HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

6.2.16 Volume B - Introduction to the environmental assessments B16 - Waste and materials management

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16 Waste and materials management

16.1 Introduction

16.1.1 This chapter provides an introduction to the technical basis for the waste and materials management assessment for the Wylfa Newydd Project. This includes legislation, policy and guidance; key points arising in consultation that have guided the waste and materials management assessment; and assessment methodologies and criteria.

16.1.2 The key stages and activities which would generate conventional waste and materials associated with the Wylfa Newydd Project are:

- construction – such as clearance of above-ground features, demolition of pre-existing structures/buildings, removal of vegetation, soils and contaminated soils, excavation including the removal of bedrock, construction of buildings and engineering works;
- operation – such as maintenance works, site administration and welfare facilities; and
- decommissioning – such as demolition of buildings and removal of foundations.

16.1.3 For the purposes of this assessment, waste and materials include consideration of the following:

- the use and management of Materials generated on-site that are considered as 'material' as defined under Article 2(1)(c) of the Waste Framework Directive; and
- the generation and management of Conventional Wastes including hazardous, non-hazardous and inert waste.

16.1.4 This chapter does not consider the management of radioactive wastes that arise from the operation of the Power Station; this is addressed in appendix D14-1 (radioactive waste) (Application Reference Number: 6.4.97) of this Environmental Statement.

16.1.5 The waste and materials management assessment is presented in chapter C6 (waste and materials management) (Application Reference Number: 6.3.6), which details the types of waste and materials likely to be generated through construction, operation and decommissioning as a result of the Wylfa Newydd Project as a whole. It identifies how waste and materials can be managed, taking into consideration any mitigation measures. For the construction, operational and decommissioning of the Site Campus, Park and Ride and Logistics Centre wastes that would be exported from the Wylfa Newydd Project, the availability and known capacity of receiving treatment and disposal sites are also assessed. An assessment on the capacities of the receiving waste management facilities to receive waste materials during decommissioning have not been included in the assessment presented in chapter C6 (Application Reference Number: 6.3.6) and would be made at the appropriate time.

16.1.6 The environmental effects associated with the generation and management of wastes and materials are considered within other chapters of this Environmental Statement as appropriate.

- The transportation of waste is assessed in chapter C2 (traffic and transport) (Application Reference Number: 6.3.2).
- Effects from dust potentially generated by the management and handling of waste are discussed in the air quality chapters D5 (Application Reference Number: 6.4.5), E5 (Application Reference Number: 6.5.5), F5 (Application Reference Number: 6.6.5), G5 (Application Reference Number: 6.7.5) and H5 (Application Reference Number: 6.8.5).
- Noise effects associated with handling and transporting waste are discussed in the noise and vibration chapters C5 (Application Reference Number: 6.3.5), D6 (Application Reference Number: 6.4.6), E6 (Application Reference Number: 6.5.6), F6 (Application Reference Number: 6.6.6), G6 (Application Reference Number: 6.7.6) and H6 (Application Reference Number: 6.8.6).
- Liquid wastes (including sewage and oily wastes) are discussed in the surface water and groundwater chapters D8 (Application Reference Number: 6.4.8), E8 (Application Reference Number: 6.5.8), F8 (Application Reference Number: 6.6.8), G8 (Application Reference Number: 6.7.8) and H8 (Application Reference Number: 6.8.8).
- The disposal of marine dredgings is discussed in chapter D13 (the marine environment) (Application Reference Number: 6.4.13).
- An assessment of effects on soils and geological receptors is discussed within soils and geology chapters D7 (Application Reference Number: 6.4.7), E7 (Application Reference Number: 6.5.7), F7 (Application Reference Number: 6.6.7), G7 (Application Reference Number: 6.7.7) and H7 (Application Reference Number: 6.8.7).
- An assessment of the cumulative effects is discussed in volume I (cumulative effects) (Application Reference Number: 6.9.1).

16.2 Legislation, policy and guidance

16.2.1 The following legislation, policy and guidance have been used to inform the scope and content of the waste and materials management assessment; assist in the identification of potential effects and mitigation; and influence the design of the Wylfa Newydd Project to reduce the significance of effects.

Key legislation

16.2.2 The relevant legislation and how it relates to the waste and materials management assessment are set out in table B16-1.

Table B16-1 Summary of key legislation

Legislation	Description
The Waste Framework Directive (2008/98/EC)	This EU Waste Framework Directive is implemented in England and Wales principally through amendments to the Environmental Protection Act 1990 and through the Waste (England and Wales) Regulations 2011. The EU Directive lays down measures to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste and by reducing overall impacts of resource use and improving the efficiency of such use. Article 3(1) of the Waste Framework Directive defines waste as "*any substance or object which the holder discards or intends or is required to discard*". The generation and disposal of waste in one form or another is an inevitable consequence of all forms of development and the sustainable management of waste is an important consideration. Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project and this assessment.
Landfill Directive 1999/31/EC	The objective of the Directive is to prevent or reduce as far as possible negative effects on the environment, in particular on surface water, groundwater, soil, air, and on human health from the landfilling of waste by introducing stringent technical requirements for waste and landfills. This Directive was transposed into UK law by the Waste (England and Wales) Regulations 2011. The Wylfa Newydd Project will aim to limit the amount of materials and waste that is sent to landfill.
Environmental Protection Act 1990	This Act implements the Waste Framework Directive (2008/98/EC) and addresses areas of significant environmental concern including waste disposal. Waste management issues are considered under Part II of the Act. Controlled waste includes commercial, industrial and household waste. Under the Act, the deposition of waste to land without a licence or beaching licence is an offence. The Act is also designed to prevent environmental pollution or harm to human health by treatment, storage and disposal of controlled wastes without a licence or in breach of a licence. Waste generated from the Wylfa Newydd Project requiring treatment/disposal off-site would be taken to appropriately permitted facilities.

Legislation	Description
	Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project.
Well-being of Future Generations (Wales) Act 2015	This Act seeks to improve the economic, social, environmental and cultural well-being of Wales. Under this Act, public bodies have a duty to carry out sustainable development, including the identification of well-being objectives and taking reasonable steps to meet these. Public bodies must work towards achieving seven well-being goals identified under the Act and demonstrate progress towards these. The goal of the Act is to reach 'a prosperous Wales' and includes using resources efficiently and proportionally to help deliver the aims of the Act. The Wylfa Newydd Project would seek to contribute to this goal by using material and waste resources in accordance with Horizon's waste hierarchy which aligns with the Waste Framework Directive; this underpins how waste would be managed and how this assessment has been carried out.
The Waste (England and Wales) Regulations 2011	These Regulations set out the duty of care requirements in respect of waste. The Waste (England and Wales) (Amendment) Regulations 2012 came into force on 1 October 2012. The Waste (England and Wales) (Amendment) Regulations 2014 came into force on 6 April 2014. The amended regulations relate to the separate collection of waste and the transfer of controlled waste, respectively. They amend the Waste (England and Wales) Regulations 2011 by replacing regulation 13. The duty of care requirements as set out within the Waste (England and Wales) Regulations 2011 (as amended) and the Controlled Waste (England and Wales) Regulations 2012 (see below) must be complied with for all waste produced at a site. Producers are required to take all such measures available as are reasonable in the circumstances to apply the waste hierarchy and to confirm that they have fulfilled their duty when transferring waste. The waste hierarchy ranks waste management options according to what is best for the environment. Producers are obligated to pre-treat their waste (either themselves or by a subsequent holder before it is disposed of). Waste collection operators are required to provide their customers

Legislation	Description
	with separate collections for paper, metal, plastic and glass. This applies to wastes from all sources including industry (construction, operation and demolition). Participating in a separate collection scheme is considered a form of pre-treatment. The Wylfa Newydd Project would comply with duty of care requirements.
The Controlled Waste (England and Wales) Regulations 2012	These Regulations classify waste as household, industrial or commercial waste. They enable local authorities in Wales to charge for the collection and disposal of waste from nondomestic properties. The classification of waste set out in these Regulations is relevant to the Wylfa Newydd Project and this assessment.
The Environmental Permitting (England and Wales) Regulations 2016	These Regulations consolidate and replace the Environmental Permitting (England and Wales) Regulations 2010 (as amended). These Regulations seek to ensure that authorised activities and their discharges do not endanger the environment or human health; Environmental Permits must be sought from Natural Resources Wales (NRW) and the Environment Agency. The regulations combine the requirements for an integrated waste management approach and for hazardous waste management. This provides a framework for regulation that enables NRW and the Environment Agency to assess permitting and compliance with a common approach. These regulations seek to ensure that authorised activities and their discharges do not endanger the environment or human health. Waste generated from the Wylfa Newydd Project requiring treatment/disposal off site would be taken to appropriately permitted facilities.
The Hazardous Waste (England and Wales) Regulations 2005	These Regulations set out how wastes are defined as hazardous due to the physical or chemical hazards they pose and the additional duty of care requirements this imposes. The Regulations require waste movements to be accompanied by a specific waste transfer note called a consignment note, which includes additional information such as the main chemical constituents, details of specific hazardous properties and how the waste is packaged. Any hazardous waste generated by the Wylfa Newydd Project would be managed in accordance with these Regulations.

Legislation	Description
The Hazardous Waste (Wales) Regulations 2005	These Regulations set out the regime for the control and tracking of the movement of hazardous waste for the purpose of implementing the Hazardous Waste Directive (Directive 91/689/EC) and has specific territorial application to Wales. There are restrictions on the mixing of hazardous wastes, which is prohibited where mixing could be harmful to the environment and may affect the recovery or recycling of the waste. The volumes of hazardous wastes produced per annum are expected to exceed the 500kg per year threshold. All hazardous wastes are to be stored in their own separate and secure containers, and labelled accordingly. Containers are to be regularly checked for leaks, deterioration and other potential risks. Any hazardous waste generated by the Wylfa Newydd Project would be managed in accordance with these Regulations.

Key policy

16.2.3 The relevant national and local plans and policies, and how these relate to the waste and materials management assessment, are described in table B16-2.

Table B16-2 Summary of key policy

Policy	Description
Overarching National Policy Statement (NPS) for Energy (EN-1) [RD1]	NPS EN-1, designated by the Secretary of State (SoS) in July 2011, sets out the overarching national policy for delivery of major energy infrastructure projects. In relation to waste and materials NPS EN-1 states: "*The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a Site Waste Management Plan*" (Paragraph 5.14.6). Paragraph 5.14.6 also states "*arrangements described and management plan should include information on the proposed waste recovery and disposal system for all waste generated by the development, and an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation. The applicant should seek to reduce the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome*". Therefore, it is directly relevant to waste and materials management for the Wylfa Newydd Project and this assessment.

Policy	Description
National Policy Statement for Nuclear Power Generation (EN-6) [RD2]	EN-6 (Annex I and II) states that "*New nuclear power stations will also produce other waste streams: low level waste, liquid and gaseous discharges, and non-radioactive wastes*" (see paragraph 2.11.2). The UK Government considers that arrangements already exist for the effective management and disposal of wastes in these categories, as demonstrated by the experience of dealing with such conventional wastes from existing nuclear power stations. Therefore, it is directly relevant to waste and materials management for the Wylfa Newydd Project and this assessment.
One Wales: One Planet – The Sustainable Development Scheme of the Welsh Assembly Government [RD3]	The document presents sustainable development as the overarching strategic aim of all policies of the Welsh Government. The vision of a sustainable Wales is to be achieved through high-level sustainable development actions and reducing the ecological footprint of Wales. The goal is to achieve 70% recycling across all sectors and diverted waste from landfill by 2025. Waste generated by the Wylfa Newydd Project would be managed in accordance with the waste hierarchy and therefore recycled wherever possible thus contributing to the 70% recycling target. The aims and targets set out within this policy have been considered in this assessment.
People, Places, Futures – The Wales Spatial Plan update 2008 [RD4]	This Spatial Plan specifically identifies expanding activity in waste reduction, reuse and recycling as a key priority. Waste generated by the Wylfa Newydd Project would be managed in accordance with the waste hierarchy and therefore reused and recycled wherever possible.
Towards Zero Waste [RD5]	This overarching waste strategy document for Wales sets out a long-term framework for resource efficiency and waste management in Wales up to 2050, taking into account social, economic and environmental outcomes. The strategy sets out an aspiration to reduce the use of landfill dramatically over the next decade through a significant increase in waste prevention, reuse, recycling and other recovery such as composting and energy from waste. Targets have been set for both commercial and industrial waste and construction and demolition waste as follows: • recycle 67% of commercial and industrial waste by 2019/20; and • recycle 70% commercial and industrial waste by 2024/25. The targets that have been set for construction and demolition waste are detailed below.

Policy	Description
	In 2019/20, the target is to reduce the volume of construction and demolition waste sent to landfill to an amount equal to or less than 75% of the volume of construction and demolition waste that was landfilled in 2007 ('the 2007 baseline'). The preparing for reuse, recycling and other material recovery, including backfilling operations using waste to substitute other materials, of non-hazardous construction and demolition waste, excluding naturally occurring material defined in European Waste Catalogue code 17 05 04, increased to a minimum of 90% by weight by 2019/20. Waste generated by the Wylfa Newydd Project would be managed in accordance with the waste hierarchy and therefore recycled wherever possible contributing to the targets. The aims and targets set out within this policy have been considered in this assessment.
Climate Change Strategy for Wales [RD6]	Chapter 12 of the Climate Change Strategy, (resource efficiency and waste sector emission reduction), sets out actions to reduce emissions in the waste sector, including reducing indirect emissions associated with resource consumption by increasing reuse, recycling and composting. Waste generated by the Wylfa Newydd Project would be managed in accordance with the waste hierarchy and proximity principle thus increasing reuse, recycling and composting and managing waste is as close to its source as possible, therefore lowering carbon emissions.
Planning Policy Wales (Edition 9) [RD7]	This document sets out the land use planning policies of the Welsh Government, forming a strategic framework to guide development. It translates the Welsh Government's commitment to sustainable development into the planning system so that it can play an appropriate role in moving towards sustainability. The plan details a number of specific waste principles, which should guide planning approaches and inform decisions; these include waste hierarchy and self-sufficiency. This is supplemented by a series of Technical Advice Notes, circulars and policy clarification letters necessary to achieve sustainable development objectives, including prevent/reuse, prepare for reuse, recycle, recover and, where necessary, safely dispose of waste, so as to meet the Welsh Government's objectives for waste management. Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project.

Policy	Description
Technical Advice Note 21 (TAN 21): Waste [RD8]	TAN 21 provides information on the topic of waste. It explains the background which helps to identify the issues, objectives, options and the preferred strategy for the Joint Local Development Plan. It outlines the national planning policy context and identifies the main trends in waste planning and management. Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project.
Collections, Infrastructure and Markets Sector Plan [RD9]	The Collections, Infrastructure and Markets Sector Plan supports Towards Zero Waste, the overarching waste strategy document for Wales, by detailing outcomes, policies and delivery actions for organisations, companies and individuals involved with the collection and management of waste resources, and the use of waste derived products. This plan is intended to deliver the sustainable development outcomes identified in the sustainable development scheme One Wales: One Planet and in Towards Zero Waste. The Plan covers the collection and subsequent management (including preparation for reuse) of all wastes produced in Wales, with a special focus on priority materials that are identified in Towards Zero Waste. Waste generated by the Wylfa Newydd Project would be managed in accordance with the waste hierarchy and the nearest appropriate installation principle.
Construction and Demolition Sector Plan [RD10]	The Construction and Demolition Sector Plan supports Towards Zero Waste, the overarching waste strategy document for Wales, by detailing outcomes, policies and delivery actions for organisations, companies and individuals involved with the construction and demolition sector in Wales. The Construction and Demolition Sector Plan addresses waste generated by the construction and demolition sector. It contains a number of proposals for discussion on how construction and demolition waste should be managed and treated to achieve more sustainable and affordable outcomes. It focuses on the key role that the construction and demolition sector plays through working with their clients, customers, suppliers, trades people and the wider communities to achieve the twin goals of 'One Planet living' and zero waste. A number of overarching actions from this Plan, which are applicable to this chapter are detailed below: • encourage all producers of waste within the construction and demolition sector to take note of

Policy	Description
	the Welsh Government's Guidance on Applying the Waste Hierarchy; • encourage clients, designers and contractors to think and plan to prevent, reduce and recycle waste on construction and demolition projects through the introduction of mandatory site waste management plans; and • encourage the use of alternative substitutes for aggregates, assessing the current use of secondary and recycled aggregates in Wales, and promoting relevant quality protocols within the construction and demolition sector community, to make better use of waste as a resource. Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project and this assessment.
Industrial and Commercial Sector Plan [RD11]	This Plan focuses on waste prevention, preparing for reuse, source segregated recycling, sustainable treatment, disposal and achieving as close to zero landfill as possible. Waste generated by the Wylfa Newydd Project would be managed in accordance with the waste hierarchy thus increasing reuse, recycling and composting.
Municipal Waste Sector Plan Part 1 [RD12]	This Plan focuses on waste prevention, preparing for reuse, recycling, followed by sustainable treatment and disposal. The Plan seeks to create a sustainable approach to resource management by ensuring that: • material resources are used as efficiently as possible; • waste is prevented as far as possible and that which is generated is maintained as a resource rather than disposed to landfill; • a high volume of clean reusable or recyclable material is separated at source; • this material is collected and delivered to reprocessors (based in Wales as appropriate) – the reuse of material is a first priority followed by recycling or recovery and a last resort landfill; and • markets are developed for the recycled material (within Wales as far as possible). Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project. Waste generated by the Wylfa Newydd Project would be managed in accordance with the waste hierarchy and the

Policy	Description
	nearest appropriate installation principle thus increasing reuse, recycling and composting within Wales.
Anglesey and Gwynedd Joint Local Development Plan 2011 – 2026 – Adopted version [RD13]	The Joint Local Development Plan (JLDP) covers the local authorities of the Isle of Anglesey County Council (IACC) and Gwynedd Council and forms the basis for land use planning in these areas. The JLDP covers the period 2011 to 2026. The JLDP acknowledges that the need to change the way in which waste is dealt with is recognised at all policy levels, and a number of projects have been established in north Wales which seek to divert residual waste from landfill sites. The JLDP details strategic objectives, which include a number of objectives which are relevant to the management of waste. Strategic objective SO18 encourages waste management based on the hierarchy of reuse, recovery and safe disposal. Strategic policy PS21 states that "the Councils will seek to ensure an adequate availability of land in appropriate locations for an integrated network of waste facilities to meet regional and local obligations in accordance with the requirements of the current relevant national/regional policy/guidance. The sites and types of facilities chosen will promote a sustainable approach to waste management based on the waste hierarchy of prevention and reuse, preparation for reuse, recycling, other recovery and then disposal whilst taking into consideration the unique character of the area including the transport links and rural nature". Policy GWA1 identifies land and property for the provision of infrastructure that could sustain or add to the range of suitable waste management facilities. Policy GWA2 states that proposals for the management of waste outside development boundaries and allocated sites (in accordance with policy GWA1) will be granted provided there is a demonstrable need for the development and that they meet certain criteria. Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project.
Regional Waste Plan for North Wales 2009 [RD14]	The Regional Members Group (with membership from the seven Local Authorities and Snowdonia National Park) agreed on the first Regional Waste Plan for North Wales. The first review was held in July 2009. The Plan will provide planning guidance on land use for managing waste and recovering resources in a sustainable way in the region. The Plan's vision is to provide a land use

Policy	Description
	planning framework for managing waste and reclaiming resources in a sustainable way in North Wales, with the following objectives: • reduce detrimental impacts on the environment and human health; • reduce social and economic detrimental impacts and maximise social and economic opportunities; • meet the needs of communities and businesses; and • adhere to legislative requirements, targets, principles and policies determined by European and national policy framework. Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project and this assessment.
The IACC Waste Management Strategy 2014/15-2017/18 [RD15]	The IACC Waste Management Strategy outlines how Anglesey will manage the collection, treatment and disposal of Municipal Waste collected by the IACC over the period 2014/15 – 2017/18. A key aim of the Strategy is to improve our environmental performance and to reduce our ecological footprint whilst maximising the use of waste and providing best value. The Strategy includes targets for the maximum amount of Biodegradable Municipal Waste which can be landfilled by the IACC annually through to 2019/20, and targets for recycling, and maximum energy from waste through to 2024/25. Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project. Waste generated by the Wylfa Newydd Project would be managed in accordance with the waste hierarchy and the nearest appropriate installation principle thus increasing reuse, recycling and composting on Anglesey.
New Nuclear Build at Wylfa: Supplementary Planning Guidance [RD16]	The purpose of this Supplementary Planning Guidance is to provide advice on important local matters relating to the proposed Wylfa Newydd Project and to set out the IACC's response to national and local policy and strategies in the context of the Wylfa Newydd Project. The New Nuclear Build at Wylfa: Supplementary Planning Guidance is designed to be consistent with considerations in the JLDP (discussed above). The Supplementary Planning Guidance also highlights some of the readily identifiable potential impacts of the Wylfa Newydd Project and outlines potential mitigation and enhancement measures to ensure that significant adverse effects are avoided or are minimised where possible.

Policy	Description
	GP 16 of the Supplementary Guidance relates specifically to waste management. It states that sustainable waste management principles should be incorporated into the construction and operation of the Wylfa Newydd Project, through the use of a site waste management plan. Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project.

Key guidance

16.2.4 The waste and materials management assessment has been undertaken in line with a number of key technical guidance documents. These guidance documents are widely used across the UK and represent standard good practice for the assessment for the various consenting regimes. These are summarised in table B16-3.

Table B16-3 Summary of key guidance

Guidance	Description
The Definition of Waste: Development Industry Code of Practice [RD17]	This Code of Practice provides a regulator-approved framework to determine on a site-by-site basis whether excavated materials are classified as waste or not and to determine when treated excavated waste can cease to be waste for a particular use. This Code of Practice would be used on the Wylfa Newydd Project to manage materials that can cease to be a waste for a particular use.
Contaminated Land Report 11: Model Procedures for the Management of Land Contamination [RD18]	This publication provides a technical framework for structured decision making regarding land contamination. The report includes guidance on risk assessment, options appraisal and development and implementation of the remediation strategy. This guidance will be followed on the Wylfa Newydd Project where land contamination has been identified.
Construction Code of Practice for the Sustainable Use of Soils on Construction Sites [RD19]	The Code of Practice states that a soil resource survey should be carried out in order to inform the waste and materials management arrangements, and to inform decisions on which aspects of the waste regulations are relevant to the Wylfa Newydd Project. Therefore, it is directly relevant to waste and materials management for the Wylfa Newydd Project.

Guidance	Description
Quality Protocol: Aggregates from inert waste [RD20]	This Protocol sets out end of waste criteria for the production and use of aggregates from inert waste. The Quality Protocol has four main purposes: clarifying the point at which waste management controls are no longer required; providing users with confidence that the aggregate they purchase conforms to an approved industry specification defined in accordance with an appropriate European aggregate standard; providing users with confidence that the aggregate is suitable for a use within a designated market sector(s), including by conforming with the industry standard; and protecting human health and the environment (including soil). Producers must be able to demonstrate compliance with all the requirements of this Quality Protocol. This guidance will be used for aggregates generated on the Wylfa Newydd Project that are required to meet the end of waste criteria for the production and use of aggregates from inert waste.
Guidance: Prevent Japanese knotweed from spreading [RD21]	This Code of Practice is based on current 'best practice' and aims to provide a concise and thorough guide to the management of Japanese knotweed. Japanese knotweed is present within the Wylfa Newydd Project Order Limits and the management and treatment will be carried out in accordance with this guidance.
Guidance on the legal definition of waste and its application [RD22]	The guidance sets out the background to and explains the rationale for providing guidance on waste. The guidance provides a practical guide to help those running businesses and other organisations to take day-to-day decisions about whether the substances or objects they are dealing with are likely or unlikely to be waste. It also provides detailed guidance on the case law on the definition of waste and is intended for those with a specialist interest in the issue. Therefore, it is directly relevant to waste and materials management for the Wylfa Newydd Project and this assessment.
Great Britain Invasive Non-native Species Strategy. [RD23]	The strategy provides a framework on how to minimise the risks posed by Invasive Non-Native Species. Invasive Non-Native Species are present within the Wylfa Newydd Project Oder Limits and the

Guidance	Description
	management and treatment will be carried out in accordance with this guidance.
Interim Advice Note 153/11, 2011: Guidance on the Environmental Assessment of Material Resources [RD24]	The Interim Advice Note provides interim guidance for those undertaking assessment of the impact and effects associated with the use of materials in new construction, improvement, and maintenance projects. It outlines the consideration of material resource use and waste as part of an EIA process. It is intended to be used in the identification of impacts associated with materials resource use and waste arisings. The Interim Advice Note guidance has been used to undertake an assessment of the impacts and effects associated with the use of materials and generation of waste from the A5025 Off-line Highways Improvements.
Demolition Protocol 2008 [RD25]	This Protocol has been developed to provide an overarching framework which enables the waste hierarchy to inform approaches for managing buildings and structures at the end of their lives. Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project.
Regulatory Position Statement 075 for reuse of pavement containing coal tar [RD26]	The Environment Agency Regulatory Position Statement 075 (A, 2014) has been adopted by NRW and would apply for the movement and reuse of the road planings. Asphalt waste containing coal tar is considered to be hazardous waste where the level of coal tar is >0.1%. Even when they are treated, normally through encapsulation using a cold recycling bound mixture, they are still considered to be hazardous waste. Their treatment and subsequent use in construction operations requires an Environmental Permit unless the requirements in this guidance are followed. Therefore, it is directly relevant to waste and materials management assessments for the Wylfa Newydd Project with regards to the reuse of road planings.

16.3 Consultation

16.3.1 This section provides a topic-specific account of scoping, statutory and non-statutory consultation undertaken to support the assessment. For a full overview of the environmental consultation activities undertaken for the Wylfa Newydd Project, refer to chapter A6 (EIA Scoping Report and Addendum)

(Application Reference Number: 6.1.6) and chapter A7 (consultation with environmental stakeholders) (Application Reference Number: 6.1.7).

Planning Inspectorate Scoping Opinion

16.3.2 In March 2016, Horizon submitted an updated Wylfa Newydd Project EIA Scoping Report to the Planning Inspectorate. In May 2017, Horizon submitted an Addendum to the March 2016 Wylfa Newydd Project EIA Scoping Report to the Planning Inspectorate. Following a period of consultation with stakeholders, a further Scoping Opinion was received from the SoS (via the Planning Inspectorate) on 14 June 2017.

16.3.3 The Wylfa Newydd Project EIA Scoping Report, Addendum and the subsequent Scoping Opinions inform the approach to the assessment. Table B16-4 provides an account of how comments raised by stakeholders in the Scoping Opinion have been considered in the waste and materials management assessment.

Table B16-4 Key issues raised through Scoping

Key issue raised	Action taken
The SoS recommends that the Environmental Statement should include a clear description of all aspects of the proposed development at the construction, operation and decommissioning stages, and include operational requirements including the main characteristics of the production process and the nature and quantity of materials used, as well as waste arisings and their disposal.	Chapter A2 (Application Reference Number: 6.1.2), Project overview and introduction to the developments, provides a description of all aspects of the Wylfa Newydd Project. Chapter C6 (Application Reference Number: 6.3.6) provides a description of the proposed development that is specific to waste arising, in addition to identification of the waste arisings generated during the construction, operational and decommissioning phases. The management of radioactive wastes which arise from the operation of the Power Station is addressed in appendix D14-1 (Application Reference Number: 6.4.97).
An assessment of environmental effects at the decommissioning stage is necessary to enable the decommissioning works to be taken into account in the design and use of materials, such that structures can be taken down with the minimum of disruption. The SoS considers that the process and methods of	As far as possible at this stage, conventional waste types generated through the decommissioning stage and how these wastes would be managed are detailed in chapter C6 (Application Reference Number: 6.3.6).

Key issue raised	Action taken
decommissioning should be considered and options presented in the Environmental Statement, where possible.	
The environmental effects of all wastes to be processed and removed from the site should be addressed. The Environmental Statement will need to identify and describe the control processes and mitigation procedures for storing and transporting waste off-site. All waste types should be quantified and classified.	Chapter C6 (Application Reference Number: 6.3.6) details the conventional waste types and quantities and the control and mitigation processes are identified. The environmental effects associated with the generation and management of wastes and materials are considered within other chapters of this Environmental Statement as appropriate; refer to section 16.1.6 for further details (Application Reference Number: 6.2.16). The management of radioactive wastes which arise from the operation of the Power Station is addressed in appendix D14-1 (Application Reference Number: 6.4.97).
Tunnelling would be required to construct the cooling water intake system which would generate spoil. The Environmental Statement should quantify the volume of material to be excavated and detail where and for how long it would be stored on-site prior to removal, plus how the spoil would be disposed of.	Details on the types and quantities of excavated materials generated are detailed in chapter C6 (Application Reference Number: 6.3.6). Any excavated material generated on-site would stay on-site and be reused, details of which are provided in chapter C6 (Application Reference Number: 6.3.6). Implementation of waste and materials management arrangements would be in accordance with the management strategy set out in the Wylfa Newydd Code of Construction Practice (CoCP) (Application Reference Number: 8.6) and Wylfa Newydd Code of Operational Practice (CoOP) (Application Reference Number: 8.13).

Key issue raised	Action taken
The SoS welcomes the preparation of a materials management plan (MMP), an environmental management plan, a site waste management plan (SWMP) and a remediation strategy. A draft of these plans should be provided within the Environmental Statement and they should be suitably secured.	Implementation of waste and materials management arrangements would be in accordance with the management strategy set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13).
In addition to radioactive waste, the Environmental Statement should set out the means by which the additional non-radioactive waste (both construction waste and municipal 'black bag' waste) will be dealt with. Sufficient information should be provided within associated documents, such as a waste management strategy, to give confidence to the council that existing municipal waste collection and storage arrangements will not be unduly affected by the Wylfa Newydd Project.	Chapter C6 (Application Reference Number: 6.3.6) details the conventional waste types and quantities and the control and mitigation processes have also been identified. Effects upon waste management capacity in north Wales and northwest England have been determined and are also presented. The management of radioactive wastes which arise from the operation of the Power Station is addressed in appendix D14-1 (Application Reference Number: 6.4.97).
Reference to waste is covered within individual topic chapters. When considering the issue of waste, how it is created and dealt with, consideration should be given to the waste hierarchy to ensure that waste is reduced wherever possible.	Chapter C6 (Application Reference Number: 6.3.6) details the conventional waste types and quantities and the control and mitigation processes have been identified. The waste hierarchy, detailed in the Waste Framework Directive, underpins how conventional waste would be managed. Implementation of waste and materials management arrangements would be in accordance with the management strategy set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13). The approach to waste and materials management would be in line with

Key issue raised	Action taken
	the waste hierarchy across the lifetime of the Wylfa Newydd Project.
NRW advises that the effects of waste generated during both the operational and construction phases should be fully assessed in the Environmental Statement. The applicant should be aware that there are a limited number of permitted waste sites within the vicinity of the Wylfa Newydd Project and that this should be considered when assessing the type and volume of waste that will be generated. The applicant should also be aware that a lack of waste options may also affect their transport strategy and assessments of traffic volumes.	Chapter C6 (Application Reference Number: 6.3.6) details the conventional waste types and quantities and the control and mitigation processes that have been identified. The assessment considers the use of waste management sites in north Wales and northwest England to manage the anticipated volumes of waste. The effects associated with the transport of waste are addressed in chapter C2, (Application Reference Number: 6.3.2).
SoS: The Environmental Statement should explain the assumptions made with regards to the quantification of the volumes of waste and materials arising from the Wylfa Newydd Power Station. Similar information should be provided for the Associated Development including the Onsite Campus.	Chapter C6 (Application Reference Number: 6.3.6) details the construction, operational and decommissioning waste types and volumes generated from the Power Station and Associated Developments including the Site Campus. The assumptions used with regards to the quantification of the volumes are also included in chapter C6 (Application Reference Number: 6.3.6).
SoS: The Environmental Statement should identify the quantities of material that is intended to be re-used.	Chapter C6 (Application Reference Number: 6.3.6) provides details of the quantities of materials that would be reused on-site and those reused/recycled off-site through the waste management infrastructure in north Wales.
SoS: The Environmental Statement should include consideration of the waste generated from the operation of the Onsite Campus.	Chapter C6 (Application Reference Number: 6.3.6) details the construction, operational and decommissioning waste types and quantities generated from the Power Station and Associated Developments including the Site Campus.

Key issue raised	Action taken
SoS: The SoS notes that an SWMP would be prepared before construction work commences, as a requirement of the Development Consent Order. The SoS has suggested that a draft version of the SWMP is provided with the application documents.	Implementation of waste and materials management arrangements would be in accordance with the management strategy set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6).
SoS: the proposed methodology should be clearly set out within the Environmental Statement. In the absence of a significance matrix approach and when applying professional judgement, the conclusions of significance reached should be clearly explained and justified.	The assessment methodology and use of professional judgement is detailed in this chapter.
The IACC requires the following to be set out: • existing waste arisings in North Wales (inert, non-hazardous and hazardous); • existing waste management capacity in north Wales and in northwest England – both by type of waste, i.e. inert, non-hazardous and hazardous, and by type of management, i.e. composting, recycling, energy from waste, landfill, etc.; • an assessment of any capacity gap, i.e. by comparing extant arisings with capacity, to assess where any potential strain on the existing waste management infrastructure may occur; and • assessment of the level of planned, future waste management capacity in north Wales and northwest England, both by type of waste, i.e. inert, non-hazardous and hazardous, and by type of management, i.e. composting,	Chapter C6 (Application Reference Number: 6.3.6) provides details on the proposed management route for the waste and materials generated through the construction, operational and decommissioning phases of the Power Station and Associated Developments. The assessment considers the types and volumes of waste generated against the use of waste management sites in north Wales and northwest England and their permitted capacities. The assessment included in chapter C6 (Application Reference Number: 6.3.6) considers the likely adverse effect of the waste types and quantities generated by the Wylfa Newydd Project on the known permitted capacity of waste management infrastructure. Chapter C6 (Application Reference Number: 6.3.6) includes details of planned and future capacity in north Wales but it is not directly considered in the assessment as there is no guarantee it will become available. Details on the permitted facilities located in north Wales are

Key issue raised	Action taken
recycling, energy from waste, landfill, etc.	provided in appendix C6-1 (see appendix local and regional waste management facilities) (Application Reference Number: 6.3.30).
The IACC: Any meaningful assessment of waste generated by the proposed development should reflect these established categories first and foremost and should be categorized as hazardous, non-hazardous or inert material.	Chapter C6 (Application Reference Number: 6.3.6) provides a full list of the anticipated waste types and quantities and are categorized as hazardous, non-hazardous or inert.
The IACC: The Council questions what is meant by local capacity? When talking about more than 25% of local capacity, IACC queries whether this is this total capacity or remaining/available capacity?	The assessment of waste management sites considers sites in north Wales and northwest England. The assessment considers the types and quantities of waste generated by the Wylfa Newydd Project on the known permitted capacity of waste management infrastructure and the magnitude is assessed as a proportion of the waste management capacity that the Wylfa Newydd Project waste would require e.g. if the capacity required is between 1 and 5% of the infrastructure capacity in north Wales the magnitude is considered small.
The IACC: The chapter in the Scoping Report Addendum is wholly focused on waste and mentions little about materials and their proposed management as part of the Environmental Statement.	The assessment in chapter C6 (Application Reference Number: 6.3.6) considers materials (defined as ‘non-wastes’) generated on-site during the construction of the Power Station and Associated Developments but does not consider the materials used to construct the Power Station and Associated Development sites.
NRW: The Environmental Statement will need to be aligned with developments and strategies outlined in the Waste and Materials Oversight Group (WaMOG) which is being progressed by the applicant. The	The Environmental Statement is aligned with the aims and strategies that have been outlined in the WaMOG.

Key issue raised	Action taken
WaMOG has responsibility for the entire development and we advise the Environmental Statement chapter on waste and materials reflect the strategies developed by this group.	
NRW: NRW advises that the impacts of waste generated during both the operational and construction phases should be fully assessed in the Environmental Statement.	Chapter C6 (Application Reference Number: 6.3.6) details the construction, operational and decommissioning waste types and quantities; the control and mitigation processes have been identified. The chapter also provides details on the proposed management route for the waste and materials generated through the construction, operational and decommissioning phases.

Statutory consultation

Pre-Application Consultation Stage One

16.3.4 The aim of Pre-Application Consultation Stage One, undertaken in late 2014, was to share information available at the time with Horizon's key consultees and stakeholders, in order to consider feedback in ongoing design development. Table B16-5 outlines how key issues raised during Pre-Application Consultation Stage One have been considered in the assessment.

Table B16-5 Key issues raised during Pre-Application Consultation Stage One

Key issue raised	Action taken
Details should be included in the Construction Environmental Management Plan (CEMP) as to how waste will be managed on the site, especially during the construction phase, including methods to reduce the production of waste.	Implementation of waste and materials management arrangements would be in accordance with the management strategy set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13). The Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13) sets out materials and waste reduction measures in line with the waste hierarchy. To help manage and reduce the amount of waste

Key issue raised	Action taken
	produced, to reuse and recycle wherever possible and therefore decrease the amount of waste disposed of to landfill.
NRW stated that, overall, the chapter does not address the effect of waste arising from the development and construction. The chapter has concentrated on the waste arising from the operational phase and addresses, in detail, the strategy for radioactive waste. However, the chapter does not make a reasonable assessment of the impact of waste arising from the construction phase. Fundamentally, the waste options are not listed. For instance, the document does not address the fact that there are only a handful of permitted waste sites nearby and, as a result, the waste 'strategy' and comments on its environmental effect need to reflect this. The strategy should also consider the intra-development risks associated with waste management which, based on the assertions made within this chapter, seem likely. For instance, a lack of waste options may affect Horizon's transport strategy as waste may need to be transported off-site. NRW advised that Horizon provide further detail of the likely volumes and destinations of waste material.	Chapter C6 (Application Reference Number: 6.3.6) details the conventional waste types (construction, operational and decommissioning); quantities and the control and mitigation processes have been identified. The assessment considers the use of waste management sites in north Wales and northwest England. Details on the permitted facilities located in north Wales are provided in appendix C6-1 (Application Reference Number: 6.3.30). The management of radioactive wastes which arise from the operation of the Power Station is addressed in appendix D14-1 (Application Reference Number: 6.4.97). The environmental effects associated with the generation and management of wastes and materials are considered within other chapters of this Environmental Statement as appropriate refer to paragraph 16.1.6 of this chapter for further details. The effects associated with the transport of waste are addressed in chapter C2, Traffic and transport (Application Reference Number: 6.3.2).
The IACC: The waste and materials management chapter should consider non-radioactive wastes with radioactive wastes considered within the separate radiological chapter, or as in the case of the Hinkley Point C application, a Spent Fuels and Radiological Waste Management	Chapter C6 (Application Reference Number: 6.3.6) details the construction, operational and decommissioning waste types and quantities; the control and mitigation processes have been identified. The chapter also provides details on the proposed

Key issue raised	Action taken
chapter. The Radiological Waste chapter should address the relevant criteria set out within Supplementary Planning Guidance P17. The waste and materials management chapter should provide information on the amount and type of construction waste likely to be generated, its treatment/recycling and disposal. The chapter should set out the location of waste management sites to be used and an assessment of their capacity to receive the amount of waste predicted. Mitigation in the form of construction waste management plans should be developed and explained.	management route for the waste and materials generated through the construction, operational and decommissioning phase. The assessment considers the use of waste management sites in north Wales and northwest England. Details on the permitted facilities located in north Wales are provided in appendix C6-1 (Application Reference Number: 6.3.30). The management of radioactive wastes which arise from the operation of the Power Station is addressed in appendix D14-1 (Application Reference Number: 6.4.97). Implementation of waste and materials management arrangements would be in accordance with the management strategy set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) and CoOP (Application Reference Number: 8.13). The Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13) sets out materials and waste reduction measures in line with the waste hierarchy which are designed to help manage and reduce the amount of waste produced and therefore disposed of to landfill.

Pre-Application Consultation Stage Two

16.3.5 In September 2016, Horizon shared a Preliminary Environmental Information Report as part of Pre-Application Consultation Stage Two. This presented preliminary details of the predicted environmental effects and mitigation measures for any adverse effects identified. Table B16-6 outlines how key issues raised during Pre-Application Consultation Stage Two have been considered in the assessment.

Table B16-6 Key issues raised during Pre-Application Consultation Stage Two

Key issue raised	Action taken
The IACC: this categorisation of waste is overly simplistic and does not reflect NRW's categorisation. Regarding the second bullet point, non-hazardous waste and inert waste are two very different types of waste which are managed and regulated in very different ways. Non-hazardous waste typically comprises the majority of non-recyclable municipal/household waste and a range of different types of commercial and industrial waste, all of which do have the potential to be harmful to health or the environment. Inert waste, however, comprises materials like builders' rubble, uncontaminated soils, etc. Context of the comment: B15.5. Conventional solid wastes generated are categorised as follows: • hazardous wastes: controlled wastes that have properties that may be harmful to human health or the environment, for example oils; and • non-hazardous wastes (including inert wastes): controlled wastes that are not harmful to human health or the environment, for example cardboard.	Response: Chapter C6 (Application Reference Number: 6.3.6) provides a full list of the anticipated waste types and quantities and NRW categorisation. Implementation of waste and materials management arrangements would be in accordance with the management strategy set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13). The Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13) sets out materials and waste reduction measures in line with the waste hierarchy which are designed to help manage and reduce the amount of waste produced and therefore disposed of to landfill. This approach is being promoted to NRW, the IACC, Flintshire Council, Constructing Excellence in Wales and Contaminated Land: Applications in Real Environments (CL:AIRE) as part of the Horizon-led WaMOG. The plans will be clear about the types of waste that will be generated, including inert waste, to ensure a broader and deeper understanding of waste types and classification.
The IACC: not really an objection to this way of splitting waste and material; however, the chapter goes on to cite The Waste (England and Wales) Regulations 2011 which identifies a target of 70% by 2020 for recovery/recycling of construction and demolition waste. If on-site materials are not being considered as	Response: Waste avoidance is a priority for the Wylfa Newydd Project in line with the waste hierarchy. Reusing the materials on-site displaces the need for importing virgin material and primary aggregates. However, materials that are not reused on-site would be managed in

Key issue raised	Action taken
a waste, it is debateable as to how much credence can be given to the project contributing to this national target. Context of the comment: B15.6. In this chapter, 'materials' are referred to as non-wastes, i.e. materials (such as top soil, rock and minerals) that are generated from site clearance, bulk earthworks and excavations on the Wylfa Newydd Development Area. These materials are considered as non-waste if they are suitable for reuse on the Wylfa Newydd Development Area.	accordance with the waste hierarchy and therefore recycled wherever possible. Chapter C6 (Application Reference Number: 6.3.6) provides the quantities of materials that would be reused/recycled/recovered off-site that will contribute to the national target. Implementation of waste and materials management arrangements would be in accordance with the management strategy set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13).
The IACC: whilst Japanese knotweed is not classed as a hazardous waste, it would be if treated with certain herbicides prior to removal. In this context, it may require treatment as a hazardous waste. Context of the comment: table B15-1, second row. Refers to Japanese knotweed as being disposed of to a non-hazardous third party off-site facility.	Response: Horizon will continue to treat known Japanese knotweed plants each year using non-persistent herbicides to ensure it is not classified as hazardous. Once treated, soils from ground containing Japanese knotweed would be reused on-site. The reuse of the soil following treatment would be accompanied with a risk assessment for each consignment, to include review of the success of the treatment by a specialist contractor. Chapter C6 (Application Reference Number: 6.3.6) presents the anticipated quantity of Japanese knotweed and the intended management method.
The IACC: It will be important for the noise and air quality (dust) assessments to consider the effects of any on-site recycling activities. Context of the comment: table B15-1, third and fourth rows refer to the on-site recycling of construction, demolition and excavation waste.	Response: The noise and air quality assessments take into consideration the effects associated with any on-site material recycling activities. Effects from dust potentially generated by the management and handling of waste are discussed in chapters C4 (Application

Key issue raised	Action taken
	Reference Number: 6.3.4), D5 (Application Reference Number: 6.4.5), E5 (Application Reference Number: 6.5.5), F5 (Application Reference Number: 6.6.5), G5 (Application Reference Number: 6.75) and H5 (Application Reference Number: 6.8.5), Air quality. Noise effects associated with handling and transporting waste are discussed in noise and vibration chapters C5 (Application Reference Number: 6.3.5), D6 (Application Reference Number: 6.4.6), E6 (Application Reference Number: 6.5.6), F6 (Application Reference Number: 6.6.6), G6 (Application Reference Number: 6.7.6) and H6 (Application Reference Number: 6.8.6). The Horizon Waste Management Team already monitor on-site crushing/screening activities for early demolitions as part of a duty of care. This will continue to be monitored through monthly site visits and reviews of paperwork.
The IACC: it is unclear whether the topsoil category includes subsoil and overburden. It is suggested that it does not (as the amounts appear too small). It will be important to quantify the subsoil/overburden as it is understood that these elements will be used on-site (and may need to go through some primary on-site re-processing, which in itself will have environmental effects that require evaluation). Context of the comment: table B15-2, summary of Site Preparation and Clearance works waste and materials arisings.	Response: Topsoil will be reused on-site. Quantities of overburden which include subsoil are detailed within the soils and geology chapter D7 (Application Reference Number: 6.4.6). It is not envisaged that any subsoil or overburden would be processed.
The IACC: it is important to understand whether there will be any	Response: The approach to marine dredging is covered in detail in

Key issue raised	Action taken
requirement of on-going maintenance dredging operations throughout the life of the Wylfa Newydd Power Station. The initial dredging activities associated with construction are predicted to generate 583,400 tonnes of sediment and rock. If there is a continued maintenance requirement, this could represent a significant waste generation activity. Context of the comment: table B15-3.	chapter D1 (proposed development) (Application Reference Number: 6.4.1). The assessment of effects is covered in D12 (coastal processes and coastal geomorphology) (Application Reference Number: 6.4.12); and D13 (Application Reference Number: 6.4.13).
The IACC: It is unclear whether this compound (and satellite sites) will deal with all waste or will some be directly exported off site? Further clarity is required such that all possible environmental effects associated with handling on-site waste are assessed adequately. Context of the comment: B15.42. During the Main Construction phase, there would be a waste and materials compound (and possibly satellite waste compounds), which would also be used as general waste collection and segregation points. The contractor will be required to retain conventional waste arisings until they are removed from site by licensed waste management contractors. The compound would consist of a reception area, a processing work area, a dry storage area.	Response: Implementation of waste management arrangements would be in accordance with the management strategy set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13).
The IACC: Whilst it is recognised that work is ongoing in respect of the type, quantity and proposed management of waste arising from the construction and operation of the Wylfa Newydd Power Station, in respect of dredged material, given the significant quantities of waste, it will be important to establish early on whether off-site disposal will be required. This is because it could have potentially	Response: It is anticipated that the dredged overburden material would be disposed of at the Disposal Site at Holyhead North. A proportion of this dredged overburden is dredged rock material and would reused and/or recycled within the Wylfa Newydd Project with the remaining rock being disposed of at the Disposal Site.

Key issue raised	Action taken
significant implications for the traffic generated during the construction phase; potential effects that must be considered in the traffic assessment. Context of the comment: B15.71. It is anticipated that clean, naturally occurring, soils and rock generated through bulk earthworks, deep excavation and marine dredging would be reused across the Wylfa Newydd Development Area site under management of the contractor. This approach would be developed and undertaken in accordance with CL:AIRE. However, some of this material may be unsuitable for reuse or there may be an excess of soils and rock, in which case, materials will be reused or disposed of via a third party off-site treatment facility. In the case of marine dredging materials, if a re-use option cannot be found, or if it the material is not suitable for re-use, the material will require disposal at sea under a Marine Licence, or treatment at a third party off-site facility.	Implementation of waste and materials management arrangements would be in accordance with the management strategy set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13).
The IACC: As it stands, the draft chapter sets out anticipated waste/materials arisings for the enabling works, the main construction and the operational phases of the proposed Wylfa Newydd Power Station. However, what is less clear is whether there is sufficient spare capacity within the network of waste management facilities that will be relied upon for the off-site disposal of the waste generated by the one-off enabling and construction activities and the on-going operational waste management requirements of the site. As the proximity principle is a cornerstone of Welsh waste management legislation and policy,	Response: Chapter C6 (Application Reference Number: 6.3.6) provides details on the proposed management route for the waste and materials generated through the construction phase. The assessment considers the use of waste management sites in north Wales and northwest England and their capacities. While a needs based assessment is not directly included, the assessment included in chapter C6 (Application Reference Number: 6.3.6) does consider the likely adverse effect of the waste quantities generated by the Wylfa Newydd Project on the capacity of waste management infrastructure. Details on the

Key issue raised	Action taken
demonstration that, where possible, local facilities can manage any waste requiring off-site treatment is needed. To this end, it is considered that some form of 'need' assessment should be included in the waste section. Context of the comment: B15.73. There are still a number of uncertainties in relation to all the quantities and end-use of materials. Work is continuing to develop and refine estimated tonnages and the strategies to manage them under the integrated waste strategy. Information will be updated in this chapter as the designs are further developed and use this to assess the environmental effects of waste and materials. This work and our findings are reported in the Environmental Statement which will be included as part of the DCO application.	permitted facilities located in north Wales are provided in appendix C6-1 (Application Reference Number: 6.3.30).
The IACC: This refers to and summarises the 2001 version of TAN 21 (Waste). However, the latest version is February 2014. Context of the comment: table 3, Welsh Planning Policy Context	Response: TAN [RD8] 2014 was reviewed and considered and the reference has been updated to 2014 in table B16-2.

Pre-Application Consultation Stage Three

16.3.6 Table B16-7 outlines how key issues raised during Pre-Application Consultation Stage Three have been considered in the assessment.

Table B16-7 Key issues raised during Pre-Application Consultation Stage Three

Key issue raised	Action taken
Welsh Government: there is a lack of detail to explain why post optimisation when the number of buildings on site is reducing, and more opportunities are being pursued for modular off-site construction, the volume of	The scope of the DCO has changed following optimisation for example the Site Campus is now included in the DCO whereas previously proposals for the Site Campus would have been the subject of a separate Town and Country Planning Act application. This has resulted in an

Key issue raised	Action taken
construction and demolition waste is now increasing by 50,000 tonnes. No details are provided on how waste arisings both construction and demolition, and domestic/food/recycling from the Travel to Work Areas will be dealt with in accordance with the waste hierarchy. Clarification is required as to whether the trip generation associated with the waste tonnage have been included within the transport assessment modelling work, which it is understood is based on one way trips travelling up to the site via Parc Cybi.	increase in construction and demolition waste detailed within chapter C6 of the Environmental Statement (Application Reference Number: 6.3.6). Chapter C6 (Application Reference Number: 6.3.6) details the construction, operational and decommissioning waste types and volumes generated from the Power Station and Associated Developments including the Site Campus. The assumptions used with regards to the quantification of the volumes are also included in chapter C6 (Application Reference Number: 6.3.6). The waste hierarchy, detailed in the Waste Framework Directive, underpins how conventional waste would be managed. The construction heavy goods vehicle numbers associated with the Wylfa Newydd Project do include 'consumables and waste' material. All incoming heavy goods vehicle trips route via the Logistics Centre (including any vehicles routing to site to collect waste). This is to ensure all vehicles accessing the site are appropriately managed. However, return trips do not route via the Logistics Centre and would route straight to their destination.

Consultation on Additional Land

16.3.7 In February 2018, Horizon undertook consultation on additional land that had not been consulted on previously. The additional land was required to:

- accommodate proposals to create or enhance wetland sites across Anglesey as Ecological Compensation Sites;
- create two new ecological mitigation areas, and minor changes to the connection to the national grid at the Wylfa Newydd Development Area; and

- update the order limits for the A5025 Off-Line Highway Improvements, and minor refinements to the boundaries of the Off-Site Power Station Facilities and Logistics Centre.

16.3.8 The feedback from the consultation has been reviewed and in relation to waste and materials management, NRW advised that for the topsoil strip at the wetland creation sites, Horizon will need to ensure that due consideration is given to whether the material from the project is a genuine material (for reuse) or a waste. If considered as material the IACC said it should fit within a Materials Management Plan and that in considering the topsoil as material, Horizon need to be mindful of the requirement under CL:AIRE (Contaminated Land: Applications in Real Environments) for suitability and certainty of use to be established. This issue is discussed in appendix D1-2 (Ecological Compensation Sites: Assessment of Environmental Effects) (Application Reference Number: 6.4.18).

Non-statutory consultation

Environmental Impact Assessment Progress Report

16.3.9 An EIA Progress Report was provided to the IACC and NRW in 2016 with updated information on the design development and associated environmental assessment. Table B16-8 outlines how key issues raised in feedback from these stakeholders have been considered in the assessment.

Table B16-8 Key issues raised in response to the EIA Progress Report

Key issue raised	Action taken
The IACC: IACC would not wish to see waste and materials and radiological effects combined as this has the potential to confuse the reader. At Pre-Application Consultation Stage One, Horizon produced a Nuclear Waste chapter. The waste and materials management chapter should consider non-radioactive wastes with radioactive wastes considered within the separate radiological chapter, or as in the case of the Hinkley Point C application, a Spent Fuels and Radiological Waste Management chapter. The Radiological Waste chapter should address the relevant criteria set out within Supplementary Planning Guidance GP17. The waste and materials management chapter should provide information on the amount and type of construction waste likely to be generated, its	As requested, the waste and materials management chapter considers non-radioactive wastes and radioactive waste is considered separately in appendix D14-1 (Application Reference Number: 6.4.97). Chapter C6 (Application Reference Number: 6.3.6) details the construction, operational and decommissioning waste types and quantities; the control and mitigation processes have been identified. The chapter also provides details on the proposed management route for the waste and materials generated through the construction, operational and decommissioning phases. The assessment considers the use of waste management sites in north Wales and northwest England. Details on the permitted facilities located in north Wales are provided

Key issue raised	Action taken
treatment/recycling and disposal. The chapter should set out the location of waste management sites to be used and an assessment of their capacity to receive the amount of waste predicted. Mitigation in the form of Construction Waste Management Plans should be developed and explained.	in appendix C6-1 (Application Reference Number: 6.3.30). This includes each facility's capacity (tonnes per annum), location and distance from the proposed development. The capacity information is summarised in appendix C6-1 (Application Reference Number: 6.3.30) and used to assess any adverse effect of the waste generated by the Wylfa Newydd Project on the capacity of these waste management facilities. The management of radioactive wastes which arise from the operation of the Power Station is discussed in appendix D14-1 (Application Reference Number: 6.4.97). Implementation of waste and materials management arrangements would be in accordance with the management strategy set out in of the Wylfa Newydd CoCP (Application Reference Number: 8.6) and Wylfa Newydd CoOP (Application Reference Number: 8.13).
The IACC: The chapter currently focuses upon radiological waste with very little information on conventional waste.	The waste and materials management chapter considers non-radioactive wastes and radioactive waste is considered separately in appendix D14-1 (Application Reference Number: 6.4.97). Chapter C6 (Application Reference Number: 6.3.6) details the construction, operational and decommissioning waste types and quantities; the control and mitigation processes have been identified. The chapter also provides details on the proposed management route for the waste and materials generated through the construction, operational and decommissioning phases. The assessment considers the use of

Key issue raised	Action taken
	waste management sites in north Wales and northwest England. Details on the permitted facilities located in north Wales are provided in appendix C6-1 (Application Reference Number: 6.3.30). The management of radioactive wastes which arise from the operation of the Power Station is discussed in appendix D14-1 (Application Reference Number: 6.4.97).
NRW: Overall, the chapter does not address the impact of waste arising from the development and construction. The chapter has concentrated on the waste arising from the operational phase and addresses, in detail, the strategy for radioactive waste. However, the chapter does not make a reasonable assessment of the impact of waste arising from the construction phase. Fundamentally, the waste options are not listed. For instance, the document does not address the fact that there are only a handful of permitted waste sites close-by and as a result, the waste 'strategy' and comments on its environmental impact need to reflect this. The strategy should also consider the intra-development risks associated with waste management which, based on the assertions made within this chapter, seem likely. For instance, a lack of waste options may impact on Horizon's transport strategy as waste may need to be transported off-site. We advise that Horizon provide further detail of the likely volumes and destinations of waste material.	Chapter C6 (Application Reference Number: 6.3.6) details the construction waste types and quantities; the control and mitigation processes have been identified. The chapter also provides details on the proposed management route for the waste and materials generated through the construction phase. The assessment considers the use of waste management sites in north Wales and northwest England. Details on the permitted facilities located in north Wales are provided in appendix C6-1 (Application Reference Number: 6.3.30). The transport effects are addressed in chapter C2, (Application Reference Number: 6.3.2). Cumulative effects are addressed in volume I (cumulative effects) (Application Reference Number: 6.9.1).
NRW: Table 10:3 does not provide sufficient detail for comment. However, it mentions off-site treatment of tree/shrub	Further details on the management of vegetation waste is provided in chapter C6 (Application Reference Number: 6.3.6). Details on the waste

Key issue raised	Action taken
waste. Please clarify where this will occur. If it is off-site, then the activity may need a permit. Inconsistencies in waste stream priorities need addressing. Whilst listing in detail a number of waste streams, it does not mention waste such as packaging. There will be a substantial amount of pallets, cardboard and plastics, arising from the transport of goods. The table does not address construction waste adequately. 10:45 mentions 59,000t of construction waste not mentioned in 10:3. Waste arising from construction needs addressing in this document and any impact from it assessed accordingly.	management facilities that can accept vegetation waste within north Wales are provided in appendix C6-1 (Application Reference Number: 6.3.30). Chapter C6 (Application Reference Number: 6.3.6) details the construction waste types and quantities; the control and mitigation processes have been identified. The chapter also provides details on the proposed management route for the waste and materials generated through the construction phase.

Draft Environmental Statement

16.3.10 During September 2017, draft Environmental Statement chapters were provided to statutory and key non-statutory stakeholders. There were no key issues raised with regards to waste and materials management.

Topic-specific stakeholder engagement

16.3.11 In addition to the three formal stages of consultation outlined above, topic-specific consultation has been undertaken with relevant stakeholders. Table B16-9 summarises the details of the consultation that has taken place with respect to the waste and materials management assessment.

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Table B16-9 Summary of topic-specific consultation

Date	Stakeholder	Title and format	Issues Arising	Action taken
September 2016	NRW The IACC Flintshire County Council CL:AIRE	WaMOG meeting	The purpose of the meeting was to propose WaMOG as a high-level interested body to oversee the delivery and management arrangements for materials and waste across Wylfa Newydd Project and other third party sites to demonstrate sustainable reuse of materials. The meeting: • introduced the Wylfa Newydd Masterplan MMP using CL:AIRE the Definition of Waste: Development Industry Code of Practice; • proposed WaMOG as a high-level interested body with an agreed terms of reference; • outlined the robust approach to materials management that will develop further the NRW-CL:AIRE relationship; • discussed management arrangements for materials, made ground and land contamination on Wylfa Newydd; and • provided assurance that Horizon's approach will reduce the impact on regulator and planning resources, through self-certification, quarterly reviews and consistent reporting.	The following actions have been taken: • Waste has been included as part of the terms of reference of the WaMOG. • Horizon has investigated the extent of works undertaken on the waste and material generation anticipated for the whole Wylfa Newydd Project. • The WaMOG attendance list has been reviewed. • Horizon has drafted terms of reference prior to the next meeting. • Horizon will continue to

Date	Stakeholder	Title and format	Issues Arising	Action taken
				arrange for draft documents to be issued in advance of all meetings to enable well-informed discussion.
November 2016	NRW The IACC Flintshire County Council CL:AIRE	WaMOG meeting	The purpose of the meeting was to further define the parameters, management arrangements and documentation to support the requirements of the WaMOG. The meeting discussed the following: • providing progress on company activities and update WaMOG on the approach; • the robust approach to materials management that would develop further the NRW-CL:AIRE relationship; • the management arrangements for materials, made ground and land contamination; • providing assurance that the approach will minimise impact on regulator and planning resources, through self-certification, quarterly reviews and consistent reporting; and • providing a first draft of suite of documents and terms of reference for comment from WaMOG members.	The discussions included the materials and waste assessment approach and it was confirmed that Jacobs had carried out some capacity studies based on information available in the public domain. This looked primarily at waste management facilities in north Wales and northwest England. The focus remained on using capacity in north Wales where

Date	Stakeholder	Title and format	Issues Arising	Action taken
				possible without exceeding or overwhelming the facilities' permit or exemption. It was acknowledged that although it is imperative to look at the proximity principle, it is important to consider re-use and recycling where possible rather than incineration or landfill, which would be in tune with the circular economy and Welsh Government commitment to increase the number of segregation streams.
February 2017	NRW The IACC	WaMOG meeting	The purpose of the meeting was to finalise management arrangements and documentation to support the requirements of the Wylfa Newydd WaMOG. The Masterplan MMP hierarchy was	The following actions have been taken: • the contractor has been

Date	Stakeholder	Title and format	Issues Arising	Action taken
	Flintshire County Council CL:AIRE		presented along with how it fits with the client, CL:AIRE, planners and regulators and how the waste data from projects will feed back to the Masterplan MMP. The SMARTWaste tool was introduced and discussions held on how it could be used alongside the CL:AIRE MMP and feed into the WaMOG quarterly meetings. Presentation of the process from the planning stage and EIA right to the contractor and the Qualified Person confirming declaration was discussed and agreed. The future WaMOG meeting requirements were confirmed.	questioned on the storage and stockpiling of Invasive Non-Native Species during Site Preparation and Clearance; and • further discussions on contingency and limitations in relation to materials and certainty of use were carried out.
May 2017	NRW The IACC Flintshire County Council CL:AIRE Constructing Excellence in Wales	WaMOG meeting	The purpose of the meeting was to update WaMOG on progress, to introduce project-specific topics and to incorporate a guided tour of the Wylfa Newydd site. Proposals were presented for (a) Geographic Information System (GIS) mapping of materials used and stockpiled on-site; (b) National Grid materials mass balance for the new power lines; and (c) CL:AIRE declaration template for Wylfa Newydd projects.	The following actions have been taken: • further discussions have taken place with NRW about permitting requirements for the temporary pavement recycling facility; and

Date	Stakeholder	Title and format	Issues Arising	Action taken
				• further discussions with National Grid have taken place about sharing materials between projects wherever possible and use of model wording in both DCOs.
September 2017	NRW The IACC Flintshire County Council CL:AIRE Constructing Excellence in Wales	WaMOG meeting	The purpose of the meeting was to provide progress updates on Wylfa Newydd Project, including the initial arrangements for a site visit to a cold recycled bound material plant in operation and the new GIS to be launched for the project later in the year.	A summary of actions included the following: • arrange a site visit to a cold recycled bound material plant; • produce a summary note of the cold recycled bound material memo for issue before site visit; • provide an update to the bulk earthworks at the next

Date	Stakeholder	Title and format	Issues Arising	Action taken
				WaMOG meeting; and • review the materials and waste sections of the DCO and Town and County Planning Act 1990 applications to take account of waste management facility capacities on Anglesey and Gwynedd.

16.4 Topic-specific methodologies and assessment criteria

Introduction

16.4.2 The overarching approach to the EIA, including the approach to the assessment of cumulative effects, is provided in chapter B1 (introduction to the assessment process) (Application Reference Number: 6.2.1). This section outlines the specific methodology used to assess the effects of the Wylfa Newydd Project on waste and materials management. It outlines the methods and criteria used to:

- define the study area and identify topic receptors;
- establish the environmental baseline for topic receptors; and
- determine the value/sensitivity of receptors, the magnitude of change and significance of effect.

16.4.3 In order to assess the potential environmental effects associated with waste and materials generation and management activities, the assessment characterises the environmental baseline and then uses this baseline to assess the potential effects of the Wylfa Newydd Project. The characterisation of environmental baseline and subsequent assessment considers the capacity of waste management facilities in north Wales and northwest England.

16.4.4 For a project of this size, waste is typically considered in the context of its impact at a regional level because local facilities would rarely be capable of servicing a major infrastructure project. Although not part of the assessment, it is noted that there is limited local capacity available, and there is a risk that the waste produced could affect existing local waste management facilities by using a significant proportion of the permitted capacity. Further details on the impact at a local level and some of the potential mitigation measures can be found in the appendix C6-1 (Application Reference Number: 6.3.30).

16.4.5 Waste would be managed in accordance with TAN 21 and the nearest appropriate installation principle which requires waste to be disposed of or recovered (within TAN 21 recovery also includes recycling) using the most appropriate methods and technologies, in order to ensure a high level of protection for the environment and public health [RD8]. TAN 21 encourages regional collaboration and envisages a ‘network’ of infrastructure spread over a wider area than a single administrative boundary. Due to the nature and scale of waste management facilities on the Isle of Anglesey, within Gwynedd and in north Wales, facilities in the northwest of England are also considered. It is also acknowledged that other businesses and infrastructure developments in north Wales would be currently using some of the available capacity in north Wales and northwest England.

16.4.6 For conventional waste, no specific guidance is available that provides definitions for receptor sensitivity, magnitude or likely significance of effects. In this context, effects have been identified and their significance assessed based upon the professional judgement of suitably qualified and experienced specialists applying experience gained from similar projects.

16.4.7 For the purposes of assessment, the quantification of waste has been based on the information and activities outlined in chapter A2 (project overview and introduction to the developments) (Application Reference Number: 6.1.2). The assessment assumes that there will be no requirement for export of bulk excavated material from the Wylfa Newydd Development Area.

Assessment of parameters

16.4.8 As outlined in chapter B1 (Application Reference Number: 6.2.1), the approach adopted for the design of the WNDA Development, Off-Site Power Station Facilities and Associated Development is to set parameters, where necessary, for the extent of the development and key aspects of that development. The final design and construction methodology would be limited to these parameters and limits of deviation. The flexibility afforded by the parameters has been taken into consideration in the quantification of waste for the construction, operation and decommissioning of the Wylfa Newydd Project. The project-wide waste and materials management assessment is presented in chapter 6 within volume C (Application Reference Number: 6.3.6).

Identification of study areas

16.4.9 The study area for the waste assessment of the Wylfa Newydd Project is in two parts. Firstly, it contains the WNDA Development as set out in chapter A1 (Application Reference Number: 6.1.1).

16.4.10 Secondly, the study area considers the waste management facilities likely to receive the waste generated and their location and capacity to take the waste. Waste can be managed at a sub-regional and in some cases regional level depending on the availability of appropriate facilities and the nature of the waste. The study area for these receiving waste management facilities is selected based on the nearest appropriate installation principle; this ensures waste is disposed of or recovered using the most appropriate method and technologies. Any waste not treated or disposed of in north Wales is likely to be transported to northwest England given the road network, the proximity to north Wales and the availability of waste management infrastructure.

16.4.11 The baseline section and subsequent assessment therefore considers the availability of waste management facilities to manage the waste produced by the Wylfa Newydd Project, regionally in north Wales (Isle of Anglesey, Gwynedd, Conwy, Denbighshire, Flintshire and Wrexham) and in northwest England (counties of Cheshire, Merseyside, Greater Manchester, Lancashire and Cumbria) where the receiving waste management facilities are located. The latest published data relating to facilities' capacities have been used to assess the level of impact from the Wylfa Newydd Project. Details of the permitted facilities located in north Wales are provided in appendix C6-1 (Application Reference Number 6.3.30); this includes the capacity (tonnes per annum), location and distance from the Wylfa Newydd Project.

Identification of receptors

16.4.12 The receptors considered in this assessment comprise waste management infrastructure potentially suitable to accept waste from the project. These include reclamation yards, material recovery facilities, approved authorised treatment facilities for Waste Electrical and Electronic Equipment (WEEE), composting facilities, anaerobic digestion plants, energy recovery plants, incineration plants and landfills.

Identification of baseline conditions

16.4.13 The waste generated from the construction, operation of the Wylfa Newydd Project and decommissioning of the Site Campus, Park and Ride and Logistics Centre could potentially affect receiving waste management facilities. Therefore, for the purposes of this assessment, the environmental baseline is characterised in terms of the ability of the waste management infrastructure to handle the waste generated by the Wylfa Newydd Project.

16.4.14 The environmental baseline is based on the publicly available information from NRW [RD27] and the Environment Agency [RD28] on waste management capacity including composting, recycling, treatment and disposal facilities in north Wales and northwest England; this has been used in the assessment.

16.4.15 Information on waste inputs to facilities in north Wales and northwest England that receive materials and waste has also been presented in chapter C6 (Application Reference Number: 6.3.6).

Assessment of effects

16.4.16 Sensitivity has been determined by identifying the nature of the waste and materials expected to be produced and how it would be managed, taking into consideration the waste hierarchy. The higher the waste management approach is on the waste hierarchy, the lower its environmental burden. Therefore, waste and materials that are reused on-site is the preferred waste management option in accordance with the waste hierarchy and the sensitivity is assessed as negligible, wastes that are predominantly sent for recycling off-site are assessed to have a low sensitivity. Any wastes sent to landfill have a high sensitivity as disposal of waste to landfill is considered the least favourable option for waste management on the hierarchy.

16.4.17 Magnitude has been assessed using waste management capacity information where the estimated quantities of wastes generated by the Wylfa Newydd Project have been compared with waste management capacity to identify the likely magnitude of effects on existing waste management capacity, as shown in table B16-11. The study area for these receiving waste management facilities is selected based on the nearest appropriate installation principle. Therefore, the waste management capacity of facilities in north Wales is used for both inert and non-hazardous. Non-hazardous and hazardous waste would be sent to facilities in northwest England as there are no appropriate non-hazardous or hazardous waste management facilities in north Wales. If the waste is less than 1% of the infrastructure capacity in north Wales (or northwest England for non-hazardous and hazardous waste) the magnitude is considered negligible. If the waste generated is between 1% and 5% of the

infrastructure capacity the magnitude is small, if greater than 5% and less than 10% the magnitude is considered to be medium. If the waste is above 10% of the infrastructure capacity in north Wales (or northwest England for non-hazardous and hazardous waste) the magnitude is considered large. Where there is limited capacity available, there is a risk that the waste produced by the Wylfa Newydd Project would use a significant proportion of the available capacity of existing non-hazardous waste management/disposal facilities, potentially resulting in displacement of other waste to alternative facilities outside of north Wales.

16.4.18 The value/sensitivity and magnitude criteria used to assess the effects of the Wylfa Newydd Project have been developed specifically for the purposes of the waste assessment and are based on professional judgement and experience from previous, similar projects (see table B16-10 and table B16-11). Magnitude and sensitivity are then combined to determine the significance of effect, as detailed in chapter B1 (Application Reference Number: 6.2.1).

16.4.19 The following sections describe the criteria used for evaluating the effects.

Value of receptors

16.4.20 The criteria used to determine the sensitivity of receptors specific to waste are set out in Table B16-10.

Table B16-10 Criteria for determining sensitivity

	Topic-specific criteria
High	Waste and/or material is hazardous or the waste and/or material is non-hazardous and predominantly disposed of to landfill.
Medium	Waste and/or material is non-hazardous and is predominantly recovered through combustion with energy recovery.
Low	Waste and/or material is inert or predominantly segregated and sent for anaerobic digestion, composting, recycling or reuse, or for further segregation, sorting and reprocessing.
Negligible	Waste and/or material is predominantly reused on-site.

Magnitude of change

16.4.21 The magnitude of change is a measure of the scale or extent of the change in the baseline condition, irrespective of the value of the receptor(s) affected. The criteria used to determine the magnitude of change are set out in table B16-11.

Table B16-11 Criteria for determining the magnitude of change for topic receptors

	Topic-specific criteria
Large	The proportion of the waste management capacity that the waste would require is 10% and over of the waste infrastructure capacity in north Wales or northwest England.
Medium	The proportion of the waste management capacity that the waste would require is greater than 5% but less than 10% of the infrastructure capacity in north Wales or northwest England.
Small	The proportion of the waste management capacity that the waste would require is between 1% and 5% of the infrastructure capacity in north Wales or northwest England.
Negligible	The proportion of the waste management capacity that the waste would require is less than 1% of the infrastructure capacity in north Wales or northwest England.

Assessment of significance

16.4.22 This Environmental Statement considers an effect to be 'significant' with respect to the EIA Regulations if it is identified to have a 'major' or 'moderate' degree of significance as defined in chapter B1 (Application Reference Number: 6.2.1), Introduction to the assessment process.

16.4.23 Professional judgement has been used in relation to the specific circumstances and anticipated effects on treatment/disposal route and capacity of waste management facilities when attributing the level of significance. There may be instances where professional judgement and experience would result in the prediction of a different level of effect (e.g. where identified receptors experience instances of combined beneficial and adverse effects).

16.4.24 In accordance with chapter B1 (Application Reference Number: 6.2.1), the significance of effect is determined with the consideration for the embedded mitigation measures. These are measures that are integral to the Wylfa Newydd Project and are incorporated within the design. In addition to the embedded mitigation, there are also a number of good practice mitigation measures that would be applied. These include actions that would be undertaken to meet existing legislative requirements, or actions that are considered to be standard practices used to manage effects. Where necessary, additional mitigation is provided if effects are predicted which would not be fully addressed by embedded or good practice mitigation.

16.4.25 Any effects identified as significant following implementation of embedded, good practice and additional mitigation are referred to as 'residual effects'.

Limitations

16.4.26 Baseline information, potential effects and mitigation are described based on available information. The level of detail provided at this time to estimate waste tonnages and waste management requirements is limited by the design information available. For the purposes of this assessment the quantity of waste anticipated to be produced by the Wylfa Newydd Project has been based on a worst case scenario, using the design information currently available, and including an additional 20% to account for uncertainty. The assessment assumes that there will be no requirement for export of bulk excavated material from the Wylfa Newydd Development Area. Therefore, estimates would need to be refined at later stages when further information is available during pre-construction preparation or during the construction period.

16.4.27 Waste and material types and quantities for the decommissioning of the Power Station and Off-Site Power Station Facilities have been detailed in chapter C6 (Application Reference Number: 6.3.6). Arrangements for the decommissioning process would be refined periodically prior to commencement of decommissioning and would detail information on decommissioning waste and materials types and quantities and how this would be managed.

16.4.28 Operational waste such as office, canteen and maintenance waste is included in the assessment; however, due to their limited nature the following operational waste has not been estimated:

- Green waste – there would be areas of landscaping and grass but these would be managed for ecological purposes or otherwise grazed and, therefore, large quantities of green waste are unlikely. Any maintenance of these areas would be undertaken by a specialist service provider. Under terms of their contract they would be responsible for removing the waste from site.
- Clinical waste – there would be a number of medical treatment facilities on-site which would generate small quantities of clinical waste including sharps, and offensive and infectious wastes. A specialist waste management contractor would be appointed to manage these wastes and they would be collected directly from the location where they are produced.
- Feminine hygiene waste – all cubicles within the female toilets would have provision for feminine hygiene waste disposal. A specialist waste management contractor would be appointed to manage these wastes and they would be collected directly from the location where they are produced.

16.4.29 Information on permitted capacity of waste management facilities has been used in the assessment. However, it should be noted that the capacity information obtained from NRW for capacities in north Wales for 2016 and the Environment Agency for capacities in northwest England for 2016 does not

necessarily mean that the capacity detailed would be available to use by the Wylfa Newydd Project.

16.4.30 It is noted that any future changes to this permitted capacity and throughput are uncertain. It is also difficult to assess the available capacity due to the commercial sensitivity of existing contracts and the timescales over which waste would be produced by the Wylfa Newydd Project. The Anglesey and Gwynedd JLDP [RD13] identifies 23 waste management facilities for increased capacity or new facilities on the Isle of Anglesey and within Gwynedd. It is likely that additional capacity would become available. However, it is not currently possible to predict the timeframes for when these new waste management facilities would become available and, therefore, how many of these sites would be available to accommodate waste arisings from the Wylfa Newydd Project. It is also possible that some of the existing waste management facilities might close or be unavailable during the lifetime of the Wylfa Newydd Project.

16.5 References

Table B16-12 Schedule of references

ID	Reference
RD1	Department of Energy and Climate Change. 2011. *Overarching National Policy Statement Energy (EN-1).* London: The Stationery Office.
RD2	Department of Energy and Climate Change. 2011. *National Policy Statement for Nuclear Power Generation (EN-6).* London: The Stationery Office.
RD3	Welsh Government. 2009. *One Wales: One Planet, A New Sustainable Development Scheme for Wales Sustainable Development Scheme*. [Online]. [Accessed: 26 April 2017]. Available from: http://gov.wales/docs/desh/publications/090521susdev1wales1planeten.pdf.
RD4	Welsh Government. 2008. *Wales Spatial Plan*. [Online]. [Accessed: 26 April 2017]. Available from: http://gov.wales/docs/desh/publications/130701wales-spatial-plan-2008-update-en.pdf.
RD5	Welsh Assembly Government. 2010. *Towards Zero Waste*. [Online]. [Accessed: 4 April 2016]. Available from: http://gov.wales/docs/desh/publications/100621wastetowardszeroen.pdf.
RD6	Welsh Assembly Government. 2010. *Climate Change Strategy for Wales 2010.* [Online]. [Accessed: 2 June 2017]. Available from: http://gov.wales/docs/desh/publications/101006ccstratfinalen.pdf.
RD7	Welsh Government. 2016. *Planning Policy Wales*. Edition 9. [Online]. [Accessed: 13 April 2017]. Available from: http://gov.wales/docs/desh/publications/161117planning-policy-wales-edition-9-en.pdf.
RD8	Welsh Government. 2014. *Technical Advice Note 21: Waste*. [Online]. [Accessed: 4 April 2016]. Available from: http://gov.wales/docs/desh/publications/170223technical-advice-note-21-en.pdf.
RD9	Welsh Government. 2012. *Collections, Infrastructure and Markets Sector Plan*. [Online]. [Accessed: 13 April 2017]. Available from: http://gov.wales/docs/desh/publications/120713wastecimsectorplanen.pdf.
RD10	Welsh Government. 2012. *Construction and Demolition Sector Plan*. [Online]. [Accessed: 13 April 2017]. Available from: http://gov.wales/docs/desh/publications/130301construction-demolition-waste-plan-en.pdf.

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RD11	Welsh Government. 2017. *Draft Industrial and Commercial Sector Plan* (under consultation 2017). [Online]. [Accessed: 26 April 2017]. Available from: http://gov.wales/betaconsultations/environmentandcountryside/industrial-commercial-sector-plan/?lang=en.
RD12	Welsh Assembly Government. 2011. *Municipal Sector Plan Part 1*. [Online]. [Accessed: 13 April 2017]. Available from: http://gov.wales/docs/desh/publications/110310municipalwasteblueprinten.pdf.
RD13	Isle of Anglesey County Council and Gwynedd Council. 2016. *Isle of Anglesey and Gwynedd Joint Local Development Plan (2011-2026), Written Statement, Composite Version Incorporating Matters Arising Changes*. [Online]. [Accessed: 4 April 2017]. Available from: https://www.gwynedd.llyw.cymru/en/Council/Documents---Council/Strategies-and-policies/Environment-and-planning/Planning-policy/Deposit-Plan/Composite-Plan-Final.pdf.
RD14	Regional Waste Plan for North Wales 2009
RD15	Isle of Anglesey County Council. 2014 *Waste Management Strategy 2014/15-2017/18*. [Online]. [Accessed: 4 April 2016]. Available from: http://democracy.anglesey.gov.uk/documents/s4734/Waste%20Management%20Strategy.pdf?LLL=0.
RD16	Isle of Anglesey County Council. 2014. *New Nuclear Build at Wylfa Supplementary Planning Guidance*. [Online]. [Accessed: 4 April 2016]. Available from: http://www.anglesey.gov.uk/Journals/2014/08/11/q/k/h/Wylfa-NNB-SPG-Adopted-July-2014.pdf.
RD17	Contaminated Land: Applications in Real Environments (CL:AIRE). 2011. *The Definition of Waste: Development Industry Code of Practice, Version 2*. London: CL:AIRE.
RD18	Environment Agency and Department for Environment, Food and Rural Affairs, 2004 Contaminated Land Report 11: Model Procedures for the Management of Land Contamination
RD19	Department for Environment, Food and Rural Affairs. 2011. *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites*. London: Department for Environment, Food and Rural Affairs.
RD20	Waste & Resources Action Programme. 2013. *Quality Protocol: Aggregates from inert waste*. Oxon: Waste & Resources Action Programme.
RD21	Environment Agency. 2016. *Guidance: Prevent Japanese knotweed from spreading.* [Online]. [Accessed: 5 April 2017]. Available from:

ID	Reference
	https://www.gov.uk/guidance/prevent-japanese-knotweed-from-spreading.
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RD25	Institute of Civil Engineers. 2008. *Demolition Protocol 2008*. London: Institution of Civil Engineers.
RD26	Environment Agency. 2014. *Regulatory Position Statement 075 for reuse of pavement containing coal tar.* [Online]. [Accessed: 2 June 2017]. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/419686/LIT_10118.pdf.
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RD28	Environment Agency. 2016. *Waste data tables 2016*. [Online]. [Accessed: 28 Sept 2017]. Available from: https://www.gov.uk/government/publications/waste-management-for-england-2016.