

Wylfa Newydd Project A5025 On-line Highway Improvements

Code of Construction Practice



APPLICATION November 2017

Contents

1	Introduction	1
1.1	General	1
1.2	The A5025 Highway Improvements	2
1.3	Environmental assessment	3
	<i>Mitigation</i>	4
2	Approach to environmental management	5
2.1	Code of Construction Practice	5
2.2	Construction Environmental Management Plan (CEMP)	5
2.3	Handover Environmental Management Plan	5
3	Communication	6
3.1	Welsh Language Standards Regulations	6
3.2	Public Liaison Officer	6
3.3	On-site communications	6
4	General Site Management Strategy	7
4.1	Construction	7
4.2	Working hours and delivery window	8
4.3	Site layout	8
4.4	Site lighting	8
4.5	Security	9
4.6	Site clearance on completion of activities	9
4.7	Construction worker code of conduct	9
5	Traffic and Transport Management Strategy	10
5.1	General	10
5.2	Construction Traffic Management Plan	10
6	Public Access Management Strategy	11
6.1	General	11
7	Dust and Air Quality Management Strategy	12
7.1	General	12
7.2	Dust and air quality management strategy	12
8	Noise and Vibration Management Strategy	14
8.1	General	14
8.2	Noise and vibration management	14
8.3	Section 61 applications	15
9	Materials and Waste Management	17
9.1	Materials Management Plan (MMP)	17
10	Water Management Strategy	20
10.1	General	20
10.2	Protection of watercourses	20
10.3	Site drainage	21
10.4	Control of pollution	21
	<i>Surface water</i>	22

	<i>Groundwater</i>	23
11	<i>Ecology and Landscape Management Strategy</i>	24
11.1	<i>General</i>	24
11.2	<i>Pre-construction and Site Clearance</i>	24
	<i>Great crested newt</i>	25
	<i>Otter</i>	25
	<i>Summary of pre-construction survey requirements</i>	25
11.3	<i>Landscaping</i>	27
11.4	<i>Visual</i>	28
12	<i>Cultural heritage</i>	29
12.1	<i>General</i>	29
13	<i>References</i>	30

List of Annexes

Annex A Relevant Acts of Parliament

Annex B Relevant Regulations

Annex C Relevant Directives

Annex D Relevant guidance, standards and codes of practice

Annex E Template application form for Section 61 consent

List of Tables

Table 4-1	Indicative core working hours.....	8
Table 8-1	Required contents of Section 61 applications	15
Table 11-1	Summary of survey requirements for the Proposed Development	25

1 Introduction

1.1 General

- 1.1.1 Horizon Nuclear Power Wylfa Limited (Horizon) is applying to the Secretary of State for a Development Consent Order (DCO) under the Planning Act 2008, to construct, operate and maintain a new nuclear power station on land west of Cemaes on the Isle of Anglesey, known as Wylfa Newydd.
- 1.1.2 Horizon has submitted a planning application under the Town and Country Planning Act 1990 (as amended) for the A5025 On-line Highways Improvements (Proposed Development) to the Isle of Anglesey County Council (IACC) as the determining local planning authority. The Proposed Development forms part of the Enabling Works for the Wylfa Newydd Project, and is required to mitigate the predicted impacts of increased traffic associated with construction activities that would be undertaken at the Wylfa Newydd Development Area, and from operational Power Station traffic that would travel along this part of the highway network.
- 1.1.3 The preparation and implementation of a Code of Construction Practice (CoCP) is widely considered to be good practice to manage the potential environmental effects of construction activities and demonstrate compliance with prevailing environmental legislation.
- 1.1.4 This CoCP has been prepared with consideration of the guidance presented in *Interim Advice Note (IAN) 183/14 Environmental Management Plans* [RD1]. For clarity, this CoCP represents the place of an Outline Environmental Management Plan, as defined in *IAN 183/14*.
- 1.1.5 The Wylfa Newydd DCO Project application will be accompanied by an overarching Code of Construction Practice (the Wylfa Newydd CoCP), and will be supported by development-specific sub-CoCPs.
- 1.1.6 This document is the A5025 On-line Highways Improvements CoCP and is part of the planning application for the Proposed Development. It forms a separate document to the Wylfa Newydd CoCP and is considered as a standalone document that details requirements that shall be followed during construction of the Proposed Development.
- 1.1.7 This CoCP sets out general and topic-specific environmental requirements in accordance with the mitigation described in the Environmental Report. It includes requirements that demonstrate the effective planning, management and control to limit the potential adverse environmental effects during construction of the Proposed Development.
- 1.1.8 Measures currently included within, and further additions to, this CoCP are subject to agreement between Horizon and key stakeholders, including the IACC, through the determination of the A5025 On-line Highways Improvements planning application. The CoCP and its implementation will be secured by a condition in the planning permission to be granted by the IACC.
- 1.1.9 The appointed construction contractor(s) (hereafter the “Contractor”) will be required to deliver the construction of the Proposed Development in

accordance with the terms of all planning conditions, including the condition required to comply with this CoCP. The Contractor will be required to produce a Construction Environmental Management Plan (CEMP) to comply with the content of this CoCP. Further information on the CEMP is included in section 2.2 below.

- 1.1.10 This CoCP does not contain an exhaustive register of environmental legislation; however, Directives, Parliamentary Acts, Regulations and other guidance that the Contractor should give consideration to are provided in annexes A–D respectively. Annex E provides a template application form for Section 61 consent under the *Control of the Pollution Act 1974* for all construction works.

1.2 The A5025 Highway Improvements

- 1.2.1 Construction of the Power Station would require very substantial transport needs for materials, large components and staff. Studies undertaken by Horizon in 2010–2011 identified that the stretch of the A5025 between Valley and the proposed Power Station Access Road Junction has physical and operational constraints in relation to its width, alignment, overtaking opportunities and surfacing condition.
- 1.2.2 As a result of these studies Horizon has committed to improve this section of the A5025 in order to mitigate the predicted impacts of increased traffic associated with construction activities that would be undertaken at the Wylfa Newydd Development Area, and from operational Power Station traffic, that would travel along this part of the highway network.
- 1.2.3 Horizon therefore intends to deliver a series of On-line and Off-line improvements (collectively termed the A5025 Highway Improvements) between Valley and the proposed Power Station Access Road Junction as part of its wider transport strategy for the Project, the objectives being to:
- upgrade the route, both in terms of standard of construction and road geometry, such that it can support increased levels of traffic, and improve safety and accessibility;
 - ensure that all relevant abnormal loads can pass along the full length of the A5025;
 - reduce any potential increase in road accident risk;
 - reduce any adverse impacts on local communities;
 - reduce any adverse impacts on the environment; and
 - seek opportunities where possible to achieve improvements for local communities and the environment through road design measures.
- 1.2.4 The 16.19km stretch of the A5025 identified for On-line Highway Improvement has been divided into eight sections.
- Section 1 – A5 east of Valley junction to north of Valley Junction (A5/A5025) – a length of 1.06km;

- Section 2 – north of Valley Junction (A5/A5025) to north of Llanynghenedl – a length of 2.46km;
 - Section 3 – north of Llanynghenedl to north of Llanfachraeth – a length of 2.28km;
 - Section 4 – north of Llanfachraeth to south of Llanfaethlu – a length of 2.7km;
 - Section 5 – south of Llanfaethlu to north of Llanfaethlu – a length of 1.43km;
 - Section 6 – north of Llanfaethlu to north of Llanrhuddlad – a length of 3.36km;
 - Section 7 – north of Llanrhuddlad to north of Cefn Coch – a length of 1.3km; and
 - Section 8 – north of Cefn Coch to the proposed Power Station Access Road Junction – a length of 1.6km.
- 1.2.5 The implementation of A5025 On-line Highways Improvement will be largely within the existing highway boundary and will include:
- improvement of the existing pavement through the application of a surface dressing through Sections 1, 3, 5 and 7;
 - reconstruction and localised widening of the existing pavement through Sections 2, 4, 6 and 8;
 - modifications and improvements to existing signage and road markings through Sections 1–8; and
 - the construction of a Temporary Construction Compound (incorporating a temporary pavement recycling facility) within Section 7, immediately adjacent to the A5025.
- 1.2.6 Further information on construction is provided in section 4.1 below.
- 1.2.7 The ‘pavement’ referenced above relates to the surface of the road within the highway boundary, defined as materials comprising the sub-base, base course and surface course placed on a sub-grade to support the traffic load.

1.3 Environmental assessment

- 1.3.1 The A5025 On-line Highway Improvements Environmental Report is principally guided by the *Design Manual for Roads and Bridges (DMRB), Volume 11: Environmental Assessment (DMRB Volume 11)* [RD2] and *DMRB Interim Advice Note (IAN) 125/09 (W) Supplementary guidance for users of DMRB Volume 11 Environmental Assessment* [RD3].
- 1.3.2 The Environmental Report has identified measures to mitigate the potential effects from the construction and operation of the Proposed Development.

Mitigation

- 1.3.3 The term 'mitigation' describes committed measures used to prevent or reduce adverse environmental effects. Three types of mitigation were considered in the environmental assessment as follows:
- 'Embedded mitigation' includes all those measures to avoid or reduce environmental effects that are directly incorporated into the design of the development.
 - 'Good practice mitigation' contains measures that would occur with or without input from EIA feeding into the design process (for example, mitigation that represents established industry practice or would be undertaken to meet existing legal compliance).
 - 'Additional mitigation' measures are those that have been identified through the EIA or other assessment processes to further reduce environmental effects.
- 1.3.4 This approach to mitigation accords with the Institute of Environmental Management and Assessment guidance [RD4]), which describes 'primary' (embedded) mitigation, 'secondary' (additional) mitigation and 'tertiary' (good practice) mitigation.

2 Approach to environmental management

2.1 Code of Construction Practice

- 2.1.1 This CoCP has been informed by the documents submitted in support of the Proposed Development which has been subject to consultation with key stakeholders including the IACC, Natural Resources Wales (NRW) and the local community.
- 2.1.2 This CoCP sets standards and measures which will be developed in the Contractor's CEMP.

2.2 Construction Environmental Management Plan (CEMP)

- 2.2.1 The CEMP is a delivery document that details how the practical execution of the construction works will be planned, managed and controlled to meet the requirements of this CoCP, as well as the planning permission, other necessary consents, legislation and relevant good practices.
- 2.2.2 The CEMP will be produced by the Contractor and shall be reviewed and accepted by IACC before the commencement of construction activities.
- 2.2.3 The CEMP will be updated as and when required to ensure the methods used reflect the changing needs of the works during construction and, for example, any relevant updates to industry guidance or legislation or as a result of pre-construction surveys. All updates to the CEMP will be subject to acceptance by IACC.

2.3 Handover Environmental Management Plan

- 2.3.1 A Handover Environmental Management Plan (HEMP) will be developed by the Contractor during the construction phase in consultation with the IACC. Upon completion of the Proposed Development, the HEMP will be handed over to IACC who will be responsible for the future operation, management and maintenance of the Proposed Development.
- 2.3.2 The HEMP will provide relevant information on existing and future environmental commitments and objectives that need to be adhered to, and ongoing actions and risks that need to be managed. Further guidance on the indicative structure and content of the HEMP is provided in *IAN 183/14* [RD1].

3 Communication

3.1 Welsh Language Standards Regulations

- 3.1.1 Safeguarding and promoting the Welsh language and developing its use is one of the IACC's basic objectives in accordance with the Welsh Language Standards Regulations, which include the following aims:
- improve the services Welsh speakers can expect to receive from organisations in Welsh;
 - increase the use people make of Welsh language services;
 - make it clear to organisations what they need to do in terms of the Welsh language; and
 - ensure that there is an appropriate degree of consistency in terms of the duties placed on bodies in the same sector.
- 3.1.2 The Contractor would be required to adhere to the Welsh Language Standards Regulations throughout the construction of the Proposed Development including communication with the public.

3.2 Public Liaison Officer

- 3.2.1 A Welsh speaking (bilingual) Public Liaison Officer would be appointed by the Contractor to liaise and communicate with the public during the construction process. The officer would notify occupiers of nearby properties in advance of works taking place that will potentially affect them. Information will include a description of the works to be carried out, including the timing and duration, the expected disruption, and an explanation of the measures being implemented to mitigate adverse effects of the works.
- 3.2.2 All notifications will be bilingual in Welsh and English, and accompanied with a telephone number and address which enquiries should be directed.

3.3 On-site communications

- 3.3.1 On-site communications, such as site inductions, daily shift and activity briefings, will be undertaken by the Contractor and used to advise the site workforce of health, safety, environmental and community matters. This will include the requirements of the CEMP such as noise generation and access issues, together with constraints detailed in the contracts (e.g. working hours) and other documents.
- 3.3.2 Appropriate information (e.g. known environmental constraints or hazards and management controls) will be communicated to all members of the construction workforce by way of an induction, including sub-contractors, prior to the commencement of construction and site clearance.
- 3.3.3 The Contractor will display an information board containing contact names, telephone numbers and address at the Temporary Construction Compound and also make this information available online and via the Public Liaison Officer. Toolbox talks or other appropriate means will be employed to disseminate information to all construction staff.

4 General Site Management Strategy

4.1 Construction

4.1.1 For the purposes of this CoCP, construction is defined to include all site clearance and physical works carried out to implement the Proposed Development. The works include, but are not limited to, the following activities:

- site mobilisation and formation of the Temporary Construction Compound (including the setting up of the temporary pavement recycling facility);
- setting out of traffic management;
- diversion and accommodation works for statutory undertakers;
- temporary diversions and temporary closures of existing Public Rights of Way (PRoW);
- site clearance of vegetation, topsoil and field boundaries;
- reinstatement and/or replacement of boundary features (including the translocation of hedgerows where possible);
- installation of highway drainage infrastructure, and the formation of attenuation ponds and outfalls to watercourses;
- works to create or improve kerbs, footways/cycleways, parking arrangements and private means of access;
- minor earthworks;
- stopping up and improvement of existing junctions;
- excavation of existing road surface, followed by the processing, batching and transportation of recycled pavement material;
- pavement reconstruction (including the construction of a new section of carriageway associated with bend improvements at Bytheicws (Section 4);
- the application of surface dressing to the existing pavement;
- landscaping and seeding;
- installation and/or replacement of signage and road markings; and
- inspection operations and handover for adoption by the IACC as the highway authority for operation and maintenance.

4.1.2 The Contractor will promote and enforce arrangements on all construction sites to ensure they remain tidy and safe.

4.1.3 The Contractor will ensure that welfare facilities for the construction workforce are appropriate to individual sections of work, and within the Temporary Construction Compound.

4.1.4 Guidance related to implementing good construction practices and design will be adhered to, as specified in relevant guidance such as the Construction Industry Research and the Information Association (CIRIA) [RD5, RD6] guidance.

4.2 Working hours and delivery window

4.2.1 Indicative core working hours for construction are described in table 4-1.

Table 4-1 Indicative core working hours

Time of week	Construction staff		Office staff
	Summer shift	Winter shift	
Weekday	07:00–19:00	08:00–16:00	09:00–17:00
Saturday	07:00–13:00	08:00–13:00	Not applicable.

4.2.2 All working hours will be agreed with the IACC under the planning application and some specific works may be subject to a Section 61 application under the *Control of the Pollution Act 1974* including the shift patterns, arrangements for notifying relevant stakeholders, road users and local residents.

4.2.3 In order to manage the impacts of HGV traffic on existing flows, the Construction Traffic Management Plan (see section 5.2) will identify a delivery window for construction materials on the A5025. The delivery window would run from 07:00 to 19:00, Monday to Friday, with restrictions during school start and end times. It is anticipated that deliveries may occasionally be undertaken outside of these times, but they will be limited wherever practicable.

4.3 Site layout

4.3.1 The Contractor will design the site layout and appearance of all works sites in accordance with the following principles:

- site drainage will be implemented to ensure that surface water run-off does not cause any impacts to waterbodies or localised flooding;
- where practicable, fixed plant, equipment and machinery within the Temporary Construction Compound will be sited away from local noise sensitive receptors, to limit noise levels; and
- temporary screening of the Temporary Construction Compound will be utilised to limit the visual impact of construction equipment and operations.

4.4 Site lighting

4.4.1 Lighting will only be used during the operational hours for works outside of daylight. If night working does take place, levels of lighting would also be reduced as far as practicable while maintaining safe working conditions.

4.4.2 Site lighting management will accord to the following high level requirements:

- Site lighting will primarily be provided to ensure safe working conditions and to maintain security, while having regard to sensitive ecological receptors or occupied residential properties.
- Lighting will be positioned and directed so as not to spill unnecessarily from the Proposed Development onto sensitive receptors.

- Lighting will be switched off when not required for safe working conditions and site security.
- Provision of low-level lighting generally limited to the Temporary Construction Compound.
- All construction site lighting will, as far as practicable, be designed to ensure that any artificial light emitted from construction work areas do not prejudice health or create a nuisance, in accordance with section 79(1) of the *Environmental Protection Act 1990*.

4.5 Security

- 4.5.1 The Contractor will secure all construction sites using appropriate barriers and specific measures to achieve this will be specified in the CEMP. Access to work sites such as the Temporary Construction Compound will be limited to specified entry points, and all personnel entries/exits will be recorded and monitored for security and health and safety purposes.
- 4.5.2 The Contractor will cooperate with IACC and relevant authorities with regard to site security matters.

4.6 Site clearance on completion of activities

- 4.6.1 The Contractor will clear and clean all working areas and accesses as work proceeds and when they are no longer required for works.
- 4.6.2 On completion of a construction activity all plant, temporary buildings and vehicles not required for subsequent activities will be removed from the Temporary Construction Compound as soon as practicable.
- 4.6.3 On completion of works, all land that is to be occupied temporarily including highways, laybys, PRow, river embankments/waterways and agricultural land will be reinstated to a comparable condition to its original use.

4.7 Construction worker code of conduct

- 4.7.1 The Contractor shall place expected standards on its construction workers in relation to their conduct and behaviour whilst employed on the Proposed Development.
- 4.7.2 This will include expected standards of behaviour in the local community, housekeeping and behaving in an environmentally and socially responsible manner.

5 Traffic and Transport Management Strategy

5.1 General

- 5.1.1 All temporary signage erected by the Contractor will be bilingual. The locations, translations and nomenclature of temporary signage will be identified and approved by the IACC and the North and Mid Wales Trunk Road Agency prior to the commencement of construction.
- 5.1.2 Works which may affect bus stops will be confirmed, and the Contractor will liaise with the relevant bus companies about any necessary repositioning of bus stops. The Contractor will ensure that disruptions from relocated bus stops are minimised as far as practicable. Any temporary bus stop relocation(s) will be kept to the minimum distance possible from the existing bus stop, as far as practicable, ensuring the safety of all highway users.
- 5.1.3 Existing laybys along the A5025 may be used as storage/stockpiling areas to limit the number of HGV movements, as agreed with the IACC Highways and Transportation Service.
- 5.1.4 The Contractor will encourage construction workers to car share where practical.

5.2 Construction Traffic Management Plan

- 5.2.1 The Contractor will adopt and develop a Construction Traffic Management Plan (CTMP) for each phase of the Proposed Development and will agree the CTMP with IACC. In line with section 6.1.1, Temporary Traffic Regulation Orders will be obtained by the Contractor. The CTMP will include the Temporary Traffic Management (TTM) procedures which will be developed in accordance with Temporary Traffic Regulation Orders and implemented by a Traffic Safety Control Officer (TSCO) who will be appointed by the Contractor.
- 5.2.2 TTM procedures will be set out where required at each of the construction sites along the A5025. TTM procedures will employ either temporary traffic signals or manned stop and go boards for each section, together with a temporary speed limit, dependent on the location of the roadworks. In some circumstances, it may be necessary to convoy traffic through works during restrictive widths when the required working area and safety zones cannot be achieved. All TTM will be monitored to ensure it is working safely and effectively.
- 5.2.3 In the event of an emergency situation occurring, the TTM procedures will allow the emergency vehicles priority through the roadworks to limit delay.
- 5.2.4 Emergency telephone numbers will be displayed on the back of any temporary traffic lights, in the event that the temporary traffic lights are not functioning.

An access route for Heavy Goods Vehicles (HGVs) has been agreed with the IACC. This route will be the only route to be used for HGVs to access the Temporary Construction Compound and the construction working areas along the A5025. This will be via the A55 (junction 3) to Valley and then along the A5025.

6 Public Access Management Strategy

6.1 General

- 6.1.1 Public Rights of Way (PRoW) will be kept open wherever practicable throughout the construction of the Proposed Development. However, where closures are unavoidable, the closures will be obtained using appropriate means, such as a Temporary Traffic Regulation Order by the Contractor under the *Road Traffic Regulations Act 1984*, and they will be of the shortest duration practicable for the works required. Temporary Traffic Regulation Order applications will be submitted in sufficient time for approval, but no less than six weeks in advance of a required closure of up to six months and no less than two weeks for a closure of up to two weeks.
- 6.1.2 The Contractor will include details of the management of PRoWs and access in their CEMP.
- 6.1.3 The needs and requirements of non-motorised users will be considered when implementing traffic management measures.
- 6.1.4 In compliance with the *Equality Act 2010*, the Contractor will maintain private access points and consider the needs of persons with mobility issues during the construction stage and during an temporary closures (e.g. footways within communities).
- 6.1.5 Construction works adjacent to cycle routes will be undertaken using traffic control and management measures. Further information on traffic control and management measures are detailed in section 5.

7 Dust and Air Quality Management Strategy

7.1 General

7.1.1 In order to minimise the potential dust and air quality impacts, the Temporary Construction Compound including the temporary pavement recycling facility and all other construction work areas, will be operated in line with standard good practice mitigation measures.

7.2 Dust and air quality management strategy

7.2.1 The Contractor will include dust control measures in the CEMP using the following hierarchy approach:

- minimise dust releases;
- good process design to reduce dust emissions (such as reducing drop heights/where possible covering stockpiles, reduction of vehicle speed limits);
- abatement systems or control measures in place (such as the use of water bowsers and water spraying); and
- ongoing monitoring and applying corrective actions.

7.2.2 The Contractor will monitor dust and air quality in line with *Guidance on the Assessment of Dust from Demolition and Construction* [RD8] during construction works, and implement corrective actions where they are required.

7.2.3 The Contractor shall control dust and air emissions by implementing the following measures through the CEMP:

- Record any exceptional incidents that cause dust and/or air emissions and the action taken to resolve the situation.
- Ensuring that all construction activities, including materials stored on site, that have a potential to produce airborne dust are subject to appropriate site management controls necessary to prevent/mitigate the risk.
- Produce a CTMP that supports and encourages sustainable travel (public transport, cycling, walking and car sharing).
- Locating stockpiles or dusty activities as far as practicable from sensitive receptors i.e. residential properties, PRow etc.
- Use of water suppression to dampen stockpiles of dusty materials.
- Use of water sprays during cutting or grinding activities.
- Reducing drop heights during material movement or transfer.
- Erecting solid screens or barriers around dusty activities.
- Development of action plans and contingency plans for adverse weather conditions and rapid response to the breakdown of dust suppression equipment.
- Notification of planned works by the Public Liaison Officer.

- Appropriate training of the construction workers to increase awareness of community issues in relation to environmental concerns and dust management and control measures.
- There will be no burning of materials.
- Specific method statement and risk assessments will be produced if the need for the removal of biological materials e.g. vegetation or organic matter, is identified which may increase the risk of dust emissions through its removal.
- All vehicles containing loose bulk material will be covered whilst in transit.
- Where there is a risk of mud and debris being transferred onto the public highway, construction vehicles will pass through a wheel-cleaning facility.
- The use of a road sweeper, as required, to further ensure that the local road network remains clear of debris.
- No idling engines, where practicable.
- Use of mains electricity or battery-powered equipment where practicable to avoid the use of petrol or diesel generators.
- Using lower power settings where practical.
- Plant specification to ensure that average emissions across the fleet of relevant non-road mobile machinery would be equivalent to the EU Stage IIIB emission standards (EC Directive 97/68/EC) introduced in January 2011 for the larger engine sizes.

The Contractor will limit the dust and air quality effects on human and ecological receptors as far as possible during the construction works and will comply with the relevant air quality standards.

8 Noise and Vibration Management Strategy

8.1 General

8.1.1 The Contractor will put in place mitigation to reduce as far as practicable noise and vibration effects on the surrounding environment.

8.2 Noise and vibration management

8.2.1 The construction of the Proposed Development will be undertaken in accordance with guidance in BS 5228-1:2009+A1:2014 (BSI, 2014) and BS 5228-2:2009+A1:2014 (BSI, 2014a) [RD9]:

- Before construction activities are undertaken, the choice of methodology and construction equipment will be reviewed to identify reasonable opportunities to reduce noise.
- Heavy plant and equipment will comply with the noise limits in the relevant European Commission Directive 2000/14/EC which is enacted in *the Noise Emission in the Environment by Outdoors Regulations 2001* Statutory Instrument (SI) 2001/1701. All plant will be maintained in good working order.
- The need for considerate working practices and behaviours will be communicated to the workforce, through (but not restricted to) site inductions, shift briefings and toolbox talks.

8.2.2 The CEMP will include all relevant noise control measures as required by good practice such as *BS 5228 Noise Control on Construction and Open Sites* [RD9], which will include as a minimum:

- Restriction of HGV delivery hours (refer to section 4.2).
- Locating noisy plant as far away from noise sensitive receptors as is practicable.
- If necessary and practical, placing temporary barriers between noise sources and receptors.
- Construction plant should comply with the European Outside Noise Directive (2000/14/EC).
- Construction plant to be sound reduced where possible, such as using acoustic covers where practical with regards to ventilation and safety.
- Ensuring plant and machinery is turned off rather than idling when not in use.
- Ensuring that plant and vehicles are regularly maintained [RD37].
- Limiting the use of radios and other sound systems on-site.
- Appropriate training will be provided for construction workers to increase awareness of community issues, including noise management.
- The start up and shut down of plant will occur within working hours for all noise sources.

8.3 Section 61 applications

- 8.3.1 The Contractor will demonstrate the adoption of Best Practicable Means of noise control to IACC through the Section 61 (of the Control of Pollution Act 1974) application process. The specific requirements for Section 61 application will be agreed between the Contractor and the IACC. This may include agreement on hours of work and limits on noise and vibration. The Contractor will ensure that IACC is provided with sufficient time to review each application. A template for a Section 61 application is included in annex E and information required is set out in table 8-1.

Table 8-1 Required contents of Section 61 applications

Section of Section 61 Application	Required information
Scheme of work	Contractor shall provide a description of the works to be carried out, working methods, type and quantity of plant to be used, and the duration of the works.
Programme	Contractor shall detail the location (on site layout drawings) and duration of each activity with a potential to cause a noise or vibration impact at local receptors.
Working hours	Contractor shall provide a definition of the working hours required.
Plant noise data	Contractor shall provide sound power levels or sound pressure levels at 10m for each proposed item of plant.
Best Practicable Means (BPM) measures	Contractor shall describe steps to reduce noise and vibration as far as practicable during the works.
Predicted noise and vibration levels	Contractor shall undertake predictions of noise and vibration levels in accordance with BS 5228 Parts 1 and 2.
Proposed noise/vibration limits	Contractor shall provide proposed noise/vibration limits applicable to normal operations described in the Section 61.
Proposed short-term higher noise/vibration limits	Where required, Contractor shall propose limits for predicted short-term higher noise/vibration effects and associated durations, for consideration by the IACC.
BPM justification for short-term higher noise/vibration operations	Contractor shall provide a detailed justification that the method and plant proposed represents BPM in terms of noise and vibration control. The duration of effect shall be described.

Section of Section 61 Application	Required information
Details of monitoring programme for noise and/or vibration	Contractor shall provide details (including proposed monitoring locations, equipment, standards and personnel) of the proposed monitoring regime.

- 8.3.2 In the event that works for which Section 61 consent has been applied for, need to be rescheduled or modified (for example, using different plant, working methods or working hours), the Contractor shall apply for a dispensation or variation from the IACC before commencing those works.

9 Materials and Waste Management

9.1 Materials Management Plan (MMP)

- 9.1.1 As part of the CEMP, the Contractor will develop and adopt a Materials Management Plan (MMP) for the Proposed Development following the process set out in *The Definition of Waste: Development Industry Code of Practice* (Contaminated Land: Applications in Real Environments, 2011) (hereafter "CL:AIRE") [RD13].
- 9.1.2 The Contractor will ensure a CL:AIRE qualified person is employed to review, approve and verify materials management. The CL:AIRE qualified person will remain independent of the materials management for the Proposed Development.
- 9.1.3 By managing materials in accordance with CL:AIRE, the Contractor will be able to demonstrate its materials management is appropriate, and that the material is not a waste by giving sufficient consideration to the following four factors:
- protection of human health and the environment;
 - suitability for use, without further treatment;
 - certainty of use; and
 - quantity of material.
- 9.1.1 When Proposed Development is complete, the Contractor will produce a document that sets out in detail how materials were actually managed during the works.
- 9.1.2 The MMP will include measures and standards of works that the Contractor will be required to follow throughout the construction of the Proposed Development. Measures will include:
- Topsoil will be stripped as soon as possible following the removal of vegetation within each section (as appropriate) to limit the length of time during which the soil is exposed without vegetative cover.
 - Clearance works will not be undertaken during or immediately after heavy rainfall.
 - Soil stripping should cease if made ground is encountered, and stripping should not recommence until appropriate measures have been put in place to ensure that soil is not mixed with made ground.
 - Topsoil and subsoil will be stored in separate stockpiles to avoid cross-contamination. Where different grades of topsoil occur, these will be identified and stored separately to preserve their qualities, in line with *BS 3882:2015*.
 - Soil stockpiles will not be sited on saturated ground or ground that is easily prone to saturation and will be protected from run-off from adjacent areas.

- Stockpiles will be located a minimum of at least 10m away from any watercourse to limit the risk of sediment entering the watercourse.
 - Biosecurity measures will be implemented to prevent the potential spread of invasive non-native species, in line with the approach presented in section 9.3.
- 9.1.3 Where practicable the Contractor will follow guidance within *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites* (Department for Environment, Food and Rural Affairs, 2009) [RD11] and *Good Practice Guide for Handling Soils* (Ministry of Agriculture, Fisheries and Food, 2000) [RD10], and *The Definition of Waste: Development Industry Code of Practice* [RD13].
- 9.1.4 In addition, the Contractor will give consideration to the following:
- *BS 3882:2015 Specification for topsoil* (British Standards Institution, 2015) [RD38];
 - *BS 8601:2013 Specification for subsoil and requirements for use* (British Standards Institution, 2013) [RD39];
 - *Environment Agency: Regulatory Position Statement 075: The movement and use of treated asphalt waste containing coal tar 2017* [RD43].
 - *The Waste (England and Wales) Regulations 2011*; and
 - *The Environmental Permitting (England and Wales) Regulations 2016*.

9.2 Site Waste Management Plan (SWMP)

- 9.2.1 The Contractor will be responsible for the management of waste and will be required by law to ensure the waste is described accurately and managed appropriately. As part of the CEMP the Contractor will develop and implement a SWMP which will incorporate a number of requirements, including:
- Compliance with the waste Duty of Care and all relevant legislation and regulation.
 - Identification of the most appropriate management route of a particular waste and available capacity (permitted or exempt) for a particular waste, depending on its characteristics and classification as inert, non-hazardous or hazardous.
 - Check and record progress against waste minimisation activities.
 - Provision of a list of compliant waste carriers and waste management companies, including suitably permitted or exempt sites, their capacities and their proximity to the project. Facilities capacities should not be exceeded or overwhelmed.
 - Provision of an accurate description of the hazardous waste and ensure that information is captured on hazardous waste consignment notes. Hazardous waste may be harmful to human health or the environment; if waste has hazardous properties it must be treated as hazardous waste.

- Consultation of the European Waste Catalogue (2000/532/EC) when classifying the types of waste and using appropriate 6-digit European Waste Codes on transfer or consignment notes. Where a waste falls under more than one of the European Waste Codes, then the most appropriate code should be used.
- Maintain records of waste transfer or waste consignment and provide copies of this written information on request.
- Provide a monthly summary to IACC of waste types and tonnages including European Waste Codes, as specified in the European List of Waste and in line with the requirements of CL:AIRE.

9.2.2 On completion of the Proposed Development, the Contractor will:

- complete and finalise its waste reporting requirements, in accordance with *BSI PAS 402:2013* [RD12];
- conduct a comparison of the forecast and actual reported quantities for each waste type; and
- generate an estimate of any cost savings achieved.

9.3 Materials and waste controls

9.3.1 Controls which are to be adopted by the Contractor within the CEMP will include, but not be limited to the following:

- Where unexpected contamination is encountered, the Contractor will stop works immediately in the vicinity of the contamination identified and take samples of the soil or materials to determine if it is hazardous.
- Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) lists Invasive non-native species (of plant) which makes it illegal to cause them to spread or grow in the wild. Stands of invasive non-native species (of plant) suspected to be present in areas outside of those already known shall be reported as soon as is practicable so that, if required, the appropriate actions can be applied from the Biosecurity Risk Assessment and Method Statement and in accordance with best practice [RD41 and RD42].

10 Water Management Strategy

10.1 General

- 10.1.1 The Contractor will comply with relevant legislation when implementing working methods to protect surface water and groundwater from pollution and other impacts, including changes to flow, flood storage volume, water levels and water quality. The measures identified within this CoCP will be developed by the Contractor and incorporated into the CEMP.
- 10.1.2 Construction Industry Research and Information Association (CIRIA) guidance will be adopted, as appropriate, from the following publications:
- *Environmental Handbook for Building and Civil Engineering Projects* (3 Parts) (C512, C528, C529) [RD14, RD15, RD16];
 - *Control of water pollution from construction sites. Guidance for consultants and contractors* (C532) [RD6];
 - *Environmental good practice on site guide* (fourth edition) (C741) [RD5];
 - *Land use management effects on flood flows and sediment – guidance on prediction* (C719D) [RD17];
 - *The SuDS Manual* (C753) [RD18];
 - *Development and flood risk – guidance for the construction industry* (C624) [RD19]; and
 - *Culvert Design and Operating Guide* (C689) [RD20].

10.2 Protection of watercourses

- 10.2.1 Stockpiles will be located a minimum of at least 10m away from any watercourse to limit the risk of sediment entering the watercourse.
- 10.2.2 The Contractor will carry out a risk assessment for all works within 10m of watercourses, including but not limited to, clearance adjacent to watercourses and construction of drainage outfalls. Furthermore, a risk assessment will be undertaken for use of any cementitious materials within 50m of any active watercourse. Appropriate controls, proportionate to the level of risk identified, will be applied to the works.
- 10.2.3 The Contractor will undertake appropriate monitoring of water quality where there is potential run-off from construction works, including the Temporary Construction Compound.
- 10.2.4 No discharge of dewatering water will occur to a watercourse without the agreement of NRW and IACC that suitable alternatives are not available and only following appropriate treatment.
- 10.2.5 Appropriate measures will be taken to prevent the deposition of silt or other material arising from work operations in existing watercourses. The Contractor should also consider the type of plant used and the time of year for working in watercourses. In addition, relevant Environment Agency and NRW

guidance including the following Pollution Prevention Guidance (PPGs) and Guidance for Pollution Prevention (GPPs) will be followed, including:

- *Understanding your environmental responsibilities – good environmental practices: PPG 1 [RD21];*
- *Works and maintenance in or near water: GPP 5 [RD22];*
- *Working at construction and demolition sites: PPG 6 [RD44];*
- *Vehicle washing and cleaning: GPP 13 [RD23];*
- *Dewatering underground ducts and chambers: GPP 20 [RD24];*
- *Pollution incident response planning: PPG 21 [RD25]; and*
- *Safe storage – drums and intermediate bulk containers: PPG 26 [RD26].*

10.2.6 Where works to structures on a designated main river are required, all works will be undertaken under a Flood Risk Activity Permit as required under the Environmental Permitting Regulations 2016 (as amended) and will adhere to the requirements of that permit.

10.2.7 Where works to structures on an ordinary watercourse are required, all works will be undertaken under an ordinary water consent, as required by IACC and the Contractor will adhere to the requirements of that consent.

10.2.8 Where practicable, only biodegradable hydraulic oils will be used in equipment working in or over watercourses.

10.2.9 Where new outfalls are constructed, they will be positioned in such a way as to not compromise the natural flow of the watercourse and the passage of fish.

10.3 Site drainage

10.3.1 Where practicable, sustainable methods will be utilised for discharges including site drainage, surface runoff and dewatering discharges. The drainage system will be maintained by the Contractor throughout the construction works such that it remains efficient.

10.3.2 Wherever practicable, permeable surfacing will be used for access tracks and compounds in order to avoid any increase in flood risk.

10.3.3 Site drainage details will be included within the CEMP and submitted by the Contractor to and agreed with the IACC.

10.4 Control of pollution

10.4.1 No material or equipment which could cause a pollution incident will be stored in flood zones C1 and C2, as defined by NRW, unless appropriate prevention measures are in place. All plant and equipment will be maintained in line with manufacturer's instructions.

10.4.2 All plant and equipment will be inspected prior to use by a suitably experienced person to ensure it is in good working order, has no obvious defects and is free from leaks. If any defects are identified, the item of plant / equipment will not be used until the defect has been rectified. Records of plant, equipment

and storage checks will be made and kept for inspection. Any repairs or maintenance will be undertaken in suitable designated areas.

- 10.4.3 Off-site concrete batching will be undertaken where practical. Where this is not practicable, concreting operations will be controlled to prevent releases to watercourses or drains. Any water that comes into contact with wet concrete will be treated as contaminated and will not be allowed to discharge into any watercourse.

Surface water

- 10.4.4 The Contractor shall ensure that protection measures to control the risk of pollution to surface water are adopted, including the following:
- All relevant requirements of the *Environmental Permitting (England and Wales) Regulations 2016* will be complied with.
 - All fuel storage will be within engineered containment facilities or suitably bunded tanks.
 - Any containers of contaminating substances on-site shall be leak-proof and kept in a safe and secure building or compound from which they cannot leak, spill or be open to vandalism. The containers, along with areas for transfer of contaminating substances e.g. fuel, will be protected by temporary impermeable bunds or plant nappies, with a capacity of 110% of the maximum stored volume, and have appropriate spill kits.
- 10.4.5 Any permanent oil storage tanks and temporary storage of over 200 litres of oil in drums and mobile bowzers, as well as ancillary pipe work, valves, filters, sight gauges and equipment require secondary containment, e.g. bunding or drip trays used in accordance with Water Resources (Control of Pollution) (Oil Storage) (Wales) Regulations 2016. The secondary containment must be sufficient to contain at least 110% of the maximum contents of an oil tank, mobile fuel bowser or intermediate (fuel) bulk container.
- 10.4.6 No fuel, oil or chemical substances will be stored a minimum of at least 10m away from a watercourse, drainage feature or ditch. Containers of potentially polluting substances will be stored in line with relevant applicable legislation, and where practicable:
- away from areas at risk of collision (e.g. away from traffic routes);
 - on level ground;
 - at least 50m away from a spring, well or borehole; and
 - on an impermeable surface.
- 10.4.7 Only construction equipment and vehicles free of oil or fuel leaks will be permitted on-site. Drip trays or plant nappies will be placed below static mechanical plant. An inventory will be kept for oils, fuels and chemicals used on-site.
- 10.4.8 All refuelling, oiling and greasing will take place above drip trays, plant nappies or on impermeable surfaces with sealed drainage and an oil interceptor, which provides protection to underground strata and watercourses, and away from drains as far as is reasonably practicable. Vehicles and plant will not be left

unattended during refuelling. Appropriate spill kits will be easily accessible during these activities.

- 10.4.9 All washing-down of vehicles (including wheel washing) and equipment will take place in designated areas and wash water will be prevented from passing untreated into watercourses and groundwater in accordance with the NRW's GPP 13 [RD23].
- 10.4.10 The NRW's GPP 5 [RD22] will be followed when carrying out works or maintenance on or near water. Where practicable, only biodegradable hydraulic oils will be used in equipment working in or over watercourses.

Groundwater

- 10.4.11 The Contractor shall employ protective measures to control the risk of pollution to groundwater which will, in particular, be consistent with the *Environmental Permitting (England and Wales) Regulations 2016*. These measures will be submitted by the Contractor to and agreed with the IACC.

10.5 Flooding

- 10.5.1 The Contractor shall ensure that flood risk is managed safely throughout the Proposed Development in compliance with the Environmental Report and the A5025 Online Highways Improvements Flood Consequences Assessment.
- 10.5.2 The Contractor's flood risk management will be based upon a risk-based precautionary approach, using the source-pathway-receptor concept, drawing information from NRW's online flood warning advice or other such reputable service as appropriate.

11 Ecology and Landscape Management Strategy

11.1 General

- 11.1.1 The Contractor will ensure that procedures are in place to prevent disturbance and damage to designated sites; prevent offences under protected and controlled species legislation and nature conservation policy and guidance.
- 11.1.2 An on-site ecologist or Ecological Clerk of Works (ECoW) will be appointed by the Contractor to supervise site clearance and construction activities during the Proposed Development.

11.2 Pre-construction and Site Clearance

- 11.2.1 The Contractor will be responsible for undertaking pre-construction surveys to ensure that ecological survey data is up to date, and to inform any potential requirement to obtain protected species licences. The pre-construction surveys are identified in Table 11-1 below. Measures to avoid offences under the relevant legislation, are identified within the A5025 On-line Highway Improvements Protected and Legally Controlled Species Compliance Report.
- 11.2.2 The Contractor will obtain and comply with the requirements of any protected species licences and prepare method statements necessary for construction of the Proposed Development. Licences and approved method statements will be recorded by the Contractor in their CEMP, and may include the following:
- European Protected Species (EPS) derogation licences – in respect of any works likely to breach *The Conservation of Habitats and Species Regulations 2010* (as amended). Species potentially requiring a derogation licence include great crested newt and otter.
 - Badger development licences – in respect of any works likely to result in the disturbance, damage or destruction of a badger sett.
 - Water vole conservation licence – in respect of any works likely to result in the disturbance, obstruction, damage or destruction of breeding or resting habitat.
 - Breeding bird method statement – detailing how breeding birds and their nests will be safeguarded from damage or disturbance during construction.
 - Reptile method statement - detailing how reptiles will be safeguarded from killing and injury during construction.
- 11.2.3 EPS licences will be agreed between the Contractor, Horizon, the IACC and NRW. Works will be timed to avoid risk of an offence where possible. The clearance of habitats including hedges, trees or other habitats will be avoided where possible during the relevant species' nesting, spawning, hibernation or rearing seasons. Where this is not possible through sensitive timing, alternative mitigation measures will be employed.
- 11.2.4 Should an ecological constraint be identified during vegetation clearance works, works within the vicinity will be stopped and the ECoW present will

determine a suitable buffer around the constraint within which no further clearance or other works would occur. The buffer will be clearly marked using demarcation tape or fencing to ensure no works take place within that area. The area will also be marked on an environmental constraints map to be provided by the Contractor and displayed on site, as well as being issued to all contractors on site.

Great crested newt

- 11.2.5 As identified in the A5025 On-line Highway Improvements Protected and Legally Controlled Species Compliance Report, an area in Section 4 will require exclusion fencing (adjacent to Ponds 11 and 12). All fence installation works will be supervised by the ECoW.
- 11.2.6 Prior to the start of site clearance works, all habitats which could act as sites of shelter/refuge for GCN will be finger-tip searched and cleared of amphibians by the ECoW. Should the ECoW determine that trapping and translocation is required, this will follow the approach described in industry good practice guidance, the Great Crested Newt Conservation Handbook [RD29].
- 11.2.7 No equipment or soil will be stored/stockpiled within 250m of any waterbody known to be used by GCNs, unless inside an area encompassed by GCN exclusion fencing and cleared of GCN through a trapping and translocation exercise.
- 11.2.8 The Contractor is required to obtain an EPS licence from NRW, accompanied by a method statement including measures to avoid killing and injuring GCN.

Otter

- 11.2.9 Otter surveys would be carried out by the Contractor in advance of any site clearance works to check for otter lying up or otter holt sites. If otter constraints are encountered within the Proposed Development, works in the area would be temporarily halted by the ECoW and the Contractor will produce a construction method statement and apply for an EPS licence from NRW.

Summary of pre-construction survey requirements

- 11.2.10 The Contractor will be responsible for undertaking species surveys in accordance with table 11-1 below.
- 11.2.11 If required, the Contractor will comply with the requirements and mitigation measures identified in the A5025 On-line Highway Improvements Protected and Legally Controlled Species Compliance Report.

Table 11-1 Summary of survey requirements for the Proposed Development

Species	Survey description	Survey area	Timeframes
GCN	Bottle trapping, egg searching, netting and torching.	Ditch 14 in Section 2.	Survey season (March to June) prior to construction.
	Finger-tip searches by the ECoW.	Any area proposed for exclusion fencing within the construction working area (as	Immediately prior to exclusion fence installation.

Species	Survey description	Survey area	Timeframes
		defined in section 11.2 of this CoCP and are areas where potential shelter/refuges are removed.	
Otter	Surveys to be undertaken prior to site clearance works.	Within the construction working area (as defined in section 11.2).	8–10 weeks prior to site clearance works (to give time for an EPS licence, if required) and again immediately prior to works.
Water vole	Surveys to be undertaken prior to site clearance works in accordance with methods outlined in <i>The Water Vole Mitigation Handbook</i> [RD30].	Within the construction working area (as defined in section 11.2 of this CoCP).	8–10 weeks prior to site clearance works between May and Sept (to give time for a species specific method statement, if required) and again immediately prior to works.
Reptiles	Finger-tip search to be undertaken by ECoW prior to removal of tree stumps, concrete waste and other debris on-site.	Within the construction working area (as defined in section 11.2 of this CoCP).	Immediately prior to removal of habitat features.
Birds	Pre-clearance checks by ECoW to determine presence of active bird nests.	Any areas of vegetation clearance within the construction working area (as defined in section 11.2 of this CoCP).	Immediately prior to removal of habitat features during main bird nesting season (i.e. March to August inclusive).
Badger	Pre-construction survey prior to start of site clearance works to identify if any badger setts are present.	Within 50m of any existing boundary features to be removed.	Prior to any site clearance works, allowing sufficient time for an application for sett closure to be completed before site clearance is scheduled (i.e. within 8–10 weeks of July to November (inclusive) when badger sett closure is permitted). A follow up badger sett survey will be undertaken immediately prior to the works commencing.

11.3 Landscaping

- 11.3.1 The Contractor will include details of the management of landscape features, landscape planting and screening of construction works in their CEMP, in line with the approaches presented in the A5025 On-line Highway Improvements Design and Landscape Strategy.
- 11.3.2 Trees and hedgerows will be retained where possible in line with *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations* [RD27] in addition to retaining grass verges where possible. Areas of retained vegetation will be clearly demarcated by the Contractor to ensure no accidental incursion by construction works.
- 11.3.3 A minimum of at least 10m buffer will be maintained around all watercourses unless agreed otherwise with the relevant regulatory authority. However, if required, this buffer will be increased under the guidance of the ECoW for any waterbody known to be used by great crested newt (GCN).
- 11.3.4 Hedgerows, stone walls and cloddiau that require removal as part of the site clearance phase will be replaced along the realigned highway boundary, in agreement with landowners and in line with the details presented on the Environmental Masterplan (see figures 2-24 to 2-38 within volume 2 of the Environmental Report) and in the A5025 On-line Highway Improvements Design Approach and Landscape Strategy.
- 11.3.5 Hedgerows and stone walls requiring translocation will be identified on site by the Ecological Clerk of Works (ECoW) at the start of site clearance. Translocated hedgerows will be infilled with new hedgerow planting.
- 11.3.6 Where vegetation and grass verges require removal, vegetation replacement at a particular location may not always be possible due to highway visibility splay requirements. Replacement vegetation will therefore be provided as close as possible to the original vegetation location. Grass seed and plant material will comply with the *National Plant Specification, Handling and Establishing Landscape Plants* [RD28], and the specifications presented in the A5025 On-line Highway Improvements Design Approach and Landscape Strategy in line with IACC requirements.
- 11.3.7 Replacement stone walls and cloddiau will be constructed to match existing boundary features, using original materials where possible.
- 11.3.8 For highway drainage attenuation ponds, native planting of British provenance will be provided where possible, in order to help integrate these features into the landscape and filter views towards them. The type of planting will be in keeping with local landscape character, and be in line with that stipulated in the A5025 On-line Highway Improvements Design and Landscape Strategy. Environmentally sensitive design of the attenuation ponds will be undertaken during detailed design to allow marginal planting to be planted on pond shelves.

11.4 Visual

- 11.4.1 The Contractor will comply with the construction lighting controls identified in section 4.4 and will be implemented in the CEMP.
- 11.4.2 The Temporary Construction Compound will include a perimeter fence. The fencing is likely to be wooden hoarding of a height no greater than 2.4m to provide site security and to visually screen activities. The hoarding would be finished in green to assist visual integration with the local environment.

12 Cultural heritage

12.1 General

12.1.1 A targeted archaeological watching brief will be carried out in accordance with a Written Scheme of Investigation in response to a planning condition attached to any grant of planning permission for the Proposed Development. The watching brief will be undertaken during groundworks that have the potential to disturb buried archaeology associated with Assets 15, 268, 356 and 370 (as per chapter 13 of the Environmental Report), in accordance with guidance provided in *Standard and guidance for an archaeological watching brief* [RD31]. Any watching brief will be carried out under an Archaeological Programme of Works. The archaeological watching brief will be undertaken by a qualified archaeologist, appointed by the Contractor. The findings of the Archaeological Programme of Works will be recorded within the CEMP. The Contractor will also include the following control measures in the CEMP:

- The Contractor will undertake a Level 2 Landscape Survey in accordance with guidance provided in *Understanding the Archaeology of Landscapes, a guide to good recording practice* [RD32].
- The Contractor will also complete a photographic survey that will be undertaken based on the guidance provided by Gwynedd Archaeological Planning Service [RD33]. This will provide a record of historic landscape elements forming HLT 2, HLT 3, HLT 9, HLT 11 and HLT 12 (as per chapter 13 of the Environmental Report), which includes 19 hedgerows (identified as important under The Hedgerow Regulations 1997) that will be removed as part of construction activities.
- Construction workers will be informed of heritage sensitivities in the area during site inductions.
- Prior to any field boundary or cloddiau removal, the Contractor will first check that those field boundaries of heritage value have been suitably recorded for cultural heritage purposes (i.e. Gwynedd Archaeological Planning Service Archaeological Curator sign off has been received). The Contractor will not remove any identified heritage field boundaries until this confirmation has been received.

13 References

ID	Reference
RD1	Highways Agency, 2014. <i>Interim Advice Note (IAN) 183/14 for Outline Environmental Management Plans</i> . Available at: http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian183.pdf
RD2	Highways Agency. <i>Design Manual for Roads and Bridges (DMRB), Volume 11: Environmental Assessment</i> . London: The Stationery Office.
RD3	Highways Agency. 2009. <i>Interim Advice Note (IAN) 125/09 (W) Supplementary guidance for users of DMRB Volume 11 'Environmental Assessment'</i> . [Online] [Accessed: June 2017] Available from: http://www.standardsforhighways.co.uk/ha/standards/ghost/ians/pdfs/ian125.pdf
RD4	Institute of Environmental Management and Assessment. 2015. <i>IEMA Environmental Impact Assessment Guide To: Shaping Quality Development</i> . [Online] [Accessed: 7 April 2017] Available from: http://www.iema.net/assets/uploads/iema_guidance_documents_eia_guide_to_shaping_quality_development_v7.pdf
RD5	Charles, P and Edwards, P. (eds.) 2015. <i>Environmental good practice on site guide</i> . Fourth edition. (C741). London: CIRIA.
RD6	Masters-Williams, H., Heap, A., Kitts, H., Greenshaw, L., Davis, S., Fisher, P., Hendrie, M. and Owens, D. 2001. <i>Control of water pollution from construction sites. Guidance for consultants and contractors (C532)</i> . London: CIRIA.
RD8	Holman <i>et al.</i> , 2014. <i>IAQM Guidance on the assessment of dust from demolition and construction</i> . London: Institute of Air Quality Management. www.iaqm.co.uk/text/guidance/construction-dust-2014.pdf
RD9	British Standards Institution, 2008. <i>BS 5228 Noise Control on Construction and Open Sites</i> . London: British Standards Institution.
RD10	Ministry of Agriculture, Fisheries and Food, 2000. <i>Good Practice Guide for Handling Soils</i> . Available from: http://webarchive.nationalarchives.gov.uk/20090306103114/http://www.defra.gov.uk/farm/environment/land-use/soilguid/index.htm
RD11	Department for Environment, Food and Rural Affairs, 2009. <i>Construction Code of Practice for the Sustainable Use of Soils on Construction Sites</i> . Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69308/pb13298-code-of-practice-090910.pdf
RD12	British Standards Institution, 2013. <i>PAS 402:2013 Waste Resource Management – Specification for Performance Reporting</i> . London: British Standards Institution.
RD13	Contaminated Land; Applications in Real Environments, 2011 (CL:AIRE). <i>The Definition of Waste: Development Industry Code of Practice</i> . Version 2. Available at: http://www.carbonaction2050.com/sites/carbonaction.ciobrebuild.io1dev.com/files/document-attachment/Definition%20of%20Waste.%20Development%20Industry%20Code%20of%20Practice.pdf
RD14	Venables, R., Newton, J., Westaway, N., Venables, J., Castle, P., Neale, B., Short, D., McKenzie, J., Leach, A., Housego, D., Chapman, J. and Peirson-Hills,

ID	Reference
	A. 2000. <i>Environmental handbook for building and civil engineering projects. Part 1: Design and specification</i> (C512). London: CIRIA.
RD15	Venables, R., Newton, J., Westaway, N., Venables, J., Castle, P., Neale, B., Short, D., McKenzie, J., Leach, A., Housego, D., Chapman, J. and Peirson-Hills, A. 2000. <i>Environmental handbook for building and civil engineering projects. Part 2: Construction phase</i> (C528). London: CIRIA.
RD16	Venables, R., Newton, J., Westaway, N., Venables, J., Castle, P., Neale, B., Short, D., McKenzie, J., Leach, A., Housego, D., Chapman, J. and Peirson-Hills, A. 2000. <i>Environmental handbook for building and civil engineering projects. Part 3: Demolition and site clearance</i> (C529). London: CIRIA.
RD17	McIntyre, N. and Thorne, C. (eds.) 2013. <i>Land use management effects on flood flows and sediment – guidance on prediction</i> (C719D). London: CIRIA
RD18	Woods Ballard, B., Wilson, S., Udale-Clarke, H., Illman, S., Scott, T., Ashley, R. and Kellagher, R. 2015. <i>The SuDS Manual</i> (C753). London: CIRIA.
RD19	Lancaster, J.W., Preene, M. and Marshall, C.T. 2004. <i>Development and Flood Risk – Guidance for the Construction Industry</i> (C624). London: CIRIA.
RD20	Balkham, M., Fosbeary, C., Kitchen, A. and Rickard, C. 2010. <i>Culvert design and operation guide</i> (C689). London: CIRIA.
RD21	Environment Agency, 2014. <i>Understanding your environmental responsibilities – good environmental practices: PPG 1</i> (withdrawn). Available at: http://webarchive.nationalarchives.gov.uk/20140328155435/http://cdn.environment-agency.gov.uk/LIT_1404_8bdf51.pdf
RD22	Natural Resources Wales, 2017, <i>Guidance for Pollution Prevention 5: Works and maintenance in or near water</i> . Available at: http://www.netregs.org.uk/media/1418/gpp-5-works-and-maintenance-in-or-near-water.pdf
RD23	Natural Resources Wales, 2017, <i>Guidance for Pollution Prevention 13: Vehicle washing and cleaning</i> . Available at: http://www.netregs.org.uk/media/1414/gpp-13-v2-plussepa-plusniea-plusnrw.pdf
RD24	Natural Resources Wales, 2017, <i>Guidance for Pollution Prevention 20: Dewatering underground ducts and chambers</i> .
RD25	Natural Resources Wales, 2017, <i>Guidance for Pollution Prevention 21: Pollution incident response planning</i> .
RD26	Natural Resources Wales, 2017, <i>Guidance for Pollution Prevention 26: Safe storage – drums and intermediate bulk containers</i> .
RD27	British Standards Institution, 2012. <i>BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations</i> . London: British Standards Institution.
RD28	Horticultural Trades Association, 2002. <i>National Plant Specification, Handling and Establishing Landscape Plants</i> . Reading: Horticultural Trades Association.
RD29	Langton, T.E., Beckett, C.L. and Foster, J.P., 2001. <i>Great Crested Newt Conservation Handbook</i> . Halesworth: Froglife.
RD30	Dean, M., Strachan, R., Gow, D. & Andrews, R., 2016. <i>The Water Vole Mitigation Handbook</i> (The Mammal Society Mitigation Guidance Series), s.l.: Eds Mathews, F. and Chanin, P The Mammal Society, London.

ID	Reference
RD31	Chartered Institute of Archaeologists, 2014. <i>Standard and guidance for an archaeological watching brief</i> . Available at: http://www.archaeologists.net/sites/default/files/CIfAS&GWatchingbrief_2.pdf
RD32	Ainsworth <i>et al</i> , English Heritage, 2007. <i>Understanding the Archaeology of Landscapes A guide to good recording practice</i> . Available at: https://content.historicengland.org.uk/images-books/publications/understanding-archaeology-of-landscapes/understandingthe archaeologyoflandscapes.pdf/
RD33	Gwynedd Archaeological Planning Service. 2015. <i>Guidance for applicants undertaking general photographic surveys for planning purposes</i> . Available from: http://www.heneb.co.uk/newimages/photographicsurvey.pdf
RD36	Natural Resources Wales, 2017. <i>Guidance for Pollution Prevention 2: Above ground oil storage tanks</i> . Available at: http://www.netregs.org.uk/media/1317/gpp-2-pdf-feb-2017.pdf
RD37	Natural Resources Wales, 2017, <i>Guidance for Pollution Prevention 19: Vehicles Servicing and Repairs</i> . Available at: http://www.netregs.org.uk/media/1417/gpp-19-vehicles-sevice-and-repair-no-e.pdf
RD38	British Standards Institution, 2015. <i>BS 3882:2015 Specification for topsoil</i> . London: British Standards Institution.
RD39	British Standards Institution, 2013. <i>BS 8601:2013 Specification for subsoil and requirements for use</i> . London: British Standards Institution.
RD41	Natural England, Department for Environment, Food & Rural Affairs and Environment Agency, 2014. <i>Prevent harmful weeds and invasive non-native plants spreading</i> . [Online] [Accessed June 2017] Available at: https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native-plants
RD42	Environment Agency, 2010. <i>managing invasive non-native plants: Managing invasive non-native plants in or near freshwater</i> . Bristol: Environment Agency.
RD43	Environment Agency, 2014. <i>Regulatory Position Statement 075: The movement and use of treated asphalt waste containing coal tar</i> . [Online] [Accessed: June 2017] Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/419686/LIT_10118.pdf .
RD44	Environment Agency, 2012. Working at construction and demolition sites: PPG 6. Available at: https://www.sepa.org.uk/media/60125/ppg-6-working-at-construction-and-demolition-sites.pdf .

Annex A Relevant Acts of Parliament

- *Road Traffic Regulations Act 1984*
- *Equality Act 2010*
- *Control of Pollution Act 1974*
- *Protection of Badgers Act 1992*
- *Wildlife and Countryside Act 1981*

Annex B Relevant Regulations

- *The Water Resources (Control of Pollution) (Oil Storage) (Wales) Regulations 2016*
- *The Waste (England and Wales) Regulations 2011*
- *The Hazardous Waste (England and Wales) Regulations 2005*
- *The Hazardous Waste (Wales) Regulations 2005*
- *The Environmental Permitting (England and Wales) Regulations 2016*
- *The Conservation of Habitats and Species Regulations 2010*
- *The Hedgerows Regulations 1997*

Annex C Relevant Directives

- The Non-road mobile machinery Directive (97/68/EC)
- The EU Outdoor Noise Directive (2000/14/EC)
- The Waste electrical and electronic equipment Directive (2012/19/EU)
- The Waste Framework Directive (2008/98/EC)
- The European List of Waste (2000/532/EC)

Annex D Relevant guidance, standards and codes of practice

General:

- *Interim Advice Note (IAN) 183/14 for Outline Environmental Management Plans* [RD1]

Air quality:

- *Guidance on the Assessment of Dust from Demolition and Construction* [RD8]

Noise and vibration:

- *BS 5228 Noise Control on Construction and Open Sites* [RD9]

Surface water and groundwater:

- *Control of Water Pollution from Construction Sites. Guidance for Consultants and Contractors* [RD6]
- *Environmental good practice on site guide* [RD5]
- *NRW Guidance for Pollution Prevention* [RD36, RD22, RD23, RD24, RD25, RD26, RD37]

Soils and geology:

- *Good Practice Guide for Handling Soils* [RD10]
- *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites* [RD11]
- *BS 3882:2015 Specification for topsoil* [RD38]
- *BS 8601:2013 Specification for subsoil and requirements for use* [RD39]

Waste and materials management:

- *Prevent harmful weeds and invasive non-native plants spreading* [RD41]
- *Managing Invasive Non-native Plants* [RD42]
- *Regulatory Position Statement 075: The movement and use of treated asphalt waste containing coal tar* [RD43].
- *The Definition of Waste: Development Industry Code of Practice. Version 2* [RD13].
- *PAS 402:2013 Waste Resource Management - Specification for Performance Reporting* [RD12].

Terrestrial and freshwater ecology:

- *Great Crested Newt Conservation Handbook* [RD29]
- *The Water Vole Mitigation Handbook* [RD30]

Landscape and visual amenity:

- *Environmental good practice on site guide (C741)* [RD5]
- *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations* [RD27]
- *National Plant Specification, Handling and Establishing Landscape Plants* [RD28]

Cultural heritage:

- *Standard and guidance for an archaeological watching brief* [RD31]
- *Understanding the Archaeology of Landscapes, a guide to good recording practice* [RD32]
- *Guidance for applicants undertaking general photographic surveys for planning purposes* [RD33]

Annex E Template application form for Section 61 consent

CONTROL OF POLLUTION ACT 1974

EXAMPLE APPLICATION FORM FOR SECTION 61 CONSENT

To be completed (with explanatory notes) in consultation with the IACC.

Name and address of Contractor	
Telephone number: Fax Number:	
Address/location of proposed works:	
Particulars of works to be carried out:	
Site Plan	
Methods to be used in each stage of development:	
Hours of work:	
Number, type and make of plant and machinery (including heavy vehicles) stating Sound Power Levels	
Proposed steps to manage noise and vibration	
Predicted Noise Levels	
Approximate duration of works	
Other Information	
List of Plans and Documents Attached	

CONTACT US:

If you have any questions or feedback regarding the Wylfa Newydd Project you can contact us on our dedicated Wylfa Newydd freephone hotline and email address, by calling on **0800 954 9516** or emailing **wylfaenquiries@horizonnuclearpower.com**

.....

Horizon Nuclear Power
Sunrise House
1420 Charlton Court
Gloucester Business Park
Gloucester, GL3 4AE

T +44 (0)1242 508508

www.horizonnuclearpower.com

All material in this document is, unless specified otherwise, copyright of Horizon Nuclear Power Wylfa Ltd and may not be reproduced without prior permission. Any unauthorised use or copying of the material may violate trademark, copyright and other proprietary rights and civil and criminal statutes. The material shall not be used in any manner that infringes any trademark, copyright or other proprietary rights and Horizon Nuclear Power Wylfa Ltd reserves all rights with respect to such unauthorised use.