annexes to this document.

Feedback and Enquiries

Users of this document are encouraged to raise any enquiries and/or provide feedback on the content and usage of this document to the dedicated Highways England team. The email address for all enquiries and feedback is: Standards_Enquiries@highwaysengland.co.uk

This is a controlled document.

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Release notes

Version	Date	Details of amendments
1	Aug 2020	Revision 1 re-published in August 2020 to correct error on DMRB website. Document was incorrectly published as revision 1 in July 2019 instead of revision 0 due to a typographical error. The DMRB website showed the document as revision 0 and so it has been updated to ensure the website matches the version of the document (revision 1). No changes have been made between first publication in July 2019 and this administrative amendment to the DMRB website. Revision 1 (July 2019) LA 104 replaces HA 205/08, HD 48/08, IAN 125/15, and IAN 133/10. The full document has been re-written to make it compliant with the new Highways England drafting rules.

Foreword

Publishing information

This document is published by Highways England.

This document updates previous environmental assessment advice contained in Volume 11 Section 2 (HA 205/08 and HD 48/08) of the DMRB, consolidates information contained in IAN 125/15 and IAN 133/10 and makes provision for requirements outlined under EU Directive 2011/92/EU as amended by 2014/52/EU 2014/52/EU [Ref 1.N].

Contractual and legal considerations

This document forms part of the works specification. It does not purport to include all the necessary provisions of a contract. Users are responsible for applying all appropriate documents applicable to their contract.

Introduction

Background

Environmental assessment is the process by which information about environmental effects is collected, assessed and used to inform decision-making. This includes Environmental Impact Assessment (EIA) and non-statutory environmental assessment.

The assessment of environmental effects, reporting of assessments and monitoring of significant adverse environmental effects, aligns with the requirements of the Directive 2011/92/EU as amended by 2014/52/EU 2014/52/EU [Ref 1.N] (hereafter referred to as the EIA Directive).

Assumptions made in the preparation of this document

The assumptions made in GG 101 [Ref 5.N] apply to this document.

Abbreviations

Abbreviations

Abbreviation	Definition
EAR	Environmental Assessment Report
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ES	Environmental Statement

Terms and definitions

Terms and definitions

Term	Definition
Authorities likely to be concerned by a project	Authorities or organisations (statutory or non-statutory) that have environmental responsibilities or local and regional competences (as defined by the relevant consenting regime).
Baseline scenario	A description of the current state of the environment without implementation of the project.
Competent authority	An authority that is legally responsible for discharging the requirements of the EIA Directive 2014/52/EU [Ref 1.N] via the development consenting process.
Cumulative effects	Impacts that result from incremental changes caused by other present or reasonably foreseeable actions together with the project. NOTE: For the purposes of this guidance, a cumulative impact can arise as the result of: a) the combined impact of a number of different environmental factors- specific impacts from a single project on a single receptor/resource; and/or b) the combined impact of a number of different projects within the vicinity (in combination with the environmental impact assessment project) on a single receptor/resource.
Detailed assessment	Detailed field surveys and/or quantified modelling techniques to understand complex environmental effects.
Effect	Term used to express the consequence of an impact (expressed as the 'significance of effect').
Elements	Parts of factors NOTE: For example, protected species are part of biodiversity.
Enhancement	A measure that is over and above what is required to mitigate the adverse effects of a project.
Environmental assessment	A process by which information about environmental effects is collected, assessed and used to inform decision-making. NOTE: This includes Environmental Impact Assessment and non-statutory environmental assessment.
Environmental factors	1) Population and human health; 2) Biodiversity; 3) Land, soil, water, air and climate; 4) Material assets, cultural heritage, and landscape; 5) The interaction between the factors listed above.

Terms and definitions (continued)

Term	Definition
Environmental Impact Assessment	Statutory process consisting of: 1) preparation of an Environmental Statement; 2) consultation; 3) examination by the competent authority of the information contained within the Environmental Statement; 4) the reasoned (justified or evidenced) conclusion by the competent authority on the significant effects of the project on the environment; and 5) the reasoned (justified or evidenced) decision by the competent authority to grant or refuse development consent.
Environmental Statement	A statutory report produced by the developer including: 1) a description of the project; 2) a description of the likely significant effects of the project on the environment; 3) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment; 4) a description of the reasonable alternatives; 5) a non-technical summary; and 6) any additional information relevant to the characteristics of a project.
Embedded mitigation	Design measures which are integrated into a project for the purpose of minimising environmental effects.
Essential mitigation	Mitigation critical for the delivery of a project which can be acquired through statutory powers.
Future baseline scenario	An outline of the likely evolution of the current state of the environment without implementation of the project.
Non-statutory environmental assessment	Process consisting of: 1) preparation of an environmental assessment report; 2) examination by the Overseeing Organisation of the information contained within that report; and 3) the reasoned (justified or evidenced) decision by the Overseeing Organisation to proceed (or not) with the project.
Project	Construction works, installations, schemes, or interventions (in the natural surroundings and landscape) including those involving the extraction of mineral resources.

Terms and definitions (continued)

Term	Definition
Reasonable alternatives	Different project design, technology, location, size and scale solutions considered by the developer.
Scoping	The process of considering the information required for reaching a (reasoned) conclusion on the likely significant effects of a project on the environment.
Simple assessment	The collection and assessment of data and information that is readily available to reach an understanding of the likely environmental effects of a project. NOTE: This informs the final design or need for further 'detailed assessment'.

1. Scope

Aspects covered

- 1.1 The requirements and procedures set out in this document shall be followed when assessing, reporting and monitoring the environmental effects of projects in line with the requirements of the EIA Directive 2014/52/EU [Ref 1.N].

NOTE This document does not cover the development of wider legislative, regulatory or administrative provisions under the Environmental Assessment of Plans and Programmes Directive 2001/42/EC [Ref 3.N] (also referred to as the SEA Directive) or the Habitats Directive 92/43/EEC [Ref 2.N].

- 1.2 An Environmental Statement (ES) must be prepared, where screening (see LA 102 [Ref 2.I] Screening) concludes that an Environmental Impact Assessment (EIA) is necessary, in accordance with the requirements of the EIA Directive 2014/52/EU [Ref 1.N].
- 1.3 A non-statutory Environmental Assessment Report (EAR) shall be prepared in line with the requirements of the EIA Directive 2014/52/EU [Ref 1.N] where screening (LA 102 [Ref 2.I] Screening) concludes that an EIA is not necessary.
- 1.4 Monitoring of significant adverse environmental effects must be undertaken in line with the requirements of EIA Directive 2014/52/EU [Ref 1.N], where ES's conclude that there are significant adverse environmental effects.

Implementation

- 1.5 This document shall be implemented forthwith on all projects on motorways and all-purpose trunk roads according to the implementation requirements of GG 101 [Ref 5.N].

Use of GG 101

- 1.6 The requirements contained in GG 101 [Ref 5.N] shall be followed in respect of activities covered by this document.

2. Principles and purpose of environmental assessment

Integration with consent procedures and planning policy

- 2.1 Environmental assessment, reporting and monitoring must meet the requirements of the EIA Directive 2014/52/EU [Ref 1.N].
- 2.2 Environmental assessment, reporting and monitoring shall meet the requirements of the national planning policy for each relevant Overseeing Organisation.

Screening and scoping

- 2.3 Environmental assessment shall be informed by the outputs of screening (see LA 102 [Ref 2.I] Screening) and scoping (LA 103 [Ref 1.I] Scoping).
- 2.3.1 Information collated at the screening and scoping stages should provide an understanding of the environmental issues that require further assessment.

NOTE *The information outlined in this section can supplement the information already collated to inform environmental assessment.*

Assessment and consultation

- 2.4 Where an EIA is required in accordance with the EIA Directive 2014/52/EU [Ref 1.N], projects must ensure:
- 1) the public are given early and effective opportunities to participate in environmental decision-making procedures before consent is given;
 - 2) the public are informed electronically and by public notices or by other appropriate means that an ES (and other relevant project information) is available;
 - 3) the public are consulted for a minimum of 30 days on the ES;
 - 4) the authorities likely to be concerned by a project are given an opportunity to express their opinion on the project before consent is given.

NOTE *For non-statutory environmental assessment, it is considered good practice to consult with affected stakeholders during the design, assessment and consenting process.*

Uncertainty

- 2.5 EIA, undertaken in accordance with the EIA Directive 2014/52/EU [Ref 1.N], must include:
- 1) a description of the main difficulties encountered in compiling the required information; and
 - 2) the main uncertainties involved in the forecasting methods or evidence.
- 2.6 Non-statutory environmental assessments shall include:
- 1) a description of the main difficulties encountered in compiling the required information; and
 - 2) the main uncertainties involved in the forecasting methods or evidence.
- 2.6.1 Reporting of uncertainty should address:
- 1) the availability and validity of baseline data;
 - 2) the effect of the passage of time on the validity of data; and
 - 3) future changes (e.g. project design) that could affect the conclusions of an environmental assessment.

NOTE 1 *The prediction of environmental effects has inherent uncertainties, which the EIA Directive 2014/52/EU [Ref 1.N] recognises.*

NOTE 2 *A level of uncertainty is acceptable provided the prediction of likely environmental effects is supported by sufficient evidence.*

Change management

- 2.7 A change management process shall be implemented throughout the project life cycle to record and assess design changes.
- NOTE 1 The purpose of change management is to record implications for assessment conclusions and subsequent mitigation and monitoring requirements.*
- NOTE 2 Where changes are made, for example as a result of design change during construction, it is essential that assessment conclusions are re-assessed.*
- NOTE 3 Re-assessing original conclusions helps to identify the need to amend mitigation and monitoring measures as the design evolves.*
- 2.8 Where a material change including to mitigation and monitoring is proposed post consent, the implications of this change shall be evaluated, assessed where applicable, and reported prior to their implementation.

3. Environmental assessment methodology

Assigning value

3.1 The value of receptors shall be reported within environmental assessments.

3.2 The descriptions for value (sensitivity) of receptors (as outlined in Table 3.2N), shall be applied by the project.

NOTE *Where relevant, individual environmental factors can set out variations in value description requirements.*

Table 3.2N Environmental value (sensitivity) and descriptions

Value (sensitivity) of receptor / resource	Typical description
Very High	Very high importance and rarity, international scale and very limited potential for substitution.
High	High importance and rarity, national scale, and limited potential for substitution.
Medium	Medium or high importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

Assigning magnitude of impact

3.3 The magnitude of impacts on receptors shall be reported within environmental assessments.

3.4 The descriptions for magnitude of impact (as outlined in Table 3.4N) shall be applied by the project.

NOTE *Where relevant, individual environmental factors can set out variations in magnitude description requirements.*

Table 3.4N Magnitude of impact and typical descriptions

Magnitude of impact (change)		Typical description
Major	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Moderate	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Minor	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring.
Negligible	Adverse	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.
No change		No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Assigning significance

- 3.5 The significance of effects must be reported within ESs, in accordance with the EIA Directive 2014/52/EU [Ref 1.N].
- 3.6 The significance of effects shall be reported within non-statutory environmental assessment reports.
- 3.7 The descriptions for significance (as outlined in Table 3.7) shall be applied by the project.

Table 3.7 Significance categories and typical descriptions

Significance category	Typical description
Very large	Effects at this level are material in the decision-making process.
Large	Effects at this level are likely to be material in the decision-making process.
Moderate	Effects at this level can be considered to be material decision-making factors.
Slight	Effects at this level are not material in the decision-making process.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

NOTE 1 Where relevant, individual environmental factors can set out variations in significance description requirements.

NOTE 2 The approach to assigning significance of effect relies on reasoned argument, the professional judgement of competent experts and using effective consultation to ensure the advice and views of relevant stakeholders are taken into account.

NOTE 3 Significant effects typically comprise residual effects that are within the moderate, large or very large categories.

3.8 The approach to deriving effects significance from receptor value and magnitude of impacts shall be based on Table 3.7 and set out in the methodology section of the environmental assessment.

3.8.1 Where Table 3.8.1 includes two significance categories, evidence should be provided to support the reporting of a single significance category.

Table 3.8.1 Significance Matrix

	Magnitude of impact (degree of change)					
		No change	Negligible	Minor	Moderate	Major
Environmental value (sensitivity)	Very high	Neutral	Slight	Moderate or large	Large or very large	Very large
	High	Neutral	Slight	Slight or moderate	Moderate or large	Large or very large
	Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or large
	Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or moderate
	Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight

3.9 The assessment of the significance of environmental effects shall cover the following factors:

- 1) the receptors/resources (natural and human) which would be affected and the pathways for such effects;
- 2) the geographic importance, sensitivity or value of receptors/resources;
- 3) the duration (long or short term); permanence (permanent or temporary) and changes in significance (increase or decrease);
- 4) reversibility - e.g. is the change reversible or irreversible, permanent or temporary;
- 5) environmental and health standards (e.g. local air quality standards) being threatened; and
- 6) feasibility and mechanisms for delivering mitigating measures, e.g. Is there evidence of the ability to legally deliver the environmental assumptions which are the basis for the assessment?

Defining the baseline scenario

3.10 The baseline environmental conditions must be defined and described without the project in place (baseline scenario) in accordance with the EIA Directive 2014/52/EU [Ref 1.N].

3.10.1 The baseline scenario should include a description of the site location and the surrounding area as far as environmental effects are anticipated.

3.10.2 The baseline scenario should define existing land-uses and environmental receptors/resources relevant to the environmental factor.

3.10.3 A description should be provided of the likely evolution of the current state of the environment without implementation of the project i.e. 'future baseline scenario', with reasonable effort on the basis of the availability of environmental information and scientific knowledge.

3.10.4 When describing the future baseline scenario, readily available information such as local plans, designated site management plans and climate change scenario data should be utilised to provide a description of the natural changes in the local environment over an appropriate timescale that the datasets support.

Defining assessment years and scenarios

- 3.11 Effects must be assessed and reported by comparing a scenario with the project against one without the project, in accordance with the EIA Directive 2014/52/EU [Ref 1.N].

NOTE The scenario without the project and scenario with the project are referred to as the do-minimum and do-something scenarios respectively.

- 3.11.1 The likely significant environmental effects for do-something scenarios should be assessed for the baseline year and future year, or series of future years, depending on the environmental factor.
- 3.12 The baseline year and future year assumptions shall be reported in the methodology section of the environmental assessment reports.
- 3.12.1 The baseline year should represent the conditions prior to implementation of the project, with consistency across the reporting of all environmental factors.
- 3.12.2 For assessing construction phase effects, the baseline year should be chosen to represent the conditions prior to construction starting.
- 3.12.3 For assessing operation phase effects (such as the effects of traffic on noise and air quality) the baseline year should be chosen to represent the situation prior to any effect e.g. opening the project to traffic.
- 3.12.4 The baseline year used for the purpose of the assessment should be as close as possible to the year in which the consenting process commences to ensure the baseline information is up to date and reflective of the current conditions.
- 3.12.5 Current scientific knowledge and methods of assessment should be used to identify foreseeable changes.

Defining the study area

- 3.13 The study area for an assessment shall be clearly defined for each environmental factor at the earliest opportunity.
- 3.13.1 The study area for an assessment should reflect the project and the surrounding environment over which effects are reasonably be thought to occur, taking into account cumulative effects.
- 3.13.2 For the assessment of cumulative effects, the spatial boundary of the receptor/resource with potential to be affected directly or indirectly should be defined.

NOTE 1 For some projects, sensitive receptors and resources can be located beyond the immediate environs of the project e.g. through hydrological pathways.

NOTE 2 Consultation with relevant stakeholders can help to inform the identification of potential receptors/resources and potential significant effects, and inform the definition of the study area.

Survey and information assembly

- 3.14 Survey design shall form part of the project planning process to minimise potential delays to delivery programmes.

NOTE Certain environmental surveys are seasonal and have set 'windows' for completion.

- 3.14.1 The need for time sensitive surveys should be identified as early as possible in the option choice, planning, assessment and design process.
- 3.14.2 Where justifiable constraints limit the scope of surveys, these should be discussed with authorities likely to be concerned by a project to determine an appropriate approach and reported appropriately.
- 3.15 Approval shall be sought from the Overseeing Organisation prior to approaching landowners and undertaking site visits for surveys.

NOTE Environmental data collated during the assessment process can help populate asset databases and inform performance reporting.

Identification of reasonable alternatives

- 3.16 EIA must report on the following alternatives, in accordance with the EIA Directive 2014/52/EU [Ref 1.N]:
- 1) technology alternatives: temporary and permanent traffic control measures;
 - 2) design alternatives: of physical elements including structures, and landscaping;
 - 3) size and scale alternatives: seeking opportunities to reduce the size and scale of the development where the project objectives would not be compromised;
 - 4) demand alternatives: to meet the need through demand management techniques;
 - 5) activity alternatives such as provision of traffic calming instead of a new road;
 - 6) location alternatives: selection of different corridors or access routes; and as a sub-set of these main alternatives;
 - 7) delivery alternatives: alternatives that reflect different means of delivering the desired end point in production terms, (for example, a clear span bridge or one with piers and abutments in the river);
 - 8) scheduling alternatives: programming the activities to avoid periods of enhanced environmental sensitivity, e.g. the consideration of alternative temporary land-take during construction;
 - 9) input alternatives: use of different materials, lighting strategies or different designs;
 - 10) mitigation alternatives: the variety of solutions available to mitigate the adverse consequences of a proposal;
 - 11) The 'do minimum' and 'do nothing' scenarios.
- 3.16.1 The level of effort applied to each of the alternative types should be proportionate to the feasibility of assessment and any benefits that assessment of an alternative can generate.
- 3.16.2 Evidence of the consideration of alternatives should be reported along with the reason(s) for not pursuing them.
- 3.17 Reporting of alternatives within EIAs shall include solution(s) that offer better environmental outcomes across objectives set by the Overseeing Organisation.
- 3.18 When investigating solutions that offer the best environmental outcomes across objectives set by the Overseeing Organisation, non-statutory environmental assessments shall report on the alternatives listed in 'Identification of reasonable alternatives'.

Cumulative effects

- 3.19 EIAs must include cumulative effects in accordance with the requirements of the EIA Directive 2014/52/EU [Ref 1.N].
- 3.20 Non-statutory environmental assessments shall include cumulative effects.
- 3.21 Environmental assessments shall assess cumulative effects which include those from:
- 1) a single project (e.g. numerous different effects impacting a single receptor); and
 - 2) different projects (together with the project being assessed).
- 3.21.1 Cumulative effects should be assessed when the conclusions of individual environmental factor assessments have been reached and reported.
- 3.21.2 The assessment of cumulative effects should report on:
- 1) roads projects which have been confirmed for delivery over a similar timeframe;
 - 2) other development projects with valid planning permissions or consent orders, and for which EIA is a requirement; and
 - 3) proposals in adopted development plans with a clear identified programme for delivery.
- 3.22 The assessment of cumulative effects shall:

- 1) establish the zone of influence of the project together with other projects;
- 2) establish a list of projects which have the potential to result in cumulative impacts; and
- 3) obtain further information and detail on the list of identified projects to support further assessment.

NOTE 1 *The assessment of cumulative impacts can be established through a desk study and mapping exercise, together with a review of planning/development applications and development plans.*

NOTE 2 *There are no defined limits or criteria for selecting the list of projects for cumulative assessment. Professional judgement using Annex III of the EIA Directive 2014/52/EU [Ref 1.N] can be applied and justification provided for developments selected (and excluded).*

NOTE 3 *The temporal and spatial scope, together with characteristics of the identified projects, are key considerations in identifying projects that require further assessment.*

NOTE 4 *The Overseeing Organisation and/or authorities likely to be concerned by a project can provide relevant advice on the scope of the assessment of cumulative effects.*

Design and mitigation

3.23 Environmental assessment and design shall incorporate mitigation measures using a hierarchical system as follows:

- 1) avoidance and prevention: design and mitigation measures to prevent the effect (e.g. alternative design options or avoidance of environmentally sensitive sites);
- 2) reduction: where avoidance is not possible, then mitigation is used to lessen the magnitude or significance of effects;
- 3) remediation: where it is not possible to avoid or reduce a significant adverse effect, these are measures to offset the effect.

3.24 Environmental assessment shall report on the following categories of mitigation:

- 1) embedded mitigation: project design principles adopted to avoid or prevent adverse environmental effects; and
- 2) essential mitigation: measures required to reduce and if possible offset likely significant adverse environmental effects, in support of the reported significance of effects in the environmental assessment.

3.24.1 Embedded mitigation should be reported in the project description and not repeated in each environmental factor assessment.

3.24.2 Essential mitigation should be reported in relevant environmental factor assessments.

3.24.3 The Overseeing Organisation should be consulted where a different approach to reporting mitigation than that outlined above is proposed.

NOTE 1 *Early identification of effects and design of mitigation measures serves to:*

- 1) *maximise the time available to projects to re-design or make design changes to 'design out' significant adverse environmental effects;*
- 2) *deliver the project in line with objectives and / or policy;*
- 3) *identify land required for mitigation enabling early dialogue with stakeholders;*
- 4) *maximise the time available to consult with authorities likely to be concerned by a project thereby ensuring mitigation is well informed and is widely accepted; and*
- 5) *minimise costs associated with mitigating effects later in the project lifecycle when design parameters are 'fixed' and therefore harder to amend.*

NOTE 2 *Mitigation measures can produce adverse as well as beneficial effects e.g. an environmental noise barrier can increase visual intrusion.*

3.25 Significance of an effect shall be reported after an assessment of the effectiveness of the design and mitigation measures (the residual effect).

NOTE Assigning significance to an effect after an assessment of the effectiveness of the design allows for positive contribution of all mitigation that is effective, deliverable and committed.

3.26 Proposed mitigation measures shall only be taken into account when determining significance if;

- 1) the success of the features / measures delivering the desired outcome is supported by evidence; and
- 2) the project has an identified legal mechanism for implementing the features/measures.

3.27 The costs of the construction and establishment of any mitigation measures that form the basis of environmental assessment shall be included in the project budget.

NOTE The most cost effective and environmentally acceptable solutions can be delivered where potential environmental effects are given early consideration.

Environmental enhancement

3.28 Enhancement opportunities shall be reported within the environmental assessment.

3.28.1 The following items may be relevant to the design and delivery of enhancement opportunities:

- 1) national and local policy requirements;
- 2) policy and performance requirements of the Overseeing Organisation;
- 3) project specific objectives.

NOTE 1 Early identification of the cost of enhancement measures helps inform decision making by the Overseeing Organisation.

NOTE 2 Where essential mitigation is being delivered for other purposes, this offers an enhancement opportunity where it does not compromise the original objective of that land.

4. Reporting of environmental assessments

Good practice principles

4.1 The following principles shall be implemented as part of an environmental assessment:

- 1) consistent, clear presentation and referencing with little or no duplication of information.
- 2) coordination between environmental factors to prevent effects being overlooked or reported multiple times.
- 3) unbiased, impartial presentation of the assessment findings.
- 4) a quantified and objective approach adopted with a distinction made between fact, assumptions and professional judgement.

Environmental factors

4.2 EIA undertaken in accordance with the EIA Directive 2014/52/EU [Ref 1.N] must report against the following factors:

- 1) air quality;
- 2) cultural heritage;
- 3) landscape;
- 4) biodiversity;
- 5) geology and soils;
- 6) material assets and waste;
- 7) noise and vibration;
- 8) population and human health;
- 9) road drainage and the water environment;
- 10) climate.

4.3 Non-statutory environmental assessment shall report against the factors listed in 'Environmental factors'.

NOTE Scoping determines the extent of reporting against each of these factors.

4.4 When reporting against factors on the above environmental factors, the requirements of the Overseeing Organisation shall be applied.

Heat and radiation

4.5 The potential impact of heat and radiation from a project must be reported within ESs in accordance with the EIA Directive 2014/52/EU [Ref 1.N].

NOTE Heat and radiation is unlikely to be relevant to the scope of most motorway and all-purpose trunk road projects.

4.6 The potential impact of heat and radiation from a project shall be reported within non-statutory environmental assessment reports.

4.7 Where heat and radiation are scoped out, evidence supporting the approach shall be outlined within the project characteristics section of the environmental assessment.

4.8 Where heat and radiation are scoped in, advice shall be sought from the Overseeing Organisation on the assessment scope and method.

Major accidents and disasters

4.9 When scoping major accidents and disasters (hereafter referred to as major events), an assessment shall be made of the following:

- 1) vulnerability of the project to risks of major events; and
- 2) any consequential changes in the predicted effects of that project on environmental factors.

4.10 Major events shall include both man-made and naturally occurring events.

NOTE There is no definition of major events within the relevant legislation.

4.10.1 When scoping major events, projects should:

- 1) apply professional judgement, in consultation with the Overseeing Organisation, to develop project specific definitions of major events;
- 2) identify any major events that are relevant to and can affect a project.
- 3) describe the potential for any change in the assessed significance of the project on relevant environmental factors in qualitative terms;
- 4) report the conclusions of this assessment within the individual environmental factors; and
- 5) clearly describe any assumed mitigation measures, to evidence assessment conclusions and demonstrate that likely effects have been mitigated and managed to an acceptable level.

4.10.2 Not all events warrant assessment and evidence should be provided to support the view that they are classified as major events.

4.11 Evidence supporting the approach to assessing major events shall be outlined within the project characteristics and methodology sections of the environmental assessment.

4.12 Major events shall be reported within the relevant environmental factors agreed during scoping.

Environmental statement

4.13 An ES must contain (as a minimum) the information outlined in Annex IV of the EIA Directive 2014/52/EU [Ref 1.N].

NOTE 1 The ES is a statutory reporting procedure for projects that have been identified as being likely to cause significant environmental effect(s).

NOTE 2 The aim of the ES is to:

- 1) fulfil statutory obligations under the EIA Regulations 2014/52/EU [Ref 1.N];
- 2) fulfil statutory obligations for public access to environmental information under EU Directive 2003/4/EC 2003/4/EC [Ref 4.N];
- 3) satisfy the Overseeing Organisation's internal communication needs and approval processes;
- 4) provide the public with an accessible document from which they can express their opinions;
- 5) provide an audit trail for decision makers;
- 6) provide a basis for identification and delivery of mitigation; and
- 7) provide a basis for monitoring, auditing and management of environmental mitigation and enhancement measures.

4.14 The specific requirements of the Overseeing Organisation shall apply to the structure of ES.

Non-technical summary

4.15 Where EIA is undertaken, a non-technical summary (NTS) must be prepared alongside the ES in accordance with the requirements of the EIA Directive 2014/52/EU [Ref 1.N].

4.16 Where an NTS is prepared, it must contain a summary of the information contained within the ES as outlined in Annex IV of the EIA Directive 2014/52/EU [Ref 1.N].

4.16.1 An NTS should highlight the principal findings of the associated ES without using technical jargon and abbreviations.

Describing the project

- 4.17 Environmental assessments must clearly describe the project and its characteristics in accordance with the EIA Directive 2014/52/EU [Ref 1.N].
- 4.17.1 Plans and/or figures should be used to support the description of a project.
- 4.17.2 Temporary and permanent land use requirements should be defined when describing a project.
- 4.17.3 When defining a project, the physical characteristics of the development should be described, with references to their size, nature and purpose, including any requisite demolition works.
- 4.17.4 Where the scale or design of elements has not been fixed in a project, the parameters of the development should be defined.
- 4.17.5 Environmental assessments should be undertaken using a realistic 'worst case' scenario.
- 4.17.6 Environmental design input should be sought at the earliest stage possible to allow sufficient time to facilitate design changes and completion of further assessment as required.
- NOTE 1 The definition of a 'worst case' scenario can vary between environmental factors.*
- NOTE 2 Approaches such as the Rochdale Envelope principle can allow environmental assessment to proceed, within a number of agreed parameters, where details of a project are broadly defined.*

Non-statutory environmental assessment

- 4.18 The content of non-statutory environmental assessment shall be agreed through scoping LA 103 [Ref 1.I] Scoping projects for environmental assessment.
- 4.18.1 Non-statutory environmental assessment should provide a record of an appropriate and proportionate level of environmental assessment, as no significant environmental effects should be reported.
- 4.19 The specific requirements of the Overseeing Organisations shall apply for non-statutory environmental assessment.

5. Monitoring of significant adverse effects

General principles

- 5.1 Where ES's conclude that there are significant adverse environmental effects, projects must undertake proportionate monitoring of associated mitigation measures, in accordance with the EIA Directive 2014/52/EU [Ref 1.N].

NOTE *The purpose of monitoring is to:*

- 1) *ensure measures envisaged to avoid, prevent or reduce and, if possible, offset significant adverse effects on the environment are delivered;*
- 2) *build data on the effectiveness of design and mitigation measures thereby driving improvement in environmental performance for future projects;*
- 3) *satisfy licence / permit requirements (where applicable); and*
- 4) *identify remedial action as a consequence of underperformance or failure of mitigation.*

- 5.2 The type of parameters to be monitored and the duration of the monitoring, reported within ESs, must be proportionate to the nature, location and size of the project and the significance of its effects on the environment, in accordance with the EIA Directive 2014/52/EU [Ref 1.N].

- 5.3 Existing monitoring arrangements which are in place as a result of other European or national legislation shall be used if appropriate to avoid any duplication of monitoring.

- 5.3.1 The need for environmental monitoring should be assessed throughout the lifecycle of the project from inception to the commencement of the statutory process.

- 5.3.2 Monitoring measures should be undertaken as required during construction, handover and through the operation and maintenance periods.

- 5.4 Mitigation and monitoring measures shall be identified and developed through the design and environmental assessment process and initially documented in the ES or the non-statutory EAR.

NOTE *Further environmental mitigation and monitoring requirements are set out in other documents, for example the flood risk assessment, statutory permit / licence conditions and stakeholder commitments.*

- 5.5 The monitoring requirements of a project shall be agreed with the Overseeing Organisation and / or competent authority, in consultation with relevant stakeholders as required.

Reporting monitoring measures

- 5.6 The results of monitoring shall be reported through updates of the environmental management plan (EMP) during construction and handover phases.

- 5.6.1 An EMP should set out the mitigation needed to manage environmental effects associated with a project and identify all necessary measures to avoid, reduce and offset a project's environmental impact and the methods for implementation.

- 5.6.2 An EMP should set out the statutory monitoring commitments, including the need to evaluate the monitoring, identify remedial actions and report on environmental monitoring.

- 5.6.3 All environmental management actions recorded in an EMP should be specific, measureable, achievable, reportable and timely (SMART).

- 5.6.4 Environmental management actions should include all monitoring requirements, success criteria, and specify a mechanism for reporting on progress against environmental requirements and commitments.

- 5.7 The EMP shall be used as a method of reporting specific monitoring and management measures post consent.

- 5.7.1 The EMP should be an iterative document and continually updated to reflect progress on achieving the identified actions throughout the project lifecycle and respond to any assessment assumption and design changes identified by the change management process.

Evaluation and remediation

- 5.8 The results and evaluation of monitoring shall be reported to the Overseeing Organisation and/or competent authority.
- 5.9 Any proposals for remedial action shall be discussed and agreed with the Overseeing Organisation and/or competent authority on a case by case basis.

6. Normative references

The following documents, in whole or in part, are normative references for this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Ref 1.N	2014/52/EU, 'Assessment of the effects of certain public and private projects on the environment'
Ref 2.N	92/43/EEC, 'Conservation of natural habitats and of wild fauna and flora.'
Ref 3.N	2001/42/EC, 'Directive 2001/42/EC(d) of the European Parliament and of the Council on the assessment of the effects of certain plans and programmes on the environment'
Ref 4.N	2003/4/EC, 'Directive 2003/4/EC of the European Parliament and of the council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC.'
Ref 5.N	Highways England. GG 101, 'Introduction to the Design Manual for Roads and Bridges'

7. Informative references

The following documents are informative references for this document and provide supporting information.

Ref 1.I	Highways England. LA 103, 'Scoping projects for environmental assessment'
Ref 2.I	Highways England. LA 102, 'Screening projects for Environmental Impact Assessment'

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Sustainability & Environment
Appraisal

LA 104

England National Application Annex to LA 104 Environmental assessment and monitoring

Revision 0

Summary

This National Application Annex sets out Highways England's specific requirements on environmental assessment and monitoring of projects.

Feedback and Enquiries

Users of this document are encouraged to raise any enquiries and/or provide feedback on the content and usage of this document to the dedicated Highways England team. The email address for all enquiries and feedback is: Standards_Enquiries@highwaysengland.co.uk

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Release notes

Version	Date	Details of amendments
0	Jul 2019	Highways England National Application Annex LA 104.

Foreword

Publishing information

This document is published by Highways England.

Contractual and legal considerations

This document forms part of the works specification. It does not purport to include all the necessary provisions of a contract. Users are responsible for applying all appropriate documents applicable to their contract.

Introduction

Background

This National Application Annex defines the Highways England specific requirements related to the environmental assessment and monitoring of projects under Directive 2011/92/EU as amended by 2014/52/EU [Ref 1.N] (hereafter referred to as the EIA Directive).

Assumptions made in the preparation of this document

The assumptions made in GG 101 [Ref 4.N] apply to this document.

Abbreviations

Abbreviations

Abbreviation	Definition
APFP	Applications: Prescribed Forms and Procedure NOTE: Reference to The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) [Ref 8.N]
DCO	Development Consent Order NOTE: Planning Act 2008 (as amended) Section 22 [Ref 6.N]
EIA	Environmental Impact Assessment
ES	Environmental Statement
IP EIA	Infrastructure Planning EIA
NN NPS	National Networks National Policy Statement
NSIP	Nationally Significant Infrastructure Project
PINS	Planning Inspectorate

Terms and definitions

Terms and definitions

Term	Definition
Development consent order	Consent given by a Minister for a nationally significant infrastructure project (NSIP). NOTE: This usually combines a grant of planning permission with a range of other separate consents, such as listed building consent.
Nationally significant infrastructure project	A highway-related development as defined within part III of the Planning Act 2008 (as amended) [Ref 6.N] including construction, alteration and improvement.
The Planning Inspectorate	An executive agency responsible for national infrastructure planning applications, examination of local plans and other planning-related and specialist casework in England and Wales.
Preliminary environmental information	Information required within an environmental statement which has been compiled by the applicant; and is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development). NOTE: Definition from the Infrastructure Planning (EIA) Regulations 2017 [Ref 3.N].

E/1. Planning Act 2008 (as amended)

Principles and purpose of environmental assessment

E/1.1 Nationally significant infrastructure projects (NSIPs) require environmental assessment and shall undertake either:

- 1) an Environmental Impact Assessment (EIA) in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as the IP EIA Regulations) [Ref 3.N]; or
- 2) a non-statutory environmental assessment.

NOTE The process of deciding whether an EIA is required for an NSIP is set out in LA 102 [Ref 1.I] Screening projects for Environmental Impact Assessment.

E/1.2 The IP EIA Regulations [Ref 3.N] transpose the principles set out in the EIA Directive [Ref 1.N] for NSIPs, and must be applied to all NSIPs required to undertake an EIA.

E/1.3 Non-statutory environmental assessments for NSIPs shall follow the procedures set out in LA 103 [Ref 7.N] Scoping projects for environmental assessment and LA 104 [Ref 2.N] Environmental assessment and monitoring.

Reporting

E/1.4 Environmental statements and non-statutory environmental assessment reports shall report against the environmental factors outlined in E/1.

E/1.5 All NSIPs must demonstrate that the environmental assessment requirements of the national networks national policy statement (NN NPS) [Ref 5.N] have been addressed.

E/1.6 The Planning Inspectorate (PINS) has developed methodology set out in Advice Note Seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects [Ref 2.I] which shall be applied to all NSIP environmental assessments.

NOTE PINS Advice Note Seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects can be used when undertaking the environmental assessment of NSIPs alongside this National Application Annex.

E/1.7 All NSIPs shall ensure that any environmental management plan (EMP) is secured within the development consent order (DCO).

E/1.8 Where the change management process (refer to LA 104 [Ref 2.N] Environmental assessment and monitoring) identifies a material change, NSIPs must follow the requirements of The Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011 (as amended) [Ref 9.N] in respect to environment assessment reporting.

NOTE PINS Advice Note Sixteen: How to request a change which may be material [Ref 3.I] can be used to inform the material change process alongside this National Application Annex.

Environmental assessment and consultation

E/1.9 All NSIPs must adhere to the consultation and publication requirements in the Planning Act 2008 (as amended) [Ref 6.N] and The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (hereafter referred to as the APFP Regulations) [Ref 8.N].

E/1.10 Where an EIA is required, the publication and notification requirements of the IP EIA Regulations [Ref 3.N] must be applied.

E/1.11 Where an EIA is required, NSIPs must publicise and consult on preliminary environmental information in accordance with the requirements of the IP EIA Regulations [Ref 3.N].

NOTE PINS Advice Note Three: EIA Consultation and Notification [Ref 4.I] can be used when undertaking the publication, notification and consultation requirements of NSIPs alongside this National Application Annex.

E/2. Normative References

The following documents, in whole or in part, are normative references for this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Ref 1.N	'Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment Text with EEA relevance, Official Journal L 124, 25/04/2014.'
Ref 2.N	Highways England. LA 104, 'Environmental assessment and monitoring'
Ref 3.N	'Infrastructure Planning (Environmental Impact Assessment) Regulations 2017'
Ref 4.N	Highways England. GG 101, 'Introduction to the Design Manual for Roads and Bridges'
Ref 5.N	'National Networks National Policy Statement (NN NPS)'
Ref 6.N	'Planning Act 2008 (as amended)'
Ref 7.N	Highways England. LA 103, 'Scoping projects for environmental assessment'
Ref 8.N	'The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)'
Ref 9.N	'The Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011 (as amended)'

E/3. Informative References

The following documents are informative references for this document and provide supporting information.

Ref 1.I	Highways England. LA 102, 'Screening projects for Environmental Impact Assessment'
Ref 2.I	Available at: www.infrastructure.planninginspectorate.gov.uk . 'The Planning Inspectorate Advice note seventeen: Cumulative effects assessment relevant to nationally significant infrastructure Projects '
Ref 3.I	The Planning Inspectorate Advice note sixteen: How to request a change which may be material. Available at: www.infrastructure.planninginspectorate.gov.uk . 'The Planning Inspectorate Advice note sixteen: How to request a change which may be material. Available at: www.infrastructure.planninginspectorate.gov.uk '
Ref 4.I	Available at: www.infrastructure.planninginspectorate.gov.uk . 'The Planning Inspectorate Advice Note three: EIA Notification and Consultation. '

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Sustainability & Environment
Appraisal

LA 104

Northern Ireland National Application Annex to LA 104 Environmental assessment and monitoring

Revision 0

Summary

This National Application Annex sets out Department for Infrastructure Northern Ireland specific requirements on environmental assessment and monitoring of projects.

Feedback and Enquiries

Users of this document are encouraged to raise any enquiries and/or provide feedback on the content and usage of this document to the dedicated team in the Department for Infrastructure, Northern Ireland. The email address for all enquiries and feedback is: dcu@infrastructure-ni.gov.uk

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Release notes

Version	Date	Details of amendments
0	Jul 2019	Department for Infrastructure Northern Ireland National Application Annex to LA 104.

Foreword

Publishing information

This document is published by Highways England on behalf of Department for Infrastructure, Northern Ireland.

Contractual and legal considerations

This document forms part of the works specification. It does not purport to include all the necessary provisions of a contract. Users are responsible for applying all appropriate documents applicable to their contract.

Introduction

Background

This National Application Annex defines the Department for Infrastructure, Northern Ireland specific requirements related to the environmental assessment and monitoring of projects under Directive 2011/92/EU as amended by 2014/52/EU (hereafter referred to as the EIA Directive [Ref 1.N]).

Assumptions made in the preparation of this document

The assumptions made in GG 101 [Ref 3.N] apply to this document.

The Department for Infrastructure should be consulted regarding any Northern Ireland specific queries, relating to the Environmental Assessment process, which are not addressed in this National Application Annex.

Terms and definitions

Terms

Term	Definition
Competent authority	An authority that is legally responsible for discharging the requirements of the EIA Directive and UK Regulations via the development consenting process. NOTE: The competent authority for road works permitted under the General Permitted Development Order [Ref 5.N] is the Department.
Department	Department for Infrastructure, Northern Ireland
Environmental Impact Assessment	Process consisting of: 1) screening, scoping and preparation of an EIA Report; 2) consultation and publication of the report and any other environmental information in accordance with the Roads (NI) Order [Ref 7.N]; 3) examination by the competent authority of the information contained within the EIA Report, and any supplementary information provided, and the results of any consultations; 4) the reasoned conclusion of the competent authority, taking into account the results of the examination referred to in point 3, and where appropriate, its own supplementary examination; and 5) the integration of that reasoned conclusion into the decision as to whether to proceed with the project.
Environmental Impact Assessment Report	In Northern Ireland an Environmental Impact Assessment Report is synonymous with Environmental Statement in other jurisdictions. Therefore any reference to Environmental Statement within the main document should be taken to mean Environmental Impact Assessment Report.

NI/1. Roads (NI) Order 1993, as amended**Environmental assessment**

NI/1.1 The criteria outlined in Article 67 of the Roads (Northern Ireland) Order 1993 [Ref 7.N], as amended by the Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 2017 [Ref 6.N], shall be used to determine if EIA is required.

NOTE This includes screening, scoping, Environmental Impact Assessment and non-statutory environmental assessment.

NI/1.2 Where it is determined that an Environmental Impact Assessment (EIA) is required, it shall be developed, produced and implemented to meet the requirements of the Roads (Northern Ireland) Order 1993 [Ref 7.N], as amended.

NI/1.3 Non-statutory environmental assessments shall follow the principles and procedures set out in LA 103 [Ref 4.N] Scoping projects for environmental assessment and LA 104 [Ref 2.N] Environmental assessment and monitoring.

NI/2. Normative References

The following documents, in whole or in part, are normative references for this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Ref 1.N	EIA Directive, 'Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment'
Ref 2.N	Highways England. LA 104, 'Environmental assessment and monitoring'
Ref 3.N	Highways England. GG 101, 'Introduction to the Design Manual for Roads and Bridges'
Ref 4.N	Highways England. LA 103, 'Scoping projects for environmental assessment'
Ref 5.N	legislation.gov.uk. 'The Planning (General Permitted Development) Order (Northern Ireland) 2015'
Ref 6.N	legislation.gov.uk. 'The Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 2017'
Ref 7.N	legislation.gov.uk. 'The Roads (Northern Ireland) Order 1993 (as amended)'

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Sustainability & Environment
Appraisal

LA 104

Scotland National Application Annex to LA 104 Environmental assessment and monitoring

Revision 0

Summary

This National Application Annex sets out the Transport Scotland specific requirements on the environmental assessment of projects including reporting and monitoring of significant adverse environmental effects in line with Directive 2011/92/EU as amended by 2014/52/EU.

Feedback and Enquiries

Users of this document are encouraged to raise any enquiries and/or provide feedback on the content and usage of this document to the dedicated Transport Scotland team. The email address for all enquiries and feedback is: TSSStandardsBranch@transport.gov.scot

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Release notes

Version	Date	Details of amendments
0	Jul 2019	Transport Scotland National Application Annex to LA 104.

Foreword

Publishing information

This document is published by Highways England on behalf of Transport Scotland.

Contractual and legal considerations

This document forms part of the works specification. It does not purport to include all the necessary provisions of a contract. Users are responsible for applying all appropriate documents applicable to their contract.

Introduction

Background

This National Application Annex gives the Transport Scotland-specific requirements related to the environmental assessment of projects including reporting and monitoring of significant adverse environmental effects in line with Directive 2011/92/EU as amended by 2014/52/EU (EIA Directive [Ref 1.N])

Assumptions made in the preparation of this document

The assumptions made in GG 101 [Ref 2.N] apply to this document.

S/1. Environmental assessment methodology

S/1.1 Significance of an effect shall be reported including embedded mitigation measures.

S/1.2 Residual effects shall be reported after assessment of the effectiveness of essential mitigation measures required to reduce and, if possible, offset likely significant adverse environmental effects.

NOTE Assigning significance of an effect, taking account of embedded mitigation, and again after an assessment of the effectiveness of essential mitigation demonstrates the positive contribution of all committed mitigation.

S/2. Normative References

The following documents, in whole or in part, are normative references for this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Ref 1.N	EIA Directive, 'Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment'
Ref 2.N	Highways England. GG 101, 'Introduction to the Design Manual for Roads and Bridges'

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Sustainability & Environment
Appraisal

LA 104

Wales National Application Annex to LA 104 Environmental assessment and monitoring

(formerly IAN (W) 125/09)

Revision 0

Summary

This National Application Annex sets out the Welsh Government's specific requirements on the environmental assessment of projects including reporting and monitoring of significant adverse environmental effects in line with Directive 2011/92/EU as amended by 2014/52/EU for projects under the Highways Act 1980.

Feedback and Enquiries

Users of this document are encouraged to raise any enquiries and/or provide feedback on the content and usage of this document to the dedicated Welsh Government team. The email address for all enquiries and feedback is: CustomerHelp@wales.gsi.gov.uk

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Release notes

Version	Date	Details of amendments
0	Jul 2019	Welsh Government National Application Annex to LA 104.

Foreword

Publishing information

This document is published by Highways England on behalf of Welsh Government.

This document supersedes previous Welsh advice contained in IAN (W) 125/09 (Supplementary Guidance for the users of Design Manual for Roads and Bridge (DMRB) Volume 11 Environmental Assessment).

Contractual and legal considerations

This document forms part of the works specification. It does not purport to include all the necessary provisions of a contract. Users are responsible for applying all appropriate documents applicable to their contract.

Introduction

Background

This National Application Annex gives the Welsh Government-specific requirements on the environmental assessment of projects including reporting and monitoring of significant adverse environmental effects in line with Directive 2011/92/EU [Ref 1.N] as amended by 2014/52/EU (herein after referred to as the EIA Directive [Ref 2.N]) under the Highways Act 1980.

Assumptions made in the preparation of this document

The assumptions made in GG 101 [Ref 6.N] apply to this document.

Terms and definitions

Terms and definitions

Term	Definition
Consultation bodies	Consultation bodies are those likely to be concerned by the projects, including NRW, CADW and relevant local authorities or National Park Authority, or their successors; and the relevant Trunk Road Agents or their successors.
Project authority	Welsh Ministers as defined by the Highways Act 1980 as amended Act CHAPTER 66 [Ref 4.N]

W/1. Environmental assessment and monitoring under the Highways Act 1980 (as amended)

Principles and purpose of environmental assessment

W/1.1 Environmental assessment, reporting and monitoring shall meet the requirements of the:

- 1) EIA Directive [Ref 2.N];
- 2) Highways Act, 1980 (as amended) [Ref 5.N] ; and,
- 3) Planning Policy Wales, Edition 9 [Ref 7.N] or its successor.

NOTE *Highways Act, 1980 (as amended) [Ref 5.N] includes The Environmental Impact Assessment (Miscellaneous Amendments Relating to Harbours, Highways and Transport) Regulations 2017 [Ref 9.N].*

W/1.2 Where a material change to mitigation and monitoring is proposed post consent, the implications of this change shall be evaluated and assessed against the Environmental Statement conclusions and other relevant assessments.

W/1.2.1 The project authority should be consulted on any consequential change to mitigation and monitoring prior to implementation.

Environmental assessment methodology

W/1.3 The assessment of cumulative effects shall adhere to the requirements of LA 104 [Ref 3.N] Environmental assessment and monitoring.

W/1.3.1 The assessment of cumulative effects should report on:

- 1) roads projects which have been confirmed for delivery over a similar time-frame;
- 2) other development projects with valid planning permissions or consent orders, and for which EIA is a requirement;
- 3) proposals in adopted development plans with a clear identified program for delivery;
- 4) the likely effect of areas of land in adopted development plans highlighted for development.

W/1.4 Significance of an effect shall be reported before and after an assessment of the effectiveness of the design and mitigation measures.

NOTE 1 *The residual effect is the significance after mitigation is applied.*

NOTE 2 *Assigning significance to an effect after an assessment of the effectiveness of the design allows for positive contribution of all mitigation that is effective, deliverable and committed.*

W/1.5 The costs of the construction and establishment of any mitigation measures that form the basis of environmental assessment shall be included in the project budget.

NOTE *The most cost effective and environmentally acceptable solutions can be delivered where potential environmental effects are given early consideration.*

Reporting of environmental assessments

W/1.6 The environmental factors of land and health in the EIA Directive [Ref 2.N] shall be assessed and reported in accordance with LA 112 [Ref 8.N] Population and human health.

W/1.7 The assessment of major accidents and disasters shall assess previous major accidents and disasters in the study area as part of the baseline.

W/1.8 The ES and non-statutory environmental assessment report shall detail how the process has been carried out so that the sustainable development principles as described in the Well-Being of Future Generations Act (Wales) 2015 [Ref 10.N] have been taken into account.

W/1.9 The ES must contain the information outlined in Annex IV of the EIA Directive [Ref 2.N] .

- W/1.10 The ES shall contain the following information:
- 1) the legal basis for the ES;
 - 2) the originator of the ES;
 - 3) purpose of the ES;
 - 4) scope and content of the ES;
 - 5) project history;
 - 6) project objectives;
 - 7) the reasons for the project, including existing problems;
 - 8) an environmental constraints map;
 - 9) the policy context;
 - 10) related draft orders under the Highways Act, 1980 (as amended) [Ref 5.N]; if relevant;
 - 11) consultations up to the publication of the ES;
 - 12) details of other related assessment reports, if relevant, and how they can be accessed;
 - 13) details of how and where the ES can be viewed/obtained;
 - 14) details of how the public and consultation bodies can comment on the ES;
 - 15) the publication date of the ES;
 - 16) details of the time period within which comments on the ES can be made;
 - 17) details of how to make comments;
 - 18) details of any material available and where it can be found, outside of the ES which would support the understanding of project and the ES (e.g.: digital media, visual models etc).
- W/1.11 The contents of a non-statutory environmental assessment report shall be based on the contents of the ES.
- W/1.12 The structure of an ES shall contain the following:
- 1) introduction;
 - 2) the project - including links to earlier assessments;
 - 3) alternatives considered;
 - 4) links to relevant policies;
 - 5) EIA methodologies;
 - 6) information relating to the assessment of the environmental factors;
 - 7) assessment of cumulative effects;
 - 8) opportunities for enhancement;
 - 9) environmental management plan;
 - 10) monitoring proposals;
 - 11) conclusions;
 - 12) references;
 - 13) glossary/abbreviations;
 - 14) technical reports supporting the assessment;
 - 15) plans which support the understanding of the assessment;
 - 16) environmental master plans;
 - 17) a copy of the non-technical summary.
- W/1.13 The structure of a non-statutory environmental assessment report shall be based on the structure of an ES.
- W/1.14 The non-technical summary shall be bi-lingual, Welsh and English.

W/1.15 Arrangements for the publication of the ES/non-statutory environmental assessment report and related notices shall be agreed with the Overseeing Organisation.

W/1.16 The ES/non-statutory environmental assessment report shall be made available to inform the consent decision, and any other relevant information from the Overseeing Organisation.

Monitoring of significant adverse effects

W/1.17 Where the ES concludes that there are significant adverse environmental effects after mitigation, projects must in accordance the EIA Directive [Ref 2.N] undertake proportionate monitoring of associated mitigation measures.

W/1.17.1 Proportionate monitoring of construction and operational activities should be undertaken to identify unforeseen significant adverse effects.

W/1.18 Monitoring requirements shall include proposals to define an appropriate definition of the success of the mitigation proposals.

W/1.19 The results of monitoring shall be evaluated against the definition of success.

W/2. Normative References

The following documents, in whole or in part, are normative references for this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Ref 1.N	'Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014'
Ref 2.N	EIA Directive, 'Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment'
Ref 3.N	Highways England. LA 104, 'Environmental assessment and monitoring'
Ref 4.N	The National Archives. legislation.gov.uk. Act CHAPTER 66, 'Highways Act 1980'
Ref 5.N	Highways Act, 1980 (as amended), 'Highways Act, 1980 (as amended)'
Ref 6.N	Highways England. GG 101, 'Introduction to the Design Manual for Roads and Bridges'
Ref 7.N	Welsh Government. Planning Policy Wales, Edition 9, 'Planning Policy Wales, Edition 9'
Ref 8.N	Highways England. LA 112, 'Population and human health'
Ref 9.N	'The Environmental Impact Assessment (Miscellaneous Amendments Relating to Harbours, Highways and Transport) Regulations 2017' , 2017/1070
Ref 10.N	'Well-being of Future Generations (Wales) Act 2015'

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Environmental Accident, Incident and Response Management Plan

Document Control	
Document Title:	Environmental Accident, Incident and Response Management Plan
Document Reference:	CD-G075
Revision Number:	4.0
Date of Revision Enforcement:	21 st November 2025
Compiled By:	Callum Mitchell

Document Template Revision Log		
Revision Number:	Date:	Description of Changes:
1.0	08/12/2021	Implementation of Environmental Incident & Accident Management Plan
2.0	22/11/2022	Additional sections regarding documenting and reporting procedures, emergency contacts and personnel responsibilities added.
2.0	22/11/2023	Reviewed, no changes.
3.0	22/11/2024	Reviewed, no changes.
4.0	21/11/2025	Various changes throughout.

Associated Documents	
Document Reference	Title
CD-A023	Site Spillage Register
CD-A024	Site Spill Report
CD-A129	Emergency Spill Procedure

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1.0. Introduction and Scope

This document has been prepared for Tom Prichard Contracting Ltd, and forms as both the Environmental Incident and Accident Management Plan. This document consolidates all Environmental Incident Plans for the Prichard's group of companies. The scope of this document is to:

- Identify events or failures that could damage the environment
- Assesses how likely they are to happen and the potential environmental consequences
- Actions to minimise the potential causes and consequences of accidents
- The actions that are required to be carried out if an accident happens.

This Environmental Incident Management Plan has been implemented and maintained at the company as part of the company's Environmental Management System and will ensure the site and all operatives within are fully prepared for such incidents.

1.1. Review

The EIMP and all associated procedures will be reviewed at least every four years or as soon as practicable after an incident, with changes made accordingly to minimise the risk of occurrence / recurrence.

2.0. Risk Assessment

The EIMP has adopted a risk assessment approach to each potential hazard by combining the probability and magnitude of the potential risk to give an estimation of the risk prior to any mitigation measures. The risk management measures, which are designed to reduce the likelihood of occurrence, are then detailed followed by an estimation of the actual risk post-mitigation (Residual Risk Rating).

The four categories are as follows:

- **Severe:** Possible irreparable damage to environmental resources.
- **Moderate:** Possible damage to environmental resources which are limited within a regional context.
- **Mild:** Possible effects might be transient damage to environmental resources which are commonplace on a regional basis and alternative sources are readily available.
- **Negligible:** The effects are negligible or might cause very slight temporary deterioration in the current environmental resource quality.

The matrix shown below considers the probability of the potential risk against the magnitude of the potential impact, thereby giving an estimation of the resulting likelihood of the risk occurring.

Table 1: Risk Estimation Matrix				
	Magnitude of Potential Impact			
Potential of pollution occurring	Severe	Moderate	Mild	Negligible
High	High	High	Medium/Low	Near Zero
Medium	High	Medium	Low	Near Zero
Low	Medium	Medium	Low	Near Zero
Negligible	Medium	Medium/Low	Low	Near Zero

The qualitative risk assessment for the EIMP has been based on the matrix outlined above.

The final stage of the risk assessment is the judgement of the severity of the residual risk following implementation of the mitigation measures.

3.0. Pollution, Emission Sources, Monitoring and Corrective Actions

3.1. Dust and Litter

Emissions may arise in the form of dust and litter from the following activities:

Table 2: Activities causing dust and litter

Pollution Causes	Risk of Occurring Without Mitigation	Risk of Impact Magnitude without mitigation	Risk Estimation	Locations	Monitoring	Control/Corrective Action	Risk of Occurring with Control Measures	Risk of Impact Magnitude with mitigation	Risk Estimation with control measures
Vehicle Movements (Dust)	High	Mild	Medium/Low	Recycling Centres Public Highways Demolition Projects Civils and Construction Projects Rail Projects	Site supervisors of non-permanent installations, i.e., demolition projects will conduct daily checks for dust. Recycling site supervisors will follow the monitoring requirements of their respective site environmental permits. Increased monitoring frequency during periods of dry weather.	For corrective actions/control measures pertaining to the companies recycling centres, consult the site-specific EMS documents. Use of tractor bowser to supply dust suppression. Dampening of materials prone to produce dusts.	Low	Mild	Low

Table 2: (Continued) Activities causing dust and litter

Pollution Causes	Risk of Occurring Without Mitigation	Risk of Impact Magnitude without mitigation	Risk Estimation	Locations	Monitoring	Control/Corrective Action	Risk of Occurring with Control Measures	Risk of Impact Magnitude with mitigation	Risk Estimation with control measures
Crushing/ Screening (Dust)	High	Mild	Medium/ Low	Recycling Centres Demolition Projects Civils and Construction Projects Rail Projects	Site supervisors of non-permanent installations, i.e., demolition projects will conduct daily checks for dust. Recycling site supervisors will follow the monitoring requirements of their respective site environmental permits. Increased monitoring frequency during periods of dry weather.	For corrective actions/control measures pertaining to the companies recycling centres, consult the site-specific EMS documents. Use of tractor bowser to supply dust suppression. Dampening of materials prone to produce dusts. Implementation of mobile plant permits and risk assessments for treatment of wastes on non-EPR-permitted sites.	Low	Mild	Low

Table 2: (Continued) Activities causing dust and litter

Pollution Causes	Risk of Occurring Without Mitigation	Risk of Impact Magnitude without mitigation	Risk Estimation	Locations	Monitoring	Control/Corrective Action	Risk of Occurring with Control Measures	Risk of Impact Magnitude with mitigation	Risk Estimation with control measures
Poor House Keeping (Litter)	High	Mild	Medium/Low	Recycling Centres Demolition Projects Civils and Construction Projects Rail Projects	Site supervisors of non-permanent installations, i.e., demolition projects will conduct daily checks for litter. Recycling site supervisors will follow the monitoring requirements of their respective site environmental permits. Increased monitoring frequency during periods of dry weather.	For corrective actions/control measures pertaining to the companies recycling centres, consult the site-specific EMS documents. Appropriate waste containers for litter will be placed on site. Operatives will be given toolbox talks on the segregation and importance of correctly disposing litter.	Negligible	Negligible	Near Zero

3.2. Mud and Debris

Emissions may arise in the form of mud and debris from the following activities;

Table 3: Activities causing mud and debris

Pollution Causes	Risk of Occurring Without Mitigation	Risk of Impact Magnitude without mitigation	Risk Estimation	Locations	Monitoring	Control/Corrective Action	Risk of Occurring with Control Measures	Risk of Impact Magnitude with mitigation	Risk Estimation with control measures
Vehicle Movements (Mud/ Debris)	High	Mild	Medium/ Low	Recycling Centres Public Highways Demolition Projects Civils and Construction Projects Rail Projects	Site supervisors of non-permanent installations, i.e., demolition projects will conduct checks for mud and debris. Recycling site supervisors will follow the monitoring requirements of their respective site environmental permits. Increased monitoring frequency during periods of abnormal weather or during periods of high traffic.	For corrective actions/control measures pertaining to the companies recycling centres, consult the site-specific EMS documents. Wheel wash/rumble strips to be installed at the entry of sites deemed at high risk. Drivers to inspect wheels before leaving site for lodged debris. Road sweeper to be utilised in areas identified with potential to cause environmental pollution.	Low	Mild	Low

3.3. Spill's, Leaks, Loss of Containment, Transfer of Substances & Overfilling of Vessels

Emissions may arise in the form of spills, leaks, containment failure and or overfilling of vessels from the following activities;

Table 4: Activities causing; Spill's, Leaks, Loss of Containment, Transfer of Substances & Overfilling of Vessels

Pollution Causes	Risk of Occurring Without Mitigation	Risk of Impact Magnitude without mitigation	Risk Estimation	Locations	Monitoring	Control/Corrective Action	Risk of Occurring with Control Measures	Risk of Impact Magnitude with mitigation	Risk Estimation with control measures
Refuelling of vehicles/plant & Machinery	Medium	Severe	High	Recycling Centres Demolition Projects Civils and Construction Projects Rail Projects	Site supervisors of non-permanent installations, i.e., demolition projects will conduct checks on containers. Recycling site supervisors will follow the monitoring requirements of their respective site environmental permits.	For corrective actions/control measures pertaining to the companies recycling centres, consult the site-specific EMS documents. Tanks and containers to be stored in line with the Control of Pollution (Oil Storage) (Wales) Regulations 2016. Levels of fuel to be recorded. Tanks are inspected visually on a daily basis by site staff to ensure	Low	Mild	Low

						continued integrity of tanks and identify any necessary remedial action.			
Overfilling vessels	Medium	Severe	High	Recycling Centres Demolition Projects Civils and Construction Projects Rail Projects	Site supervisors of non-permanent installations, i.e., demolition projects will conduct checks on containers. Recycling site supervisors will follow the monitoring requirements of their respective site environmental permits.	For corrective actions/control measures pertaining to the companies recycling centres, consult the site-specific EMS documents. Containers to be stored /refilled/transferred in bunded areas with capacity of at least 110% of the initial container. Operatives to be trained in appropriate filling practices. Pumps will operate anti-spillage mechanisms, to automatically stop dispensing.	Low	Mild	Low
COSHH/ Fuel Spillage	Medium	Severe	High	Recycling Centres	Site supervisors of non-permanent installations,	For corrective actions/control measures	Low	Mild	Low

				Demolition Projects	i.e., demolition projects will conduct checks on plant/machinery.	pertaining to the companies recycling centres, consult the site-specific EMS documents.			
				Civils and Construction Projects	Recycling site supervisors will follow the monitoring requirements of their respective site environmental permits.	Spill kits to be kept in a number of locations, which is risk based.			
				Rail Projects		Operatives to be trained in appropriate			
Plant Malfunction	Medium	Severe	High	Recycling Centres	Site supervisors of non-permanent installations, i.e., demolition projects will conduct checks on plant/machinery.	All sites with plant/machinery to complete daily tick sheets.			
				Demolition Projects					
				Civils and Construction Projects	Recycling site supervisors will follow the monitoring requirements of their respective site environmental permits.	Spill kits to be located in/on all plant and machinery.			
				Rail Projects					

3.4. Fire

Emissions may arise from fire from the following activities;

Table 5: Activities causing dust and litter

Pollution Causes	Risk of Occurring Without Mitigation	Risk of Impact Magnitude without mitigation	Risk Estimation	Locations	Monitoring	Control/Corrective Action	Risk of Occurring with Control Measures	Risk of Impact Magnitude with mitigation	Risk Estimation with control measures
Arson	High	Severe	High	Recycling Centres Demolition Projects Civils and Construction Projects Rail Projects	Site supervisors of non-permanent installations, i.e., demolition projects will conduct daily checks of perimeters. Recycling site supervisors will follow the monitoring requirements of their respective site environmental permits. Increased monitoring frequency during periods of dry weather.	For corrective actions/control measures pertaining to the companies recycling centres, consult the site-specific EMS documents. On-site security measures. Security lighting 24 hours a day. Security cameras are installed at key areas of the site. Lockable gates are located at the site entrance.	Low	Mild	Low

						Gates will be locked whenever the site is closed. Fencing and gates are maintained and repaired to ensure their continued integrity. If damage is sustained, repair will be made within the same working day. If this is not possible, suitable measures will be taken to prevent unauthorised access to the site and permanent repairs will be affected as soon as is practicable. All visitors to the site are required to register in the visitor's book and sign out again on exit, thereby minimising the risk of unauthorised visitors on the site; and			
Ignition of plant and machinery	Low	Severe	Medium	Recycling Centres	Site supervisors of non-permanent installations, i.e., demolition projects	For corrective actions/control measures pertaining to the	Low	Mild	Low

				Demolition Projects	will conduct daily checks of plant and machinery.	companies recycling centres, consult the site-specific EMS documents.			
				Civils and Construction Projects	Recycling site supervisors will follow the monitoring requirements of their respective site environmental permits.	On-site security measures.			
				Rail Projects	Increased monitoring frequency during periods of dry weather/high productivity or long periods of inactivity.	Security lighting 24 hours a day. Security cameras are installed at key areas of the site. Plant and machinery to be stored as far as reasonably practical away from combustible materials/waste/liquids.			

4.0. Response/Reporting Procedures

Control and corrective actions in the response to a pollution event have been detailed in tables 2-5.

The below responses shall not apply to Natural Resource Wales regulated facilities as these are managed under a site-specific environmental management plan which covers these procedures.

4.1. Fire

In the incidence of fire, the personnel upon discovering the fire shall ensure their own safety. Once safe, the personnel will contact **999** and request the Fire and Rescue Service. Once the alarm has been raised, the personnel will contact the Environmental Manager, George Harvey, who will implement the standard Emergency Response investigation.

4.2. Other Emergency Responses

In the incidence of oil spills, the discovering personnel shall implement the procedures within the Emergency Spill Response Plan, CD-A129, unless site specific instructions exist.

In the incidence of dust and litter, the discovering personnel shall immediately inform the site manager, who will contact the skips & waste management department. The skips and waste management department will assign a tractor bowser to attend site as per the corrective actions set out in the above tables.

All incidences of pollution shall be immediately reported to the Environmental Manager, who will implement the standard Emergency Response investigation.

The investigation procedure and record will be recorded on CD-A024 and logged on a register as per CD-A023.

5.0. 24 Hour Emergency Contacts

External Company Contacts Directory			
Organisation:	Contact Name:	Information:	Contact Number:
Tom Prichard Contracting Ltd	George Harvey	Environmental Manager	07771 484840
Tom Prichard Contracting Ltd	Jason Cornock	Health and Safety Manager	07947 364226
Emergency Services	N/A	Police, Fire, Ambulance	999
Health and Safety Executive (HSE)	N/A	For major injuries or fatality	0345 300 9923 (Office) 0151 922 9235 (Out of Hours)
Natural Resources Wales	N/A	Environmental Incident Hotline 24/7	0300 065 3000
Biffa	N/A	Emergency Spill Response 24/7	08455 216 666
Dwr Cymru	N/A	Welsh Water Services	0800 052 0130 (Water) 0800 085 3968 (Sewerage)
British Telecom	N/A	Communications Infrastructure	0800 783 2023
Wales and West Utilities	N/A	Gas Utilities	0800 912 29 99
National Grid	N/A	Gas Utilities	0800 111 999
National Grid	N/A	Electricity Utilities	0800 40 40 90
Western Power Distribution	N/A	Electricity Utilities	0800 678 3105

6.0. Personnel Responsibilities

Site operatives will be required to report any pollution incidences directly to the Site Manager and the Environmental Manager.

The Site Manager will be responsible for implementing the emergency response procedures set out in this document as well as any further requirements instructed by the Environmental Manager.

The Environmental Manager will be responsible for issuing emergency responses, as well as conduct the investigation, implement and monitor lessons learnt following on from the incident. The Environmental Manager will also be responsible for liaising with relevant stakeholders such as Natural Resources Wales.

7.0. Distribution

This document will be placed in the environmental folder accompanied to each project.

Prior to the start of the project, the Environmental Manager (or other designated persons) will distribute this document to the Site Manager.

The site manager, as part of the site induction will distribute this document to all persons under their authority.

8.0. Conclusion

This document is required to be used in conjunction with the associated documents in the previous headings as well as the appended documents.

This document shall be kept up to date on at regular intervals, or where a process change/incident warrants a revision.



Site Waste Management Plan (SWMP)

Table 1: Document Control	
Document Title:	Site Waste Management Plan
Master Template Version:	1.0
Master Template Reference:	CD-G076
Template Created:	9 th January 2026
Next Review:	9 th January 2027
Project Name:	
Project Number:	
Site Address:	
Client:	
Compiled By:	
Contract Manager:	
Project Manager:	

This SWMP shall be reviewed as often as is required to ensure that it reflects the progress of the project and in any event, not less than every three months. The below version log is a summary of the site specific SWMP and relevant changes specific to the project, not the master template.

Table 2: Document Revision Log		
Revision Number:	Date:	Description of Changes:
1.0		SWMP001 Issued

Contents

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Table 3: Appendices List

Appendix Ref:	Appendix Title:	Revision:

Table 4: Tables List

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3	Appendices List	
4	Tables List	
5	Figures List	



6	Regulatory Framework	
7	Declaration Signatories	

Table 5: Figures List		
Figure Ref:	Figure Description:	Section:
1		

1.0. Introduction

This Site Waste Management Plan (SWMP) has been developed to enable the site team to efficiently manage waste materials produced through the life of the project. It also covers the legal use of waste materials (if required) brought onto site for use in the project.

This SWMP applies to all activities throughout the project.

The Plan includes:

- Brief details of the regulatory framework and project details including who is responsible for maintaining this SWMP and agreed recycling targets (Section 2.0)
- A declaration signed by the principal parties to manage waste efficiently and legally (Section 3)
- A record of who the SWMP has been distributed to and when (Section 4)
- Waste reduction targets (Section 5.0)
- Waste reduction initiatives (Section 6.0)
- Evidence that the Duty of Care checks have been carried out on all the waste managed on this project and a record of audits (Section 7.0)
- Completion Report, a comparison of the predictions with the actual waste removed, deviations from the Plan, estimate of the cost savings by operating the SWMP and the declaration that the Plan has been managed in accordance with the Regulations (Section 8.0)
- Sign-off Declaration (Section 9.0).

2.0. Responsible Persons, and Relevant Regulatory Framework

2.1. Responsible Persons

The persons responsible for updating this SWMP is [ENTER NAME HERE] whose role is [ENTER ROLE HERE].

2.2. Project Brief

[ENTER PROJECT BRIEF HERE]

2.3. Regulatory Framework

This SWMP has been compiled with consideration given to the following environmental legislations

Table 6: Regulatory Framework

Environmental Factor	Status/Legal Protections
Waste	Environmental Protection Act 1990
	The Site Waste Management Plans Regulations 2008 (revoked)
	Clean Neighbourhoods and Environment Act (2005)
	Hazardous Waste (England and Wales) Regulations 2005
	The Waste (England and Wales) Regulations 2011 (as amended)
	Waste Management, The Duty of Care Code of Practice (2016 update)
Environmental Incidents	Water Resources Act 1991
	Environmental Protection Act 1990

3.0. Declaration

The Client, Principal Contractor and major sub-contractors will take all reasonable steps to ensure that:

- All waste from the site is dealt with in accordance with the waste duty of care in section 34 of Environmental Protection Act 1990 (as amended), the Waste (England & Wales) Regulations 2011 and the Waste (Scotland) Regulations 2012; and
- Material will be handled efficiently and waste managed appropriately.

Table 7: Declaration Signatories

Client:

Client Name:

Representative:

Signature:

Date:

Principal Contractor:

Principal Contractor:

Representative:

Signature:

Date:

Subcontractor 1:

Subcontractor:

Representative:

Signature:

Date:	
Subcontractor 2:	
Subcontractor:	
Representative:	
Signature:	
Date:	
Subcontractor 3:	
Subcontractor:	
Representative:	
Signature:	
Date:	
Subcontractor 4:	
Subcontractor:	
Representative:	
Signature:	
Date:	

Add subcontractors as necessary.



4.0. Distribution

4.1. Distribution

This SWMP and its Appendices must be kept on site at all times. The controlled copy, held by Tom Prichard Contracting, must be available for inspection by auditors.

The controlled copy of this SWMP is held by:

Table 8: Controlled Copy		
Name:	Position:	Company:

Each subcontractor that produces waste whilst on site will receive an uncontrolled copy of the SWMP and a representative shall sign the declaration in Section 3.0.

Uncontrolled copies of this SWMP have been distributed to the following:

Table 9: Distribution List			
Name:	Position:	Company:	Version Number:



5.0. Waste Reduction Targets

Table 10 sets out agreed targets for waste reduction initiatives for the duration of the project.

Table 10: Reduction Targets		
Target ID:	Target Description:	Comments:
1	Recover a minimum of 90% of construction waste materials by weight through recycling and energy recovery, and aim to meet 100%	
2	Reuse 100% of excavation and in-situ materials by weight on site within the MMP	



6.0. Pre-construction Waste Reduction Initiatives

The following initiatives were implemented during the pre-construction stages to reduce the quantity of waste produced over the life of the project. These are taken from client’s & designer’s information and Prichard’s initiatives. These typically include improvements to the cut/full balance, off site pre-fabrication, specifying site-won material, increasing recycled content, soil stabilisation etc. The estimated cost savings have been calculated by calculating the cost of using raw materials and disposal of the existing material at a non-hazardous landfill.

Table 11: Distribution List			
Type of Waste Eliminated or Minimised:	Quantity Eliminated or Minimised:	Decision Taken	Estimated Cost Savings:
e.g. Inert Soils Infill	e.g. 160,000m ³	e.g. Reuse of soils utilising the CL:AIRE Strategy.	e.g. £2000.00

7.0. Duty of Care Summary Tables

The following summary tables are used to ensure that we have carried out our Duty of Care checks on our waste contractors. These checks must be carried out and are generally completed on our waste management system. The Duty of Care documentation can be found on our ISYS portal. The documentary evidence for our Duty of Care checks must be available for inspection before the waste goes off-site.

7.1. Waste Details

The list of waste codes listed below can be found on the WM3 Guidance

7.2. Waste Carrier

The Carrier's registration details are found on:

<https://naturalresources.wales/permits-and-permissions/check-for-a-permit-licence-or-exemption/?lang=en>

The online checks on the waste carriers are carried out here to ensure that waste remains within control of a licenced entity.

Use a Waste Transfer Note for inert and non-hazardous waste and a Hazardous Waste Consignment Note (supplied by the contractor/regulator) for hazardous waste.

7.3. Disposal Audits

For all waste dispatched on to a downstream facility, full checks are to be carried out before new waste types or suppliers are to be allowed to remove waste on to site.

A pre-acceptance screening procedure will be used to ensure that the wastes that are being proposed for delivery comply with the requirements of the environmental permit held, and whether the wastes are suitable to be recovered.

This process will involve a review of information from the waste receiver.



7.4. Inert and Non-hazardous Waste

Table 12: Inert and Non-hazardous Waste dispatches										
Waste Details:				Waste Carriers Licensing Details:				Disposal Site Details:		
Waste Type	LoW Code	Source	Tonnage Dispatched	Name of Waste Carrier	Carrier Registration Number:	Waste License Checked?	Waste Transfer Note Used, Single or Seasonal:	Name of Disposal Site	EPR/Exemption Number:	Append Audit:
Wood	20 01 38		0.00	Tom Prichard Contracting Ltd	CBDU9944	✓	Single WTN			
Mixed Municipal Waste	20 03 01		0.00	Tom Prichard Contracting Ltd	CBDU9944	✓	Single WTN			
Metal	17 04 07		0.00	Tom Prichard Contracting Ltd	CBDU9944	✓	Single WTN			

Add rows as necessary



7.5. Hazardous Waste

Table 13: Hazardous Waste Producer Registration Number	
Wales Only: Site Hazardous Waste Producer Registration Number:	

Table 14: Inert and Non-hazardous Waste dispatches									
Waste Details:				Waste Carriers Licensing Details:			Disposal Site Details:		
Waste Type	LoW Code	Source	Tonnage Dispatched	Name of Waste Carrier	Carrier Registration Number:	Waste License Checked?	Name of Disposal Site	EPR/Exemption Number:	Append Audit:
Used Spill Kits	15 02 02*	Compound Area	0.00	Tom Prichard Contracting Ltd	CBDU9944	✓			

Add rows as necessary



8.0. Completion Report

This section must be completed within 3 months of contract completion.

8.1. Waste Target Comparison

The Project Targets set in 5.0., should be compared with the final project report to measure the waste management performance of the project.

8.2. Deviations from the Plan

Projects very rarely go exactly to plan. There may be good reasons why the targets were not met or were significantly exceeded. The important thing is that we learn from the process and aim to perform better next time.

Detail here the reasons why the actual waste quantities varied from the targets. This is to enable us to learn lessons for future projects:

Table 15: Distribution List	
Details:	

8.3. Cost Savings

The cost savings as a result of diverting waste from landfill by operating this Site Waste Management Plan on this project are:

Table 16: Hazardous Waste Producer Registration Number	
Cost Savings:	£



9.0. Sign-off Declaration

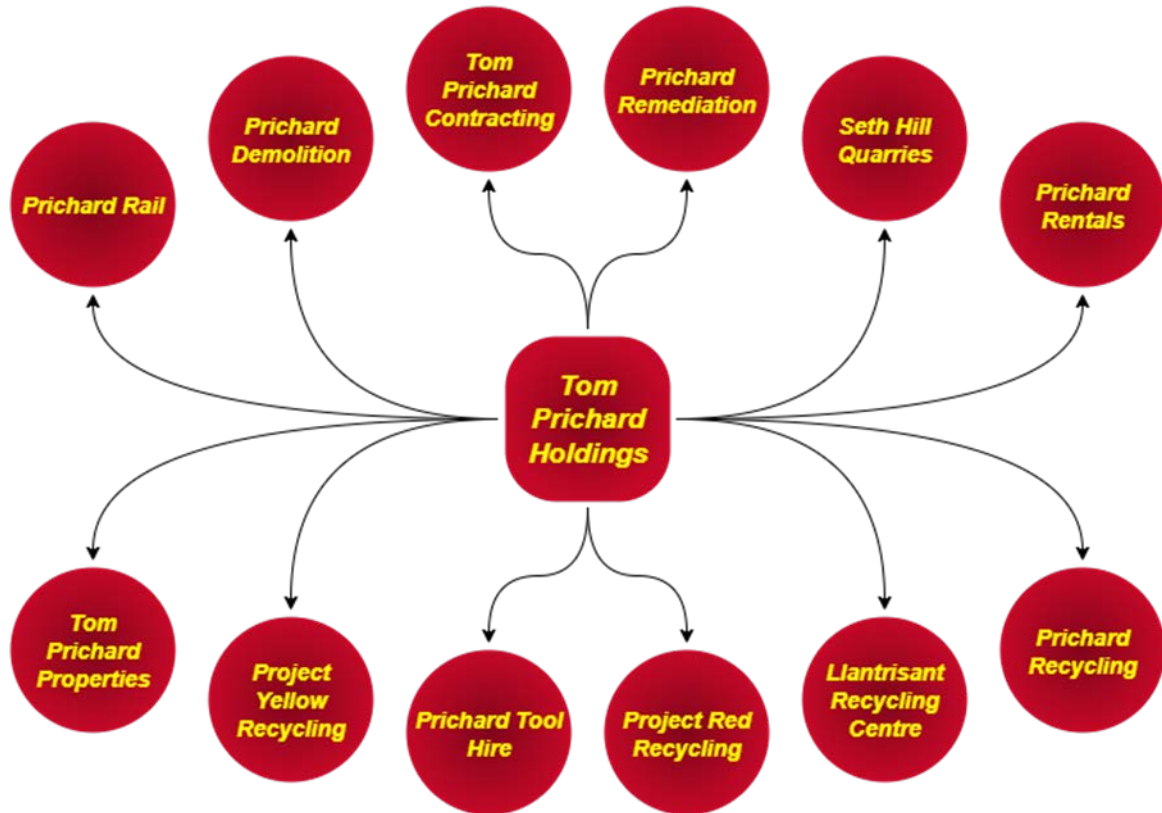
Name:

Date:

Signature:

NOTE: THIS PLAN MUST BE KEPT FOR TWO YEARS AFTER COMPLETION OF THE PROJECT AT THE
PRINCIPAL PLACE OF BUSINESS

Once this section is complete, the whole document should be emailed to the Environmental
Manager to enable lessons learned to be disseminated throughout the company.



Anti-Idling Policy

Version Number	2
Date Of Issue	Oct 2025
Controlled Document Number	CD-B069

Document Reference: CD-B069 | Revision: 2.0 | Date of Issue: October 2025

Anti-idling Policy

Engine idling is the running of an engine which is not required for the examination or operation of machinery other than that used for driving the vehicle.

Prichard's operates an anti-idling policy

In order to minimise vehicle emissions that negatively impact on the environment and health, Prichard's is committed to reducing vehicle idling times at depots, in stationary traffic queues and at any other times unnecessary idling takes place. The company actively encourages drivers to reduce levels of idling.

Anti-idling measures have been implemented to:

- Reduce unnecessary vehicle idling
- Improve air quality
- Protect health
- Reduce wasted fuel
- Reduce costs

The Highway Code states that 'you must not leave a parked vehicle unattended with the engine running or leave a vehicle engine running unnecessarily while the vehicle is stationary on a public road'.

You are expected to follow these anti-idling rules:

- Don't leave an unattended vehicle's engine running.
- Do not leave the engine running during loading and unloading (except where specific machinery requires it);
- Don't leave the engine running in the depot;
- Don't leave the engine running when you are parked up, or when you are on a break;
- Cab heaters are provided in HGV vehicles for cold starts and defrosting – use them rather than the engine to warm the cab;
- If you anticipate being stationary for more than one minute in traffic consider turning your engine off.

Any fines incurred for unnecessary idling will be paid by the driver.

Signed



Date 1st October 2025

Tom Prichard
Managing Director

Guidance for Pollution Prevention

Works and maintenance in or near water: GPP 5

January 2017

This guidance has been produced by Natural Resources Wales (NRW), the Northern Ireland Environment Agency (NIEA) and the Scottish Environment Protection Agency (SEPA).

For Northern Ireland, Scotland and Wales, this document provides guidance on environmental legislation. These guidelines are not endorsed by the Environment Agency as regulatory guidance in England. For guidance on environmental regulations in England go to www.gov.uk

To find the relevant regulations visit www.legislation.gov.uk

Guidance for Pollution Prevention (GPP) documents are based on relevant legislation and reflect current good practice. Following this guidance will help you manage the environmental responsibilities to prevent pollution and comply with the law.

If you cause pollution or allow it to occur, you will be committing a criminal offence. Following these guidelines will help you reduce the likelihood of a pollution incident. If one does occur contact the environmental regulator immediately on the relevant incident hotline number: In Northern Ireland, Scotland and England call **0800 80 70 60**, in Wales call **0300 065 3000**.

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Welsh Government

Dŵr Cymru Welsh Water

Section 1: Introduction

1.1 Who is this guidance for?

This guidance is for anyone carrying out works or activities in or near the water environment. Such activities have the potential to cause pollution, transfer non-native species and can impact on the bed and banks of a watercourse.

Potential environmental risks when working in or near water include:

- Silt – **section 2**
- Cement and concrete – **section 3**
- Chemicals and solvents – **section 4**
- Bridge cleaning debris – **section 5**
- Herbicides – **section 6**
- Invasive Non-Native Species – **section 7**
- Waste materials (including hazardous waste or special waste in Scotland) – **section 8**

1.2 Legal requirements

Formal approval may be required when carrying out such works or activities. It can take up to four months to process an application for formal approval, it is therefore important you contact the environmental regulator early on in the project.

There are laws that protect land, water, air, wildlife and people from pollution. If you cause pollution you will be committing an offence. Penalties include fines, imprisonment, Fixed Penalty Notices, stop-work notices or equivalent and having to pay clean-up costs, along with damage to your reputation.

Only clean uncontaminated water can be discharged without formal approval.

The Legal requirements are different throughout the United Kingdom (UK) (England, Northern Ireland, Scotland and Wales). If you are located in **Scotland** or **Northern Ireland** you can find information on your legal environmental obligations by visiting the NetRegs website (see website list). In **Scotland**, also read references 2 and 3. In **Wales** guidance on regulations can be found on the Natural Resources Wales (NRW) and Welsh Government website (see website list).

1.3 Which type(s) of formal approval may I need?

In this document we refer to 'formal approval', which covers the authorisation(s) you may need from the environmental regulator. They may be called a consent, licence or permit. You may be committing an offence if you carry out your works or activities without all the relevant formal approvals in place. See Appendix A for the main ones applicable in your area.

You are responsible for ensuring that you understand and comply with all applicable legislation wherever your site is located. If you have any concerns, or require clarification, contact the environmental regulator before taking action. Ignorance is no defence under law, so you need to understand which laws apply to you and your activities.

1.4 Scoping your project

Allowing time to plan and prepare before work starts on site can significantly reduce the risk of a pollution incident. Once you have identified potential sources of pollution, you can put in place measures to avoid or reduce the risk of causing pollution.

Planning ahead will:

- help make the job run smoothly
- improve risk management, reducing risk of pollution incidents and enforcement action
- help identify efficiencies and potential cost savings
- improve relationships with clients, local regulators and neighbours and reduce likelihood of complaints
- reduce damage and clean-up costs if an incident does happen
- help you win and maintain contracts
- protect and enhance your reputation

Plan to protect the Environment



Figure 1: Plan to protect the Environment (courtesy NetRegs 2016)

You can get information on local surface and groundwater water sensitivity from the environmental regulator before you start any work. In addition to preventing pollution of surface waters and groundwater you should take precautions to prevent blocking of channels and culverts, and erosion of the riverbank or bed. This information should form part of the environmental aspects and impact assessment and Site Environmental Management Plan (SEMP).

1.5 Pollution Prevention

It is important to understand how activities could affect the environment and cause pollution. Think about what pollution linkages there are (see Figure 2.).

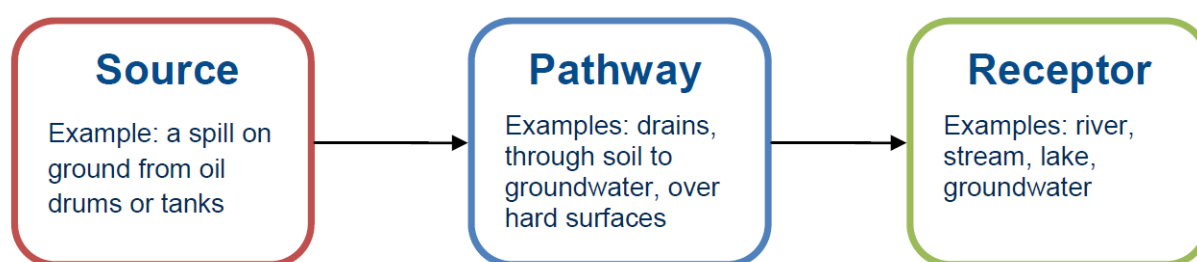


Figure 2: Example of a pollution linkage using the source > pathway > receptor model.

NOTE: Groundwater is both a pathway and a receptor.

The site and activities will only cause a risk to the environment or people if you have all three parts of the pollutant linkage present i.e. a source, a pathway and a receptor. You should put in place measures to prevent or minimise or mitigate the effects of any risks and thereby break the pollutant linkages between these three. By doing this, you can identify how to prevent or reduce the likelihood of pollution and reduce the impact of any risks that may occur. It is important that you fully understand the local drainage network as pollution is often caused by mistaking a surface water drain for a foul/combined sewer. Contact your local water company for advice on this.

Surface water drains go directly to a watercourse and therefore should only carry clean uncontaminated rainwater

If you cause pollution you will be responsible for the clean-up cost. This can be expensive and time consuming particularly if groundwater has become contaminated. There may be additional costs associated with recovering the cost for the environmental regulator's response (in line with the Polluter Pays Principle), you may receive fines through the criminal courts or civil claims and you may experience a reputational cost i.e loss of future work.

Following this Guidance for Pollution Prevention will help you reduce the likelihood of an incident. However, if one does occur contact the environmental regulator immediately on the relevant Incident Hotline number - see section 9. A rapid response to incidents will help to minimise the environmental impact and could reduce the overall costs – For more information refer to section 9.

1.6 Emergency works

Even if the works you are carrying out are required as a result of an emergency, this Guidance for Pollution Prevention should be followed as closely as possible. An emergency can be defined as an occurrence, which presents a risk of serious flooding, serious detrimental impact on drainage, or serious harm to the environment or people.

Contact should be made with the environmental regulator as soon as practicable to discuss whether further approval is required. If works are carried out without the knowledge of the environmental regulator, enforcement action may be considered whether it is an emergency or not.

Section 2: Silt

Good soil use and management is crucial to preventing silt pollution which is a major cause of environmental incidents. It can harm water quality, damage and kill aquatic life by smothering and suffocation and can cause flooding by blocking culverts and channels. See websites listed under Reference 19 for relevant soil guidance and good practice.

2.1 Activities that can cause silt pollution

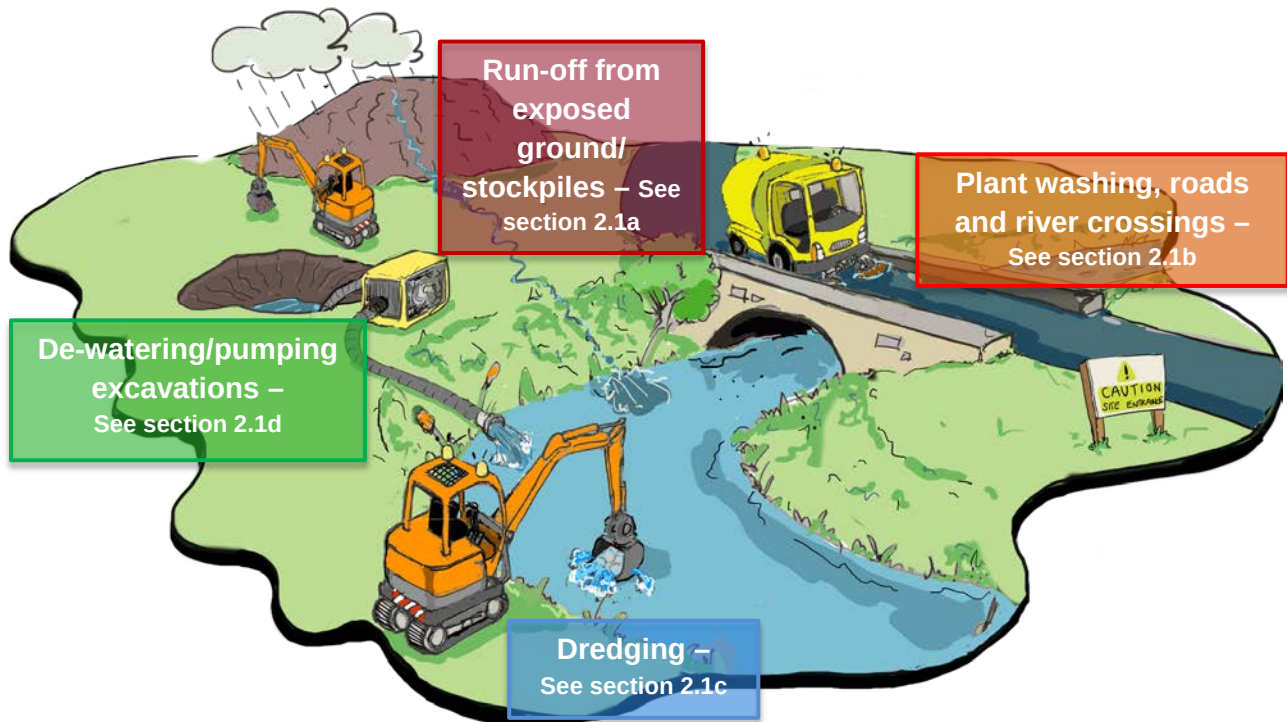


Figure 3: Activities that can cause silt pollution (courtesy NetRegs 2016)

2.1a Exposed ground and stockpiles

Soil stripping and vegetation removal at the start of a project can increase the volume of contaminated surface water run-off. It can also reduce the area of vegetated land available for disposal of silty water.

You should plan ahead for intense and also prolonged wet weather and consider all relevant pollution mitigation measures including:

- minimising the amount of time stripped ground and soil stockpiles are exposed
- only removing vegetation from the area that needs to be exposed in the near future
- seeding or covering stockpiles
- using geotextile silt fencing at the toe of the slope, to reduce the movement of silt; this should be installed before soil stripping has begun and vehicles start tracking over the site
- collect run-off in lagoons and allow suspended solids to settle before disposal – see section 2.2b
- divert clean water away from the area of construction work in order to minimise the volume of contaminated water

2.1b On-site working

The movement and maintenance of plant on site can generate silt and oil contaminated water, or introduce non-native species from other sites. Sources of silt (e.g. plant and wheel washing, site roads, river crossings) carry a high risk of causing pollution.

Plant and wheel washing

To reduce the pollution risk, make sure that you consider all relevant measures, including:

- plant and wheel washing is carried out in a designated area of hard standing at least 10 metres from any watercourse or surface water drain, rock outcrop (hard rock at surface) or karstic sinkhole
- run-off is collected in an impermeable sump - recycle and reuse water where possible
- settled solids are removed regularly and appropriately disposed of
- if permission can be granted from your local water and sewerage provider, it may be possible to discharge contaminated water to the public foul/combined sewer – see section 2.2e
- discharge of treated water to the environment with formal approval from the environmental regulator – see section 2.2
- contaminated water tankered off site for authorised disposal – see section 2.2f
- biodegradable oils should be used for vehicles and plant where possible, please be aware that they should still be prevented from entering the water environment

Site roads and river crossings

Run off from site roads and river crossings can contain high levels of silt. Road drains typically drain to the local water environment so are a pathway for pollution. To reduce the pollution risk make sure that you consider all relevant measures, including:

- brushing or scraping roads to reduce dust and mud deposits, appropriately disposing of material collected
- putting small dams or silt fencing in artificial roadside ditches to retain silt
- using existing permanent bridges or pipe crossings for crossing the river
- if necessary building temporary bridges (constructed in the dry) - do not ford rivers
- working from the bank where possible (taking steps to stabilise the bank during and after works), avoiding working in the river
- divert run-off to settlement lagoons - see section 2.2b

In **Scotland** please refer to the SEPA river crossings guidance, reference 4.

2.1c Disturbance of the river bed / working in the river channel

Always try to avoid working in the channel. When you have considered all other options and it is still necessary (e.g. dredging operations, river diversion works) contact your environmental regulator as early as possible during the scoping stages to discuss appropriate pollution control measures. Permission for this type of work may take up to four months to obtain - see section 1.

The risk of silt pollution causing an incident will depend on many factors including:

- the time of year e.g. fish spawning season
- likelihood of silt being disturbed and the method/effectiveness of silt containment
- what the river bed is made of, e.g. silt or gravel
- the conditions in which the work is carried out, e.g. working in the dry, weather

Silt pollution caused by working in the water environment can be minimised or prevented by keeping water out of the working area using appropriate isolation techniques, such as coffer dams and by-pass channels. There may be a need for fish rescue prior to in-channel works, stream diversion or coffer dam work. Fish passage **MUST** be maintained during in-channel works.

In **Northern Ireland** all river works should be conducted 'in the dry' (*i.e. isolated from waterway*) in a manner to prevent the release or escape of suspended solids or pollutants to the environment following regulator engagement to agree a method of works.

In **Wales** in-channel works during the spawning season (17 October to 15 May) are generally **NOT** permitted. You will need to contact the local NRW Fisheries Team to find out what the specific embargo periods are when working in the channel is not allowed in your area.

In **Scotland** please refer to the SEPA Silt Control Guidance: Preventing Pollution While Dredging – Reference 5

2.1d Disposal of water from excavations, dewatering and pumping

Problems with disposal of water from these activities may be minimised or avoided by:

- preventing water from entering excavations, by using cut-off ditches
- considering the impact on groundwater if you use well point dewatering or cut off walls (in Scotland, please refer to the CAR Practical Guide: GBR 15, Reference 1)
- using pump sumps in excavations
- raising inlet hoses above the bed to ensure that they do not disturb silt on the bed
- discharging clean water onto a hard surface e.g. concrete slabs/gravel, to avoid causing impact from ground/bank erosion
- using appropriate pump rates; to avoid disturbance of bed or bank the maximum rate should be set after consideration of the flow of the river, the location of the discharge and the risk of erosion
- protecting the pump inlet to avoid drawing in aquatic life and other debris
- minimising disturbance of standing water

In **Wales** please refer to the dewatering guidance – Reference 6.

2.2 Disposal of contaminated water

Where run off water is contaminated with silt or other pollutants such as oil this water must not be pumped or allowed to flow (directly or indirectly) into the water environment without treatment.

Discharges to the water environment may require formal approval from the environmental regulator – see section 1. If you require formal approval, it may limit the volume, amount of silt and the presence of any oil in the discharge, and may have conditions for additional substances.

In **Scotland** all surface water discharges from new developments require authorisation and to be treated by a Sustainable Drainage System or equivalent - see section 2.2a.

It is essential to minimise the volume of clean water that becomes contaminated, by diverting clean water away from working areas

Discharges to public foul/combined sewers will require consent from the water and sewerage provider. In **Wales** see Reference 7 for details on the water and sewerage providers in your area. If the water and sewerage provider is unable to approve, it will be necessary to tanker the contaminated water off site for authorised disposal (section 2.2f).

The choice of method for the treatment and disposal of contaminated water will depend on:

- the volume of water
- the area of land available for storage, treatment or discharge
- the amount and type of silt
- the presence of other substances in the water
- the conditions of any consent or authorisation.

Contaminated water treatment and disposal options

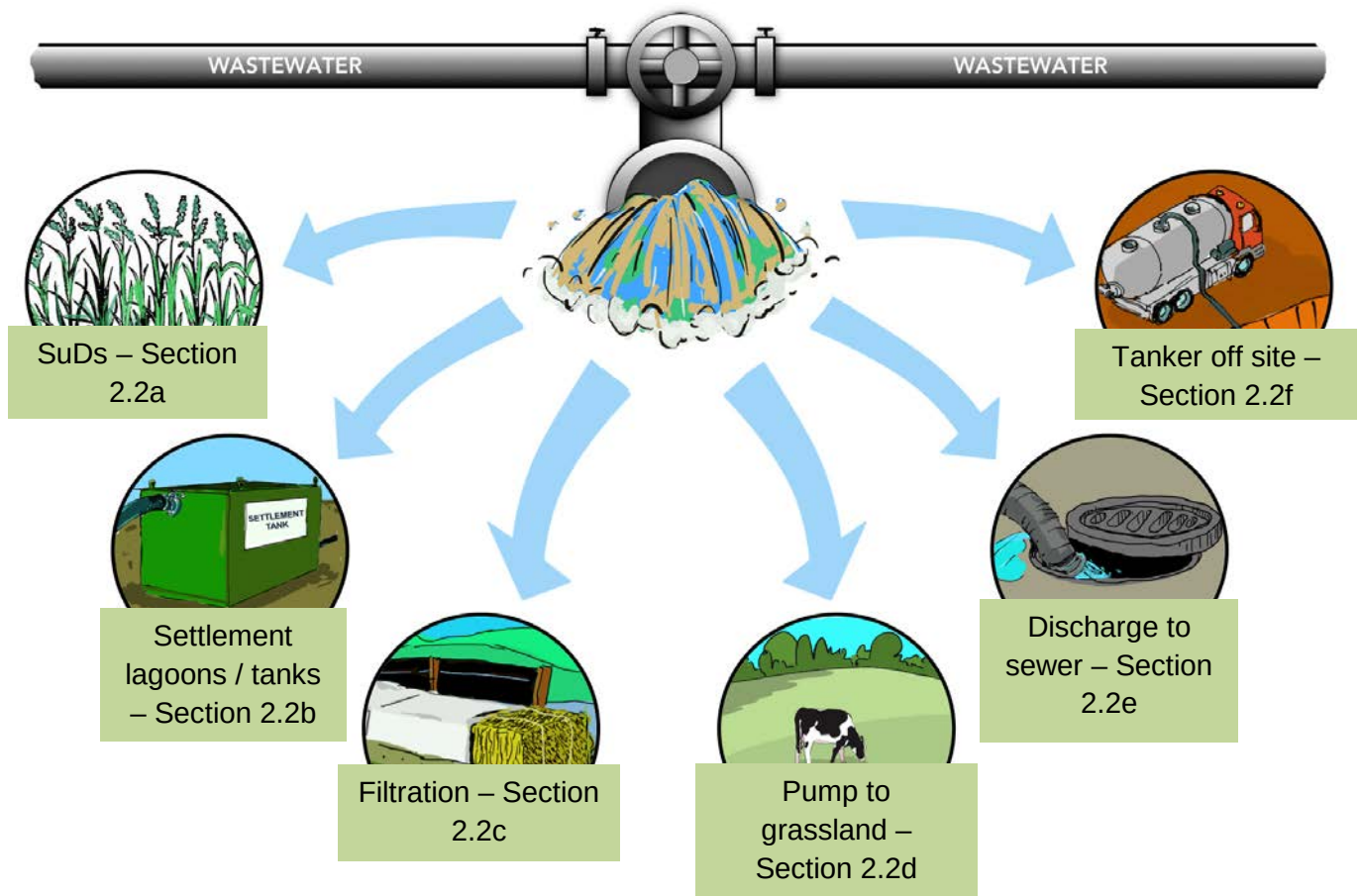


Figure 4. Contaminated water treatment and disposal options (courtesy NetRegs, 2016)

2.2a Sustainable Drainage Systems (SuDS)

Sustainable drainage is the practice of controlling and managing surface water runoff as close to its origin as practicable by slowing and reducing flows, allowing adequate settlement and biological action to take place before water is discharged to the water environment. The most effective SuDS use a series of drainage components to imitate natural drainage rather than traditional end-of-pipe drainage solutions. Well designed, easy to maintain SuDS will deliver a range of important benefits. They can:

- reduce flood risk from development within a catchment by slowing down runoff reaching the water environment
- minimise diffuse pollution arising from surface water runoff
- minimise the risk of pollution to groundwater
- minimise environmental damage, such as bank erosion and damage to habitats
- maintain or restore the natural flow regime of the receiving watercourse
- maintain recharge to groundwater
- achieve environmental enhancements, improvement to wildlife habitats, amenity and landscape quality
- help meet conditions set in license or consents.

Examples of source control SuDS:

- **Permeable/porous surface pavements** – water permeates in to the soil or sub-surface reservoir which can then be allowed to discharge slowly rather than immediately running off. This will minimise the volume of water that you might need to treat and can also recharge groundwater. Permeable/porous pavements need to be protected during installation from blocking by excessive silt-contaminated water.
- **Infiltration trenches** – a shallow excavated trench backfilled with stone to make an underground reservoir. Run off is diverted into the trench and then filters in to the subsoil. The closer to the source the more effective this method will be.
- **Infiltration basins** – a shallow surface impoundment where water is stored until it gradually infiltrates into the soil of the basin floor. The performance of the basin depends largely on the permeability of the soil and the depth of the water table
- **Filter drains or French drains** - these are similar to infiltration trenches but also allow movement of run off slowly towards a watercourse allowing time for filtration, storage and some loss of water due to evaporation / infiltration.
- **Swales** – grassed wide shallow depressions which lead water overland from a drained surface into a storage or discharge system. They provide temporary storage for run off reducing high flows. Solids are retained and oily residues and organic matter broken down in the top layer of the soil and vegetation.
- **Filter strips** – vegetated sections of land designed to accept run off as an overland sheet flow. To be effective they should be 5 – 15 metres wide and are best employed on the upstream end of a drainage system. They are most effective at removing excess solids and pollutants before discharging to downstream system.

Other SuDS can be considered including ponds, retention basins (dry ponds) and wetlands.

At the planning stage of your project consider how your drainage can be managed by using SuDS. This will ensure that SuDS infrastructure is properly maintained and functions effectively for its design life. It is advisable to begin discussions at an early stage to help ensure that sufficient land is made available to implement SuDS. Pre-application discussions between the developer, local planning authority, water and sewerage provider and other relevant bodies will help to identify the most cost effective way to integrate SuDS within the emerging scheme design.

For phased developments, the design should indicate how SuDS features will be managed, protected and commissioned, especially where their use may change through the construction programme.

Pollution removal by these methods is achieved by sedimentation, adsorption, absorption, filtration and microbial action. CIRIA have more detailed information on SuDS which can be found on the CIRIA website (see website list) or in References 8 and 9

In **Scotland**, discharges of water run-off from construction sites are required to be treated by either a Sustainable Drainage System (SuDS) or an equivalent which is equipped to avoid pollution. However, equivalent systems are not acceptable for treatment of runoff water from completed developments - see CAR Practical Guide: GBR 10 in Reference 1.

Businesses in **Scotland** and **Northern Ireland** can find more information on SuDS on the guidance pages on the NetRegs website (see website list). Businesses in **Wales** can find more information at the SuDS Wales website (see website list).

2.2b Settlement lagoons or tanks

To be effective a settlement lagoon or tank should retain contaminated water long enough for silt to settle out. The length of time will depend on the type of silt, with finer clay solids taking longer to settle. If you use flocculants to aid settlement you **MUST** discuss this option with your environmental regulator before use. Flocculants can themselves be polluting and/or toxic and need careful use and monitoring to be effective. The checklist below gives guidance on lagoon/tank operation.

Table 2.1 gives guidance on the volume of lagoon or tank needed for a three-hour settlement at a defined rate of inlet discharge. NOTE: This may not be suitable for the settlement of fine clay solids.

Typical dimension of a settlement lagoon / tank for a three hour settling time			
Pump Diameter	Discharge rate in to the lagoon	Length	Width
6 inch pump	3000 l/ min	60m	20m
	6000 l/ min	80m	27m
4 inch pump	1000 l/ min	30m	10m
	2500 l/ min	50m	17m
Assuming a tank / lagoon depth of 1 m , where length = three times the width			

Table 2.1: Settlement pond dimensions - the size of the tank/lagoon is determined by the rate of introduction of water.

Settlement lagoon/tank – good practice checklist

- maintain a constant pumped inlet rate
- minimise the inlet flow as much as possible by using energy dissipaters or rip rap
- position inlet pipe work vertically to dissipate energy
- provide lined inlet chamber to reduce velocity of flow
- line the inlet chamber and outlet weir with materials like geotextiles, brickwork, polythene or timber
- have a long outlet weir to minimise disturbance
- provide two or three lagoons in series or parallel to increase silt retention, preferably with a bypass facility to allow maintenance, when necessary
- de-silt inlet chamber regularly
- monitor discharge quality frequently.

See Reference 10 for more detail.

2.2c Filtration

If you do not have the space for lagoons and the water is contaminated with coarse silt only (not fine clay silts), you may be able to use tanks filled with filter material. Single sized aggregates 5–10 mm, geotextiles or straw bales wrapped in geotextiles can be used as a filter. You must monitor the inlet pump rate and discharge quality carefully, to ensure only clean, uncontaminated water is discharged. Discharge should then be to foul sewer (with the water and sewerage company's permission), land (with the environmental regulator's and landowner's permission), or to surface water drains (with the environmental regulator's permission).

2.2d Pump to grassland

This method of disposal is only suitable for water contaminated with silt only and you must have permission from your environmental regulator and landowner. The discharge rate must match the rate of infiltration into the soil, which will vary with the soil type (see Table 2.2), weather, amount of vegetation cover and the gradient. Discharges should be well away from excavations to avoid re-circulation through the ground and must be monitored to prevent scouring, waterlogging, overland flow and sediment mobilisation issues.

Soil type	Infiltration co-efficient (m/h)
Gravel	10-1000
Sand	0.1-100
Loamy sand	0.01-1
Sandy loam	0.05-0.5
Loam	0.001-0.1
Silt loam	0.0005-0.05
Chalk	0.001-100
Cut off point for most infiltration drainage systems	0.001
Sandy clay loam	0.001-0.01
Silty clay loam	0.00005-0.0005
Clay	<0.0001
Till	0.00001-0.01
Rock	0.00001-0.1

Table 2.2: Typical infiltration rates for different soil types (Bettess, 1996)

2.2e Discharge to sewer

Discharges to foul sewer will require the permission of the local water and sewerage provider. You must approach your local water and sewerage provider (In **Wales**, see reference 7) as early as possible in your project. You may require formal approval, which may limit the volume and content of the discharge. If the water and sewerage provider is unable to approve, it will be necessary to tanker the contaminated water off site for authorised disposal (see section 2.2f).

2.2f Tanker off site

If no other disposal routes are available then contaminated water can be collected by tanker for authorised disposal off-site. This may be a costly option and must be discussed with your environmental regulator at the scoping stage of your project. You must comply with your Duty of Care obligations and obtain Waste Transfer Notes for any waste leaving site.

Section 3: Concrete, cement and grout

Concrete, cement and grouts are very alkaline and corrosive and can cause serious pollution to water. Concrete, cement and grout mixing and washing areas should:

- be sited on an impermeable designated area
- be sited at least 10 metres from any watercourse or surface water drain, rock outcrop (hard rock at surface) or karstic sinkhole to minimise the risk of run off entering the water environment
- have settlement and re-circulation systems for water reuse, to minimise the risk of pollution and reduce water usage
- have a contained area for washing out and cleaning of concrete batching plant or ready mix lorries; see section 2.1b above
- collect wash waters that cannot be reused and, where necessary, discharge to the foul sewer (you must have permission from the local water and sewerage provider for this), or contain wash water for authorised disposal off site (see section 8. Waste Management).

Wash waters from concrete and cement works should never be discharged into the water environment as this could have serious impact on the water quality and ecology.



Cement silo inspection (courtesy of SEPA)

Section 4: Oil and chemicals

Oil storage regulations differ between countries, however in general the regulations apply to businesses in:

- **Wales**, who store more than 200 litres of any kind of oil (except uncut bitumen) in oil storage containers. The regulations also apply to oil storage at domestic properties installed since 15 March 2016;
- **Scotland**, who store any volume of any kind of oil (excluding uncut bitumen). More prescriptive requirements apply to industrial, commercial and institutional sites storing over 200 litres of oil. The regulations also apply to domestic premises storing more than 2,500 litres of oil;
- **Northern Ireland**, who store more than 200 litres of any kind of oil (excluding uncut bitumen) in oil storage containers including drums and IBCs. The regulations also apply to domestic premises storing more than 3,500 litres of oil;
- **England**, who store more than 200 litres of oil in oil storage containers.

Detailed guidelines concerning above ground oil storage can be found in our guidance GPP2, see Reference 11.

4.1 Biodegradable oils

If possible use biodegradable lubricant and biodegradable hydraulic oil in plant when working in or near watercourses. Biodegradable oils are less toxic than most of the synthetic oil but should still be stored and used to the same standards as other oils and prevented from entering the water environment.

4.2 Trade materials

Sealants, coatings, adhesives and glazings can be toxic to plants and animals if released into the environment. Select, store and use these materials carefully to save resources and protect the environment. You must not use sealant and glazing compounds containing asbestos. You should:

- use water based or low solvent products
- avoid products containing lead as a drying agent and those containing hazardous solvents (toluene or chlorinated hydrocarbons)
- provide safe and secure storage.

For guidance on general storage in **Northern Ireland** and **Scotland** visit NetRegs (see website list).

You must make sure you are familiar with the labelling on the products you use and fully understand any hazardous properties they hold.

Section 5: Bridge maintenance and structures over water

Work to maintain bridges or other structures over or next to watercourses has a high risk of causing pollution. The maintenance work itself may require formal approval from the environmental regulator and you should contact them at an early stage in your project to agree the most appropriate method of working and to agree an Environmental Management Plan.

5.1 Pollutant containment

Dust, debris and contaminated water are the most common pollutants produced by structure maintenance. You should choose a containment system designed to reduce the risk of pollution from your work. The system should take account of the sensitivity of the environment which will influence the type of containment you will need.

Methods of containment include:

- air or water impermeable walls
- rigid or flexible framing lined as necessary
- fully sealed joints
- airlocks or re-sealable entryways
- negative air pressure (achieved by forced or natural air flow)
- exhaust air filtration.

In sealed containment areas you should provide filtered ventilation to prevent the build-up of dust and minimise the possibility of contaminated air escaping. Use physical cleaning instead of liquid chemicals such as caustic and acid solutions. Contain contaminated water from surface washings and agree the disposal method with the environmental regulator as part of the Environmental Management Plan before you start work. In some circumstances you may be able to use a barge with a wastewater containment facility for working over water, or dispose to foul sewer with prior permission of the local water and sewerage provider.

The containment facility must be designed so that the structure does not obstruct the river flow beneath it to such an extent that it increases the risk of flooding.

5.2 Paint removal

Paint removal methods include:

- abrasive blast cleaning
- blasting in a closed circuit
- preparation by various types of wet abrasive blasting or water jetting
- chemical stripping
- hand or power tool cleaning.

Abrasive blasting produces the greatest level of dust and debris. The use of vacuum attachments on power tools can reduce dust generation. Water cleaning methods produce less debris, but generate run-off, which needs to be contained and treated.

Sample existing coatings for hazardous materials (e.g. lead) before starting to remove them. This can help determine the level of containment you will need. The level of containment needed depends on:

- the amount of paint to be removed
- the type and concentration of the hazardous materials
- the sensitivity of the surrounding environment.

5.3 Surface cleaning

You should avoid using grit blasting with slag-derived grit as they can contain significant levels of heavy metals such as copper. These can be toxic if they get into the water environment. Reduce the potential for contamination by using garnet, low silica abrasive or recycled glass media with vacuum attachments.

5.4 Painting

The advice for painting is similar for paint removal although the volume of waste and size of operations will be less. Remove dust and debris by sweeping or vacuum cleaning before painting. Paints can be applied on-site using brush, conventional spray or airless spray. Consider using electrostatic spray units to reduce the loss of product by over-spraying.

Carefully consider the type of paint you use. Although water based solvent-free paints have lower environmental impact they may require more frequent application. Solvent-based paints could have a higher environmental impact but will last longer and require less maintenance. The decision to use water or solvent-based paints should be based on the environmental sensitivity of the surrounding environment and ease of access to the structure. All waste paints should be disposed of at an appropriately authorised waste facility. Washings from paint brushes and containers must not enter surface water drains (e.g. roof gullies, road drains) as these may drain to the local water environment.



Bridge maintenance (courtesy of SEPA)

Section 6: Pesticide use

Pesticides are used for controlling pests (these include: insecticides; molluscicides; and acaricides), weeds (herbicides) and diseases (fungicides). They are all required to have information on the product labels to explain how and where they can be used.

You should always consider alternative ways of controlling pests and weeds in or near water. If you decide to use a pesticide in or near water, you will need approval from the environmental regulator before use. Safe and correct application of pesticide is required to protect the environment and water supplies. Only pesticides approved for use in or near water may be used, and only by competent persons holding a Health and Safety Executive (HSE) recognised specified certificate for pesticide use (or under the direct supervision of a certificate holder). The sprayer/operator must comply with the herbicide product label and meet all of its conditions.

You should contact the environmental regulator if you are considering aerial spraying.

You must also carry out a Control of Substances Hazardous to Health (COSHH) assessment for any activities that involve pesticides.

You must make sure that your pesticide application equipment is tested at least once by 26 November 2016 unless it is less than 5 years old on that date and at regular intervals thereafter. Knapsacks and handheld sprayers are exempt from the requirement to pass inspection. All equipment must be calibrated on a regular basis.

Equipment which is less than 5 years old on 26 November 2016 must be tested before it becomes 5 years old.

After the 26 November 2016, ongoing testing intervals vary depending on the type of applicator. The following types of equipment must be inspected at intervals of no more than 5 years between 2016 and 2020 and at intervals of no more than 3 years after 2020:

- boom sprayers greater than 3m
- sprayers attached to trains or aircraft
- air assisted broadcast sprayers.

Equipment that represents a very low scale of use, including those not used for spraying pesticides, will be subject to a maximum inspection interval of 6 years. This equipment type must be inspected once by 26 November 2016 (unless it is less than 5 years old on that date) and at intervals of no more than 6 years thereafter. A complete list of these equipment types is maintained within the National Action Plan for the Sustainable Use of Pesticides, see Reference 12.

Further information is also available from the 'Using Pesticides' guidance pages and the 'Code of Practice for using Plant Protection Products' on the HSE website (see website list).

Section 7: Invasive Non-Native Species (INNS)

An invasive non-native species is any non-native animal or plant that has the ability to spread causing damage to the environment, the economy, our health and the way we live.

Common examples include:



Japanese Knotweed



Himalayan Balsam



Giant Hogweed



Asian Clam



Floating Pennywort

Common INNS (images courtesy of GBNNSS)

The regulations differ between countries, however in general:

- In **England, Wales** and **Northern Ireland** it is an offence to plant or cause to grow in the wild certain listed invasive non-native species.
- In **Scotland**, it is an offence to plant or cause **any** non-native plant species to grow in the wild.

You should take the necessary steps to eliminate the risk of transferring water and soil potentially containing plant or animal diseases, or invasive non-native species, to or from the development site. If plant material is removed from site, it can only be transported by registered waste carriers and disposed of at appropriately authorised waste sites. The environmental regulator has a public register which holds this information. In **Scotland** and **Northern Ireland** you can visit the 'Find my nearest waste site' pages on the NetRegs website (see website list) in **Wales** see Reference 13.

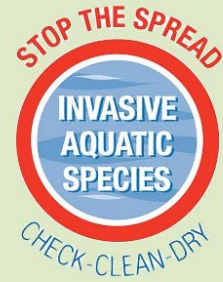
Any pumps and associated pipework used should be:

- emptied, thoroughly cleaned using a disinfectant approved for aquatic use, rinse thoroughly without allowing the cleaning water to enter the main drainage system (and preferably dried) before it is taken to a site and again before being removed from it.
- positioned to avoid placing the inlet pipe amongst water plants
- positioned with the inlet just below the water's surface, rather than on the bed of the water body.

To help minimise the risk of spreading INNS, any equipment or plant needs to be cleaned and dried before it is taken to a site and again before being removed from it.

In **Wales** further INNS information, including leaflets on different species is available through the Welsh Government INNS website pages (see website list).

In **Northern Ireland**, wildlife crime is reported to the Police Service Northern Ireland (see Reference 14). All sightings of INNS should be submitted through the CEDaR online submissions portal (see website list).



Use the GB Non Native Species Secretariat website (See website list) which has the latest INNS good practice information including:

- ***a short e-learning training module to provide a basic understanding of INNS, the risks and what to do***
- ***more specific biosecurity advice***
- ***and further Be Plantwise and Check, Clean, Dry information.***

You should also make yourself familiar with the GB NNSS advice on:

- ***high priority alert species***
- ***how to report any suspected INNS sightings***

Section 8: Waste management

Legal waste storage and disposal are essential for effective pollution prevention.

Under the Duty of Care legislation (see Reference 15) you have a legal duty to make sure any waste you produce does not escape from your control. Waste must be transferred to an authorised, registered or exempt waste carrier or waste manager. It must be accompanied by a full description of the waste and a Waste Transfer Note and be disposed of lawfully. You should check on the proposed destination and ensure the site is authorised to receive the waste.

In **Scotland** and **Wales** you must separate dry recyclable materials such as paper, card, glass, metals and plastics. These must be collected separately from other wastes and managed in such a manner as to allow high quality recycling. In **Wales** see Reference 16

Some types of waste, called 'hazardous wastes' or in Scotland, 'special wastes', such as oily wastes, acids, solvents and solvent-based products are very harmful to human health or to the environment. When dealing with hazardous/special wastes:

- you must store, handle and dispose of these differently to non-hazardous wastes
- you must not mix different types of hazardous or special wastes together
- if you mix hazardous or special wastes with non-hazardous wastes then you must consider everything as hazardous or special waste
- the movement of hazardous/special wastes must be accompanied by a consignment note. Everyone involved in the transfer of the waste, including your environmental regulator, must keep copies of the consignment notes for proof of legal disposal.

In **Wales** any premises that produces less than 500kg of hazardous waste in a 12 month period is exempt from registering. However hazardous waste moved from an exempt premises must still be covered by a Hazardous Waste Consignment Note. The unique consignment note code will show that the waste has come from an exempt premises. NRW have published advice that lists certain types of premises that do not need to register (see Reference 13). These exceptions only apply in certain circumstances. You should read the advice to ensure that it applies to your premises and activity. See Reference 17 for information on how to register as a hazardous waste premises.

Consider the security of your premises too - any waste dumped on your property becomes your responsibility to remove which will cost you money.

If you are located in **Scotland** or **Northern Ireland** you can find out how these waste regulations affect your site. Check the guidance by Environmental Topic section of the NetRegs website (see website list) for information on waste legislation and how you can comply.

If you are located in **Wales** you can find out how waste regulations affect you by visiting the NRW website, (see website list).

To help maximise reuse and recycling and also minimise disposal of waste, it's useful to draw up a Project Waste Management Plan or a Resource Management Plan taking into account the waste hierarchy of prevention, preparing for re-use, recycling and other recovery and disposal.

Project Waste Management Plan checklist

- Carry out a waste minimisation audit to identify where you can reduce the volume of waste you produce
- Reuse materials or use products that can be reused many times
- Substitute materials for less hazardous ones – e.g. biodegradable lubricants and water based paints
- Recycle waste where possible
- Segregate different wastes for recycling, hazardous waste and general waste and label them. Do not mix or dilute hazardous wastes - In **Scotland**, you must separate dry recyclable materials such as paper, card, glass, metals and plastics. These must be collected separately from other wastes and managed in such a manner as to allow high quality recycling
- Store waste in suitable containers of sufficient capacity to avoid loss, overflow or spillage
- Store waste in designated areas, isolated completely from surface water drains, outside the floodplain and areas which discharge directly to the water environment
- Cover or enclose skips unless they are stored undercover or within a building
- Take waste off your site frequently; do not allow large quantities to accumulate.

Section 9: Incident response

Incident Hotline Numbers:

In **Scotland, Northern Ireland and England** call:

0800 80 70 60

(24 hour service)

In **Wales** call:

0300 065 3000

(Press 1 for 24 hour service)

You should immediately report any environmental incidents by calling the Incident Hotline for your country.

Incidents can include spillages (e.g. from oils and chemicals), contaminated surface water run-off, flooding, riverbed disturbance, damage to underground services, damage to habitats and poor waste disposal and storage. If in doubt, report it.

You should produce an Incident Response Plan as part of the environmental impact management of your work. Include the following:

- site risks
- list of key external and internal contacts (include your environmental regulator, Local Authority, Fire Service)
- reporting procedures
- site plan including drainage and location of storage/refuelling areas
- list of stored materials
- details of local environmental sensitivities e.g. abstractors, high amenity areas and fish farms
- location of spill equipment
- procedures for spill containment and remediation

Train your staff and contractors in the use of spill equipment and how to manage and dispose of waste materials legally.

If you are using oils and chemicals in close proximity to the water environment, store a suitable spill kit or absorbent materials nearby. Provide appropriate temporary storage for any oils and chemicals. Contain all spillages using absorbents such as sand, soil or commercially available booms or pads and notify the environmental regulator immediately, using the Incident Hotline numbers above.

Appendix A: Types of formal approval

	Water discharge	Working close to water	Designated sites and protected species	Other
Northern Ireland	If you want to discharge any of the following: trade or sewage effluent; or other poisonous, noxious or polluting substance into a waterway or water contained in any underground strata you must have approval from the Northern Ireland Environment Agency (NIEA), see website list	You must have consent from the Rivers Agency before you place structures in any waterway that could affect its drainage. Contact your local Rivers Agency office for further information, see website list	Authorisation may be required for works within designated sites such as Sites of Special Scientific Interest – contact NIEA to check. European Protected Species of animals, their breeding sites and resting places, are protected against disturbance and harm. Check the NIEA website for more information and details on how to apply for a licence.	Planning permission – contact your Local Planning Authority. Trade Effluent Consent for discharging to public foul/combined sewer – contact your water and sewerage company to apply/discuss. If you plan to use herbicides to control weeds you may need authorisation from NIEA - see NIEA website. Other approvals may be needed depending on the site's specific environmental sensitivities – contact NIEA to check.
Scotland	Depending on the activity being carried out you may require authorisation from SEPA under the Controlled Activity Regulations (CAR). The level of authorisation required is dependent on the effect that the activity will have on the water environment. The levels of authorisation are as follows: - General Binding Rules (GBRs) provide statutory controls over certain low risk activities - Registration is intended to cover low risk activities which cumulatively pose a risk to the water environment		Scottish Natural Heritage (SNH) is the conservation body for Scotland. Permission will be required for works on designated sites such as Sites of Scientific Interest (SSSI) or Special Area of Conservation (SAC). Contact SNH for further	Planning permission – contact your Local Planning Authority. Trade Effluent Consent for discharging to public foul/combined sewer – contact your water and sewerage company to apply/discuss.

	A licence is needed if site-specific controls are required, particularly if constraints upon the activity are to be imposed Please contact SEPA to discuss, see website list. Also read reference 1 for more details.		details, see website list. European Protected Species of animals, their breeding sites and resting places, are protected against disturbance and harm. Contact SNH for details on licencing.	If you plan to use herbicides to control weeds you may need authorisation from SEPA - see SEPA website. Other approvals may be needed depending on the site's specific environmental sensitivities – contact SEPA to check.
Wales	An Environmental Permit for Water Discharge may be required if you carry out a water discharge. Discharges of clean, uncontaminated water from e.g. excavations, do not need approval providing the discharge is temporary (less than 3 consecutive months) and the advice in this GPP is followed. Contact NRW to apply/discuss.	A Flood Risk Activity Permit may be required if works are being proposed in, over, under or adjacent to a Main River. Please check NRW's website for more information. If the watercourse is classed as an Ordinary Watercourse you will need to contact the relevant Local Authority to discuss whether a consent is required. See Reference 18 to find out whether your works are near a Main River or Ordinary Watercourse.	Assent or Consent may be required for works within designated sites, such as Sites of Special Scientific Interest – contact NRW to check. European Protected Species of animals, their breeding sites and resting places, are protected against disturbance and harm. Check the NRW website for more information and details on how to apply for a licence.	Planning permission – contact your Local Planning Authority. Trade Effluent Consent for discharging to public foul/combined sewer – contact your water and sewerage company to apply/discuss. If you plan to use herbicides to control weeds you may need to apply for an agreement – see NRW website. Other approvals may be needed depending on the site's specific environmental sensitivities – contact NRW to check.

Appendix B: Examples of site specific environmental hazards and sensitivities

Environmental Sensitivities
Downstream water abstractors and users e.g. fish farms.
NOTE: In Northern Ireland, if the waterway or downstream of the works is of a fisheries interest it will have an impact on the level and frequency of engagement with the regulator.
High amenity areas
Designated bathing waters
Fish, especially in fish spawning season
Surface water drains
Designated sites e.g. Sites of Special Scientific Interest (SSSIs)
Protected species e.g. Otters

Environmental Hazards
Silt laden water
Foul sewerage pipes
Oil or chemical pipelines
Mains water supply pipelines
High voltage fluid filled cables

Glossary

Aerial spraying	Involves spraying crops or plants with plant protection products from an aircraft.
Aquatic life	Animal or plant that lives or grows in water.
Biosecurity	Measures that are taken to stop the spread or introduction of harmful organisms to human, animal or plant life.
By-pass channels	A channel created to divert water from the main channel.
Catchment	The area drained by a river or body of water.
Clean, uncontaminated water	Water which is free from any contamination, for example uncontaminated could include rainwater directly from roofs. Even if the water looks clear it may still be contaminated with e.g. chemicals, so it is essential the sources of runoff are considered carefully when checking whether water is contaminated or not.
Coffer dams	A watertight enclosure pumped dry to permit construction work below the water line.
Combined drains/sewers	Sewers or drains that collect both foul sewage and surface water run-off and carries it safely to a sewage treatment facility. Either owned privately or by the local water and sewerage provider.
Containment	The action of keeping something harmful under control or within limits
Culverts	A covered channel or pipe designed to prevent the obstruction of a watercourse or drainage path by an artificial construction e.g. a road crossing, highway embankment etc.
Cut-off walls	A wall of impervious material built to reduce seepage.
De-silt	Removal of silt.
Dewatering	Removing groundwater or surface water from a construction site.
Discharge	Release of water into the water environment or drainage/sewer systems.
Dredging	The removal or redistribution of any sand, silt, ballast, clay, gravel or other materials from or off the bed of a watercourse. Generally results in channel deepening and/or widening.
Duty of Care	A legal obligation to take reasonable care and avoid causing damage.

Environmental Management Plan	A document describing potential environmental impacts and activities of a project/site and ways to manage and mitigate these.
Flocculants	A substance which promotes the clumping of particles/sediments.
Ford rivers	Crossing a body of water at a shallow point on foot or in a vehicle
Formal approval	In this document refers to the authorisation(s) you may need from the environmental regulator. They may be called a consent, licence or permit.
Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Habitat	Specific area or environment in which a particular type of plant or animal, or group of plants or animals, live
Hazardous material	Hazardous materials are those with toxic properties that damage the environment and / or affect human health
Hazardous waste	Waste that is harmful to human health or the environment. For specific legal definitions including special waste in Scotland.
Herbicide	Commonly known as weed killers. It is substance used to control/destroy unwanted plants.
Impermeable	A surface or material that liquid cannot pass through.
Impervious	A surface that cannot be penetrated.
Karstic sinkhole	A depression in the ground that has no natural external surface drainage
Lagoon	An artificial pool for the treatment or storage of water.
Organism	An individual living thing.
Overland flow	Also known as run-off. Water flow over the ground surface to the drainage system or direct to watercourse. This occurs if the ground is impermeable, is saturated or if rainfall is particularly intense.
Pesticide	A substance used to control/destroy insects or other harmful organisms to cultivated plants or to animals.
Polluter Pays Principle	Principle in law that ensures that the party responsible for pollution should pay for damage caused to the environment.

Remediation	The act of remedying, reversing or stopping environmental damage.
Rock outcrop	A rock formation that appears above the surface of the surrounding land.
Run-off	Also known as overland flow. Water flow over the ground surface to the drainage system or direct to watercourse. This occurs if the ground is impermeable, is saturated or if rainfall is particularly intense.
Scour	Erosion of the channel banks and bed due to excessive velocity of the flow.
Secondary containment	This is another container in which a primary container is located. It is impermeable to the product being stored and water, and designed to catch spills, leaks or overflows from the container (including its pipework and equipment) in everyday use, accidents and emergencies. Secondary containment is essential to prevent pollution. Bunds and drip trays are examples of secondary containment.
Sediment mobilisation	The transport or movement by water of insoluble particulate matter.
Soil stripping	Removal of the surface layer of the soil.
SuDS	Sustainable drainage systems are a sequence of management practices and control structures designed to drain surface water in a more sustainable way than conventional techniques.
Surface waters	Water bodies including rivers, lakes, lochs, loughs, reservoirs, ponds, streams, canals, ditches (including those that are temporarily dry), estuaries and coastal waters up to three miles offshore. Northern Ireland legislation defines these as 'waterways'.
Suspended solids	Small solid particles which remain in suspension in water.
Toe (slope/bank)	The lowest point on the bank/slope of any body of inland surface water where the bank meets the bed of the body of inland surface water.
Trade Effluent	Trade effluent is any liquid waste (effluent) discharged from premises being used for a business, trade or industry.

References

1. SEPA (2016) The Water Environment (Controlled Activities) (Scotland) Regulations (as amended) A Practical Guide, Version 7.4. Available from the SEPA website
2. SEPA (2006) Prevention of Pollution from Civil Engineering Contracts: Special Requirements for Civil Engineering Contracts for the Prevention of Pollution, WAT-SG-31. Available from the SEPA website
3. SEPA (2006) Prevention of Pollution from Civil Engineering Contracts: Guidance on the Special Requirements for Civil Engineering Contracts, WAT-SG-32. Available from the SEPA website
4. SEPA (2010) Engineering in the water environment: good practice guide – River crossings. Available from the SEPA website
5. SEPA (2015) Silt Control Guidance: Preventing Pollution While Dredging. Available at <http://www.sepa.org.uk/media/153290/sepa-silt-control-guidance.pdf>
6. NRW (2016) Dewatering guidance. Available from the NRW website
7. Ofwat reference map to show which water companies supply each area of England and Wales. Available at <http://www.ofwat.gov.uk/households/your-water-company/map/>
8. CIRIA (2015) The SuDS Manual (C753). Available at www.ciria.org.uk
9. CIRIA (2007) Site handbook for the construction of SuDS (C698). Available at www.ciria.org.uk
10. CIRIA (2015) Environmental good practice on site guide (fourth edition) (C741), ISBN 978-0-86017-746-3
11. GPP2 Above ground oil storage tanks. Available at www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/
12. DEFRA (2013) UK National Action Plan for the Sustainable Use of Pesticides (Plant Protection Products). Available at http://ec.europa.eu/food/plant/pesticides/sustainable_use_pesticides/docs/nap_uk_en.pdf
13. NRW advice on types of premises that do not need to register as a hazardous waste premises. Available at <http://naturalresources.wales/media/1205/guidance-statement-premises-notification-for-the-hazardous-waste-regulations.pdf>
14. Watch out for wildlife crime. Available at www.wildlifecrimeni.org
15. Duty of Care Code of Practice guidance. Available at www.gov.uk/government/uploads/system/uploads/attachment_data/file/506917/waste-duty-care-code-practice-2016.pdf

16. Welsh Government Guidance on the Separate Collection of Waste Paper, Metal, Plastic and Glass Available at
http://gov.wales/topics/environmentcountryside/epq/waste_recycling/publication/guidance-on-the-separate-collection-of-waste-paper-metal-plastic-and-glass/?lang=en
17. Register a premises as a hazardous waste producer at:
<http://naturalresources.wales/apply-for-a-permit/waste/register-as-a-producer-of-hazardous-waste>
18. How to find out if a watercourse is a Main River or and Ordinary Watercourse.
Available at: <http://www.naturalresources.wales/our-evidence-and-reports/maps/flood-risk-map/?lang=en>
19. Section 2 (silt pollution) guidance:
 - a. Construction code of practice for the sustainable use of soils on construction sites. Available at www.gov.uk/government/publications/code-of-practice-for-the-sustainable-use-of-soils-on-construction-sites
 - b. Protecting our Water, Soil and Air A Code of Good Agricultural Practice for farmers, growers and land managers (CoGAP). Available at www.gov.uk/government/uploads/system/uploads/attachment_data/file/268691/pb13558-cogap-131223.pdf
 - c. UK Forestry Standard (UKFS) Guidelines on Forests and Soil. Available at <http://www.forestry.gov.uk/ukfs/soil>
 - d. UKFS Guidelines on Forests and Water. Available at www.forestry.gov.uk/ukfs/water

Website List

NetRegs - Guidance on environmental regulations for businesses in Scotland and Northern Ireland

www.netregs.org.uk

Scottish Environment Protection Agency (SEPA) website

www.sepa.org.uk

Natural Resource Wales

www.naturalresources.wales

Welsh Government

www.gov.wales

Department of Agriculture, Environment and Rural Affairs Northern Ireland

www.daera-ni.gov.uk

Sustainable Drainage System guidance for Wales

www.sudswales.com

Health and Safety Executive (HSE) - Using Storing and Disposing of Plant Protection Products

www.hse.gov.uk/pesticides/topics/using-pesticides.htm

GB Non-Native Species Secretariat

www.nonnativespecies.org

CEDaR Online Recording for INNS.

www2.habitats.org.uk/records/ISI

Scottish Natural Heritage (SNH)

www.snh.gov.uk

Chemicals Regulation Directorate (HSE)

www.hse.gov.uk/crd

Further information

For information about environmental compliance, or to report inconsistencies or inaccuracies in this guidance, visit www.netregs.org.uk.

You can view guidance on environmental regulations online at www.netregs.org.uk (for businesses in Scotland and Northern Ireland) and at <http://naturalresources.wales> (for businesses in Wales).

This guidance is issued by the Scottish Environment Protection Agency (SEPA), Northern Ireland Environment Agency (NIEA) and Natural Resources Wales (NRW).

This document is available at www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/.

First published January 2017

Useful contacts

Incident/Pollution hotline: Northern Ireland, Scotland and England

0800 80 70 60 (24-hour service)

Emergency hotline - Wales

0300 065 3000 (press 1 – 24-hour service)

Floodline – Wales, Scotland and England

0845 988 1188

Flooding incident line - Northern Ireland

0300 200 0100

Natural Resources Wales

Scottish Environment Protection Agency

Northern Ireland Environment Agency

www.naturalresourceswales.gov.uk

www.sepa.org.uk

www.daera-ni.gov.uk

Head Office (Ty Cambria)
29 Newport Road
Cardiff
CF24 0TP

Corporate Office
Strathallan House
The Castle Business Park
Stirling
FK9 4TZ

Head Office
Klondyke Building
Cromac Avenue
Gasworks Business Park
Malone Lower
Belfast
BTZ 2JA

Tel: 0300 065 3000 (Mon – Fri,
9am–5pm)

Tel: 03000 99 66 99

Tel: 0300 200 7856

enquiries@naturalresourceswales.gov.uk

www.sepa.org.uk/contact

nieainfo@daera-ni.gov.uk

CONSTRUCTION & DEMOLITION PROJECT COMMUNICATION LOG

PROJECT NAME	PROJECT MANAGER	SITE MANAGER	PROJECT ID	DATE OF LAST UPDATE
TBC	TBC	TBC	TBC	

COMMUNICATION METHOD	DESCRIPTION / PURPOSE OF COMMUNICATION	OBJECTIVES / KEY MESSAGES	Internal Representative Name	Job Role	External Representative Name	Job Role	CONCERNS	COMMENTS



Section 1: Document Control and Regulation

Toolbox Talk Signing Sheet			
Document Reference:	CD-G028	Revision:	3.0
Date Created:	2 June 2025	Review Date:	2 June 2026
Created By:	Callum Mitchell	Approved By:	George Harvey
Date Approved:	2 June 2025		

Section 2: Signature

TBT Document Reference:	CD-G069				
TBT Document Title:	Toolbox Talk: Completing the Waste Transfer Note Form				
Briefing details;					
Name:	Signature:	Briefing Date:	Briefed By:	Review Date:	TBT Revision Number:
		08/01/2026	Callum Mitchell	08/01/2027	2.0

PRICHARD'S

SITE INDUCTION

Site Address and opening hours

PRICHARD'S

Site Address:

Opening hours:

0730hrs -1830hrs weekdays

0800-1300hrs Saturday

Site Register: Must be filled in each day

The site must be locked at all times to prevent unauthorised access

Site Ongoing Activity

PRICHARD'S

The Following activity is ongoing:

Site Manager and supervisor details

PRICHARD'S

- Site Manager Name
- Site Supervisors name



Emergency Arrangements

PRICHARD'S

- Location of the Muster Points
- Location of the Fire Exits
- Location of Fire Fighting equipment
- Alarms
- Location of the First Aid Box
- Location of the Nearest A&E
- Who are the First Aiders
- Defibrillator
- Accident and Incident Reporting



Traffic and Pedestrians

PRICHARD'S

- Speed Limit 5 MPH
- Pedestrian Routes
- Crossing Points
- Car Parking – Reverse Parking
- Load out areas
- Turning Points
- Use of Banksman



Welfare Facilities

PRICHARD'S

- Toilets
- Changing and drying facilities
- Canteen
- Keep them clean, if supplies are needed, speak to
- The site manager
- Nearest shops
- Break times
- Smoking areas
- Use of Mobile Phones only permitted in the welfare
- or in a safe place.



Waste Management

PRICHARD'S

- Minimize waste
- Reduce
- Re-use
- Recycle
- Segregate what is left and remove to Landfill as a last resort



PPE

PRICHARD'S

Hard hat at all times

Hi Vis jacket at all times (Prichards)

Safety Boots at all times

Gloves cut level 3 at all times for demo cut level 5

Light eye protection at all times for demo and soft strip

Safety Goggles when using breakers- disc cutters

RPE when dust is present or when told to wear it must be clean shaven and face fit tested

Type 5 Overalls if work with hazardous
Material or Asbestos potential



CSCS or CPCS

PRICHARD'S

To work on this site you must have a CSCS card or CPCS card if operating Plant.



Those using Abrasive Wheels must be trained to use them. Water suppression must be used.



Plant Operations

PRICHARD'S

Stay in the safe Zone

Always maintain Eye Contact with the Operator

Never move inside the safe zone unless Thumbs Up- bucket down

All plant must be supported by a PUWER or LOLER 98 certificate of thorough Inspection. Plant must be inspected daily and records retained on site.

Only qualified persons are permitted to operate plant.

Keys are to be removed when not in use



Plant Maintenance

PRICHARD'S

A permit to work is required

All plant and machinery must be isolated

Only authorised Person are permitted to work on Plant



Work at Height

PRICHARD'S

You may only use Ladders if you have been authorised to use them

All Ladders must be inspected before use

All ladders must be Commercial Grade

Those erecting towers must be PASMA Trained

Those using IPAF machines must hold IPAF Cards



Hop ups may be used provided they are commercial grade. No milk crates etc.

Excavations

PRICHARD'S

All excavations must be assessed by a competent person and either stepped or battered. If this is not possible, temporary works and edge protection will be required.

All excavations must be inspected daily and records retained for 3 months.



Electrical safety

PRICHARD'S

All electrical equipment must be inspected for electrical safety and PAT Tested.

240v is NOT permitted to be used on site

Railing leads must be managed and hung where possible



Noise and Dust

PRICHARD'S

Dust must be minimized where possible with wetting or on tool extraction fitted.



Noise levels must be kept to a minimum. If noise levels exceed 80 decibels, hearing protection will be issued and if noise levels reach 85decibels, hearing protection must be worn.



Environmental Spill

PRICHARD'S

- Environmental Spill kits are to be held on site and located where plant is operation and refuelling explain where these are placed
- All spills are to be dealt with immediately and reported to the Site Manager
- Generators are to be placed in bunded trays
- Water Courses are to be protected



Ecology

PRICHARD'S

- Bats
- Newts
- Birds
- Badgers
- Rivers and water courses



Our Neighbours:
Be polite – No swearing or abusive language- Be mindful where you are parking

Section 1: Document Control and Regulation

Investigation Report

Form ID:	IVRE		
Document Reference:	CD-G017	Revision:	3.0
Date Created/Reviewed:	2 June 2025	Next Review Date:	2 June 2026
Created By:	Callum Mitchell	Approved By:	George Harvey
Date Approved:	2 June 2025		

Section 2

Date:	
Compiled by:	
Batch ID:	

Section 3: Non-compliance

Please state below, the nature of the non-compliance:

Please state below the standard corrective actions as stated in the SOP's, in relation to the non-conformance below, giving reference to the section within the SOP's document:

As stated in the SOPs, any sampled and tested batch that does not conform to either the Quality Policy's Table 1 quality criteria and the Safety and Quality Control System (HACCP) applicable to the compost grade shall:

- Undergo corrective action then be sampled and tested in terms of the parameter(s) relevant for evaluating efficacy of the corrective action;
- Undergo re-composting with or without addition of further input material as appropriate, then be sampled and tested in terms of the parameter(s) relevant for evaluating the efficacy of the corrective action; or
- Be dispatched for use, processing elsewhere or disposal, and the recipient, certification body and regulator notified of the nature of its non-conformity with PAS 100.

Please detail the corrective action, given reference to any forms that document processes to the windrow where applicable.

Section 4: Signature

Appraisers Signature:	C. Mitchell
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Section 1: Record of Active Consents and Licenses					
Consent ID:	Consent / Licence / Permit Title:	Date Obtained:	Expiry:	Reference Number:	Authorising Authority:



Section 2: Proposed/Application in Progress Consents and Licenses Tracker					
Consent / Licence / Permit Title:	Reference Number:	Date of Application:	Application Progression Date:	Status:	Authorising Authority:

- *Detail all active consents or licenses pertaining to the project in section 1. Add additional rows as necessary.*
- *Detail all consents/licenses or agreements that are either proposed or undergoing application in Section 2. If undergoing application, for each major development, record the date in the fourth column and summarise the details of the update in the fifth column to track progression.*

SITE NAME HERE []

Management Site Inspection Checklist

Week Commencing (Insert Mondays date) _____

Daily Checks: (Score 1 to 3) 1 = Satisfactory 2 = Review Weekly 3 = Immediate Attention N/A = Not Applicable

Site Inspection Checklist									
Day of Inspection	Mon	Tues	Wed	Thrus	Fri	Sat	Sun	Score	Action By
Inspected By (Initial)									
Weather conditions									
Signage									
Site Personnel / Manning									
Security/Fences/Gates									
Surfaces & Site Roads									
Waste Storage Areas									
Waste Capacities									
Waste Types									
Waste Segregation									
Waste Quarantine									
Fuel Storage Tank									
Drain and Interceptors									
Equipment/Machinery & Maintenance									
Infrastructure & Maintenance									
Wind Monitoring Systems									
Security Systems									
Loose debris & Litter									
Spillages & Leakages									
Surface Water Management Systems (If Applicable)									
Dust									
Noise									
Odour									
Mud & Debris on Roads									
Vermin/Pests/Birds									
Lighting									
Tidiness									
Evidence of fires									
Health & Safety									
Comments & Actions									



CEMP & DEMP Environmental Compliance Audit

Table 1: Document Control	
Document Title:	CEMP and DEMP Environmental Compliance Audit
Document Reference:	CD-G080
Revision:	1.0
Project ID:	
Project Name:	
Audit Address:	
Client:	
Date Of Audit:	
Audit Undertaken By:	
Contracts Manager:	
Project Manager:	

1.0. Audit Framework

Objectives:

- Inspect to determine compliance with CEMP / DEMP
- Audit the Principal Contractor's monitoring data
- Determine whether Best Practicable Means (BPM) are being adopted
- Recommend improvements where applicable

The audit has used the following descriptors to present the audit findings for each condition:

- YES: This has been checked and is conforming
- NC: Non-conformance – this has been checked and is non-conforming. Details will be recorded under 'Findings'
- N/A: There is no applicability for assessment of this requirement at this stage of the Proposed Scheme.

Table 2: CEMP Framework Assessment

ID	Aspect Audited	Checked			Findings
		Yes	NC	N/A	
1. Records					
1.1	CEMP/CEMP in file and up to date				
1.2	Environmental Risk assessments (Inc. sub-contractors, fitters etc.)				
1.3	Method statements (Inc. sub-contractors)				
1.4	Preconstruction Assessments				
1.5	Traffic management plan				
1.6	Site waste management plan				
1.7	Surface Water Management Plan				
1.8	COSHH Inventory and assessments				
1.9	Fire risk assessment				
1.10	Site inductions				
1.11	Site managers daily inspections				
1.12	Training records (Inc. sub-contractors)				
1.13	Evidence of completed toolbox talks				
1.14	Waste documentation				
1.15	Environmental Control Plans				

Table 2: CEMP Framework Assessment

ID	Aspect Audited	Checked			Findings
		Yes	NC	N/A	
1.16	Emergency Accidents and Incidents Response Plan				
1.17	Additional Consents				
1.18	Third Party Consents				
1.19	ECoW Method Statement Audits (if required)				
1.20	ECoW Environmental Monitoring and Implementation Certification (if required)				
1.21	Additional Consents				
1.22	Programme of works, phased construction and environmental protection measures (if required)				
1.23	Emergency Response Investigations and Feedback records				
1.24	Materials Management Plan (if required)				
1.25	Fuel delivery records				
2. COSHH & Emergency Response					
2.1	Suitable and sufficient fire extinguishers mounted or footed. Relevant signage. Within inspection date and not obstructed. • All welfare areas • Fuel bowser • Cabbed plant • Chemical stores				
2.2	Assembly point established and signage in place				
2.3	Emergency fire evacuation drills established and known				
2.4	Suitable spill kits available in set locations; • Fuel bowser • Chemical stores • Generator (diesel / petrol) • Plant				
2.5	Fuel stored in adequately bunded container?				
2.6	Drums stored in bunded area				
2.7	All stored substances labelled with contents.				
2.8	Are flammable or dangerous substances locked away in secure storage places at the end of the day				
2.9	Ground conditions suitable for storage of chemicals (hard level ground)				

Table 2: CEMP Framework Assessment

ID	Aspect Audited	Checked			Findings
		Yes	NC	N/A	
2.10	Chemicals Located away from water courses				
3. Signage					
3.1	Current HSEQ policies on display and signed				
3.2	Emergency procedures				
3.3	Site Plan – On display				
3.4	Appropriate HSEQ information for employees (alerts, campaigns, newsletters)				
3.5	Site rules – On display				
4. Plant, Machinery, Tools and Equipment					
4.1	Maintenance checks carried out				
4.2	Defected tools / equipment quarantined and labelled as such				
4.3	Defects closed out?				
5. Emissions					
5.1	Dust mitigations in place				
5.2	Noise Mitigations in place				
5.3	Engine Emission Mitigations in place				
6. Waste					
6.1	Is waste segregated for recycling?				
6.2	Is waste management adequate (no overflowing skips)				
6.3	Is sewage adequately contained or sufficiently treated prior to disposal?				
7. Housekeeping					
7.1	Is the work area free from debris and surplus materials				
7.2	No evidence of general waste littered on site				
7.3	Pest management				
8. Other					



2.0. Supporting Photographs

Add any supporting photographs here.



3.0. Signatures

Table 3: Audit Signatories			
Auditors Name:		Site Manager Name:	
Auditors Signature:		Site Manager Signature	
Date:		Date:	

EMERGENCY SPILL PROCEDURE

In the event a chemical spill does occur you may think you are doing immediately
BUT REMEMBER:



- YOURS AND OTHER PEOPLE'S SAFETY COMES FIRST.
- IF IN DOUBT raise the alarm and evacuate.
- Inform the site Supervisor/ Manager immediately.



- If contaminated carefully remove contaminated clothing, with gloves removed last.
- Clean down if necessary.
- Seek First Aid assistance if necessary

To 'Clean Up' or 'Not to Clean Up'?

Before attempting to clean up spilt chemicals ask yourself:

- Are you confident you know what you are doing or should you seek advice?
- Do you understand the hazards associated with the chemical?
- Are you certain no other hazards will be created by the spill e.g. reaction with other chemicals producing toxic gases?
- Do you know how to protect yourself against all the hazards?
- Will the area need to be vacated by others during the clean-up, and / or for a period of time after the clean up?
- Is the correct PPE and a suitable clean up 'spill kit' available?
- Do you need help to clean up?

NEVER

- Do not attempt to neutralise concentrated acids or alkalis chemically.
- Do not switch 'ON' / 'OFF' electrical equipment if the spill involves flammable liquids.

CLEANING UP SPILLS SAFELY

1. **Make sure you are wearing appropriate PPE. If none is available don't clean up - but do:**
 - Warn others who could be affected.
 - Inform a Supervisor/Manager immediately.

Prichard's		Issue Status:	Issued
Document Reference:	CD-A129	Revision No.:	2.0
Document Type:	Controlled Document	Issue Date:	June 24

2. Protect drains and control spills by using absorbent booms or materials where possible eg:



3. Deactivate the spilt chemicals by absorbing pads or granules appropriately.



4. Leave absorbent material in place for at least 20 minutes.



5. Clean up the deactivated chemicals into suitable containers/ bag - usually provided with the spill kit.
6. Ensure the container is properly labelled, indicating the name of the chemical and any hazards.
7. Clean the area with water and detergent. Remember to dry the floor and / or place a warning sign.
8. Dispose of all the contaminated material; including PPE correctly i.e. as hazardous waste and appropriate for the type of Chemical involved.

Prichard's		Issue Status:	Issued
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Document Type:	Controlled Document	Issue Date:	June 24

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Plant Operator's Inspection / Defect Report Sheet

Company, Contract & Location <i>L/r/c</i>		Machine Hours <i>3169</i>
Machine Type <i>Shovel</i>	Plant No. <i>1367</i>	Next Service Hours <i>3368</i>

Please check the following items using these symbols as appropriate

✓ = OK

x = ADJUSTMENT

O = REPAIR NEEDED

N/A = NOT APPLICABLE

Items to be checked daily	Mon	Tues	Wed	Thur	Fri	Sat	Sun
1 Enging Cooling System	✓	✓	✓	✓	✓	✓	✓
2 Engine oil level	✓	✓	✓	✓	✓	✓	✓
3 Fuel level	✓	✓	✓	✓	✓	✓	✓
4 Mirrors	✓	✓	✓	✓	✓	✓	✓
5 All lights	✓	✓	✓	✓	✓	✓	✓
6 Flashing beacon	✓	✓	✓	✓	✓	✓	✓
7 Instruments and gauges	✓	✓	✓	✓	✓	✓	✓
8 Hydraulic oil levels	✓	✓	✓	✓	✓	✓	✓
9 Seat & seat belt condition	✓	✓	✓	✓	✓	✓	✓
10 Brakes	✓	✓	✓	✓	✓	✓	✓
11 Horn & reversing alarm	✓	✓	✓	✓	✓	✓	✓
12 Window screen & other glass	✓	✓	✓	✓	✓	✓	✓
13 Tyre Condition	✓	✓	✓	✓	✓	✓	✓
14 Wipes	✓	✓	✓	✓	✓	✓	✓
15 Blade & Bucket condition	✓	✓	✓	✓	✓	✓	✓
16 Culling edge, tips, pins, bushes or tracks	✓	✓	✓	✓	✓	✓	✓
17 Lifting attachment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18 Wire rope condition	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19 Fire extinguisher	✓	✓	✓	✓	✓	✓	✓
20 Air conditioner	✓	✓	✓	✓	✓	✓	✓
21 Body buzzer	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22 Camera	✓	✓	✓	✓	✓	✓	✓
23 Lift & crowd operation	✓	✓	✓	✓	✓	✓	✓
24 Conditon of forks	N/A	N/A	N/A	N/A	N/A	N/A	N/A
25 Capacity of plate	✓	✓	✓	✓	✓	✓	✓
26 General machine conditon	✓	✓	✓	✓	✓	✓	✓
27 Quick hitch general condition	✓	✓	✓	✓	✓	✓	✓

All defects must be reported to your supervisor immediately.

Name (print): <i>Mark Wilson</i>	Signature: <i>[Signature]</i>	Date: <i>29-5-22</i>