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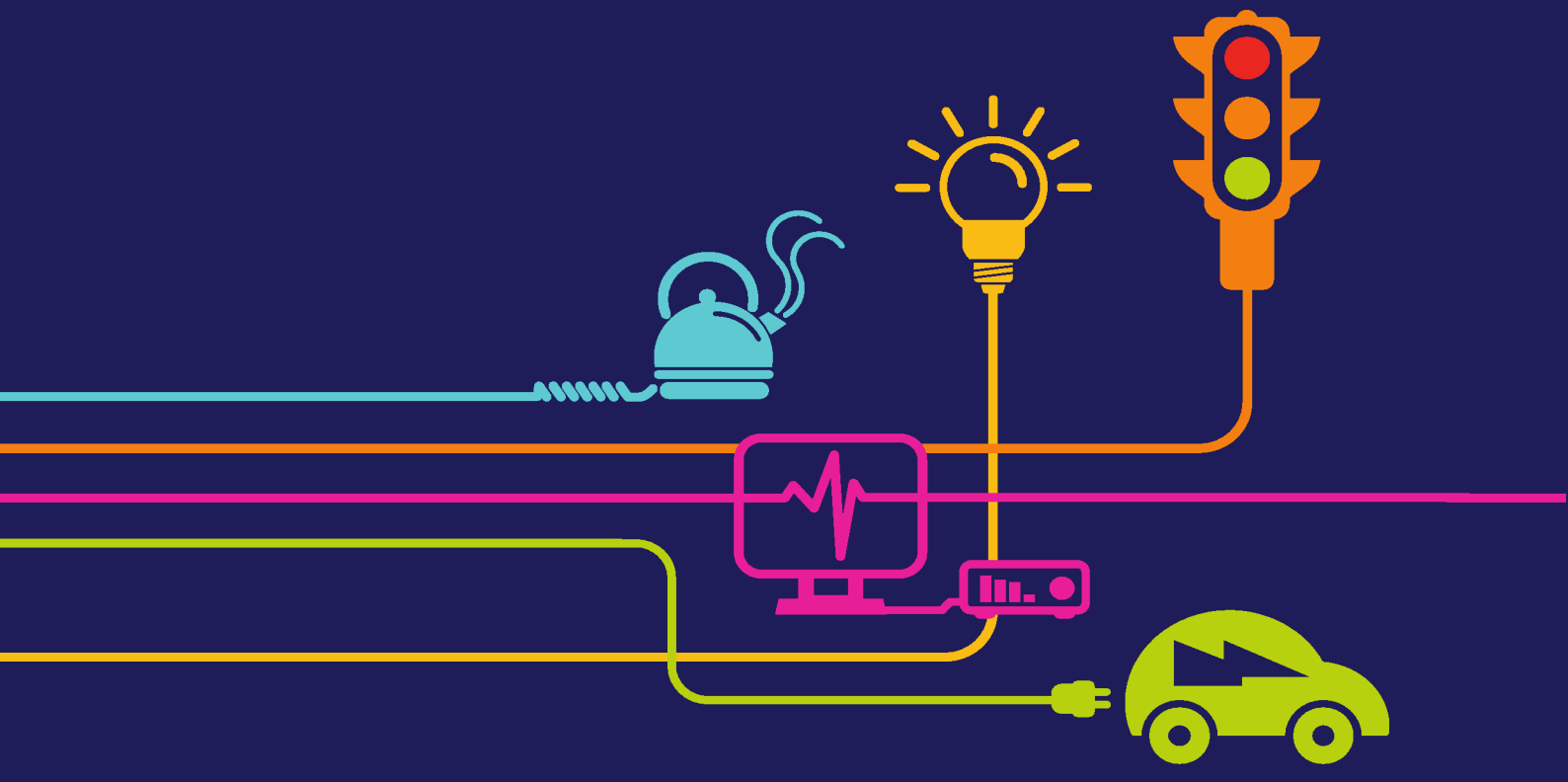
DOCUMENT 7.11

Outline Waste Management Plan

National Grid (North Wales Connection Project)

Regulation 5(2)(q) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



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Outline Waste Management Plan

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EXECUTIVE SUMMARY

Outline Waste Management Plan

The objectives of the Outline Waste Management Plan (OWMP), in accordance with the waste hierarchy are to:

- minimise raw materials consumed and the volume of waste produced;
- re-use any waste produced, where practicable;
- recycle waste, where re-use is not practicable;
- recover waste, where feasible, and:
- dispose of any remaining waste streams in accordance with legislative requirements.

The purpose of this document is to set out the principles and procedures for the management of waste during the construction of the Proposed Development. The standards that will be employed by the contractors to limit effects on the environment are detailed in section 3 of this document. Each of the contractors, for the overhead line construction, substation and tunnelling works will be required to produce a Site Waste Management Plan (SWMP) and where relevant a Materials Management Plan (MMP). An example SWMP is provided in Appendix 1 of this document and an Outline Materials Management Plan (OMMP) is included as **Document 7.12**.

To help ensure the principles, standards and requirements as outlined in section 3 are delivered, the contractor(s) will develop and implement a comprehensive communications and training programme for all relevant staff, to include the following:

- understanding the different sources, types and nature of wastes;
- the legal responsibilities for waste and its impact on the Proposed Development;
- the requirements of the CEMP, the OWMP and SWMP, and the OMMP;
- the roles and responsibilities of waste regulators and licensed carriers; and

- the roles and responsibilities of site personnel in the management of waste.

The OWMP discusses the materials arising from the shaft and tunnel construction works and the overhead line construction works. Estimates of the waste types and volumes in section 4, indicate that between 285,000 and 365,000 tonnes of rock would be excavated for the shafts and tunnel, and almost 550,000 tonnes of aggregate would be required to construct the access tracks for the Proposed Development. The expected construction programme may not enable the excavated material to be utilised for access track construction, therefore the potential end use of these materials has been considered having regard to their anticipated characteristics.

More detail is provided on the sources of materials and waste in section 5, which considers the opportunities for recycling the shaft and tunnel arisings, and potential resources for construction of the access tracks required for the shaft and tunnel works and the overhead line construction. The removal of the access tracks and the scope for recycling the materials within the region are also discussed.

The regional facilities for recycling and disposal, together with available supplies of aggregate are reviewed in section 6. The review concludes that, due to the limited capacity for recycling and disposal on Anglesey, a proportion of the shaft and tunnel arisings would be likely to be taken to facilities in north Wales and possibly north-west England.

The review also concludes that there are insufficient resources of recycled aggregates in the region to supply the requirements for access track construction. There are, however, abundant resources of secondary aggregate in the form of slate waste, which would meet the specification for access track construction.

The properties of slate waste could affect its performance over the operating period and the contractor may therefore decide to use primary aggregates instead. In these circumstances the review concludes that there are adequate resources of such aggregates from various quarries on Anglesey and in north Wales to supply the Proposed Development.

1 Introduction

1.1 GENERAL INTRODUCTION

1.1.1 This Outline Waste Management Plan (OWMP) presents the approach to and application of sustainable waste management procedures for the construction of the Proposed Development.

1.1.2 All the measures detailed in this OWMP are secured by Requirement 6 of the draft DCO (**Document 2.1**).

1.1.3 The contractor will be required to produce a Site Waste Management Plan in line with the principles of this OWMP this is secured by Requirement 7 of the draft DCO (**Document 2.1**).

1.2 THE PROPOSED DEVELOPMENT

1.2.1 The Proposed Development consists of the following components:

- extension to the existing substation at Wylfa;
- Sections of new 400 kV overhead line (OHL) between Wylfa substation and Braint Tunnel Head House (THH) and Cable Sealing End Compound (CSEC) on Anglesey including modifications to parts of the existing 400 kV OHL between Wylfa and Pentir;
- Braint THH and CSEC on Anglesey;
- Tunnel between Braint and Tŷ Fodol THHs;
- Tŷ Fodol THH and CESC in Gwynedd;
- New section of 400 kV OHL between Tŷ Fodol THH and CSEC and Pentir Substation;
- Extension to the existing substation at Pentir; and
- Temporary construction compounds, access tracks, construction working areas, localised widening of the public highway and third party works that are required to construct the infrastructure listed above.

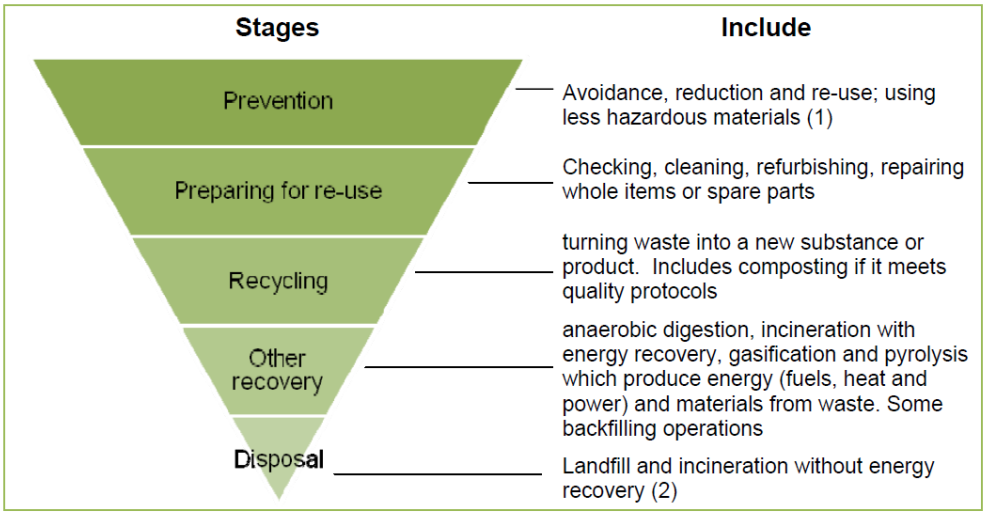
1.3 THE OUTLINE WASTE MANAGEMENT PLAN

1.3.1 In accordance with its published approaches to sustainable design and construction National Grid will to seek to maximise resource efficiency, reduce the amount of waste generated, minimise water consumption and make the most efficient use of energy (Ref 14).

1.3.2 The objectives of the OWMP are, in order of preference and in accordance with the waste hierarchy, shown below, to:

- minimise raw materials consumed and the volume of waste produced;
- re-use any waste produced, where practicable;
- recycle waste, where re-use is not practicable;
- recover waste, where feasible; and
- dispose of any remaining waste streams in accordance with legislative requirements.

Waste Hierarchy Summary (Defra, 2011) (Ref 1)



1.3.3 The purpose of the OWMP is to set out the principles and procedures for the management of waste during the construction of the Proposed Development. It includes a series of principles and standard measures for waste management, in addition to a commitment to the production of Site Waste Management Plans (SWMP), and where appropriate Materials Management Plans (MMP), for each of the principle components (overhead lines, shafts and tunnel, underground cables, substations and THH/CSECs), and their associated works.

1.3.4 SWMPs manage and reduce the amount of waste produced by construction projects through a process of identification of wastes, input to the design process, and the continued measurement and management of wastes to achieve the most sustainable level in the waste hierarchy.

1.3.5 The object of a MMP is to provide the principles of using materials excavated on site as non-waste. The plan must be produced prior to excavation and provide details of materials to be used, including storage, quantities and specifications for placement, together with details of the final destination and use of these materials.

1.3.6 This OWMP includes:

- a review and analysis of national and local planning policy and legislation related to waste (section 2);
- a description of National Grid policy, principles and procedures in relation to waste management (section 3);
- a description of the general types and an indication of likely quantities of waste likely to be generated by the Proposed Development (section 4);
- details of the sources and characteristics of materials and waste, together with opportunities for recycling and re-use (section 5)
- a description of the facilities for aggregate production, recycling and disposal in the region, together with their potential utilisation (section 6);
- an example SWMP (Appendix 1); and

1.4 INVOLVEMENT OF LOCAL AUTHORITIES AND OTHER STAKEHOLDERS

1.4.1 National Grid is committed to engaging with stakeholders, including local authorities and other statutory and non-statutory bodies. As part of this engagement meetings have taken place with a Thematic Group dedicated to Waste and Minerals during the development of the waste strategy. These meetings included representatives of Isle of Anglesey County Council; (IACC), Gwynedd Council, Natural Resources Wales (NRW) and Horizon Nuclear Power (HNP).

1.4.2 Where required, permits from NRW will be sought prior to commencement of the site construction works.

2 UK Policy and Legislation

2.1 NATIONAL PLANNING POLICY

2.1.1 An analysis of the requirements for waste management in the Overarching National Policy Statement (NPS) EN-1 (Ref 2) has been carried out. Details are provided in **Table 2.1**.

Table 2.1 NPS EN-1 Compliance

Paragraph	Requirement	Section of OWMP	Compliance
5.14.6	The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a Site Waste Management Plan (SWMP).	Arrangements for this are set out in sections 4 and 5 of this document; an example (SWMP) is provided in Appendix 1 of this document.	The OWMP describes principles and procedures for managing waste from the Proposed Development and identifies the requirement for the production and contents of the SWMPs and MMPs. The SWMPs and MMPs will set out in detail the arrangements for managing any waste produced for each relevant element of the Proposed Development.
5.14.6	The arrangements described in the Waste 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	This has been considered in section 6 and will be addressed further in the SWMPs.	Details on proposed recovery and disposal systems will be developed further in the SWMP and MMP; this will include an assessment of the impact of the waste arising from the Proposed Development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation.

Table 2.1 NPS EN-1 Compliance			
Paragraph	Requirement	Section of OWMP	Compliance
	development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation.		
5.14.6	The applicant should seek to minimise 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.	This is addressed in section 1 (objectives of the OWMP) and sections 2 and 3 (waste management policy and waste management principles).	Sustainable waste management through the implementation of the waste hierarchy principles, and National Grid's policies and procedures, is described throughout the OWMP, with a commitment to move up the hierarchy, beginning with a reduction in the resources used and subsequent reduction in the waste produced; followed by re-use, recycling and only when all other options have been discounted, disposal to a licensed waste facility.
5.14.7	The IPC should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed	This is described in section 3 of this document.	The OWMP describes procedures for managing hazardous and non-hazardous waste on the construction sites, which include National Grid corporate procedures for waste management. The SWMPs and MMPs would ensure that waste arisings are minimised and do

Table 2.1 NPS EN-1 Compliance			
Paragraph	Requirement	Section of OWMP	Compliance
	development. It should be satisfied that: Any such waste will be properly managed, both on-site and off-site; the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.		not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area.

2.2 LEGISLATION

2.2.1 The main legislative provisions are summarised below.

Revised EU Waste Framework Directive (2008/98/EC)

2.2.2 The revised Waste Framework Directive (2008/98/EC) (WasteFD) (Ref 3) provides the overarching legislative framework for the collection, transport, recovery and disposal of waste, and includes a common definition of waste. The aim of the revised WasteFD is to promote waste prevention, increase recycling and ensure better use of resources, whilst protecting human health and the environment. It encourages the prevention and reduction of harmful waste by requiring Member States to take appropriate measures to encourage:

- the prevention or reduction of waste production and its harmfulness; and
- the recovery of waste by means of recycling, re-use or reclamation or any other process with a view to extracting secondary raw materials, or the use of waste as a source of energy.

2.2.3 The WasteFD's requirements are supplemented by other directives for specific waste streams.

2.2.4 The WasteFD considers some wastes to be hazardous waste. A hazardous waste is defined as a waste that has one or more of the 15 specified hazardous properties listed in Annex III to the WasteFD.

2.2.5 Waste classification is based on:

- Commission Decision 2014/995/EC; and
- Annex III to Directive 2008/98/EC.

2.2.6 Commission Decision 2014/995/EU inserts a new European List of Wastes into Commission Decision 2000/532/EC. The List of Wastes (LoW) serves as a common encoding of waste characteristics in a broad variety of purposes like classification of hazardous wastes. Assignment of waste codes has a major impact on the transport of waste, installation permits (which are usually granted for the processing of specific waste codes), decisions about recyclability of the waste or as a basis for waste statistics.

2.2.7 The LoW will be used to determine the types of waste likely to be produced in the construction (indicative types and quantities are provided in sections 4 and 5 of this OWMP) and the methods of treatment suitable, for example which wastes can be recycled. The LoW has been transposed into UK (Welsh) Law through the Hazardous Waste (Miscellaneous Amendments) (Wales) Regulations 2015 (Ref 4).

Waste (England and Wales) Regulations 2011

2.2.8 The 2011 Waste Regulations (Ref 5) transpose the WasteFD into law and resulted in a number of changes to the management of waste. These changes are as listed in Environment Agency (EA) guidance on the Waste Regulations (Ref 6), which is also applicable to Wales, and include:

- Placing greater emphasis on the waste hierarchy to encourage more waste prevention, re-use and recycling. The hierarchy will have to be applied by businesses transferring waste and by Environmental Permit holders whose operations generate waste. The waste producer has the most important role in this application.
- Some amendment to obligations under duty of care to take account of the waste hierarchy, such as a declaration on transfer notes and hazardous waste consignment notes.
- Introducing a two-tier carrier and broker registration system, including an obligation on waste producers carrying their own (non-construction/demolition) waste to register by end of 2013, and a new concept of 'dealer'.
- Minor amendments to the assessment of hazardous waste and to the consignment note procedures and record keeping requirements.
- Bringing certain categories of radioactive waste under waste control.

2.2.9 The Waste (England and Wales) (Amendments) Regulations 2012 (Ref 7) came into force on 1 October 2012. The amended Regulations relate to the separate collection of waste and amend the Waste (England and Wales) Regulations 2011 by replacing regulation 13 (Duties in relation to collection of waste).

2.2.10 The Site Waste Management Regulations 2008 required any project on a construction site with an estimated cost greater than £300,000 to prepare and update a SWMP. These regulations were revoked on 1 December 2013 when the Environmental Noise, SWMPs and Spreadable Fats etc. (Revocations and Amendments) Regulations 2013, came into force.

2.2.11 National Grid are committed to still work in the spirit of the requirements of the repealed regulations and will continue to produce SWMPs during the design phase for projects above the previous threshold or where it believes that a SWMP will be of benefit to a project.

Environmental Protection Act (EPA) 1990 (Duty of Care)

2.2.12 Section 34 of the EPA 1990 (as amended) (Ref 8) sets out the extent of the 'Duty of Care' owed by any person who imports, produces, carries, keeps, treats or disposes of controlled waste.

2.2.13 As described in the Code of Practice for the Duty of Care for Waste Management, published by the Department for Environment, Food and Rural Affairs (Defra), those subject to the duty of care must take all reasonable steps to achieve the following:

a) to prevent any other person committing the offences of depositing, disposing of or recovering controlled waste without a waste management licence, contrary to the conditions of a licence or in a manner likely to cause environmental pollution or harm to health;

b) to prevent the escape of waste, that is, to contain it;

c) to ensure that, if the waste is transferred, it goes only to an "authorised person" or to a person for "authorised transport purposes"; and

d) when waste is transferred, to make sure that there is also transferred a written description of the waste, a description good enough to enable each person receiving it to avoid committing any of the offences under (a) above and to comply with the duty at (b) above to prevent the escape of waste.

Hazardous Waste (England and Wales) Regulations 2005

2.2.14 Hazardous waste is waste that contains hazardous properties which, if mismanaged, has the potential to cause greater harm to the environment and human health than non-hazardous waste. As a result, strict controls apply from the point of its production, to its movement, management, and recovery or disposal.

2.2.15 The European Hazardous Waste Directive (91/689/EEC) was replaced by the revised European Waste Framework Directive (2008/98/EC). The directive provides that additional record keeping, monitoring and control obligations from the 'cradle to the grave' are required when managing hazardous waste over non-hazardous waste, and that greater attention is required when different categories of hazardous wastes are mixed with each other or with non-hazardous wastes.

2.2.16 In the UK, hazardous wastes are regulated by Hazardous Waste (England and Wales) Regulations 2005 (Ref 9).

2.2.17 The Hazardous Waste Regulations 2005 set out key requirements for the production and handling of hazardous waste. They include specific responsibilities for producers, carriers and receivers (consignees) of hazardous waste, to ensure that the waste causes no harm or damage.

2.2.18 Producers are required to identify, segregate and store hazardous waste safely, ensure that the waste is managed and transported correctly, and retain the necessary records. These procedures form part of the SWMP as discussed in section 3.4.

The Environmental Permitting (England and Wales) Regulations 2016

2.2.19 The Environmental Permitting (England and Wales) Regulations 2016 (Ref 10) consolidate and replace the Environmental Permitting (England and Wales) Regulations 2010. The 2016 Regulations set out an environmental permitting regime that applies to various activities and industries.

2.2.20 The environmental permitting regime requires those carrying out certain types of activity involving emissions to land air or water, or that involve waste. to hold an Environmental Permit. The regulations allow for Standard Rules Permits for specific activities, including waste transfer and treatment. They refer to a fixed set of standard rules that an operator must comply with. There are also Bespoke Permits, which are applied to more complex operations such as waste disposal sites, whereby site specific conditions are applied the regulate and manage the environmental impacts of the operation.

2.3 WASTE STRATEGY FOR WALES

2.3.1 'Towards Zero Waste' 2010 (TZW) (Ref 11) is the current overarching waste strategy document for Wales. TZW provides an overview of waste management in Wales and, together with its associated documents listed below, sets out the requirements within the revised EU Waste Framework Directive, and associated Directives, to adopt waste management plans and waste prevention programmes as they apply in Wales.

2.3.2 The current suite of documents that comprise the formal waste management strategy for Wales are:

- Towards Zero Waste (with revised policies, outcomes sought and targets)
- Waste Strategy Progress Report 2002-2008

- Wise About Waste (in respect of policies, targets and actions described therein that are still on going, with the exception of the policies, targets and actions that have been superseded by those in Towards Zero Waste
- Technical Advice Note 21 (Waste) - for development planning policies associated with waste
- Regional Waste Plans for North, South West and South East Wales
- Waste Sector Plans and Waste Prevention Programme
- Local Development Plans.

2.3.3 Of particular relevance to the Proposed Development is a requirement in the WasteFD for Member States to:

- Prepare for re-use, recycling and other material recovery of non-hazardous construction and demolition waste to be increased to a minimum of 70% by weight in 2020.

2.3.4 This requirement has been taken into account in the principles outlined for the management of waste arisings during the construction phase of the Proposed Development and will be an important objective of the SWMPs and MMPs.

2.4 LOCAL PLANNING POLICY

2.4.1 Local waste policies are currently contained within two documents; the Anglesey and Gwynedd Joint Local Development Plan 2011-2026, adopted on 31st July 2017 (Ref 13) and Topic Paper 12: Waste, February 2015 (Ref 12).

2.4.2 In relation to waste, these documents provide the planning platform to manage the provision of waste facilities in these geographical areas. The Topic Paper explains the background which will help to identify the issues, objectives, options and preferred strategy to inform the preparation of the Joint Local Development Plan (JLDP). The JLDP also should have regard to the Planning Policy Wales Technical Advice Note 21 Waste, 2014 (TAN 21) (Ref 14).

2.4.3 The JLDP identifies Key Issues (KI) and, having regard to the environment, KI 27 identifies the “Need to produce less waste in the first place and facilitate re-using and recycling waste along with disposal of residual waste.” The Plan also identifies Strategic Objectives (SO) and under Theme 5: Protect and enhance the natural and built environment, SO 18 seeks to

"Encourage waste management based on the hierarchy of reduce, re-use, recovery and safe disposal."

2.4.4 The Plan also sets out Strategic Policy PS 21 for Waste Management whereby 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.

2.4.5 The Plan includes Policy GWA 1: Provision of Waste Management and Recycling Infrastructure. This states that the land and property listed in **Table 2.2** below are allocated for the provision of infrastructure that could sustain or add to the range of suitable waste management facilities. In addition to these allocated sites, waste management and recycling infrastructure, excluding landfill and open windrow composting, may be acceptable on existing industrial estates, quarries and brownfield sites.

Table 2.2: Provision of waste management and recycling infrastructure

	Site name	Location
Gwynedd	Land a Cibyn Industrial Estate*	Caernarfon
	Llwyn Isaf Site	Clynnog Fawr
	Coed Bolyn Mawr*	Near Bethel
	Penygroes Industrial Estate*	Penygroes
	Williams and Williams	Pencaenewydd
	H Parry Composting*	Chwilog
	Cookes	Penrhyndeudreath
	Cefn Graianog*	Llanllyfni
	Bryncir Quarry*	Bryncir
	Nanhoron Granite Qaurry*	Nanhoron, Pwllheli
	Part of Peblig	Caernarfon

Table 2.2: Provision of waste management and recycling infrastructure		
	Site name	Location
	Penryn Quarry*	Bethesda
	Griffiths Crossing	Caernarfon
	Cefn Bychan	Blaenau Ffestiniog
	Manod Quarry*	Blaenau Ffestiniog
Anglesey	Penhesgyn	Penmynydd
	Recycling Centre	Gwalchmai
	Mona Industrial Estate	Mona
	Former Anglesey Aluminium Site	Holyhead
	Rhuddlan Bach Quarry*	Brynteg
	Cae'r Glaw Quarry*	Gwalchmai
	Nant Newydd Quarry*	Brynteg
	Bwlch Gwyn Quarry*	Pentre Berw

*Sites suitable for urban quarries as defined by TAN 21: Waste

2.4.6 The sites have been allocated to direct developers to locations that are considered suitable for waste management and recycling facilities. The policy acknowledges that there may be other suitable sites on existing industrial estates, quarries and sites allocated for employment uses where B2 and B8 uses are acceptable in principle.

2.4.7 The Plan refers to TAN 21 as explaining that where there are longer term prospects for a sufficient and economic supply of demolition and construction waste, it may be appropriate to identify a permanent repository of urban quarry for this purpose. The criteria referred to in GWA 1 should be

used to guide the determination of planning applications for storage repositories of construction and demolition waste to avoid unnecessary landfilling of inert waste.

2.4.8 The Plan further includes Policy GWA 2: Waste Management and Allocated Sites. This states that proposals for the management of waste on appropriate sites and allocated sites (in accordance with Policy GWA 1) will be granted in accordance with the waste hierarchy provided there is demonstrable need for the development, that the development is supported by a Waste Planning Assessment (as defined by TAN 21) and that all the following criteria can be met:

1. Allocated sites are either unavailable or unsuitable for the proposed activity;

2. There are no suitable sites within the development boundary;

3. The proposal will have incorporated measures to mitigate impact upon the environment and the health and amenity of the local population;

4. The proposal is of an appropriate scale and nature in terms of the site and its surroundings;

5. The proposal wouldn't have an adverse impact upon the natural environment and heritage value of the area;

6. The development and any associated traffic do not result in an unacceptable disturbance to local communities, through noise smell, vibration, smoke or air pollution.

2.4.9 The Plan considers that currently there is no required need for landfill provision within the Plan area. As part of the process of monitoring the Plan, measures will be taken to review the future landfill requirement. Any proposed landfill that has proven a demonstrable need would have to conform with Policy GWA 2.

2.4.10 The proposals for monitoring the Plan are a means of ensuring that there is sufficient capacity within the local region to treat waste as well as assessing if the current provision is appropriate.

3 National Grid Waste Management Principles and Standards

3.1 ENVIRONMENTAL POLICY

3.1.1 National Grid maintains an Environmental Management System (EMS) to provide a framework within which to manage its effects on the environment and support the delivery of best practice. The EMS is certified to the International Standard ISO 14001:2004. Appointed contractors for the Proposed Development will be contractually obliged to work in accordance with National Grid's EMS, as outlined in the CEMP (**Document 7.4**).

3.1.2 National Grid recognises that investing in, constructing and operating safe and reliable electricity infrastructure uses energy and raw materials and produces waste. As a minimum, National Grid will comply with regulations and is committed to reducing the environmental effects of its operations and to seek out opportunities to improve the environment and integrate sustainability into its decision making.

3.1.3 As part of its Environment Policy (Ref 15), National Grid seeks ways to use resources more efficiently through good design, use of sustainable materials, responsibly refurbishing existing assets, and reducing and recycling waste. National Grid's policy has been prepared in accordance with the waste hierarchy explained in paragraph 1.4.2 above.

3.2 SUSTAINABLE WASTE MANAGEMENT PRINCIPLES

3.2.1 As described in section 2, the Waste Regulations 2011 impose a duty on all persons who produce, keep or manage waste, to apply the waste hierarchy. The principles of the waste hierarchy, also known as 'Sustainable Waste Management Principles', and f how they will be employed in the Proposed Development are described in the following paragraphs.

3.2.2 In particular, these principles will form the basis of SWMPs and, where relevant, MMPs, to be produced for each relevant component of the Proposed Development (overhead lines, shafts and tunnel, underground cables, substations and THH/CSECs).

3.2.3 The sources, types and management of potential waste streams are referred to at a high level in this section; an initial estimate of arisings and

further details of waste management proposals are provided in sections 4 and 5 of this document.

Prevent

3.2.4 By reducing resources used, or increasing the efficiency in the use of resources, the amount of waste produced can be reduced. Excessive resources can be used in construction projects as a result of over-ordering, poor on-site waste segregation, a requirement for a high standard of finishing and a lack of space for storage of unused and waste materials.

3.2.5 The consumption of raw materials and waste will be minimised through sound design and good design procedures and procurement practice.

3.2.6 The SWMPs will consider the application of Waste and Resources Action Programme (WRAP) Technical Solutions for Designing out Waste for Civil Engineering Projects (Ref 16), to reduce materials use as well as waste arisings. Both will be monitored as part of the SWMPs' review process.

Re-use

3.2.7 Opportunities for reusing waste before recycling, recovery or disposal will be considered. For example, one of the waste materials generated by the construction of the Proposed Development would be excavated soils and superficial deposits. Where possible, and appropriate, such materials will be re-used on site.

3.2.8 During the construction phase, working areas would be set out and temporary access tracks constructed. This would involve stripping vegetation and topsoil for some of these areas. Surface vegetation, topsoil and subsoils would be stored separately for re-use and handled in accordance with the Defra guidance 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites'.

3.2.9 Soil management would be carried out in accordance with the Outline Soil Management Plan (**Document 7.10**). A Method Statement for topsoil stripping would be prepared by the contractors to describe the method for removing and reinstating topsoil for works such as the access tracks, construction working areas and pylon foundations.

3.2.10 In the event that soils are encountered during excavation that display contaminant levels that prevent their direct re-use, these would be segregated on site either for on-site treatment (and subsequent re-use) or for disposal off site to an appropriate treatment facility or authorised landfill.

Recycle

3.2.11 If materials could not be appropriately re-used on site, they would be assessed for their potential for recycling.

3.2.12 The principal recyclable waste produced by the Proposed Development would be steel and aluminium from the removal of sections of the existing overhead line. Steel and aluminium are recyclable with a high degree of efficiency.

3.2.13 Where possible, the shaft and tunnel arisings that are of suitable quality would be recycled as aggregate, engineering fill or general fill in the construction industry, according to the demand for the material.

3.2.14 The granular stone access tracks, which would be constructed using secondary or primary aggregates, would be taken to an appropriate facility for recycling, for onward use, for example as secondary aggregate in the construction industry.

3.2.15 Other recyclable, general construction waste may be produced, such as wood, plastics and cardboard packaging. These would be segregated and stored for short periods on site in secure designated areas prior to removal from site to a recycling facility.

Recover

3.2.16 Stripped vegetation and removed trees (with landowner agreement, except where identified for re-use or recycling) and any general food waste produced by the workforce would be taken to a composting, anaerobic digestion or biomass plant.

3.2.17 Opportunities for recovery of any tunnel arisings that are not suitable for recycling, such as land re-instatement schemes, would be sought in the region to minimise disposal.

Disposal

3.2.18 The disposal of waste from the Proposed Development to landfill would be regarded as a last resort. All other options, as described above, would be considered prior to considering disposing of waste to landfill. Where disposal is required, it would be undertaken in a safe and responsible manner ensuring that all waste carriers and management facilities are appropriately licensed, in accordance with the procedures outlined in this document.

3.3 RESOURCE TARGETS

3.3.1 In order to promote these Sustainable Waste Management Principles, National Grid has set specific resource targets as follows:

- 10% reduction in waste production (24 tonnes per £100k spend baseline);
- 98% diversion from landfill;
- 10% increase in secondary/recycled aggregate (22% usage);
- 100% eco-cabin usage.

These are targets that NG seeks to achieve where possible.

3.4 NATIONAL GRID WASTE MANAGEMENT PROCEDURES

Background

3.4.1 National Grid has developed Corporate Procedures for Waste Management as part of its accredited EMS. These documents include mandatory requirements for staff and suppliers.

3.4.2 Requirements that are of relevance to the Proposed Development are detailed in the following paragraphs.

Standard Measures

3.4.3 A set of standard measures to be employed for the management of waste and are listed below; more detailed measures are set out the following sections relating to Duty of Care, Hazardous Waste and the Storage of Waste:

- The consumption of materials and production of waste shall be minimised through good design procedures and procurement practice;
- opportunities for reusing, recycling or recovery of waste will be considered prior to disposal to landfill;
- the treatment of recyclable waste materials from the Proposed Development will be undertaken off-site at an appropriate facility;
- material will be stored for short periods on site in secure designated places in the identified construction working areas until taken away for recycling;

- all waste materials shall be stored securely on site in order to prevent their escape and protect them against vandalism, vermin or outside interference;
- hazardous waste (e.g. paints, solvents, sealants) will be segregated on-site to avoid contaminating other material and waste streams (for further details see Hazardous Waste section below);
- waste management activities on sites operating under an Environmental Permit will be managed by a nominated Technically Competent Manager i.e. the manager will be technically competent to manage the permitted activity, as defined by the Chartered Institution of Wastes Management/Waste Management Industry Training and Advisory Board's (CIWM/WAMITAB) Operator Competence Scheme (Ref 17);
- all waste management contractors carrying waste shall be authorised to do so and all sites that receive the waste shall be authorised to do so;
- a sample of waste management routes will be subject to an annual audit to confirm that waste is being managed correctly;
- management of all waste will be accompanied by the relevant statutory transfer documentation that adequately describes the waste, the documentation will be retained and be readily accessible;
- quantities of waste generated will be recorded and monitored, records will be kept for a minimum of three years, or as prescribed in the construction contract;
- an authorised waste management contractor will deal with the disposal of any fly-tipped materials discovered. Any fly-tipping will be reported as an environmental incident and notified to the local authority and/or NRW to enable them to investigate the incident;
- all employees and contractors involved with the handling and managing of waste will have the relevant training and be assessed as competent and training records retained;
- all employees and contractors will have a Duty of Care when controlling the carriage and disposal of waste to ensure it is handled in a responsible manner;
- all waste containers shall be labelled to indicate the types of waste that may be deposited in them;

- all staff and contractors working on the project shall understand which waste should be deposited where, and that they are not allowed to use the facilities for the disposal of domestic waste. This will be delivered by toolbox talks;
- a SWMP shall be produced for all projects costing over specified thresholds; and
- an MMP will be produced where appropriate.

Duty of Care

3.4.4 All wastes produced by National Grid and its contractors are governed by waste management legislation. The producer of the waste is the holder of the waste generated by an activity.

3.4.5 As outlined in section 2 of this document, Duty of Care is a legal process designed to control the carriage and disposal of waste to ensure it is handled in a responsible manner from “cradle to grave”.

3.4.6 In line with the Duty of Care requirements, waste produced will be:

- transferred only to an Authorised Person accompanied by a Waste Transfer Note or Hazardous Waste/Special Waste Consignment Note; and
- not able to escape from anyone's control on site or in transit.

3.4.7 An Authorised Person is a Registered Waste Carrier, broker and/or the manager of a legitimate waste management facility, e.g. a waste disposal site.

3.4.8 If a third party employed by National Grid or one of its contractors, arranges waste disposal, and is not the waste producer, the Registered Waste Carrier or the manager of a waste disposal site, then that third party shall be a Registered Waste Broker.

3.4.9 Waste shall not be allowed to leave site unless Duty of Care checks are successfully completed.

3.4.10 Where a contractor is employed to undertake work that produces waste, it is the contractor’s responsibility as producer of the waste to carry out the Duty of Care checks outlined above (including Registered Waste Carriers, Registered Waste Brokers, and Environmental Permits/Waste Management Licences for waste disposal sites or proof of exemptions from licensing).

3.4.11 However, National Grid retain a Duty to ensure that waste is managed in a responsible manner; the member of staff employing the contractor shall ensure the contractor has a system of works to ensure that adequate Duty of Care checks are being undertaken and shall carry out periodic checks to ensure the contractor is using only Authorised Persons.

3.4.12 The contractor shall provide evidence of Duty of Care checks that have been undertaken on request.

Non-Hazardous Waste

3.4.13 All non-hazardous waste arising from the work carried out by staff will be accompanied with a Waste Transfer Note when passed to a Registered Waste Carrier for removal from a site.

3.4.14 All Waste Transfer Notes will be signed by a trained site representative. Prior to signing, the trained site representative must check the Waste Transfer Note to ensure the following:

- the date(s) to which the Waste Transfer Note applies, this could be up to one year;
- name and address of the waste producer and the site of waste production;
- the type of waste produced including the quantity and how it is packaged;
- the appropriate European Waste Catalogue (EWC) code for the waste;
- the Standard Industry Code (SIC) of the business;
- the name and address of the person who is receiving the waste and details of the permit or exemption of the person receiving the waste;
- registered Waste Carriers shall be checked using the information held on the NRW's website;
- a final disposal site that is authorised to accept the waste; and
- a declaration that the waste producer has taken all reasonable measures to apply the waste hierarchy when the waste is transferred.

3.4.15 The site representative signing the Waste Transfer Note will ensure all Waste Transfer Notes are placed in the Site Waste Management File and

kept for a minimum period of three years, or as prescribed in the construction contract.

Hazardous Waste

3.4.16 As outlined in section 2, the European List of Waste (LoW) identifies types of hazardous waste. If the waste is not listed, it shall be analysed for hazardous properties prior to disposal to ensure the appropriate method of disposal is arranged.

3.4.17 If a site produces more than 500 kg of hazardous waste in a year, the Site Manager shall ensure the site is registered with NRW.

3.4.18 Hazardous waste will be correctly labelled, shall not be mixed with non-hazardous waste and will be securely contained preferably on hard standing.

3.4.19 A Hazardous Waste/Special Waste Consignment Note shall be completed for every movement of hazardous waste. Hazardous Waste/Special Waste Consignment Notes will be signed on behalf of National Grid by a trained site representative.

3.4.20 If hazardous waste is being returned to a depot for assessment it will be handled and transported appropriately. A waste carrier's licence will also be obtained.

3.4.21 Hazardous Waste Consignment Notes will be placed in the Site Waste Management File and kept for a minimum period of three years, or as prescribed in the construction contract.

3.4.22 All waste containers will be clearly labelled.

3.4.23 Materials potentially generating small volumes of hazardous waste such as oily rags, aerosols and dry cell batteries from mobile operations shall be returned to the nearest waste storage site for assessment to determine if the material is waste. Waste materials shall be assessed for their hazardous nature, potential for re-use, recycling or some other form of recovery prior to disposal.

Storage of Waste

3.4.24 Waste may be stored at construction compounds for a limited amount of time to help to limit the number of vehicle movements to and from site as far as possible to minimise effects on the local roads.

3.4.25 Storage of waste on site shall either be:

- within the scope of, and comply with, the requirements of one or more of the activities specified as exempt from Waste Management Licensing; or
- carried out under an Environmental Permit (in this instance this would be issued by NRW).

3.4.26 Other measures will include the following:

- waste will be stored in secure designated areas, in enclosures or containers to prevent material being dispersed by the wind;
- designated areas will be sited at least 8 m away from drains and watercourses, or 15 m away from navigable watercourses to limit risk of escape and contamination of water courses;
- waste storage containers will be labelled with their waste type and their LoW code;
- waste containers will be covered to prevent dust emissions and potential nuisances;
- the burning of any waste is prohibited;
- liquid wastes will be stored in containers within bunded zones with secondary containment of at least 110% capacity of the largest container or at least 25% of the total tank capacity inside the bunded zone (whichever is the greatest); and,
- incompatible or hazardous wastes will be stored and handled in accordance with the Hazardous Wastes Regulations.

Site Waste Management Plan

3.4.27 SWMPs will be produced for each of the major project components; overhead lines, shafts and tunnels, cables, substations and CSECs.

3.4.28 The SWMPs shall record the following information:

- a description of the construction works (for the project component);
- proposals for managing the waste following the Waste Hierarchy to ensure that waste arisings are minimised, including ‘designing out waste’ and waste prevention measures;
- details of any decisions taken before the SWMP was drafted to minimise the quantity of waste produced on site;

- a description of each type of waste expected to be produced in the course of the project;
- an estimate of the quantity of each waste type that will be produced;
- identification of the waste management action proposed for each waste type, including reusing, recycling, recovery and disposal;
- a detailed action plan for the management of the waste, including roles and responsibilities, data collection and reporting procedures;
- details of any site waste storage facilities including the requirements of Environmental Permits and pollution control measures; and
- a declaration that material will be handled efficiently and waste managed appropriately.

3.4.29 For the Proposed Development, following the estimate of quantities and identification of waste management methods, an analysis of waste management facilities would be carried out, in accordance with NPS EN-1.

3.4.30 The SWMP would be reviewed regularly, (if possible, every month and, as a minimum, every six months) and updated as necessary following these reviews, to give a current picture of how the work is progressing against the waste estimates contained in the plan, this would include recording details of:

- types and quantities of waste produced and a comparison of the estimated quantities of each waste type against the actual quantities of each waste type;
- an explanation of any deviation from the OWMP;
- the identity of the person removing the waste (including waste carrier's registration number);
- all disposal documentation e.g. transfer and consignment notes, marked with the time and date of collection;
- details of the final destination of waste, a description of the waste type and the European Waste Classification (EWC) if appropriate;
- quantitative and qualitative estimate of site waste produced during construction;
- requirements for reporting under the Hazardous Waste Regulations; and

- an estimation of the cost savings that have been achieved by completing and implementing the SWMP.

3.4.31 SWMPs will be prepared in accordance with Requirement 7 of the draft DCO (**Document 2.1**). An example SWMP is provided in Appendix 1 of this document.

Materials Management Plan

3.4.32 The excavation and use of materials on site would come under a Materials Management Plan (MMP), following the principles of the CL:AIRE (Contaminated Land: Applications In Real Environments) protocol and associated Code of Practice (Ref 18). The details for the preparation of an MMP for the development are given in **Document 7.12** as an Outline Materials Management Plan (OMMP).

3.4.33 The OMMP will provide a framework from which future site based MMP's will be developed and used. The object of a MMP is to provide the principles of using site-won materials as non-waste, the plan must be produced prior to excavation and provide the following:

- details of the project and all parties involved with the implementation of the MMP;
- details of materials to be used, including storage, quantities and specifications for placement;
- details of the final destination and use of these materials;
- details of the tracking system for movement of these materials;
- contingency arrangements; and
- a verification plan outlining the process to produce a Verification Report.

3.4.34 For compliance with the requirements of the CL:AIRE Code of Practice, the materials must:

- Not be a risk to human health;
- be suitable for use without further processing (chemically and geotechnically);
- have a certainty of use; and
- be only the quantity that is absolutely necessary.

3.4.35 Site based MMP's would be produced where appropriate for each component of the Proposed Development. The materials would be assessed to fall within one of the following categories:

- Material is capable of being used in another place on the same site without treatment;
- material is capable of being used in another place on the same site following on site ex-situ treatment;
- material is capable of being used on another development site without treatment;
- material is capable of being used on another development following ex-situ treatment on another site (designated as a Hub site);
- material is not capable of being used on site or elsewhere and as such will require recovery or disposal offsite as waste; and
- material is surplus to requirements and as such will require recovery or disposal offsite as waste.

3.4.36 Depending on the above, the MMP would be prepared and submitted for independent review by a Qualified Person (QP). The QP would be registered through CL:AIRE and, if satisfied that the Code of Practice has been followed, would sign off a declaration and submit to NRW.

3.5 COMMUNICATIONS AND TRAINING

3.5.1 In order to ensure the principles, standards and requirements outlined in this document are delivered, the contractor would develop and implement comprehensive communications and training programmes for all relevant staff, to include the following:

- understanding the different sources, types and nature;
- the legal responsibilities for waste and its impact on the Proposed Development;
- the requirements of the WMP, MMP (**Document 7.12**) and CEMP (**Document 7.4**);
- how to conduct basic waste audits to identify, estimate and report quantities of waste;
- how to produce a SWMP;

- the roles and responsibilities of waste regulators and licensed carriers; and
- the roles and responsibilities of site personnel in the management of waste.

3.5.2 All site personnel would be made aware of the principles of sustainable waste management, as outlined in the OWMP, and any component of the Proposed Development specific requirements of SWMPs, of relevance to their work.

4 Waste Types and Volumes

4.1 INTRODUCTION

4.1.1 As outlined in section 3 of this document, detailed information would be recorded in Site Waste Management Plans (SWMPs) on the types and volumes of wastes produced and removed; methods of treatment, recovery or disposal and associated costs.

4.1.2 This section provides an initial estimate of the likely types and volumes of waste that would arise from the construction of the Proposed Development. These will be fully determined during the production of the detailed SWMPs and MMPs.

4.2 WASTE TYPES

4.2.1 Broad descriptions of sources and types of waste that would arise include:

- Construction waste in the form of excavated material from the construction of the tunnel and the associated shafts;
- construction wastes from the construction of the new sections of 400 kV overhead line (OHL), CSECs, THHs and associated infrastructure works;
- metallic wastes arising from removing sections of the existing OHL; and
- 'municipal' type waste arising from construction worker office and welfare facilities.

4.2.2 Typically, waste falls into three main classifications as defined by the Landfill Directive (Ref 18) and European Council Decision (2003/33/EC) for the purposes of management and disposal (Ref 20).

- hazardous waste (covered by Article 1(4) of Council Directive 91/689/EEC of 12 December 1991 on hazardous waste);
- non-hazardous waste (includes municipal type wastes); and
- inert waste.

4.2.3 Hazardous wastes include materials such as asbestos, coal tars, materials containing dangerous or corrosive substances, organic solvents etc.

Product data sheets including detail on any hazardous substances should be made available and used by anyone engaged in the removal and handling of dismantled OHL parts.

4.2.4 Non-hazardous wastes include materials which will biodegrade giving rise to leachates and generation of landfill gas, examples include general municipal wastes, canteen wastes, wood, plastics, fabrics etc.

4.2.5 Inert wastes are defined as materials that do not undergo any significant physical, chemical or biological transformations, they will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which they come into contact in a way likely to give rise to environmental pollution or to harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and, in particular, not endanger the quality of surface water and/or groundwater. Examples include subsoils, clays, stones, concrete, brick, tiles, glass, etc.

4.3 WASTE QUANTITIES

4.3.1 A preliminary estimate of potential waste arisings is provided for the Proposed Development. A more accurate estimate would be calculated by the contractors before (and as appropriate during, and after) commencement of construction of the relevant part of the Proposed Development. The estimate of potential waste arisings would be presented within the SWMPs, which will be verified by the contractor (monthly or at least every six months) during construction of the Proposed Development and updated as necessary.

4.3.2 There are two main methods of tunnelling proposed utilising a tunnel boring machine (TBM) or drill and blast techniques. These involve different tunnel diameters and therefore produce different quantities of arisings. The TBM also requires additional excavation at the base of the launch shaft to enable the TBM to be assembled. These tunnelling methods are discussed further in section 5.

4.3.3 The main categories and quantities of arisings are as follows:

- Shaft and tunnel arisings;
- access track aggregates;
- foundation concrete to be removed from the existing pylon foundations;
- metallic wastes from the existing OHL; and

- material to be excavated for the new pylon foundations.

These estimates are summarised in **Tables 4.1 and 4.2**, together with the anticipated use of the materials.

Table 4.1: Forecast of Likely Waste Types and Arisings – Tunnel & Shafts

Proposed Development	Materials and excavation method	Estimated volume (m^3) unless otherwise stated	Estimated Tonnage	Anticipated use of materials
Braint shaft site preparation	Topsoil removal	15,000	30,000	Re-used on site for re-instatement
	Geogrid or geotextile	61,000m^2	8.5	Recycled as plastic
	Access track and site aggregate	17,000	30,600	Recycled as aggregate
	Access track and site fencing	6,400m	N/A	Wood and metal recycled
Braint shaft excavation	Excavated superficial deposits (glacial till)	2,200	4,400	Used on site for landscaping
	Blasted rock	13,200	34,300	Either used on site for landscaping or recycled as aggregate

Table 4.1: Forecast of Likely Waste Types and Arisings – Tunnel & Shafts				
Proposed Development	Materials and excavation method	Estimated volume (m^3) unless otherwise stated	Estimated Tonnage	Anticipated use of materials
Tŷ Fodol shaft site preparation	Topsoil removal	15,000	30,000	Re-used on site for re-instatement
	Geogrid or geotextile	59,700m^2	8.5	Recycled as plastic
	Access track aggregate	19,000	34,200	Recycled as aggregate
	Fencing	7,400m	N/A	Wood and metal recycled
Tŷ Fodol shaft excavation	Excavated superficial deposits (glacial till)	4,000	8,000	Used on site for landscaping
	Blasted rock	15,250	39,650	Either used on site for landscaping or recycled as aggregate
Tunnel (TBM)	TBM option arisings	76,000	197,600	Recycled as aggregate
	Blasted rock for TBM	5,000	13,000	Recycled as aggregate

Table 4.1: Forecast of Likely Waste Types and Arisings – Tunnel & Shafts				
Proposed Development	Materials and excavation method	Estimated volume (m^3) unless otherwise stated	Estimated Tonnage	Anticipated use of materials
Tunnel (Drill & Blast)	Drill and blast option arisings	112,500	292,500	Either used on site for landscaping or recycled as aggregate

Table 4.2: Forecast of Likely Waste Types and Arisings – Overhead Line Construction				
Proposed Development	Waste Type	Estimated length (km) area (m^2) or volume (m^3)	Estimated tonnage	Anticipated use
New pylons and overhead lines	Topsoil removal	221,200 m^3	376,300 tonnes	Re-used on site for re-instatement
	Access track and working areas aggregate	248,600 m^3	477,500 tonnes	Recycled as aggregate
	Geogrid or geotextile layer	604,700 m^2	82.8 tonnes	Recycled where possible
	Replace existing conductors and earthwire	28.28 km	39 tonnes	Recycled where possible

Table 4.2: Forecast of Likely Waste Types and Arisings – Overhead Line Construction				
Proposed Development	Waste Type	Estimated length (km) area (m^2) or volume (m^3)	Estimated tonnage	Anticipated use
Removal sections of existing OHL and temporary 4ZB OHL	Crane pads topsoil removal	1,350 m^3	2,375 tonnes	Re-used on site for compound and working area re-instatement
	Crane pad and working area aggregate	2,010 m^3	3,860 tonnes	Recycled as aggregate
	Geogrid or geotextile layer	5,555 m^2	0.9 tonnes	Recycled where possible
	Steel pylons	12 No	353 tonnes	Recycled where possible
	Aluminium and steel conductors and earthwire	103.134 km	174.4 tonnes	Recycled where possible
	Foundation concrete (top 1.25 m)	50 m^3	112.1 tonnes	Recycled where possible
	Foundation rebar	Approx 150 to 200 kg in each pylon	2.5 tonnes	Recycled where possible
	Insulator sets	16 No	54 tonnes	Recycled where possible

4.4 OTHER WASTES

General Waste

4.4.1 Waste produced by welfare facilities associated with the construction of the Proposed Development would be classified as municipal waste.

4.4.2 The management of other general wastes likely to be produced during the construction phase is described in section 3 of this document.

4.4.3 **Tables 4.1 and 4.2** summarise the major waste streams and approximate tonnages to be generated by the Proposed Development. Other wastes would also be generated but are either of relatively minor volumes and/or, given their nature, are not possible to quantify with any accuracy prior to the production of the relevant SWMPs.

4.4.4 Precise volumes for other waste types arising from components of the Proposed Development such as vehicle operation, works compounds, site offices and welfare facilities, would be calculated by the contractor and presented within the SWMPs. An indicative, but not exhaustive list of waste types is provided below:

- excess concrete;
- excess cement and grout;
- paper and cardboard packaging;
- plastic;
- timber;
- glass;
- mixed metals;
- mixed packaging;
- paints;
- oils, fuel oils and lubricants (for vehicle operation and maintenance);
- absorbents and filter materials (spill kits);
- biodegradable waste;
- portable toilet waste, and:

- road sweeper waste.

5 Sources of Waste and Opportunities for Recycling and Re-use

5.1 SHAFT AND TUNNEL ARISINGS

5.1.1 As indicated in **Table 4.1**, between 350,000 and 440,000 tonnes of material would be produced from excavating the tunnel. Where practicable, the contractor would re-use as much of the materials generated by the tunnel construction works as possible within the Proposed Development.

5.1.2 There are two methods of tunnelling considered for the Proposed Development, each is described below. There are many sub-methods of tunnelling that can be considered, which would be determined through detailed design and contractor preference:

Method 1: Tunnel Boring Machine (TBM)

5.1.3 A TBM is a mechanised tunnelling method whereby a circular cutting wheel rotates at the front of the machine, cutting the rock and excavating the spoil. This method breaks the rock into spoil in the form of "chippings" small enough to be transported. One method of managing and transporting the spoil is to use bentonite slurry at the tunnel face to extract the spoil and to carry the chippings to the surface. Another method is to use polymers, foaming agents and other additives mixed with water to manage the spoil and extract it from the tunnel face via a screw conveyor, which allows the spoil to be transported via conveyors or muck cars.

5.1.4 Hydraulic rams are used to apply force to the face and allow the excavation to progress. It is typical that a pre-cast segmental lining would be installed by the TBM as the excavation progresses. This lining provides support to the ground and controls groundwater. For this length of tunnel, TBM tunnelling is usually carried out from one shaft and driven in one direction to meet the receiving shaft.

Method 2: Drill and blast tunnelling

5.1.5 Drill and blast tunnelling uses explosives to break the rock, or mechanical means such as roadheaders in weaker ground. Typically, the tunnel cross section would not be circular, but more similar to a “horse-shoe” profile.

Excavators are then used to remove the spoil which is transported out of the shafts. The primary tunnel support can include sprayed concrete, rock bolts and steel ribs. Once the full tunnel length is constructed, the final lining is installed, typically formed of cast in-situ concrete. For this length of tunnel, drill and blast tunnelling is usually carried out from both shafts with the tunnel drives meeting within the tunnel.

Material arisings

5.1.6 The materials arising from these works would include the following:

- surface vegetation;
- top soil, subsoil and superficial deposits (e.g. glacial till) from compound and access road construction works, including the areas of shaft excavation;
- superficial deposits (e.g. glacial till) from the shaft excavations;
- blasted rock arisings from access the shaft excavations; and
- either crushed rock and bentonite slurry arisings from the TBM tunnel excavation or blasted rock arisings from drill and blast tunnel excavations.

5.1.7 The two shaft sites would require the access track and working areas to be stripped of surface vegetation and topsoil, together with any excavation of the superficial glacial till required to achieve the proposed site levels. The access track and working areas would be surfaced with compacted aggregates underlain by Geogrid or Geotextile.

5.1.8 A ground investigation has been undertaken in advance of tunnel construction to characterise the properties of materials that would be excavated. The ground investigation results have been presented as a simplified geological cross section in Figure 11.11 of the Environmental Statement (**Document 5.11.1.11**).

5.1.9 The geological cross section shows the Braint shaft and the north-western section of the tunnel beneath Anglesey would be excavated in Pre-Cambrian metamorphic schists. The central part of the tunnel would be in a varied Carboniferous sedimentary sequence from Anglesey beneath the Menai Strait and onto the mainland. The south-eastern section of the tunnel and the Tŷ Fodol shaft would generally be excavated in Pre-Cambrian Padarn Volcanic Tuffs. There is a complex geological faulted contact between the Carboniferous and Pre-Cambrian rocks, which brings in sections of Ordovician Allt Lwyd Formation of mainly limestone and

siltstone, and the Cambrian Minffordd Formation of mainly limestone and tuff. There are two further suspected geological fault zones where the tunnel crosses beneath the Menai Strait and A487.

5.1.10 The sequence of arisings from Braint shaft to Tŷ Fodol shaft for the TBM tunnelling method, together with their expected approximate quantities, is summarised in **Table 5.1**.

5.1.11 Alternative options for excavating the tunnel from Anglesey to Gwynedd (Scenario 1), and from Gwynedd to Anglesey (Scenario 2), are included as part of the Proposed Development. The sequence of arisings for the direction of driving from Tŷ Fodol shaft to Braint shaft would be the reverse of that summarised in **Table 5.1**.

5.1.12 It is anticipated that the shafts would be excavated by drill and blast techniques and it is expected that the arisings would be in the 5 to 150 mm size range, and generally less than 300 mm in size to facilitate removal from the shafts. The schists are more competent and larger blocks up to 500 mm may be produced from the Braint shaft.

5.1.13 The TBM tunnel arisings are expected to be smaller in size ranging from 5 to 50 mm, and down to silt sized particles. The method of removal varies depending on the selection of construction methods and contractor preference. One method would be to pump the arisings out from the TBM to the surface, suspended in a bentonite slurry. The arisings from a drill and blast tunnel would be in the 5 to 150 mm size range, and generally less than 300 mm in size to facilitate removal from the shafts.

5.1.14 It is expected that following completion of the TBM launch shaft, part of the reception shaft would be excavated during tunnelling, with arisings being generated from the reception shaft at the same time as the production of the tunnel arisings. The sequence of excavation and quantities for the TBM tunnelling method can therefore be determined from the geological cross section as follows:

Table 5.1: Excavation sequence from Braint shaft to Tŷ Fodol shaft (TBM Method)- Scenario 1				
Excavated Material	Excavation Method	Expected Size Range	Estimated volume (m^3)	Estimated tonnage
Superficial deposits	Excavated glacial tills from Braint shaft	Not applicable	2,000	4,000
Schist and mica schist	Blasted rock from Braint shaft	5-150 mm, up to 500 mm size	18,000	46,800
Superficial deposits and weathered Padarn Tuff	Excavated glacial tills and weathered rock from Tŷ Fodol shaft	Not applicable	4,000	8,000
Padarn Volcanic Tuffs	Blasted rock from Tŷ Fodol shaft	5-150 mm, up to 300 mm size	15,000	39,000
Schist and mica schist	TBM	5-50 mm, down to silt size (<0.06mm)	20,000	52,000
Menai Strait Formation and Carboniferous Limestone series	TBM	5-50 mm, down to silt size (<0.06mm)	36,000	93,600
Allt Lwyd and Minffordd Formations (Ordovician and	TBM	5-50 mm, down to silt size	5,000	13,000

Table 5.1: Excavation sequence from Braint shaft to Tŷ Fodol shaft (TBM Method)- Scenario 1				
Excavated Material	Excavation Method	Expected Size Range	Estimated volume (m^3)	Estimated tonnage
Cambrian sedimentary sequence)		(<0.06mm)		
Padarn Volcanic Tuffs	TBM	5-50mm, down to silt size (<0.06mm)	15,000	39,000

5.1.15 The drill and blast method of excavation would be carried out from both shafts simultaneously, with tunnelling commencing from both shafts and driving towards each other (Scenario 3). **Table 5.2** shows the quantities of shaft and tunnel arising for the drill and blast method of excavation.

5.1.16 If this method is used, schist and mica schist would be produced from the Braint shaft and tunnel on Anglesey, followed by Menai Strait Formation and Carboniferous Limestone series. At the same time Padarn Tuffs would be produced from the Tŷ Fodol shaft and tunnel in Gwynedd, followed by Allt Lwyd and Minffordd Formations and finally Menai Strait Formation and Carboniferous Limestone series.

Table 5.2: Excavation sequence (Drill and Blast Method) – Scenario 3				
Excavated Material	Excavation Method	Expected Size Range	Estimated volume (m^3)	Estimated tonnage
Superficial deposits	Excavated glacial tills from Braint shaft	Not applicable	2,000	4,000
Superficial deposits and weathered	Excavated glacial tills	Not	4,000	8,000

Table 5.2: Excavation sequence (Drill and Blast Method) – Scenario 3				
Excavated Material	Excavation Method	Expected Size Range	Estimated volume (m^3)	Estimated tonnage
Padarn Tuff	and weathered rock from Tŷ Fodol shaft	applicable		
Schist and mica schist	Blasted rock from Braint shaft and tunnel	5-150 mm, up to 500 mm size	45,000	117,000
Menai Strait Formation and Carboniferous Limestone series	Blasted rock from tunnel	5-150 mm, up to 300 mm size	51,000	132,600
Allt Lwyd and Minffordd Formations (Ordovician and Cambrian sedimentary sequence)	Blasted rock from tunnel	5-150 mm, up to 300 mm size	8,000	20,800
Padarn Volcanic Tuffs	Blasted rock from Tŷ Fodol shaft and tunnel	5-150 mm, up to 300 mm size	38,000	98,800

5.1.17 It is anticipated that a proportion of the excavated material from both tunnelling methods would be suitable for recycling, provided there is a demand for the material. Its suitability for recycling would depend on the properties of the material and the overall particle size range. Stronger and coarser rock materials would be suitable for aggregate production under the WRAP protocol (Ref 21). Weaker and finer rock materials would be more suitable for recycling as general fill.

5.1.18 The volumes of material would represent a significant proportion of the overall recycled aggregate production in the region. It is likely the material would have to be taken to a facility that is capable of storing it beyond the period of the tunnelling contract, for more gradual release to the market according to demand.

5.1.19 The TBM arisings would be too small for optimal end use as a compacted engineered fill, as standard specifications generally require a larger size range to include particles up to 100 to 125 mm (Ref 21). However, it would be possible for an operator to blend the tunnel materials from the TBM with the coarser shaft arisings at the receiving facility, to increase the size range and thereby improve its engineering characteristics. The drill and blast tunnelling method is expected to produce a coarser spoil overall. The stronger rock arisings would therefore be more suitable for use as an engineered fill.

5.1.20 The TBM arisings would be separated from the bentonite slurry by a series of screening processes. The bentonite slurry would be returned to the TBM for re-use in the tunnelling process. The final condition of the excavated material would depend on the efficiency of these separation processes and it may be possible to reduce the bentonite content to a trace amount (less than 0.5%). The arisings may need to be tested to determine the affect any remaining bentonite would have on its engineering properties to confirm its suitability for potential end uses.

5.1.21 Similarly, if polymers, foaming agents and other additives are used at the tunnel face, the spoil could contain traces of these additives. These would be non-toxic and non-damaging to the environment, however, the spoil would need to be tested for its environmental properties to confirm its suitability for potential end uses.

5.1.22 The complete separation of bentonite from the finer silt sized proportion of the TBM arisings would not be possible. A proportion of the finer element of the TBM arisings would therefore contain a higher proportion of bentonite. Whilst bentonite is essentially an inert material, it is classified as a non-hazardous waste. However, mixing it with other inert materials may enable it to be categorised as inert waste. Bentonite enriched materials are used as low permeability engineering materials to resist water flow. For example, bentonite enriched sand has been used in landfill engineering where there is a shortage of low permeability clay. Opportunities for utilising the finer fraction of the TBM arisings for engineering purposes would therefore be considered as an alternative to disposal to landfill.

5.1.23 Prior to completion of tunnelling and the TBM breaking through into the reception shaft, the bentonite slurry would be recovered from the pipework for re-use. A small quantity of bentonite would remain in the TBM during break through and become mixed with the tunnel spoil. There would only be a few cubic metres of spoil and bentonite produced and this would be removed from the shaft and disposed of as either inert or non-hazardous waste.

5.1.24 Opportunities for using the excavated materials in the region, under the CL:AIRE protocol as discussed in section 3, would be reviewed and considered prior to commencing excavations. Where appropriate, a MMP would be prepared prior to earthworks commencing to demonstrate that the materials are physically and chemically suitable for use, that there is certainty of use, and that materials are being used in necessary quantities. Any of the material that is found to be unsuitable for use, and therefore come within the definition of waste, would largely be expected to be classified as inert waste.

5.1.25 An Outline Materials Management Plan (OMMP) (**Document 7.12**) provides an indication of the scope and content of the detailed MMPs.

5.1.26 Should any arisings display contaminant concentrations that make them unsuitable for re-use, these would be managed in accordance with the standards outlined in section 3 of this OWMP and within the CEMP (**Document 7.4**). This may include remediation to make the materials suitable for re-use, or off-site disposal as waste.

5.1.27 Should any asbestos containing material (ACM) be identified by the pre-construction ground investigation or encountered during construction works, then this would be managed and disposed of in accordance with The Control of Asbestos Regulations, 2012.

5.2 OVERHEAD LINE CONSTRUCTION – TEMPORARY ACCESS TRACKS

Proposed OHL works

5.2.1 The OHL construction would involve the construction of 100 new pylons for Option A or 101 new pylons for Option B. In addition, the construction of the Proposed Development would require two temporary pylons and one pylon, 4ZB001A, which has been considered as part of Pentir Substation extension.

5.2.2 The Proposed Development would also require the removal of 10 existing pylons to facilitate transposition points between sections of new and existing OHL. Two gantries at Wylfa Substation would also be removed and four

new gantries constructed.

5.2.3 Two new Full Line Tension (FLT) gantries are to be installed at each of the Braint and Tŷ Fodol CSECs and at the Pentir Substation. One 4ZB OHL circuit off 4ZB001A would connect to a new gantry at Pentir Substation and quantities for pylon 4ZB001A are included in **Table 5.3** below. All gantries are to be installed either under the substation work or CSEC work.

Access track construction

5.2.4 In order to provide access to this linear construction site, approximately 40 km of temporary stone access tracks would need to be constructed. Approximately 5 km of Interlocking Panels would be used for access to some existing pylons and scaffold locations.

5.2.5 The quantities shown in **Table 5.3** below exclude any work associated with archaeological work, especially strip and map activities. As these archaeological works are located within the proposed soil stripping areas, the soils would be incorporated into the main excavation and reinstatement works. However, there may be archaeological features which require investigation outside the soil strip areas in order to fully expose them. This would involve limited additional soil excavation, which would be reinstated upon completion.

5.2.6 Temporary access tracks would generally be approximately 4.5 m wide with passing places. Working areas for new OHL construction are also required. There would be 57 bellmouths linking the temporary access tracks to the existing surfaced road network. Construction would involve removal of topsoil within the footprint of this infrastructure and the spreading of aggregate over a Geogrid or Geotextile layer to separate the material from the subsoil.

5.2.7 The approximate quantities of materials for construction, together with materials produced by the removal of sections of the existing OHL, have been summarised in **Table 5.3**.

Table 5.3: Forecast of Likely Waste Types and Arisings – Overhead Line Construction

Proposed Development Component	Waste Type	Estimated area, volume, length or number	Estimated Quantity	Anticipated use

Table 5.3: Forecast of Likely Waste Types and Arisings – Overhead Line Construction				
Proposed Development Component	Waste Type	Estimated area, volume, length or number	Estimated Quantity	Anticipated use
Access Track to Working Sites	Topsoil Removal for Access Tracks (Inc. Passing Places)	116,000 m^3	197,500 tonnes	Minimal waste anticipated as aim is to reuse on site for re-instatement
	Topsoil Removal for Bellmouths (Excl. visibility splays)	10,000 m^3	17,000 tonnes	Minimal waste anticipated as aim is to reuse on site for re-instatement
	Topsoil Removal for OHL Compound	17,200 m^3	29,200 tonnes	Minimal waste anticipated as aim is to reuse on site for re-instatement
	Access Track (Inc. Passing Place) Aggregate	135,600 m^3	260,500 tonnes	Recycled as aggregate
	Bellmouth Aggregate	11,700 m^3	22,400 tonnes	Recycled as aggregate
	OHL Compound Aggregate	17,000 m^3	32,600 tonnes	Recycled as aggregate
	Geotextile Layer Access Tracks (Inc. Passing Places)	261,600 m^2	36 tonnes	Recycled where possible

Table 5.3: Forecast of Likely Waste Types and Arisings – Overhead Line Construction				
Proposed Development Component	Waste Type	Estimated area, volume, length or number	Estimated Quantity	Anticipated use
	Geotextile layer (Bellmouth)	18,000 m^2	2.5 tonnes	Recycled where possible
	Geotextile Layer (OHL Compound)	29,000 m^2	4 tonnes	Recycled where possible
New Pylons and Overhead lines (New Build & Temp)	Working Area Top Soil Removal	78,000 m^3	132,600 tonnes	Minimal waste anticipated as aim is to reuse on site for re-instatement
	Working Area Aggregate	78,000 m^3	150,000 tonnes	Recycled as aggregate
	Working Area Geotextile layer	272,000 m^2	37 tonnes	Recycled where possible
	Crane Pad Aggregate	6,300 m^3	12,000 tonnes	Recycled as aggregate
	Crane Pad Geotextile layer	24,100 m^2	3.3 tonnes	Recycled where possible
	Replace Existing Conductor (4 Conductors x 6 Bundles)	0.79km	31 tonnes	Recycled where possible

Table 5.3: Forecast of Likely Waste Types and Arisings – Overhead Line Construction				
Proposed Development Component	Waste Type	Estimated area, volume, length or number	Estimated Quantity	Anticipated use
	Replace Existing Earthwire	9.32km	8 tonnes	Recycled where possible
Removal of Pylons and Overhead Lines - Dismantling	Crane Pad Topsoil Removal	600 m^3	1,100 tonnes	Minimal waste anticipated as aim is to reuse on site for re-instatement
	Crane Pad Aggregate	1,200 m^3	2,300 tonnes	Recycled as aggregate
	Crane Pad Geotextile layer	2,700 m^2	0.4 tonnes	Recycled where possible
	Pylon Steelwork	10	267 tonnes	Recycled where possible
	Conductors (4 Conductors x 6 Bundles)	3.7 km	144 tonnes	Recycled where possible
	Earthwire	3.6 km	3.1 tonnes	Recycled where possible
	Foundation Concrete (approximate top 1.25m of each pylon leg	34 m^3	76.1 tonnes	Approx. 1m of each pylon foundation would be removed below ground

Table 5.3: Forecast of Likely Waste Types and Arisings – Overhead Line Construction				
Proposed Development Component	Waste Type	Estimated area, volume, length or number	Estimated Quantity	Anticipated use
	foundation)			and the remainder left and buried. Material recycled where possible
	Foundation Rebar	(approx 150kg reinforcement each pylon)	2 tonnes	Approx. 1m of each pylon foundation would be removed below ground and the remainder left and buried. Material recycled where possible
	Insulator Sets	15	52 tonnes	Recycled where possible
	Pylon Steelwork	2	86 tonnes	Recycled where possible
	Conductors (2 Conductors x 3 Bundles)	1.5km	25 tonnes	Recycled where possible
	Earthwire	1.5km	1.3 tonnes	Recycled where possible

Table 5.3: Forecast of Likely Waste Types and Arisings – Overhead Line Construction				
Proposed Development Component	Waste Type	Estimated area, volume, length or number	Estimated Quantity	Anticipated use
Removal of Pylons and Overhead Lines - Temporary	Foundation Concrete (approximate top 1.25m of each pylon leg foundation)	16 m^3	36 tonnes	Approx. 1m of each pylon foundation would be removed below ground and the remainder left and buried. Material recycled where possible
	Foundation Rebar	(approx 200 kg reinforcement each pylon)	0.5 tonnes	Approx. 1m of each pylon foundation would be removed below ground and the remainder left and buried. Material recycled where possible
4ZB Overhead Line	Working Area Topsoil Removal	750 m^3	1,275 tonnes	Minimal waste anticipated as aim is to reuse on site for re-instatement
	Working Area	750 m^3	1440	Recycled as

Table 5.3: Forecast of Likely Waste Types and Arisings – Overhead Line Construction				
Proposed Development Component	Waste Type	Estimated area, volume, length or number	Estimated Quantity	Anticipated use
	Aggregate		tonnes	aggregate
	Working Area Geotextile	2620 m^2	0.4 tonnes	Recycled where possible
	Crane Pad Aggregate	60 m^3	120 tonnes	Recycled as aggregate
	Crane Pad Geotextile layer	235 m^2	0.1 tonnes	Recycled where possible
	Conductors – Dismantle (2 Conductors x 3 Bundles)	0.039km	1 tonne	Recycled where possible
	Insulator Sets	1	2 tonnes	Recycled where possible

Note:

- Spacers, dampeners and jumpers are not included in the calculations above (for dismantling of the existing and temporary OHL's).
- Lengths of spans, conductors and earthwires do not take into account sag. These lengths are approximate only.

5.2.8 The potential resources of recycled material suitable for track construction are likely to be limited and insufficient to supply the tonnages required. There is a large resource of secondary aggregate in the form of slate waste deposited historically at various quarries in Gwynedd during the production of roofing slates and related construction materials. Whilst slate waste is hard and durable, the fragments are predominantly platy in shape and

therefore do not compact well into a stable track surface. As a consequence, the surface of the track tends to move about under trafficking and the slate fragments can break up over time.

5.2.9 Placing a harder wearing course over the slate material may mitigate this effect and make it more feasible to use. However, there is a possibility that a contractor would consider that the potential performance and maintenance issues represent too great a risk. In such circumstances, primary aggregates may be used for track construction and there are several quarries in the region that could supply the Proposed Development.

5.3 REMOVAL OF TEMPORARY ACCESS ROADS AND PYLON WORKING AREAS

5.3.1 As shown in **Table 5.3**, approximately 260,500 tonnes of material would be required for access track construction and 22,400 tonnes for bellmouth construction. A further 151,440 tonnes of aggregate would be required for new build, temporary and 4ZB pylon working areas, and 14,420 tonnes for new build, temporary, 4ZB and dismantling crane pads. Additionally, 32,600 tonnes of aggregate would be required for the OHL compounds. The total OHL aggregate requirement is therefore 481,360 tonnes.

5.3.2 There would also be approximately 261,600 m^2 of Geogrid or Geotextile required for the access tracks, 18,000 m^2 for the bellmouths, 29,000 m^2 for the OHL compounds, 274,620 m^2 for the new build, temporary and 4ZB pylon working areas, and 27,035 m^2 for the new build, temporary and 4ZB and dismantling crane pads. The total Geogrid or Geotextile requirement is therefore 610,255 m^2. On completion, the access track would be removed. The compound, crane pads and pylon working areas would also be removed. The Geogrid or Geotextile would be removed and baled for recycling through a suitable facility, where possible. Unsuitable Geotextile would be taken to landfill.

5.3.3 Approximately 197,500 tonnes of topsoil would be removed for access tracks, 17,000 tonnes for the bellmouths and 29,200 tonnes for the OHL compounds. A further 133,875 tonnes of topsoil would be removed for new build, temporary and 4ZB pylon working areas and 1,100 tonnes for dismantling pylon crane pads. The total approximate quantity of soil to be excavated is therefore 378,675 tonnes. However, it is envisaged that this material would be re-instated after construction, thus little or no waste would be anticipated. Any spoil that is unsuitable for re-instatement would be taken to landfill.

5.3.4 The access track material would be recycled to the most beneficial use depending on the material used in construction. If slate materials were

utilised these could be recycled into the same market currently supplied from this resource and it may be that the most effective option would be to return the material to the source for processing into the normal product range.

5.3.5 If another type of harder wearing aggregate is used, depending on its resistance to wear by trafficking, it may be that a large proportion of the material could be recovered for recycling into the aggregate market. However, the volumes of material would represent a significant proportion of the overall aggregate production in the region and it is likely the material would have to be taken to a facility that is capable of storing it for more gradual release to the market according to demand.

5.4 OVERHEAD LINE CONSTRUCTION – PYLON CONSTRUCTION

5.4.1 The development of sections of new OHL between Wylfa Substation and the Braint THH/CSEC site on the Anglesey, would require the construction of 96 new pylons for Option A or 97 new pylons for Option B. In addition, two temporary pylons would also be required to facilitate construction. The new section of OHL from Tŷ Fodol THH/CSEC site in Gwynedd to the Pentir Substation, would involve the construction of a further four new pylons. There would also be four new gantries at the Wylfa Substation and two new FLT gantries at each of the Braint and Tŷ Fodol THH/CSECs and Pentir Substation. All gantries are to be installed either under the substation work or CSEC work.

5.4.2 Material from foundation excavations for the new and temporary pylons are likely to include:

- Surface vegetation;
- topsoil, subsoil and superficial deposits (e.g. glacial clays);
- rock; and
- made ground.

5.4.3 At selected pylon locations, ground investigation would be undertaken in advance of construction to identify material properties of ground to be excavated. Information gained would be used to make initial foundation type selection supported by confirmatory post-excavation testing if necessary. It is anticipated that the excavated material would be suitable for retention on-site for re-use as backfill and reinstatement for the new pylons as well as any removed pylon foundations during the construction phases.

5.4.4 Where appropriate, a MMP would be prepared by the contractor prior to earthworks commencing to demonstrate that the materials are physically and chemically suitable for use, that there was certainty of use, and that materials were being used in necessary quantities.

5.4.5 Where any of this material was found to be unsuitable, and therefore fall within the definition of waste, it would largely be expected to be classified as inert waste.

5.4.6 An OMMP (**Document 7.12**) provides an indication of the scope and content of the MMP.

5.4.7 Should any soil arisings display contaminant concentrations that made them unsuitable for reinstatement or for re-use as excavation backfill, these would be managed in accordance with the standards outlined in section 3 of this OWMP and the CEMP (**Document 7.4**). This may include remediation to make the materials suitable for re-use, or off-site disposal as waste.

5.4.8 Should any asbestos containing material (ACM) be identified by the pre-construction ground investigation or encountered during construction works, then this would be managed and disposed of in accordance with The Control of Asbestos Regulations, 2012.

5.5 REMOVAL OF EXISTING PYLONS AND OVERHEAD LINES

5.5.1 OHL construction would include the removal of 10 existing pylons to facilitate transposition points between sections of new and existing OHL. Temporary pylons would also be required to facilitate construction of the Proposed Development. These temporary pylons would be dismantled for recycling.

5.5.2 At the three transposition points along the route there are a total of 10 steel lattice pylons to be removed. These pylons are 47 to 60 m high and constructed from steel, with a combined weight of 267 tonnes. The temporary pylons have a combined weight of 86 tonnes (of galvanised steel).

5.5.3 Strung between each of the pylons are conductors and an earthwire. On the existing 4ZA route, the conductors that would be removed comprise six sub-bundles of four conductors. Each span (distance between pylons) therefore consists of 24 conductors and one earthwire. The total length of the 4ZA spans from which conductors are to be removed is 3.6 km and approximately 0.087 km of downleads are to be removed from the Wylfa Substation, giving a total along the route of approximately 3.7 km. The total length of conductor to be removed would therefore be 24 times this

distance, i.e. 88.8 km. The earthwire would be removed from a longer section of the OHL route. The total length of the spans from which earthwire is to be removed is therefore 12.92 km (dismantling and existing pylons).

5.5.4 The total length of temporary spans to be removed, if not able to be incorporated in the final OHL is 1.5 km, this figure excludes some of the existing conductor spans which are initially re-used in the temporary OHL before being subsequently dismantled and replaced with new conductor. The conductors comprise three sub-bundles of two conductors, therefore each span consists of six conductors. The total length of conductor to be removed is six times 1.5 km, ie 9 km.

5.5.5 At Pentir, on the existing 4ZB route, the conductors to be removed comprise three sub-bundles of two conductors. This means that each span consists of six conductors. The total length of the 4ZB spans from which conductors are to be removed is 0.039 km. The total length of conductor to be removed would therefore be six times this distance, i.e. 0.234 km. No earthwire is to be removed from the 4ZB route.

5.5.6 The pylons, conductors and earthwire removed during OHL construction would be recycled. There are established recycling facilities for metals outside the region and it is expected that these materials would be transported along the A55 to these facilities.

5.5.7 The conductors are connected to the pylons by insulator string assemblies, which would be removed when the pylons are dismantled. The insulators are made from glass or ceramic material and weigh a total of 55 tonnes. They would be disposed of as inert waste.

5.5.8 Steelwork and concrete, including any reinforcing bar (rebar) present in the foundations of the existing pylons, would be cut-up or dismantled on site and then removed to a facility for recycling. The first 1.5 m of the foundation below the finished level of the ground would be removed from the site. The balance of the foundation deeper than 1.5 m below finished level would remain and be buried.

5.5.9 Approximately 112 tonnes of concrete and 2.5 tonnes of rebar would be excavated from the 10 existing pylon foundations and the temporary pylon foundations identified for dismantling. The concrete removed from the foundations would be crushed and recycled locally on Anglesey or in Gwynedd.

5.6 SUBSTATION CONSTRUCTION

5.6.1 The substation at Wylfa is to be modified, and the substation at Pentir is to be modified and extended to accommodate the additional connection. At Wylfa the modification only requires 25.5 m^3 of sub-base/blinding material and 134 m^3 of concrete to support the additional electrical installations. At Pentir the extension requires 94 m^3 of sub-base/blinding to be laid and 1,248 m^3 of concrete for the extension works. In addition, there would need to be 135 m^3 of aggregate used to form a temporary laydown area for the construction period, which would be removed on completion.

5.6.2 The substation extension and temporary laydown area at Pentir would require small quantities of topsoil to be removed and superficial clays to be excavated. The topsoil and clays from the extension and laydown area would be retained for reinstatement on completion.

5.6.3 The waste arisings from these construction works would be relatively minor in comparison to the main tunnelling works and OHL construction. These would be quantified by the contractors in the SWMPs prior to construction, and any materials arising would be incorporated into the waste management procedures established for the Proposed Development.

6 Regional Facilities for Aggregate Supply, Recycling and Disposal

6.1 INTRODUCTION

6.1.1 The preferred option for the Proposed Development (Scenario 1 – TBM tunnelling from the Braint shaft) would produce approximately 47,300 tonnes of blasted schist and mica schist and 39,650 tonnes of volcanic tuffs from the shafts, together with 197,600 tonnes of arisings from the TBM passing through various strata intersected by the tunnel, giving a total of 284,550 tonnes. If the drill and blast method of tunnelling is used, the shaft and tunnel arisings would be 366,550 tonnes. Details of the strata are presented in section 5 and it is expected that a proportion of these materials would be suitable for recycling as general fill or engineered fill, subject to demand.

6.1.2 There would also be a requirement for almost 550,000 tonnes of aggregate for construction of the access tracks for the Braint and Tŷ Fodol Construction Compounds and for the OHL construction. Should the construction programmes allow for the shaft and tunnel arisings to be used within the Proposed Development, the arisings would be assessed for their suitability for access track construction under the CL:AIRE protocol using a MMP. This is discussed further in section 6.2.

6.1.3 However, the programme for the access track construction is likely to be partly in advance of the tunnel construction and therefore the opportunity for utilising the tunnel arisings may be reduced. The scope for recycling and disposal within Anglesey and on the mainland has therefore been assessed in sections 6.3, 6.4 and 6.5.

6.1.4 A number of the sites identified have been allocated in the Anglesey and Gwynedd JLDP (Ref 13) as part of the provision for waste management and recycling infrastructure that could sustain and add to the range of suitable facilities. In addition to these allocated sites the JLDP states that facilities may also be acceptable on existing industrial estates, quarries and brownfield sites.

6.1.5 The quarries and recycling/disposal facilities on Anglesey and in mainland north Wales have been assessed to determine the capacity for dealing with these materials. The recycling output is limited due to the absence of large construction projects. There is also an abundant supply of slate as a secondary aggregate in mainland north Wales, which competes with

recycled materials in terms of cost and availability, and therefore has the effect of reducing the demand regionally.

6.1.6 The market for recycled material on Anglesey is also currently limited and dominated by the supply of slate waste. Consequently, the scope for selling any recycled material from the Proposed Development may be restricted and would require space for stockpiling for a period beyond the tunnelling contract to enable the material to be released gradually to meet demand.

6.1.7 As the capacity on Anglesey for recycling and disposal is limited, it is expected a proportion of the shaft and tunnel arisings would need to utilise facilities on the mainland. Potential sites along the A55 have therefore been considered.

6.1.8 It is also very unlikely that sufficient recycled aggregate would be available in the region to construct the access tracks and, as such, secondary or primary aggregates would be likely to be required. The aggregate requirements are discussed in section 6.6 and the potential aggregate resources in the region are reviewed in section 6.7.

6.1.9 The assessment does not identify specific destinations for the waste arisings or sources of aggregates for temporary construction works. These would be determined by the contractors in accordance with the contractual requirements and best practices in waste management. The location of the Proposed Development in relation to the road network, together with the location of the main waste management infrastructure and quarry operations, means that much of the associated traffic would gravitate towards and travel along the A55.

6.1.10 Chapter 13, Traffic and Transport Chapter of the ES (**Document 5.13**) and Appendix 13.1, Transport Assessment (**Document 5.13.2.1**) consider the effects of the construction of the Proposed Development on the highway network. This assessment considers the peak of construction activity in terms of vehicle movements relating to all aspects of the construction of the Proposed Development, including movements associated with the excavated material as a result of the tunnel works. Section 9 of Document 5.13 assesses the traffic and transport effects of this peak construction activity on highway links, whilst Document 5.13.2.1 considers effects on junctions in the AM and PM peak hours.

6.2 USE OF TUNNEL SPOIL FOR ACCESS TRACK CONSTRUCTION

6.2.1 Should the tunnel and OHL construction programmes allow a proportion of the arisings to be considered for use in access track construction, the materials would be assessed for their suitability. This would involve

assessing the grading and material properties of the various arisings as they emerge in the sequence indicated on **Tables 5.1 and 5.2**. Any material that is unsuitable for temporary access track construction may still be recycled for other purposes, as discussed in sections 6.3, 6.4 and 6.5.

6.2.2 The important material properties would be the suitability of the particle size range for compaction to form a stable layer, and the hardness of the particles and their resistance to wear and degradation during trafficking. The wearing properties may be less critical if a harder-wearing capping layer was placed over the shaft and tunnel materials to form a wearing course.

6.2.3 If the materials were of marginal suitability, it may be that some processing could be undertaken to improve their quality. For example, it is possible that the smaller sized tunnel arisings would benefit from blending with the coarser shaft arisings. In order to make the shaft arisings suitable for blending, the material could require larger fragments to be broken up or removed. This processing could potentially result in an overall aggregate grading that is more suitable for compaction to produce a stable track surface.

6.2.4 Any post-excavation processing may need to be undertaken at an operator's site with suitable equipment available for processing and blending of the materials, together with space for temporary storage. Alternatively, if the processing required was minimal, it may be possible to carry this out within the Proposed Development construction sites, provided temporary storage space could be made available for this purpose.

6.2.5 Under the CL:AIRE protocol, the transfer and use of shaft and tunnel arisings for temporary access track construction could be undertaken under an MMP. If the material requires processing prior to use, this would be defined within the MMP as taking place at a Hub Site under an Environmental Permit or Mobile Plant Licence.

6.3 WASTE RECYCLING, RECOVERY AND DISPOSAL FACILITIES

6.3.1 The tunnel and OHL construction programmes may not allow the arisings to be considered for use in access track construction. The following sections therefore consider the available facilities for recycling, recovery and disposal, together with potential resources of materials for access track construction.

6.3.2 The current Environmental Permits have been researched on Anglesey and in Gwynedd to assess the regional capacity for managing waste materials. In order to demonstrate that there is sufficient capacity, sites in north Wales have been researched along the route of the A55 as well as sites in north-

west England. The details are presented in Appendix 2, together with plans that show the locations of various Permitted facilities.

6.3.3 Planning consents have also been researched for the majority of sites on Anglesey, and those within reasonable travelling distance in Gwynedd and Conwy, in order to identify any potential constraints on the operation of waste management facilities in addition to the Permit conditions. These include consents for quarry sites where there are no waste management facilities. These are included because of their capacity to supply the Proposed Development, particularly the aggregate requirements for access track construction. The relevant planning permissions are summarised in Appendix 2.

6.3.4 The available facilities on Anglesey are summarised in section 6.4 and **Tables 6.1 and 6.2**, together with facilities in mainland north Wales in Section 6.5 and **Tables 6.3 and 6.4**. Waste disposal sites in north-west England have also been summarised in **Table 6.5**. Site references are provided in these tables to enable the sites to be cross referenced to the details presented in Appendix 2.

6.3.5 Having regard to the varied content of the shaft and tunnel arisings, and the smaller size range of the tunnel materials arising from the TBM method, a proportion of the arisings may not be suitable for recycling. It would therefore be advantageous for the material to be taken to a site with both recycling, recovery and/or disposal options. This would enable any unsuitable materials to be disposed of without further haulage. However, to assess all the options, recycling operations without recovery or disposal facilities have also been considered in this review.

6.3.6 Other potential opportunities have also been considered that may arise in the future, prior to construction commencing. Whilst these are dependent on third parties to facilitate, they have been included for future reference should the opportunities materialise.

6.4 FACILITIES ON ANGLESEY

Rhuddlan Bach and Nant Newydd Quarries

6.4.1 **Table 6.1** indicates that, on Anglesey, only Rhuddlan Bach and Nant Newydd can recycle and dispose of inert waste. As the owners of Rhuddlan Bach were in the process of acquiring Nant Newydd at the time of preparing this OWMP, the sites have been considered as a combined operation.

6.4.2 The current operation at Rhuddlan Bach recycles about 20,000 tonnes of material per annum. At Nant Newydd the recycling operation has been on a

smaller scale. Access to the Nant Newydd operation is controlled by a traffic movement restriction of four vehicle loads delivered per hour (32 loads per day). There are no traffic movement restrictions in relation to Rhuddlan Bach.

Table 6.1: Waste Treatment and Disposal Facilities on Anglesey							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
Disposal WP3132SX (A11)	Rhuddlan Bach Quarry Landfill	C and M Plant Hire Ltd	Disposal (Quarry void)	Inert waste	75,000	16/03/17	Benllech, Anglesey
Disposal RP3337SE (A9)	Nant Newydd Quarry	Owen Jean Tyrer and Gwilym Tyrer	Disposal (Quarry void)	Inert waste	5,000	30/03/07	Benllech, Anglesey
Treatment AB3095CJ (A8)	Nant Newydd Quarry	W J Owen and Son Ltd	Physical Treatment (Quarry location)	Inert waste treatment to produce soil substitute and aggregate	75,000	16/02/16	Benllech, Anglesey
Treatment	Caer Glaw Quarry	Hogan Aggregates	Physical treatment	Use/Treatment of inert waste for land reclamation	74,999	14/02/12	Gwalchmai,

Table 6.1: Waste Treatment and Disposal Facilities on Anglesey							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
DB3735RP (A3)	(Gwalchmai)	Ltd	(Quarry location)	or construction			Anglesey
Treatment FP3498EQ (A18)	Penhesgyn IVC Facility	Anglesey County Council	Biological Treatment	In vessel composting	25,000	28/09/08	Menai Bridge, Anglesey

Table 6.2: Waste Transfer, Treatment and Recycling Facilities on Anglesey

Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
Transfer ZP3695VH (A1)	Refail Newydd	Kevin Humphreys	Fixed collection	Household, commercial and industrial transfer station (including treatment and Asbestos storage)	74,999	22/06/16	Holyhead, Anglesey
Transfer (Recycling) RP3694FK (A2)	Gwalchmai Civic Amenity Site	Isle of Anglesey County Council	Fixed Collection	Household Waste Recycling Centre	20,000	29/04/05	Holyhead, Anglesey
Transfer NB3833AE (A5)	Mona Industrial Estate	Grays Waste Management Ltd	Fixed collection	Household, commercial and industrial transfer station (including treatment)	75,000	13/03/13	Mona, Anglesey

Table 6.2: Waste Transfer, Treatment and Recycling Facilities on Anglesey							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
Transfer DB3830AQ (A7)	Mona Industrial Estate	Grays Waste Management Ltd	Fixed collection	Household waste transfer station (including treatment)	74,999	17/04/14	Mona, Anglesey
Transfer AP3594EC (A6)	Anglesey Ecoparc Mon Ltd Plot 8+	Anglesey Ecoparc Mon Ltd	Fixed Collection	Household, commercial and industrial transfer station (including treatment)	75,000	12/05/10	Mona, Anglesey
Transfer FP3590LV (A10)	Rhuddlan Bach Quarry Landfill	Clive Hurt (Plant Hire) Ltd	Fixed collection (Quarry location)	Household, commercial and industrial waste transfer station	27,000	5/10/12	Benllech, Anglesey

Table 6.2: Waste Transfer, Treatment and Recycling Facilities on Anglesey							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
Transfer GB3338RB (A12)	Anglesey CC Highways Depot	Dawnus Construction Holdings Ltd	Fixed Collection	Inert waste transfer station (including treatment)	74,999	28/06/17	Gaerwen, Anglesey
Transfer EP3994FB (A14)	Green Skips Environmental Ltd	Green Skips Environmental Ltd	Fixed Collection	Household, commercial and industrial transfer station (including treatment)	5000	29/07/98	Gaerwen, Anglesey
Transfer QP3294FQ (A15)	Cymru Lan	Cymru Lan Cyfyngedic	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	69,000	03/02/17	Gaerwen, Anglesey

Table 6.2: Waste Transfer, Treatment and Recycling Facilities on Anglesey							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
Transfer (Recycling) JB3132RC (A20)	Penhesgyn Waste Household Recycling Facility	Isle of Anglesey County Council	Fixed Collection	Household Waste Recycling Centre	19,999	14/09/14	Menai Bridge, Anglesey
Transfer QP3894FF (A21)	Penhesgyn Waste Transfer & Materials Recovery Facility	Isle of Anglesey County Council	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	19/04/06	Llansadwrm, Anglesey
Metal Recycling ZP3094FM	Phoenix Metals and Colin Davies Non Ferrous Metals	Alwyn Davies and Colin Davies	Physical Treatment	Metal Recycling	24,999	30/05/95	Ynys Mon, Anglesey

Table 6.2: Waste Transfer, Treatment and Recycling Facilities on Anglesey							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
(A13)							

6.4.3 The Permitted capacity for receiving material is 75,000 tonnes per annum at Rhuddlan Bach, and 75,000 tonnes at Nant Newydd. This would only allow a proportion of the arisings from the Proposed Development to utilise these two facilities within the programmed period for shaft and tunnel excavation.

6.4.4 There is 500,000 m^3 of landfill void remaining at Rhuddlan Bach and a further 250,000 m^3 at Nant Newydd. Complete extraction of the remaining limestone would create a further 300,000 m^3 of space at Rhuddlan Bach and about 200,000 m^3 at Nant Newydd.

6.4.5 Operations at both sites are small to medium scale and the volume of shaft and tunnel arisings could overwhelm their current recycling operations and available working space. Nevertheless, with suitable forward planning and engagement with the facility operators, the combined sites could be an option on Anglesey for material arising on Anglesey, particularly the tunnel arisings which may include a proportion of material for disposal.

Caer Glaw (Gwalchmai) Quarry

6.4.6 Caer Glaw Quarry (**Table 6.1**) recycles construction waste produced largely from the activities of the operator's own construction business. The process involves treatment of the materials to produce soils substitute and aggregate. The operator does not have a permit for the disposal or recovery of waste. The quarry would therefore be capable of treating the blasted material from the Braint shaft construction on Anglesey, together with tunnel arisings that are suitable for recycling.

6.4.7 The quarry has a capacity under the Environmental Permit to receive 75,000 tonnes of material per annum and could therefore accommodate the Braint shaft arisings, and/or a proportion of the recyclable tunnel arisings, subject to the demand for importing material to the quarry from other sites.

Bwlch Gwyn Quarry

6.4.8 Bwlch Gwyn Quarry obtained planning consent for mineral extraction in 2017, having agreed an alternative access into the quarry to enable operations to re-commence. The quarry has been operational since November 2017 and produced various aggregates. The site has previously been used for recycling and the operator has obtained an Environmental Permit for recycling 75,000 tonnes per annum. The operator hopes to resume recycling operations at the site, this would require a planning application to be submitted and approved. The quarry is located close to the Braint shaft site and therefore could become an option for the Proposed Development in future.

Grays Waste Management, Mona Industrial Estate

6.4.9 This is an operating waste transfer and treatment facility centrally located on Anglesey, on the Mona Industrial Estate (**Table 6.2**). The facility has a permit to receive 75,000 tonnes of household, commercial and industrial waste per annum. There is also a Transfer Station Permit on Plot 6 to allow a further 25,000 tonnes of household, commercial and industrial waste to be received per annum.

6.4.10 There is planning permission and an exemption in place to raise land levels on an adjacent business park development site using recovered aggregates. A planning application has been submitted to allow the importation of inert waste for this purpose. This could therefore become an option for the Proposed Development in future.

6.4.11 The facility therefore has the capability and capacity to handle a wide range of wastes such as canteen wastes, cardboard and paper that might be generated by construction activities, including an established route for recycling plastic waste.

Other Facilities and Options Considered

6.4.12 There are a number of other waste transfer and treatment facilities located on Anglesey, including Refail Newydd, Anglesey Ecoparc, Anglesey County Council Highways Depot, Green Skips Environmental Ltd and Cymru Lan. The permit details of these facilities are also shown in **Table 6.2.**

6.4.13 A household waste and recycling centre is located at Gwalchmai, operated by Anglesey County Council and a metal recycling facility at Ynys Mon.

Proposed Wylfa Newydd Nuclear Station

6.4.14 The possibility of exchanging material with the proposed Wylfa Newydd Power Station has been discussed with Horizon NP. The details are subject to ongoing discussions with Horizon to explore the viability of this option.

Holyhead Port

6.4.15 There are three potential areas of infill at Holyhead Port to enable the area of land available for development of port support facilities to be extended. The infill requirements may be a future option for use of the material from the Proposed Development, assuming the Port's application for infilling is approved.

6.4.16 The main area of infill is likely to be completed by 2020 using dredged material, although this is subject to the suitability of the dredgings. The two

other potential infill areas, of four hectares and two hectares respectively, are likely to remain available during the construction period of the Proposed Development and may have a capacity of the order of 300,000 to 500,000 m^3.

6.4.17 In order for the use of tunnel arisings, potentially containing a trace of bentonite or other additives, to be considered for infilling at the Port, it would be necessary to demonstrate that any turbidity and sediment produced by the material would not adversely affect the marine environment.

6.5 FACILITIES IN MAINLAND NORTH WALES AND NORTH WEST ENGLAND

Llanddulas Landfill (including Llanddulas Quarry Waste Treatment and Llanddulas Composting Facility)

6.5.1 In mainland north Wales the nearest site to the Proposed Development with an existing disposal option is Llanddulas, located adjacent to the A55 at Abergele (**Table 6.3**). Any inert materials imported to the site are currently used for the restoration of a pre-existing valley feature, which is not subject to landfill tax. The remaining capacity for inert materials is estimated as 550,000 m^3. It is understood that capacity for receiving inert materials is expected to be available throughout the construction period until 2030.

6.5.2 An application has been submitted to consolidate all planning permissions relating to the landfill. If approved, this would enable the site to operate until 2055, if required. The operator is also considering potential projects to fill the lagoon area at the front of the site and the former brickworks area with soils to create development platforms. These would require new planning applications and Environmental Permits, or some form of exemption. The proposals would increase the capacity at Llanddulas for suitable inert materials.

6.5.3 The site also has planning consent for a recycling operation in an adjacent closed limestone quarry. This would be a joint venture with Grays Waste, who are currently based on Anglesey. It is understood the facility is expected to be operating before shaft and tunnel construction commences, although the operator considers there is no business case to progress the permit application at this time.

6.5.4 The site also includes a non-hazardous landfill cell. If some of the tunnel arisings material has to be treated as non-hazardous waste, then Llanddulas Landfill would provide an option for disposal of this material. The non-hazardous operation is expected to close in 2025.

Table 6.3: Waste Treatment, Recovery and Disposal Facilities in North Wales							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit tonnes/Year (tonnes total)	Effective Date	Location
Disposal BU0800IZ (C10)	Llanddulas Landfill Site	3C Waste Limited	Disposal (Quarry void)	Inert and non hazardous landfill	600,000	10/06/16	Abergele, Conwy
Dispoal BP3330LS (C11)	Ty Mawr farm Landfill	Griffiths, Griffith Wyn	Disposal (Land raise)	Inert landfill	99,000	29/03/07	Abergele, Conwy
Disposal WP3432SC (G4)	Nant Y Garth Landfill Site	Treborth Leisure Limited	Disposal (Quarry void)	Inert landfill	75,000	08/09/06	Port Dinorwic, Gwynedd
Disposal RP3695VS (C1)	Penmaenmawr Quarry	Hanson Quarry Products Europe Ltd	Disposal (Quarry waste)	Mining and extractive wastes facility	0	01/02/11	Penmaenmawr, Conwy

Table 6.3: Waste Treatment, Recovery and Disposal Facilities in North Wales							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit tonnes/Year (tonnes total)	Effective Date	Location
Disposal YP3091ED (C7)	Raynes Quarry	Cemex UK Minerals Ltd	Disposal (Quarry waste)	Mining and extractive wastes facility	0	15/06/11	Colwyn, Conwy
Disposal FB3497TK (F2)	Fron Haul Quarry	Breedon South Limited	Disposal (Quarry waste)	Mining and extractive waste facility	0	26/07/13	Mold, Flintshire
Disposal XP3695VK (W3)	Borras Quarry	Tarmac Trading Limited	Disposal (Quarry waste)	Mining and extractive waste facility	0	17/11/15	Wrexham
Disposal XP3696EW (G27)	Minffordd Quarry	Tarmac Trading Limited	Disposal (Quarry waste)	Mining and extractive wastes facility	0	17/11/15	Porthmadog

Table 6.3: Waste Treatment, Recovery and Disposal Facilities in North Wales							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit tonnes/Year (tonnes total)	Effective Date	Location
Disposal MB3637AA (G32)	Llechwedd Slate Mines	Greaves Welsh Slate Co Ltd	Disposal (Quarry waste)	Mining and extractive waste facility	0	19/12/12	Blaenau Ffestiniog
Recovery XP3690VJ (G15)	Ty Mawr (East Quarry)	Watkin Jones and Son Ltd	Physical Treatment (Quarry void)	Use/Treatment of inert waste for land reclamation or construction	(49,999)	26/01/12	Talysarn, Gwynedd
Recovery ZP3097ET (C5)	Morfa Uchaf	Alwyn Jones Ltd	Physical Treatment (Land raise)	Use/Treatment of inert waste for land reclamation or construction	(49,999)	24/08/11	Conwy
Recovery EB3635RQ C15)	Foryd harbour	Denbigh County Council	Physical Treatment (Infill)	Use/Treatment of inert waste for land reclamation or	(99,999)	10/04/12	Rhyll, Conwy

Table 6.3: Waste Treatment, Recovery and Disposal Facilities in North Wales							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit tonnes/Year (tonnes total)	Effective Date	Location
				construction			
Recovery FB3897TV (F3)	Meas Mynan Quarry	Breedon Southern Ltd	Physical Treatment (Quarry void)	Use/Treatment of inert waste for land reclamation or construction	(80,000)	26/09/16	Mold, Flintshire
Recovery XP3691EG (W4)	Clays Site	Clays Farm Golf Centre Ltd	Physical Treatment (Land raise)	Use/Treatment of inert waste for land reclamation or construction	(99,999)	05/10/11	Wrexham
Recovery CP3594FE (D4)	Moel Y Faen Quarry	Jones Bros Ruthin (Civ Eng) Ltd	Physical Treatment (Quarry void)	Use/Treatment of inert waste for land reclamation or construction	(360,000)	12/03/12	Llangollen, Denbighshire
Recovery	Isfryn Field	Hywell Glyn	Physical	Use/Treatment of inert waste for land	(49,999)	30/05/15	Corwen,

Table 6.3: Waste Treatment, Recovery and Disposal Facilities in North Wales							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit tonnes/Year (tonnes total)	Effective Date	Location
MP3492EA (D5)		Roberts	Treatment	reclamation or construction			Denbighshire
Treatment B3733RU (F6)	Alltami Soil & Agg Recycling Facility	Brock Plc	Physical Treatment	Use/Treatment of inert waste for land reclamation or construction	75,000	19/06/13	Mold, Flintshire
Treatment JB3237WU (W2)	Ballswood Quarry	DP Williams Holdings Ltd	Physical Treatment	Use/Treatment of inert waste for land reclamation or construction	74,999	05/11/15	Wrexham
Treatment FB3735AT (F4)	Cambrian Concrete	Lloyd Holdings (NW) Ltd	Physical Treatment	Use/Treatment of inert waste for land reclamation or construction	74,999	30/05/12	Rhosemoor, Mold

Table 6.3: Waste Treatment, Recovery and Disposal Facilities in North Wales							
Operation and Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit tonnes/Year (tonnes total)	Effective Date	Location
Treatment DP3494FN (D2)	K M Environmental Ltd	K M Environmental Ltd	Physical Treatment	Use/Treatment of inert waste for land reclamation or construction	75,000	23/08/04	St Asaph, Denbighshire
Treatment NB3634RX (C4)	Caerhurn Farm	Sion Roberts	Biological Treatment	Open windrow composting	4,000	25/09/14	Conwy
Treatment CB3432AA (C9)	Llanddulas Composting Facility	3C Waste Ltd	Biological Treatment	Open windrow composting	20,000	12/09/12	Abergele, Conwy

Table 6.4: Waste Transfer Facilities in North Wales

Operation Permit Number (Site No.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
Transfer NP3494FP (G2)	Llandygai Transfer Station	Watkin Jones & Son Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	11/12/14	Bangor, Gwynedd
Transfer UP3794FZ (C2)	Worldcare Wales Ltd	Worldcare Wales ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	16/02/93	Llandudno Junction, Conwy
Transfer AP3494FF (C3)	Bron Y Nant Waste Transfer and Materials Reclamation Facility	Conwy County Borough Council	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	22,671	07/10/16	Colwyn Bay, Conwy

Table 6.4: Waste Transfer Facilities in North Wales

Operation Permit Number (Site No.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
Transfer EB3931AM (C8)	Llanddulas Quarry waste treatment	FCC Recycling (UK) Ltd	Fixed Collection	Household, commercial and industrial transfer station (including treatment)	110,000	13/06/17	Abergele, Conwy
Transfer LB3593HD (G5)	Penrhyn Quarry	Welsh Slate Ltd (Chris Allwood)	Fixed Collection	Inert waste transfer stations (including treatment)	75,000	06/05/14	Bethesda, Gwynedd
Transfer RP3294FP (G6)	Coed Bolyn Mawr	Robert Davies & Jennifer Ann Davies	Fixed Collection	Inert waste transfer stations (including treatment)	24,999	30/05/12	Caernarfon, Gwynedd

Table 6.4: Waste Transfer Facilities in North Wales							
Operation Permit Number (Site No.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
Transfer LB3933AE (G7)	Thomas Skip and Plant Hire Ltd	Thomas Skip and Plant Hire Ltd	Fixed Collection	Household, commercial and industrial transfer stations	74,999	08/11/12	Caernarfon, Gwynedd
Transfer CB3237AP (G10)	Gwynedd Skip and Plant Hire Ltd	Gwynedd Skip and Plant Hire Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	30/06/17	Caernarfon, Gwynedd
Transfer AB3494CM (G34)	Llechwedd Quarry	Northern Welsh Recycling Ltd	Fixed Collection	Inert waste transfer stations (including treatment)	75,000	26/05/17	Blaenau Ffestiniog

6.5.5 It is possible this landfill cell will close following the opening of the waste to energy plant in Flintshire in 2020, as the non-hazardous waste streams will be diverted to this plant. If the cell is closed, then any non-hazardous material would have to be transported to Permitted facilities along the A55 in north-east Wales or north-west England.

Nant-y-Garth Landfill

6.5.6 Nant-y-Garth Landfill is located close to the Tŷ Fodol Construction Compound and imports inert waste for disposal (**Table 6.3**). The site is almost full and is expected to reach its approved restoration contours prior to its recent planning consent expiring on 31st July 2021. The site would not therefore be available during the construction period.

Penrhyn Quarry

6.5.7 Penrhyn Quarry's core business is the production of roofing slate and slate products, together with secondary aggregate from slate waste. It has a Recycling Permit for inert materials up to 80,000 tonnes per annum, but this has not been activated (**Table 6.4**). The quarry also has a large dormant quarry void, but the operator has not applied for a Disposal Permit.

6.5.8 After Nant y Garth, Penrhyn Quarry is the closest site to the Tŷ Fodol Construction Compound. However, due to the absence of a Disposal Permit and the Recycling Permit not being activated, it is not currently an option for recycling and disposal.

Ty Mawr Farm Landfill

6.5.9 Ty Mawr Farm is a small inert waste landfill site located off the A55, south of Abergele (**Table 6.3**). The site operations involve backfilling a former valley to improve agricultural farmland. Due to the limited size and distant location of the site it is considered unlikely to offer a suitable repository for materials generated during the construction period.

Penmaenmawr Quarry

6.5.10 Penmaenmawr Quarry, located north-east of Bangor, has a large quarry void, but is only permitted to dispose of quarry waste generated on site under a Mining and Extractive Waste Disposal Permit (**Table 6.3**). There are currently no consents for the recycling or disposal of material and therefore it is not currently an option for the Proposed Development.

Llechwedd Quarry (including Llechwedd Slate Mines)

6.5.11 Llechwedd Quarry, located south-east of the Proposed Development near

Blaenau Ffestiniog, has a large resource of slate waste for supply as a secondary aggregate. It produces about 20,000 tonnes per annum but has permission to produce 70,000 tonnes per annum.

6.5.12 The quarry has planning permission and an Environmental Permit for inert waste transfer to handle soils, bricks, blocks, stone and aggregates, including treatment, for 75,000 tonnes of material per annum (**Table 6.4**). The quarry also holds a Waste Carriers Permit.

6.5.13 Llechwedd Quarry only has a Mining and Extractive Waste Disposal Permit for disposal of quarry wastes generated on site and is not therefore currently able to accept third party wastes for disposal (**Table 6.3**).

6.5.14 The distance of the site from the main construction works, together with the relatively poor potential transport routes between the site and the quarry, means it is unlikely to be able to compete with more local operators and facilities.

Caernarfon Brickworks Quarry

6.5.15 Caernarfon Brickworks Quarry has a substantial quarry void in need of stabilisation and restoration. It is therefore a potential option for receiving material arising from the Tŷ Fodol Construction Compound.

6.5.16 There is a current planning consent for the disposal of arisings from the A487 Caernarfon to Bontnewydd Bypass. The Welsh Government has approved the Bypass and it is anticipated that construction will commence in November 2018, with completion expected in Spring 2021. The planning consent for the quarry site requires the development to cease within five years of notification of commencement. Haulage operations involving the import of materials for site restoration are also required to be completed three years after completion of materials haulage in connection with the Bypass construction works. Access to the quarry will be from the Bypass, and this entrance will be closed on completion of the Bypass construction, which is likely to be prior to tunnel construction.

6.5.17 It is estimated that following completion of the Bypass the completion of the quarry sump filling, soiling of the slopes and restoration of the quarry will take 5 to 10 years. This will be subject to the availability of suitable restoration materials and also subject to the quarry planning conditions. In order for the Proposed Development to utilise the Quarry after the Bypass has been completed, an alternative access would be required, together with consent to continue disposal. This would require planning and permit applications to be submitted and approved prior to construction

commencing. It would therefore require some forward planning and preparation to be a viable option.

Other Waste Disposal and Recovery Operations

6.5.18 There are a number of quarries in mainland north Wales, including Raynes Quarry at Colwyn, which have Mining and Extractive Waste Disposal Permits. These permits only allow the disposal of waste materials produced by the quarry operations. The sites are listed in **Table 6.3**.

6.5.19 Other sites offering disposal of waste materials include those operating under a Waste Recovery Permit, whereby the treatment of inert waste is undertaken for land reclamation or construction. These permits operate on the basis of a maximum volume of material which is permitted to be disposed of to achieve a predefined objective. These objectives can include infilling or restoration of quarry workings and land raising operations for reclamation purposes. The life span of a Waste Recovery Permit is therefore of a temporary nature, and operations cease when the defined infill objective has been achieved.

6.5.20 A Waste Recovery Permit is in operation at Ty Mawr East Quarry, located south of the Proposed Development at Talysarn, in Gwynedd (**Table 6.3**). The operator, Watkin Jones and Son Ltd have planning permission to restore a former slate quarry, although the quantity of material is limited by the permit conditions to a maximum of 50,000 tonnes of inert waste in total.

6.5.21 Waste Recovery Permits are in operation at several other sites in mainland north Wales, details of which are given in **Table 6.3**. The quantity of materials involved varies from less than 50,000 tonnes up to 360,000 tonnes in total.

6.5.22 There are therefore opportunities for disposal of materials at such facilities. However, these sites are controlled by their Waste Recovery Permit conditions, and usually have a defined capacity and consequently a limited operational period. The scope for disposal would therefore depend on whether the sites are active at the time of the Proposed Development construction works.

6.5.23 There are a number of waste transfer, recycling and treatment facilities located throughout mainland north Wales. The permit details of a selected number of facilities are shown on **Tables 6.3 and 6.4**. A full list of sites taken from the NRW database is attached as Appendix 2.

6.5.24 There are several disposal sites located in north-west England. The nearest sites in Cheshire are shown in **Table 6.5**. Gowy Landfill is due to close in

November 2022 and would only be available for a limited time during the construction period. Maw Green is due to close in December 2027 and should therefore be available during the construction period.

6.5.25 Winsford Rock Salt Mine is a specialised facility storing hazardous waste underground and would not be suitable for the majority of wastes produced by the Proposed Development. Similarly, Holford Brinefield and Hillyop Farm Brinefield have permits for the disposal of salt and potash processing wastes and would not be suitable for construction wastes.

Table 6.5: Waste Disposal Facilities in England

Operation Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
Disposal BV1844IM (CH2)	Gowy Landfill	3C Waste Limited	Disposal	Inert and Non hazardous Landfill	480,000	09/05/16	Chester, Cheshire
Disposal BS7722ID (CH14)	Maw Green Landfill Site	3C Waste Limited	Disposal	Inert and Non hazardous Landfill	450,000	15/2/17	Crewe, Cheshire
Disposal AP3238GH (CH11)	Winsford Rock Salt Mine Waste Disposal Facility	Veolia ES (UK) Limited	Disposal (Mine void)	Hazardous Waste	99,000	14/11/14	Middlewich, Cheshire

Table 6.5: Waste Disposal Facilities in England							
Operation Permit Number (Site Ref.)	Site Name	Operator	Type	Category	Limit (tonnes/ annum)	Effective Date	Location
Disposal XP3934SL (CH10)	Holford Brinefield Landfill Site	INOVYN Enterprises Ltd	Disposal	Non Hazardous Waste (solid salts and solutions)	220,000	30/11/16	Northwich, Cheshire
Disposal GP3334XL (CH12)	Hilltop Farm Brinefield	British Salt Limited	Disposal	Non Hazardous Waste (waste from potash and rock salt processing)	35,000	30/11/16	Warmingham, Cheshire

6.6 AGGREGATE REQUIREMENTS

Recycled and Secondary Aggregates

6.6.1 The secondary and recycled aggregates market in Gwynedd is dominated by slate waste, primarily supplied by Penrhyn Quarry, which has millions of tonnes of resources available. This is because it is exempt from the aggregate levy and can supply material at commercial advantage to other resources. Due to this commercial advantage, slate waste is also supplied competitively on Anglesey and this has had the effect of supressing the market for recycled aggregates.

6.6.2 The availability of suitable materials for recycling as aggregate is also limited on Anglesey as there are relatively few large-scale construction projects that involve demolition of buildings and structures that could supply such materials. In addition, the tendency is for such materials to be re-used on site. These factors compound the issues arising from the use of slate waste and mean that the availability of recycled aggregates is therefore very limited on Anglesey and in Gwynedd.

Suitability of Slate Waste

6.6.3 Slate waste is widely used in the region as an alternative to primary aggregates. It complies with the specification for materials for access track construction and, having regard to the shortage of other suitable materials, its use would make a positive contribution to National Grid's Sustainability Objectives.

6.6.4 However, the suitability of slate waste for access track construction may be limited by its cleavage fabric, which causes it to be predominantly formed from platy fragments. These tend to lie flat as the material is spread and therefore don't compact well and tend to move around when tracked by vehicles. Repeated tracking also causes the edges of larger material to break up and over time a significant proportion of silty clay materials can build up within the tracks from this abrasion.

6.6.5 It is therefore possible that a contractor would consider that the potential performance and maintenance issues represent too great a risk. In such circumstances, primary aggregates would need to be used for track construction.

Use of Primary Aggregates

6.6.6 Should the use of slate for the access roads prove not to be viable, and primary aggregates are used for the access tracks, there are sufficient

resources in the region to supply the volume of material in the required timescales.

6.7 AVAILABILITY OF AGGREGATE MATERIALS

6.7.1 The available resources for supplying primary and secondary aggregates to the Proposed Development have been assessed to demonstrate the capacity in the region and to identify any potential resources of secondary aggregates in addition to slate waste. This has been carried out alongside the research of Environmental Permits and planning consents discussed in section 6.3. Details of the relevant permits and planning consents are presented in Appendix 2. A summary of the sites that are most likely to be viable options for the Proposed Development is provided in **Table 6.6**.

Rhuddlan Bach Quarry

6.7.2 Rhuddlan Bach Quarry produces limited quantities of recycled aggregates from the segregation of imported inert wastes and skip waste from a variety of local sources. The material is therefore variable, but it finds a niche market where contracts specify the use of recycled material rather the secondary aggregate. The total annual production is around 20,000 tonnes.

6.7.3 The quarry also produces a black limestone aggregate, mainly supplying the local market on Anglesey. Current production is around 50,000 to 75,000 tonnes per annum, with the capacity to increase this to 120,000 tonnes. There are estimated to be 800,000 tonnes of limestone resources remaining within the quarry. The quarry is located close to the central section (Section C) of the Proposed Development as presented in Chapter 3, Description of the Proposed Development of the ES (**Document 5.3**). It is expected that the material would compact well for access track construction and produce a good running surface.

Nant Newydd Quarry

6.7.4 There is a resource of waste limestone in Nant Newydd Quarry, derived from the previous extraction of landscaping, block and walling stone, this may be suitable for screening to extract secondary aggregate. Whilst this provides a potential option, the resource has not been tested and its suitability is unproven at present.

6.7.5 The quarry also has an estimated 500,000 tonnes of black limestone resources remaining, although recent production has been mainly for small quantities of block stone rather than aggregate material. The quarry is located close to Section C of the Proposed Development. It is expected that

the material would compact well for access track construction and produce a good running surface.

Caer Glaw (Gwalchmai) Quarry

6.7.6 Caer Glaw Quarry recycles inert waste and aggregate. There are 150,000 tonnes of recycled materials on site. These are mainly derived from the operator's own construction operation, which include excavated materials and planings from road construction projects. Resources suitable for access track construction may therefore be limited.

6.7.7 The quarry also produces 100,000 tonnes of igneous rock aggregate per annum with the capacity to increase this to 400,000 tonnes per annum. There are 25 to 30 years of reserves available at the current rate of production.

6.7.8 The rock is a good quality igneous rock and its material properties make it suitable for use as road construction. If it is used for access track construction and remains relatively uncontaminated during use, on removal the material could still be regarded as good quality aggregate and suitable for recycling.

Gwyndy Quarry

6.7.9 Gwyndy Quarry produces 350,000 tonnes of igneous rock per annum and has the capacity to increase this to 450,000 tonnes per annum. There are 20 to 30 years of reserves available at the current rate of production. The operator has recently taken possession of an area alongside the Public Quay at Holyhead and is therefore able to import and export up to 500,000 tonnes of aggregate through the Port of Holyhead.

6.7.10 The rock is a good quality igneous rock and its material properties make it suitable for use as road construction. If it is used for access track construction and remains relatively clean, on removal the material could still be regarded as good quality aggregate and suitable for recycling.

6.7.11 The quarry also has 400,000 tonnes of scalpings available in stockpile, which may contain aggregate material suitable for access track production. However, this would require screening to separate it from the sand sized fraction. The operator has recently recovered or manufactured coarse concreting sand from the scalpings, with the coarser material being reprocessed into primary aggregates and drainage material.

Bwllch Gwyn Quarry

6.7.12 Bwllch Gwyn Quarry reopened in November 2017 for primary aggregate

production. Planning consent has been granted for an alternative access to facilitate the extraction and quarry operations are ongoing.

6.7.13 There are 2.7 million tonnes of metamorphic rock (hornblende schist) reserves with planning permission to extract until 2042. The site has been previously used for recycling and the operator is keen to re-establish this on site. An Environmental Permit has been granted for this purpose and a planning application is likely to be submitted in 2018. Bwllch Gwyn therefore could be another potential resource for aggregate and recycled materials in due course.

Penmaenmawr Quarry

6.7.14 Penmaenmawr Quarry, located close to the A55 at Penmaenmawr, produces 200,000 tonnes of igneous rock aggregate per annum and is capable of producing and processing up to 900,000 tonnes. The rock is a high quality granite and its material properties make it suitable for use as roadstone and railway ballast. If it is used for access track construction and remains relatively clean, on removal the material could still be regarded as high-quality aggregate and suitable for recycling.

6.7.15 The quarry has reduced production recently, which has been limited to working existing stockpiles. However, production could be resumed in the future and the resource is therefore likely to be available as an option for the Proposed Development.

Raynes Quarry

6.7.16 Raynes Quarry produces limestone aggregate suitable for concrete production and roadstone. Current production is around 600,000 tonnes per annum and there are reserves available up to around 2030. The quarry has a marine loading facility utilising a travelling conveyor which can load 4,000 tonne ships in a few hours. It is also located adjacent to the A55 for road haulage. It is expected that the material would compact well in access tracks and produce a good running surface.

Trefor Quarry

6.7.17 Trefor Quarry, located on the Lleyn Peninsula, has previously been used for the production of granite setts used in road construction. There are waste heaps of coarse granite debris located on a hillside below the quarry. These heaps have been used previously to supply a road construction contract, however, the planning consent has expired and a further application would be required to be submitted and approved to allow their use for the Proposed Development.

6.7.18 The material is a very strong, un-weathered granite and the large size range would require crushing for use as access tracks. However, the high quality of the material suggests it is more suitable for use as a primary aggregate in concrete and road surfacing materials. If it is used for access track construction and remains relatively clean, on removal the material could still be regarded as high-quality aggregate and suitable for recycling.

6.7.19 Access to the heaps is through a village and up a steep track. Whilst the access route has been used before, care would again be needed to manage vehicle movements.

6.7.20 This could be achieved by extraction over a longer period of time with haulage by an operator to an established crushing plant and stockpile located on Anglesey, ready for delivery to the access tracks over a shorter timescale. However, the construction programme may not allow sufficient time for this option to be viable.

Proposed Wylfa Newydd Power Station

6.7.21 The possibility of exchanging material with the proposed Wylfa Newydd Power Station has been discussed with Horizon NP. The details are subject to ongoing discussions with Horizon to explore the viability of this option.

Summary

6.7.22 The above potential resources are summarised in **Table 6.6** below. The table indicates the primary and secondary aggregate resources in the region around the Proposed Development, and where recycled materials are produced.

Table 6.6: Primary, secondary and recycled aggregate resources

Site (Site Ref.)	Primary mineral/aggregate extraction	Secondary aggregate resources	Recycled material resources
Rhuddlan Bach and Nant Newydd Quarries (AQ3 and AQ4)	Limestone extraction	Potential resource of worked limestone debris and fines, quantity unknown	Inert material recycling undertaken, limited tonnage

Table 6.6: Primary, secondary and recycled aggregate resources			
Site (Site Ref.)	Primary mineral/aggregate extraction	Secondary aggregate resources	Recycled material resources
Caer Glaw (Gwalchmai) Quarry (AQ1)	Igneous rock extraction	None	Inert material recycling undertaken
Gwyndy Quarry (AQ2)	Igneous rock extraction	Potential resource of quarry scalpings with fines, estimated 400,000 tonnes, quality uncertain	Not permitted
Bwllch Gwyn Quarry (AQ5)	Dormant, further extraction proposed	None	Not permitted, but in future business plan
Penmaenmawr Quarry (CQ1)	Igneous rock extraction	None	Not permitted
Raynes Quarry (CQ2)	Limestone extraction	None	Not permitted
Penrhyn Quarry (GQ1)	Slate and slate products	Slate waste processed to secondary aggregate (exempt from aggregate levy)	Permitted, but not activated
Trefor Quarry (No current planning consent for waste heap	Granite extraction for dimension stone and curling stones	Granite waste heaps previously used for secondary aggregate (possibly exempt from aggregate levy)	Not permitted

Table 6.6: Primary, secondary and recycled aggregate resources			
Site (Site Ref.)	Primary mineral/aggregate extraction	Secondary aggregate resources	Recycled material resources
extraction)			

6.8 REMOVAL OF ACCESS TRACKS

6.8.1 The access tracks would be removed on completion of construction. The access track materials would be recycled utilising the same facilities as described in sections 6.3, 6.4 and 6.5 above. The quality of the excavated material and its suitability for recycling would partly depend on the quality of the material utilised for access track construction and how this performs during the construction works.

6.8.2 As the regional demand for recycled materials is limited, it is likely the excavated track material would need to be stored for gradual release into the market over a period of time. A recycling operation with sufficient storage space would therefore be required, or several operations with smaller storage capacity, to accommodate the removal of the tracks.

6.8.3 The capacity for storage of materials at recycling facilities in the region is limited. However, where operators anticipate commercial opportunities arising in the future, they are likely to increase capacity to take advantage of these opportunities. There have already been a number of changes to capacity in the region during this assessment, and it is anticipated there would be further changes in capacity in the years prior to and during construction in response to the potential increase in demand.

6.8.4 The scope for reducing the materials arising from the tunnelling works is limited, however, it is likely the aggregate requirements for the OHL works would be regarded as a significant factor in assessing the contractual costs of constructing the OHL. Contractors are therefore likely to assess the scope for phased construction, and the re-use of materials between phases, to reduce costs and thereby provide a competitive advantage at tender stage. This process could contribute to reducing the quantity of aggregate requiring recycling, and potentially reduce the storage requirements. However, as this is not guaranteed, the assessment work undertaken for the

DCO application has considered a worst case scenario in relation to aggregate requirements.

6.9 SUMMARY OF THE FACILITIES AND RESOURCES

6.9.1 The currently permitted capacity for taking material arisings from the shaft and tunnel excavation is limited on Anglesey. If the tunnel is driven by TBM from the Braint shaft on Anglesey (Scenario 1 and the preferred option) then a proportion of the arisings would have to be taken to facilities in mainland north Wales. The nearest facility that is likely to have the capacity is at Llanddulas Landfill located adjacent to the A55, although there are other facilities further along this route in north-east Wales and north-west England.

6.9.2 If the tunnel is driven by TBM from the Tŷ Fodol shaft (Scenario 2), then it is likely the shaft and tunnel material would follow the same route along the A55 to Llanddulas and beyond. The arisings from Braint shaft on Anglesey could then be accommodated by the facilities on Anglesey.

6.9.3 If the tunnel is driven by drill and blast methods (Scenario 3) then excavated materials would arise from both shafts and a proportion of the arisings on Anglesey would have to be taken to facilities in mainland north Wales.

6.9.4 The availability of recycled aggregates in the region is limited and could not supply the access track construction requirements. There is an abundant supply of secondary aggregates in the form of slate waste and this material would meet the specification for the access tracks. However, the slate waste does not compact readily due to its platy structure and it may be that the contractor decides to utilise primary aggregates for the access tracks.

6.9.5 There is an adequate supply of primary aggregates from a number of quarries on Anglesey and in mainland north Wales. The contractor(s) could therefore procure material from one or more locations, having regard to their geographic location in relation to the linear extent of the Proposed Development.

6.9.6 There have already been a number of changes to capacity in the region during the development of this OWMP. Furthermore, there is increasing awareness amongst operators of the opportunities that could emerge from the Wylfa Newydd Power Station and the Proposed Development. It is therefore anticipated there would be further changes in capacity in the years prior to and during construction in response to the potential increase in demand.

7 References

REF 1
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69404/pb1352 9-wastehierarchy- summary.pdf

REF 2 DECC, Overarching National Policy Statement for Energy (EN-1), 2011

REF 3 Directive 2008/98/EC on waste 'The Waste Framework Directive'

REF 4 The Hazardous Waste (Miscellaneous Amendments) (Wales) Regulations 2015

REF 5 The Waste (England and Wales) Regulations 2011

REF 6 The Waste Regulations (web page: https://www.gov.uk/managing-your-waste-an-overview)

REF 7 The Waste Regulations (England and Wales) (Amendments) 2012

REF 8 Environmental Protection Act 1990

REF 9 Hazardous Waste (England and Wales) Regulations 2005

REF 10 The Environmental Permitting (England and Wales) Regulations 2016

REF 11 Towards Zero Waste – One Wales: One Planet wales.gov.uk/docs/desh/publications/100621wastetowardszeroen.pdf

REF 12 Anglesey and Gwynedd Joint Local Development Topic Paper 12 Waste, February 2015

REF13 Anglesey and Gwynedd Joint Local Development Plan 2011 – 2026 Written Statement, 31 July 2017

REF 14 Planning Policy Wales Technical Advice Note 21 Waste (TAN 21), Welsh Government 2014

REF 15 National Grid, Environmental Policy

REF 16 WRAP, Designing Out Waste: A Design Team Guide for Civil engineering, Part 2: Technical Solutions

REF 17 CIWM/WAMITAB, Operator Competence Scheme, Version 6. January 2014

REF 18 The Definition of Waste: Development industry Code of Practice – Version 2, March 2011

REF 19 Council Directive 1999/31/EC of 26 April 1999 on the Landfill of waste – 'The Landfill Directive'

REF 20 Council Decision of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC (2003/33/EC)

REF 21 WRAP, Aggregates from inert waste: Quality Protocol, October 2013

REF 22 Manual of Contract Documents for Highway Works, Volume 1: Specification for Highway Works, Series 600 Earthworks, Highways Agency, February 2016

Appendix 1: Example Site Waste Management Plan

Responsibility

Name of Client	
Name of Principal Contractor	
Name of Person Who Drafted Plan	
Notes/Amendments	

Construction Project

Location (Address, postcode if appropriate)	
Estimated Project Cost	
Notes/Amendments	

Materials Resource Efficiency

Describe here any methods adopted during the conception, design and specification phase to reduce the amount of waste arising.

Method	Resource Saving (quantify if possible)

Waste Management

Declaration

The client and principal contractor will take all reasonable steps to ensure that:

a) All waste from the site is dealt with in accordance with the waste duty of care in section 34 of the Environmental Protection Act 1990 and the Environmental Protection (Duty of Care) Regulations 1991; and

b) Materials will be handled efficiently and waste managed appropriately.

Signatures:

Representing Client	Representing Principal Contractor

Waste Data

Waste Type	Quantity (Tonnes)							
	Re-use on site	Re-use off site	Recycling on site	Recycling off site	Other form of recovery on site	Other form of recovery off site	Sent to landfill	Other Disposal
Estimated arisings								
Inert								

Non - hazardous								
Hazardous								

Totals	0	0	0	0	0	0	0	0
Actual arisings								
Inert								
Non-hazardous								
Hazardous								
Total	0	0	0	0	0	0	0	0
Difference Between Estimated and Actual	0	0	0	0	0	0	0	0

Figure in RED indicates actual waste disposed was higher than estimate

Figure in BLUE indicates actual waste disposed was lower than estimate

Appendix 2: Environmental Permits and Planning Consents

INTRODUCTION

A review of facilities permitted by Natural Resource Wales (NRW) to transfer, treat and dispose of waste materials has been undertaken (Ref 10). The review is based on the project area encompassing Anglesey and the north Wales mainland, together with the adjacent part of north-west England. The review is based on the NRW website map of permitted sites followed up by requests to NRW for details of individual permitted sites.

The review covers those sites having a Waste Permit and includes the following types of facility:

- Landfill Sites;
- Mining and Extractive Waste Facilities (quarries).
- Waste Recovery Sites;
- Waste Treatment Stations*;
- Waste Transfer Stations;
- Waste Recycling Centres;

**Waste treatment includes biological, composting, physical treatment and waste recovery.*

The review has incorporated a detailed search of the above facilities within an area encompassing the whole of Anglesey, extending east along the A55 corridor towards Abergele and south towards Barmouth (Figure 1).

Given the relatively few disposal facilities within the detailed search area, the review of landfill sites, mining and extractive waste facilities, and waste recovery operations was extended as a secondary search area along the A55 corridor to the east, to include the area around Chester and south towards Wrexham, where there are a greater number of permitted sites (Figure 1). The sites have been allocated a reference to enable them to be cross referenced with the Outline Waste Management Plan (OWMP) (**Document 7.11)**.

NRW have provided permit details for sites for which they currently have records. For older facilities, this information is generally no longer available. The site review has been undertaken using a combination of Google Earth and internet search (for the identification of operational and closed/restored sites), liaison with NRW and the local authority. Follow up telephone calls and site visits have been undertaken to further assess the status of various sites.

Details of all the registered Environmental Permits are summarised in **Table 1**, including those sites which appear to have closed or ceased to operate, and their locations are shown on Figure 2. The table also includes for a number of waste disposal sites located in north-west England, these sites are a greater distance from the Proposed Development, but are included on the basis that they offer the next nearest potentially available sites to those located in Wales and would be accessed via the strategic road network (A55). The waste sites which are still active have been presented in **Table 2**, where further details from the permits are provided. The locations of each Welsh facility recorded as being active, having regard to the general type of permit, are shown on Figures 3 to 5.

WASTE PERMITS

The type of permit held by the operator dictates to what extent waste materials can be handled on site. Permits are divided between those operating under Standard Rules and those working to Bespoke Permits.

A Standard Rules Permit conforms to a set list of conditions, which include, for example distance from a watercourse or a designated European Site or Site of Special Scientific Interest. They are available for a wide range of waste activities including screening and treatment of waste, the use of wastes in construction, reclamation and improvement of land. These permits are cheaper and easier to operate but are also more restrictive on the types of waste and conditions of use.

A Bespoke Permit allows greater flexibility in the operations carried out or in the range of waste activities but needs to be accompanied by more detailed risk assessment and method statements. They are more expensive to operate but do allow a greater flexibility for change and/or variation during the lifetime of operation. Permitted facilities can be divided broadly into three categories; those transferring waste, those treating, recovering or recycling wastes and those disposing of waste.

Disposal (Figure 3)

Permits for disposal of wastes tend to be bespoke rather than following a standard rules format and as such are less restrictive in the volume of materials handled on a daily or annual basis. Waste disposal would usually be by landfill either within a former quarry, excavation or as a land raise operation.

Landfill sites are for the disposal of inert, non-hazardous or hazardous wastes as classified by the European Waste Directive. The disposal of liquid wastes in any form is prohibited. All wastes are subject to landfill tax, currently levied at £84.40 per tonne standard rate (hazardous and non-hazardous wastes) and £2.65 per tonne lower rate (inert wastes). Landfill sites would come under a Bespoke Environmental Permit and as such meet with various operator competency requirements, management systems, an environmental risk assessment and specific site design to avoid and control emissions.

Mining and Extractive Waste Facility Permits are granted for quarry operations. However, these are restricted to the formation of waste heaps as a byproduct of the mineral extraction process. The conditions of such permit do not allow for the import of external waste materials into the site.

Permits for the use of inert waste for reclamation, restoration or improvement of land previously subject to industrial or man-made development exist for a number of sites. These permits are for the recovery rather than the disposal of waste and as such will need to meet with the definition of recovery in accordance to current guidance. Changes to Standard Rules Permits for waste recovery came into effect on 1st August 2017 and a number of popular existing permit types including SR2010 No.7, 8, 9 and 10 have now been withdrawn and replaced with SR2017 No.1, which has a maximum waste cap of 60,000m3. Sites working under an existing Waste Recovery Permit will have to re-apply for the new permit type, with possibly more restrictive working conditions.

Permit exemptions exist for low risk waste handling operations that do not require a full Environmental Permit and in the past these were an easier way of disposing of selected amounts of excavated or waste materials. However, new regulations which came into force in 2010, placed greater restrictions on their use, in particular the amount of materials that can be handled as part of this process. A previous limit of up to 50,000 tonnes of waste used for restoration and construction was reduced to a maximum of 5,000 tonnes of imported material. Notwithstanding the above, waste

exemptions are still used and are popular for a number of smaller operations carried out in the north Wales area.

Waste Treatment (Figure 4)

Waste treatment involves the sorting, separation, screening, shredding and crushing of materials, it is generally restricted to non-hazardous wastes, but can be permitted to include asbestos. These permits are often operated under Standard Rules, although with consequent limitations on waste import. The forms of treatment afforded by these permits will depend on the waste streams involved.

Example permits include Household and Commercial, Industrial Waste Transfer Stations with Treatment, or for a quarry, an Inert and Excavation Waste Transfer Station with Treatment. The permit allows for separation, screening and crushing of waste into different components for disposal or recovery. Waste imports under Standard Rules are limited to 75,000 tonnes per annum (an average of 300 tonnes per day) but with treatment limited to no more than 50 tonnes per day.

Specific waste treatment permits are available solely for producing aggregates or construction materials, examples include those for mobile plant for temporary sites and for fixed plant within a quarry. Permitted activities include sorting, separation, screening, crushing and blending of waste for recovery as a soil, a soil substitute or aggregate.

Other treatment permits include for biological treatment involving composting biodegradable wastes, either as in-vessel or as open windrows.

Waste Transfer and Recycling (Figure 5)

The transfer of waste involves the collection and bulking of waste with sorting or separation for onward disposal or recycling. A number of these facilities also undertake treatment in addition to transfer. Depending on the type of permit, there is a limitation on the amount of waste imported to site, usually a maximum of 75,000 tonnes per annum.

Recycling Permits are typified by Non-Hazardous Household Waste Amenity sites where materials are sorted and separated then bulked for disposal or recycling elsewhere. More specific recycling permits are also available for metals, wood and fabrics.

PLANNING CONSENTS

Planning consents have been researched for most of the Environmental Permits within Anglesey, Gwynedd and Conwy to provide further details of

what has been consented in planning terms, together with any restrictions on their operation due to planning conditions. The planning consents and a summary of the more important planning conditions have been presented in **Table 3**. The table includes mineral extraction sites as potential suppliers of recycled materials, secondary aggregates and primary aggregates for the Proposed Development. The sites have been allocated a reference to enable them to be cross referenced with Tables 1 and 2 of Appendix 2, and Figures 1 to 6.

The planning conditions place some limitations on tonnage production or waste throughputs, traffic movements, noise levels and blast vibration levels. There are also various conditions regarding the waste handling and management that could constrain the operation of the sites. However, the majority of the planning conditions correspond to the Environmental Permit conditions.

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Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire										
County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
A1	ZP3695VH(V002)	Holyhead, Anglesey	Transfer Station	Active	Refail Newydd	Kevin Humphreys	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	74,999	22/06/2016
A2	RP3694FK	Holyhead, Anglesey	Recycling	Active	Gwalchmai Civic Amenity Site	Isle of Anglesey County Council	Fixed Collection	Household Waste Recycling Centre	20,000	29/04/2005
A3	DB3735RP	Gwalchmai, Anglesey	Treatment	Active	Caer Glaw Quarry (Gwalchmai)	Hogan Aggregates Ltd	Physical Treatment	Treatment of waste to produce soil and aggregate	74,999	27/07/2017
A4	FB3630AY	Llanbeulan, Anglesey	Transfer Station	Closed	Ty Mawr	IG Hughes and JG Hughes	Fixed Collection and Biological Treatment	Inert waste transfer station (including treatment), Open windrow composting	4,999	19/06/2012
A5	NB3833AE/T001	Mona, Anglesey	Transfer Station	Active	Mona Industrial Estate, Plot 6	Grays Waste Management Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	25,000	13/03/2013
A6	AP3594EC/V002	Mona Anglesey	Transfer Station	Active	Anglesey Ecoparc Mon Ltd Plot 8+	Anglesey Ecoparc Mon Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	12/05/2010
A7	DB3830AQ/V003	Mona, Anglesey	Transfer Station	Active	Mona Industrial Estate	Grays Waste Management Ltd	Fixed Collection	Household waste transfer stations (including treatment)	74,999	17/04/2014
A8	AB3095CJ	Benllech, Anglesey	Treatment	Active	Nant Newydd Quarry	W J Owen and Son Ltd	Physical Treatment	Inert waste treatment to produce soil and aggregate	75,000	16/02/2016
A9	RP3337SE	Benllech,	Landfill	Active	Nant Newydd Quarry	Owen JT and Owen	Disposal	Inert Landfill Site	5,000	30/03/2007

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire

County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
		Anglesey				GT				
A10	FP3590LV/V002	Benllech, Anglesey	Transfer Station	Active	Rhuddlan Bach Quarry Landfill	Clive Hurt (Plant Hire) Ltd	Fixed Collection and Disposal Infrastructure	Household, commercial and industrial transfer station	27,000	05/10/2012
A11	WP3132SX	Benllech, Anglesey	Landfill	Active	Rhuddlan Bach Quarry Landfill	C and M Plant Hire Ltd	Disposal	Inert Landfill Site	75,000	16/03/2007
A12	GB3338RB(T002)	Gaerwen, Anglesey	Transfer Station	Active	Anglesey CC Highways Depot	Dawnus Construction Holdings Ltd	Fixed Collection	Inert waste transfer station (including treatment)	74,999	28/06/2017
A13	ZP3094FM	Ynys Mon, Anglesey	Recycling	Active	Phoenix metals and Colin Davies Non Ferrous Metals	Alwyn Davies and Colin Davies	Physical Treatment	Metal Recycling Site	24,999	30/05/1995
A14	EP3994FB	Gaerwen, Anglesey	Transfer Station	Active	Green Skips Environmental Ltd	Green Skips Environmental Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	0	29/07/1998
A15	QP3294FQ(V003)	Gaerwn, Anglesey	Transfer Station	Active	Cymru Lan	Cymru Lan Cyfyngedic	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	69,000	03/02/2017
A16	BB3932AL	Menai Bridge, Anglesey	Treatment	Closed	Cae Uchaf Farm	Glyngwyn Foulkes	Physical Treatment	Treatment of inert waste for land reclamation or construction	35,000	02/12/2011
A17	KP3994FG	Menai Bridge, Anglesey	Landfill	Closed	Penhesgyn Gors Landfill (Area 3)	Cyngor Sir Ynys Mon	Disposal	Non Hazardous Landfill Site	0	23/11/1993
A18	FP3498EQ	Menai Bridge,	Treatment	Active	Penhesgyn IVC	Anglesey County	Biological	In Vessel Composting	25,000	28/09/2008

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire										
County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
		Anglesey			Facility	Council	Treatment			
A19	CP3694FW	Menai Bridge, Anglesey	Landfill	Closed	Penhesgyn Gors Landfill (Area 2)	Cyngor Sir Ynys Mon	Disposal	Hazardous Landfill Site	0	10/04/1995
A20	JB3132RC	Menai Bridge, Anglesey	Recycling	Active	Penhesgyn Waste Householed Recycling Facility	Isle of Anglesey County Council	Fixed Collection	Household Waste Recycling Centre	19,999	14/09/2014
A21	QP3894FF	Llansadwrm, Anglesey	Transfer Station	Active	Penhesgyn Waste Transfer & Materials Recovery Facility	Isle of Anglesey County Council	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	19/04/2006
G1	JP3794FS	Bangor, Gwynedd	Transfer Station	Closed?	SP Power Systems	SP Power Systems Ltd	Fixed Collection	Hazardous waste transfer station (including treatment)	5,000	27/03/2006
G2	NP3494FP	Bangor, Gwynedd	Transfer Station	Closed?	Llandygai Transfer Station	Watkin Jones and Son Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	0	01/04/1997
G3	QP3794FT	Bangor, Gwynedd	Recycling	Active	Llandygai Civic Amenity Site	Gwynedd Council	Fixed Collection	Household Waste Recycling Centre	2,200	18/08/2006
G4	WP3432SC	Portdinorwic, Gwynedd	Landfill	Active	Nant Y Garth Landfill Site	Treborth Leisure Limited	Disposal	Inert Landfill Site	75,000	08/09/2006
G5	LB3593HD	Bethesda, Gwynedd	Transfer Station	Not Yet Active	Penrhyn Quarry	Welsh Slate Ltd (Chris Allwood)	Fixed Collection	Inert waste transfer stations (including treatment)	0	06/05/2014
G6	RP3294FP/V002	Caernarfon, Gwynedd	Transfer Station	Active	Coed Bolyn Mawr	Robert Davies & Jennifer Ann Davies	Fixed Collection	Inert and excavation waste transfer station (including treatment)	24,999	30/05/2012

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire										
County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
G7	LB3933AE	Caernarfon, Gwynedd	Transfer Station	Active	Thomas Skip and Plant Hire Ltd	Thomas Skip and Plant Hire Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	74,999	08/11/2012
G8	XP3094FS	Caernarfon, Gwynedd	Landfill	Closed	Pontrug Landfill	Watkin Jones & Son Ltd	Disposal	Inert Landfill Site	0	25/02/1993
G9	QP3994FZ	Caernarfon, Gwynedd	Transfer Station	Active	Caergylchu Waste Management Facility	Gwynedd Council	Physical Treatment	I&C MRF, household, commercial and industrial transfer stations; Household Waste Recycling Centre	40,000	03/03/2017
G10	CB3237APV002	Caernarfon, Gwynedd	Transfer Station	Active	Gwynedd Skip and Plant Hire Ltd	Gwynedd Skip and Plant Hire Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	30/06/2017
G11	KP3094FZ(V003)	Penygroes, Gwynedd	Landfill	Closed	Cilgwyn Landfill Site	Gwynedd Council	Disposal	Non Hazardous Landfill Site	0	25/05/2016
G12	HP3494FA	Caernarfon, Gwynedd	Landfill	Closed	Plas Gwernoer	Robin Jones & Sons Ltd	Disposal	Inert Landfill Site	0	28/04/1994
G13	FP3494FV	Penygroes, Gwynedd	Landfill	Closed	Ty Mawr East Quarry Landfill	Watkin Jones & Son Ltd	Disposal	Non Hazardous Landfill Site	0	23/08/1994
G14	XP3690VJ	Talysarn, Gwynedd	Treatment	Active	Ty Mawr (East Quarry)	Watkin Jones and Son Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	49,999	26/01/2012
G15	MP3494FQ	Caernarfon, Gwynedd	Transfer Station	Closed	Llwyn Isaf Landfill and Transfer Station	Gwynedd Council	Non Hazardous		40,000	

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire										
County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
G16	KB3438AN	Caenarflon, Gwynedd	Treatment	Active	Llwyn Isaf AD Plant	Biogen Gwyriad Ltd	Biological Treatment	Anearobic Digestion	11,500	04/07/2013
G17	VP3494FK	Pwllheli, Gwynedd	Transfer Station	Active	Melin Plas Du	M O Jones	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	24,999	10/10/2000
G18	PP3092FN	Pwllheli, Gwynedd	Recycling	Active	S & R Metals	Rosalind Jones	Physical Treatment	Metal Recycling Site	2,500	02/04/2007
G19	NB3793HS	Pwllheli, Gwynedd	Transfer Station	Active	Bryn Williams Ltd	Fixed Collection	Fixed Collection	Inert waste transfer station (including treatment)	75,000	17/11/2014
G20	AP3594FZ	Pwllheli, Gwynedd	Transfer Station	Active	Glan Y Don Depot	Gwynedd Council	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	4,999	02/11/2001
G21	RP3494FM	Pwlheli, Gwynedd	Transfer Station	Active	Gwrtaith Gwynedd	Harri Morrus Parry	Fixed Collection: Biological Treatment, Windrow Composting	Inert waste transfer station (including treatment), windrow composting	24,999	26/05/2004
G22	PP3594FM	Garndolbenmaen, Gwynedd	Recycling	Active	Rhwngyddwyryd Civic Amenity Site	Gwynedd Council	Fixed Collection	Household Waste Recycling Centre	5,000	15/12/1994
G23	VB3893HC	Porthmadog, Gwynedd	Transfer Station	Active	Gelert House MRF	Maybrook Investments Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	0	17/12/2014
G24	VP3194FS	Porthmadog,	Transfer Station	Closed?	Porthmadog Skip	J Gaffey, P Gaffey	Fixed	Household,	5,000	12/01/2001

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire										
County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
		Gwynedd			Hire		Collection	commercial and industrial transfer stations (including treatment)		
G25	AB3494FG	Penrhndeudraeth, Gwynedd	Transfer Station	Active	Ty'n Coed	Gwynedd Environmental Waste Services Ltd	Fixed Collection	Household, commercial and industrial transfer station	20,000	31/05/2017
G26	XP3696EW/V003	Porthmadog	Quarry	Active	Minffordd Quarry	Tarmac Trading Limited	Disposal	Mining and extractive waste facility	0	17/11/2015
G27	ZP3798VA	Penrhndeudraeth	Transfer Station	Active	Grays Penrhndeudraeth Works	Grays Waste Management Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	12/05/2016
G28	PP3294FJ	Harlech, Gwynedd	Recycling	Active	Ffridd Rasus Landfill (Area 2) & Civic Amenity Site	Gwynedd Council	Non Hazardous	Household Waste Recycling, Non Hazardous Landfill Site	4,999	26/05/2017
G29	YB3897TF(V002)	Harlech, Gwynedd	Transfer Station	Active	Ffridd Rasus Landfill Site	Gwynedd Council	Non Hazardous	Household, commercial and industrial transfer station	75,000	19/03/2015
G30	BP3398EW	Harlech, Gwynedd	Treatment	Active	Ffridd Rasus IVC Site	Gwynedd Council	Biological Treatment	In Vessel Composting	24,999	02/03/2008
G31	MB3637AA	Blaeneau ffestiniog, Gwynedd	Quarry	Active	Llechwedd Slate Mines	Greaves Welsh Slate Co Ltd	Disposal	Mining and extractive waste facility	0	19/12/2012
G32	EB3836AC	Blaeneau ffestiniog, Gwynedd	Recycling	Active	Recycling Centre at Blaeneau ffestiniog	Gwynedd Council	Fixed Collection	Household Waste Recycling Centre	74,999	14/02/2012

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire										
County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
G33	AB3494CM	Blaeneau ffestiniog, Gwynedd	Transfer Station	Active	Llechwedd Quarry	Northern Welsh Recycling Ltd	Fixed Collection	Inert waste transfer stations (including treatment)	75,000	26/05/2017
G34	RB3197TN	Ganllwyd, Gwynedd	Treatment	Closed	Events Parking Area	Natural Resources Wales	Physical Treatment	Treatment of inert waste for land reclamation or construction	13,870	18/11/2013
G35	LB3730RJ	Dolgellau, Gwynedd	Transfer Station	Active	Coed Ffridd Arw	Gwynedd Council	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	9,000	18/12/2012
G36	YP3794EV	Dolgellau, Gwynedd	Recycling	Active	Gwynedd Council	Gwynedd Council	Fixed Collection	Household Waste Recycling Centre	4,999	26/05/2011
C1	RP3695VS	Penmaenmawr, Conwy	Quarry	Active	Penmaenmawr Quarry	Hanson Quarry Products Europe Ltd	Disposal	Mining and extractive waste facility	0	01/02/2011
C2	UP3794FZ	Llandudno Junction, Conwy	Transfer Station	Active	Worldcare Wales Ltd	Worldcare Wales ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	0	16/02/1993
C3	AP3494FF	Colwyn Bay, Conwy	Transfer Station	Active	Bron Y Nant Waste Transfer and Materials Reclamation Facility	Conwy County Borough Council	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	22,671	07/10/2016
C4	NB3634RX	Conwy	Treatment	Active	Caerhurn Farm	Sion Roberts	Biological Treatment	Open Windrow Composting	4,000	25/09/2014
C5	ZP3097ET	Conwy	Treatment	Active	Morfa Uchaf	Alwyn Jones Ltd	Physical Treatment	Treatment of inert waste for land reclamation or	49,999	24/08/2011

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire

County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
								construction		
C6	SP3594FG	Llanwrst, Conwy	Transfer Station	Active	Plas Y Dre, Llanwrst	Conwy County Borough Council	Fixed Collection	Household, commercial and industrial transfer stations	0	01/04/1991
C7	YP3091ED	Colwyn, Conwy	Quarry	Active	Raynes Quarry	Cemex UK Minerals Ltd	Disposal	Mining and extractive waste facility	0	15/06/2011
C8	EB3931AM	Abergele, Conwy	Transfer Station	Not yet Active	Llanddulas Quarry Waste Treatment	FCC Recycling (UK) Ltd	Fixed Collection	Household, commercial and industrial transfer station (including treatment)	110,000	13/06/2017
C9	CB3432AA/V002	Abergele, Conwy	Treatment	Active	Llanddulas Composting Facility	3 C Waste Ltd	Biological Treatment	Open Windrow Composting	20,000	01/07/2015
C10	BU0800IZ/V011	Abergele, Conwy	Landfill	Active	Llanddulas Landfill Site	3C Waste Limited	Disposal	Installation	600,000	10/06/2016
C11	BP3330LS	Abergele, Conwy	Landfill	Active	Ty Mawr Farm Landfill	Griffiths, Griffith Wyn	Disposal	Inert Landfill Site	99,000	29/03/2007
C12	HP3591EZ	Abergele, Conwy	Treatment	Active	Gofer Bulking Station	Conwy County Borough Council	Physical Treatment	Inert and construction waste material recycling facility	24,999	14/05/2011
C13	JP3894FM	Abergele, Conwy	Transfer Station	Active	Thorncliffe Building Supplies Ltd	Thorncliffe Building Supplies Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	74,999	14/02/2006
C14	MB3097TG	Abergele, Conwy	Recycling	Active	Abergele Civic Amenity Site	Bryson Recycling Ltd	Fixed Collection	Household Waste Recycling Centre	25,000	31/03/2016
C15	EB3635RQ	Rhyll, Conwy	Treatment	Active	Foryd harbour	Denbigh County	Physical	Treatment of inert waste for land	99,999	10/04/2012

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire										
County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
						Council	Treatment	reclamation or construction		
D1	TF3994FV	Dyserth, Denbighshire	Landfill	Closed	Marian Ffrith Landfill	Jones J, G & E	Disposal	Non Hazardous Landfill Site	0	04/10/2002
D2	DP3494FN	St Asaph, Denbighshire	Treatment	Active	K M Environmental Ltd	K M Environmental Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	75,000	23/08/2004
D3	SP3094FY	Clwyd, Denbighshire	Landfill	Closed	Plas Einon Quarry	IT Williams Co Ltd	Disposal	Non Hazardous Landfill Site	0	12/03/1991
D4	CP3594FE	Llangollen, Denbighshire	Treatment	Active	Moel Y Faen Quarry	Jones Bros Ruthin (Civ Eng) Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	385,000	12/03/2012
D5	MP3492EA	Corwen, Denbighshire	Treatment	Active	Isfryn Field	Hywell Glyn Roberts	Physical Treatment	Treatment of inert waste for land reclamation or construction	49,999	30/05/2015
F1	HP3394FV	Bagillt, Flintshire	Landfill	Closed	Bagillt Landfill Site	Onxx Leigh Environmental Ltd	Disposal	Inert Landfill Site	0	18/03/1994
F2	FB3497TK(T001)	Mold, Flintshire	Quarry	Active	Fron Haul Quarry	Breedon South Limited	Disposal	Mining and extractive waste facility	0	26/07/2013
F3	FB3897TV	Mold, Flintshire	Treatment	Active	Meas Mynan Quarry	Breedon southern Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	80,000	26/09/2016
F4	FB3735AT	Rhosemoor, Mold	Treatment	Active	Cambrian Concrete	Lloyd Holdings (NW) Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	74,999	30/05/2012

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire										
County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
F5	SP3894FZ	Mold, Flintshire	Landfill	Closed	Maes Y Grug Landfill	B Griffiths	Disposal	Non Hazardous Landfill Site	0	21/05/1994
F6	MB3733RU	Mold, Flintshire	Treatment	Active	Alltami Soil & Aggregate Recycling Facility	Brock Plc	Physical Treatment	Treatment of inert waste for land reclamation or construction	75,000	19/06/2013
F7	TB3590HJ	Mold, Flintshire	Treatment	Active	Parry's Quarry Waste Transfer & Processing Centre	Mold Investments Ltd	Physical Treatment	Construction and demolition waste material recycling facility	100,000	11/09/2015
F8	CB3593HF	Deeside Industrial Park	Treatment	Active	Parry and Evans Ltd	Parry and Evans Ltd	Physical Treatment	Industrial and commercial waste material recycling facility	250,000	07/04/2015
F9	BP3894FD	Deeside, Flintshire	Landfill	Closed	Sea View Farm 1	D Morgan plc	Disposal	Non Hazardous Landfill Site	0	02/11/1988
F10	SP3394FL	Deeside, Flintshire	Landfill	Closed	Sea View Farm 2	D Morgan plc	Disposal	Non Hazardous Landfill Site	0	20/02/1991
F11	BP3390VA	Buckley, Flintshire	Landfill	Closed	Standard Landfill Site	Flintshire County Council	Disposal	Hazardous Waste Landfill Site	0	21/07/1993
F12	TP3894FN	Mold, Flintshire	Landfill	Closed	Waen Farm	Edward Stephens	Disposal	Inert Landfill Site	0	21/01/1994
F13	LP3394FD/V005	Mold, Flintshire	landfill	Closed	Cefn Mawr Quarry Landfill	Castle cement Padeswood Ltd	Disposal	Inert Landfill Site	0	25/05/2016
W1	FP3894FP	Wrexham	Landfill	Closed	Astbury Landfill	WRG Environmental Ltd	Disposal	Non Hazardous Landfill Site	0	17/08/1994
W2	JB3237WU	Wrexham	Treatment	Active	Ballswood Quarry	DP Williams Holdings Ltd	Physical Treatment	Treatment of inert waste for land reclamation or	74,999	05/11/2015

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire										
County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
								construction		
W3	XP3695VK	Wrexham	Quarry	Active	Borras Quarry	Tarmac Trading Limited	Disposal	Mining and extractive waste facility	0	17/11/2015
W4	XP3691EG	Wrexham	Treatment	Active	Clays Site	Clays Farm Golf Centre Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	99,999	05/10/2011
W5	BP3994FJ	Wrexham	Landfill	Closed	WDA Formerly Erie Electronic 2	Welsh Assembly Government	Disposal	Hazardous Waste Landfill Site	0	02/03/1987
W6	BP3494FC	Wrexham	Landfill	Closed	Garden Claypit 1 Midlands	Shanks Midlands Ltd	Disposal	Non Hazardous Landfill Site	0	02/05/1989
W7	HP3694FJ	Wrexham	Landfill	Closed	Garden Claypit 2 Midlands	Shanks Midlands Ltd	Disposal	Non Hazardous Landfill Site	0	06/07/1994
W8	FP3594FA	Wrexham	Landfill	Closed	Moel Garregog	DS Faulkner	Disposal	Non Hazardous Landfill Site	0	10/08/1994
CH1	HP3294FN	Chester, Cheshire	Landfill	Closed	Huntington Water Treatment Works	United Utilities Water Ltd	Disposal	Non Hazardous Landfill Site		
CH2	CP3632RR	Chester, Cheshire	Landfill	Active	Gowy Landfill Site	3C Waste Limited	Disposal	Non Hazardous Landfill Site	480,000	19/05/2016
CH3	XP3196CU	Frodsham, Cheshire	Landfill	Closed	Frodsham Marsh Lagoons	Manchester Ship Canal Co Ltd	Disposal	Non Hazardous Landfill Site		
CH4	HP3596CY	Ellesmere Port, Cheshire	Landfill	Closed	Hooton Brickworks Landfill	Brock Plc	Disposal	Non Hazardous Landfill Site		08/02/1984
CH5	EP3892CV	Bromborough, Merseyside	Landfill	Closed	Bromborough Dock North Landfill	UK Waste Management Ltd	Disposal	Non Hazardous Landfill Site		01/02/1992
CH6	RP3437AQ	Astmoor, Cheshire	Landfill	Closed	Randle Landfill	Inovyn Chlovinyls Ltd	Disposal	Hazardous Landfill Site	150,000	13/10/2014

Appendix 2 - Table 1: Summary Waste Permits within North Wales and Cheshire										
County Ref No.	Permit Number	Location	Facility	Status	Site Name	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date
CH7	VP3330RM	Sankey Bridges, Cheshire	Landfill	Closed	Arpley Landfill	3C Waste Limited	Disposal	Non Hazardous Landfill Site	1,200,000	12/12/2013
CH8	QP3296CP	Warrington Cheshire	Landfill	Closed	Northern Land Agricultural Improvements Landfill Site	Northern Land Agricultural Improvements Ltd	Disposal	Non Hazardous Landfill Site		21/10/2017
CH9	JP3596CQ	Northwich, Cheshire	Landfill	Closed	Wallerscote Limebeds	Northwich Resources Management Ltd	Disposal	Non Hazardous Landfill Site		27/11/2015
CH10	KP3336DE	Lostock Gralam, Cheshire	Landfill	Active	Holford Brinefield Landfill Site	Inovyn Chlovinyls Ltd	Disposal	Non Hazardous Landfill Site	220,000	30/11/2016
CH11	JP3134WB	Middlewich, Cheshire	Landfill	Active	Winsford Rock Salt Mine Waste Disposal Site	Veolia ES (UK) Ltd	Disposal	Hazardous Landfill Site	99,000	14/11/2014
CH12	GP3636DW	Warmingham, Cheshire	Landfill	Active	Hilltop Farm Brinefields	British Salt Ltd	Disposal	Non Hazardous Landfill Site	35,000	30/11/2016
CH13	TP3636EG	Crewe, Cheshire	Landfill	Closed	Eardswick Hall Landfill Site	Brock Plc	Disposal	Non Hazardous Landfill Site		17/10/2001
CH14	EP3794CA	Crewe, Cheshire	Landfill	Active	Maw Green Landfill	3C Waste Ltd	Disposal	Non Hazardous Landfill Site	900,000	15/02/2017

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
A1	ZP3695VH(V002)	Transfer Station	Refail Newydd	Holyhead, Anglesey	Kevin Humphreys	Fixed Collection	Household, commercial and industrial transfer stations (including treatment and asbestos storage)	74999	22/06/2016	Standard Rules Permit (SR2008 No7) Max waste accepted 75,000 tonnes per year. Treatment consisting of manual sorting, separation, screening, baling, shredding, crushing or compaction of non hazardous waste for future disposal or recovery. No more than 50 tonnes per day for disposal. No sludge or liquid wastes accepted.	
A2	RP3694FK	Recycling	Gwalchmai Civic Amenity Site	Holyhead, Anglesey	Isle of Anglesey County Council	Fixed Collection	Household Waste Recycling Centre	20,000	29/04/2005	Household waste recycling centre	

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
A3	DB3735RP	Treatment	Caer Glaw Quarry (Gwalchmai)	Gwalchmai, Anglesey	Hogan Aggregates Ltd	Physical Treatment	Treatment of waste to produce soil and aggregate	74,999	27/07/2017	Site operating under Standard Rules SR2010 No12 however notification received to be superseded by a new Rules Set on 1st November 2017. Maximum 75,000 tonnes per year. Permit for treatment - sorting, separation, screening, baling, shredding, crushing or blending of waste for recovery as soil or aggregate. Limitation on waste storage to 40,000 tonnes at any one time (some wastes restricted to 10,000 tonnes)	Treatment to produce soils and aggregate
A5	NB3833AE/T001	Transfer Station	Mona Industrial Estate, Plot 6	Mona, Anglesey	Grays Waste Management Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	25,000	13/03/2013	Permit Transfer Note only March 2013	Grays Waste Management own Plots 6 and 8 (A) for a Materials Recycling Facility for Commercial, Industrial, Construction,

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
											Demolition and Municipal waste streams.
A6	AP3594EC/V002	Transfer Station	Anglesey Ecoparc Mon Ltd Plot 8+	Mona Anglesey	Anglesey Ecoparc Mon Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	12/05/2010	Standard Rules Permit (SR2008 No7 75kte) Household, commercial and industrial waste transfer station with treatment & asbestos storage. Manual sorting, separation, screening, baling, shredding, crushing or compaction of non hazardous waste for disposal or recovery. (No more than 50 tonnes per day for disposal). No sludge or liquid wastes accepted.	Grays Waste Management own Plots 6 and 8 (A) for a Materials Recycling Facility for commercial industrial, construction, demolition and municipal waste streams.
A7	DB3830AQ/V003	Transfer Station	Mona Industrial Estate	Mona, Anglesey	Grays Waste Management Ltd	Fixed Collection	Household waste transfer stations (including treatment)	74,999	17/04/2014	Standard Rules Permit (SR2008 No7 75kte) Household waste transfer station. Manual sorting, separation, screening, baling,	Grays Waste Management own Plots 6 and 8 (A) for a Materials Recycling Facility for commercial,

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										shredding, crushing or compaction of non hazardous waste for disposal or recovery.	industrial, construction, demolition and municipal waste streams.
A8	AB3095CJ	Treatment	Nant Newydd Quarry	Benllech, Anglesey	Owen JT and Owen GT	Physical Treatment	Inert waste treatment to produce soil and aggregate	75,000	16/02/2016	Tier 2 Bespoke Permit base on SR2010 No12 allowing treatment of inert waste to produce soils and aggregate. Maximum quantity of 75,000 tonnes waste per year. Some limitations on waste storage and treatment provisions using a hardstanding or impermeable surface. Waste storage limits of Table S2.1 wastes of 40,000 tonnes per year and Table S2.2 wastes of 10,000 tonnes per year at any one time. Defined area close to site entrance for these operations	Treatment to produce soils and aggregate. The site is an active limestone quarry with both an inert landfill and inert waste recycling facility.

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
A9	RP3337SE	Landfill	Nant Newydd Quarry	Benllech, Anglesey	Owen JT and Owen GT	Disposal	Inert Landfill Site	5,000	30/03/2007	Bespoke landfill permit. All future landfill cells to be clay lined. Deposit of waste limited by pre settlement contours determined on Drawing ESID 4 (Sept 2005). Waste input limited to 5000 tonnes/year. Extensive list of operational requirements (including monitoring provisions) detailed in permit.	The site is an active limestone quarry with both an inert landfill and inert waste recycling facility. As of 2017 the site waste capacity is 250,000 cubic metres with potential for an additional 200,000 cubic metres subject to remaining limestone extraction. There is a traffic restriction of 20 vehicles movements in and out of the site per day.
A10	FP3590LV/V002	Transfer Station	Rhuddlan Bach Quarry Landfill	Benllech, Anglesey	Clive Hurt (Plant Hire) Ltd	Fixed Collection	Household, commercial and industrial transfer station (including treatment)	27,000	05/10/2012	Treatment operations limited to screening, crushing, baling, shredding and pelletising for purposes of recovery. No more	

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										than 400 tonnes of untreated waste shall be stored at any one time and a maximum of 27,000 tonnes of waste handled per year.	
A11	WP3132SX	Landfill	Rhuddlan Bach Quarry Landfill	Benllech, Anglesey	C and M Plant Hire Ltd	Disposal	Inert Landfill Site	75,000	16/03/2007	All future landfill cells to be clay lined. Waste input limited to 75,000 tonnes/year. Landfill operation subject to a Local Air Pollution and Control (LAPPC) Permit issued by the Local Authority. Extensive list of operational requirements (including monitoring provisions) detailed in permit.	The site is an active limestone quarry with both an inert landfill and materials recycling facility. As of 2017 the site waste capacity is 500,000 cubic metres with potential for an additional 300,000 cubic metres subject to remaining limestone extraction.
A12	GB3338RB(T002)	Transfer Station	Anglesey CC Highways Depot	Gaerwen, Anglesey	Dawnus Construction Holdings Ltd	Fixed Collection	Inert waste transfer station (including treatment)	74999	28/06/2017	Standard Rules Permit (SR2008 No7 75kte). Manual sorting, separation, screening,	

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										crushing of waste for disposal or recovery. (No more than 50 tonnes per day for disposal). No sludge or liquid wastes accepted.	
A13	ZP3094FM	Recycling	Phoenix metals and Colin Davies Non Ferrous metals	Ynys Mon, Anglesey	Alwyn Davies and Colin Davies	Physical Treatment	Metal Recycling	24999	30/05/1995	Bespoke Permit to recycle metals. Permit modified to included waste electronic electrical equipment (WEEE).	
A14	EP3994FB	Transfer Station	Green Skips Environmental Ltd	Gaerwen, Anglesey	Green Skips Environmental Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	5000	29/07/1998	Old Waste Management Licence only. Maximum waste input 5,000 tonnes per year (100 tonnes per day). Maximum amount of waste stored on site at any one time 200 tonnes inert and 60 tonnes other wastes.	No modern style permit
A15	QP3294FQ(V003)	Transfer Station	Cymru Lan	Gaerwen, Anglesey	Cymru Lan Cyfyngedic	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	69000	03/02/2017	Bespoke Permit for a waste transfer station with treatment, maximum through put of 69,000	

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										tonnes per year.	
A18	FP3498EQ	Treatment	Penhesgyn IVC Facility	Menai Bridge, Anglesey	Anglesey County Council	Biological Treatment	In Vessel Composting	25000	28/09/2008	Bespoke Permit for aerobic composting facility for green waste, manures, cooked food waste and animal waste. Maximum waste input 25,000 tonnes per year.	Composting
A20	JB3132RC	Recycling	Penhesgyn Waste Household Recycling Facility	Menai Bridge, Anglesey	Isle of Anglesey County Council	Fixed Collection	Household Waste Recycling Centre	19999	14/09/2014	Hazardous and Non hazardous Waste Amenity Site for bulking and future disposal or recovery elsewhere. Permit also allows for treatment by sorting, separation, shredding or compaction. Maximum waste input 20,000 tonnes per year.	
A21	QP3894FF	Transfer Station	Penhesgyn Waste Transfer & Materials Recovery Facility	Llansadwrm, Anglesey	Isle of Anglesey County Council	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75000	19/04/2006	No details supplied by NRW	

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
G2	NP3494FP	Transfer Station	Llandygai Transfer Station	Bangor, Gwynedd	Watkin Jones & Son Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75000	11/12/2014	Standard Rules Permit SR2008 No11 for an inert and excavation waste transfer station with treatment. Treatment consisting of manual sorting, separation, screening or crushing of waste for disposal (no more than 50 tonnes per day) or recovery. Maximum waste through put of 75,000 tonnes per year. No liquid or sludge wastes	
G3	QP3794FT	Recycling	Llandygai Civic Amenity Site	Bangor, Gwynedd	Gwynedd Council	Fixed Collection	Household Waste Recycling Centre	2200	18/08/2006	No details supplied by NRW	
G4	WP3432SC	Landfill	Nant Y Garth Landfill Site	Portdinorwic, Gwynedd	Treborth Leisure Limited	Disposal	Inert Landfill Site	75,000	08/09/2006	Bespoke Permit for disposal of inert wastes into a steep sided valley (maximum capacity 445,000 tonnes of waste). 75,000 tonnes per	The site is almost at capacity with planning due to expire 31st July 2021. The site is expected to close before

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										annum	2021
G5	LB3593HD	Transfer Station	Penrhyn Quarry	Bethesda, Gwynedd	Welsh Slate Ltd (Chris Allwood)	Fixed Collection	Inert waste transfer stations (including treatment)	75,000	06/05/2014	Standard Rules Permit SR2008 No11 for an inert and excavation waste transfer station with treatment. Treatment consisting of manual sorting, separation, screening or crushing of waste for disposal (no more than 50 tonnes per day) or recovery. Maximum waste through put of 75,000 tonnes per year. No liquid or sludge wastes	The permit has been granted but not yet activated.
G6	RP3294FP	Transfer Station	Coed Bolyn Mawr	Caernarfon, Gwynedd	Robert Davies & Jennifer Ann Davies	Fixed Collection	Inert and excavation waste transfer station (including treatment)	24999	30/05/2012	Standard Rules Permit SR2009No8 - the management of inert waste and soil resulting from prospecting, extraction, treatment and storage of mineral	Permit allows the storage, treatment and disposal of inert extractive wastes and soils resulting from the working of the quarry and the

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										resources and the working of quarries.	approved Waste Management Plan. No limit on volumes/tonnages however, restricted only to materials generated at the quarry.
G7	LB3933AE	Transfer Station	Thomas Skip and Plant Hire Ltd	Caernarfon, Gwynedd	Thomas Skip and Plant Hire Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	24999	08/11/2012	Standard Rules Permit (SR2008 No1) for household, commercial and industrial waste transfer station. Manual sorting, separation of waste for disposal (no more than 50 tonnes per day) or recovery. Maximum waste throughput 75,000 tonnes per year.	
G9	QP3994FZ	Transfer Station	Caergylchu Waste Management Facility	Caernarfon, Gwynedd	Gwynedd Council	Physical Treatment	I&C MRF, household, Commercial and industrial transfer Stations; Household Waste	40000	03/03/2017	Bespoke Permit for a household waste recycling centre accepting hazardous and non hazardous waste together with a waste transfer	Principally recycling and waste transfer

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
							Recycling Centre			station for non hazardous wastes and a material recycling facility for non hazardous wastes. Maximum waste through put of 40,000 tonnes per year.	
G10	CB3237AP	Transfer Station	Gwynedd Skip and Plant Hire Ltd	Caernarfon, Gwynedd	Gwynedd Skip and Plant Hire Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	30/06/2017	Bespoke Permit for a household, commercial and industrial waste transfer station with treatment and asbestos storage (maximum asbestos storage 20 tonnes per day). Treatment consisting of manual sorting, separation, screening, baling shredding, crushing and compaction of non hazardous or inert waste for recovery or disposal. Maximum waste throughput of 75,000 tonnes per year.	

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
G14	XP3690VJ	Treatment	Ty Mawr (East Quarry)	Talysarn, Gwynedd	Watkin Jones and Son Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	49999	26/01/2012	Standard Rules Recovery Permit (SR2010No9) for the use of waste for reclamation, restoration or improvement of land. Total quantity of waste that can be stored and subsequently spread not to exceed 50,000 tonnes. Waste shall only be spread to a thickness not exceeding 2m.	Maximum waste limit (total) at site is 49,999 tonnes Recovery operation
G16	KB3438AN	Treatment	Llwyn Isaf AD Plant	Caenarflon, Gwynedd	Biogen Gwyriad Ltd	Biological Treatment	Anearobic digestion	11500	04/07/2013	Bespoke Permit for anaerobic digestion of waste and combustion of resultant biogas	Anaerobic digestion
G17	VP3494FK	Transfer Station	Melin Plas Du	Pwllheli, Gwynedd	M O Jones	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	24999	10/10/2000	No details supplied by NRW	

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
G19	NB3793HS	Transfer Station	Bryn Williams Ltd	Pwllheli, Gwynedd	Fixed Collection	Fixed Collection	Inert waste transfer station (including treatment)	75000	17/11/2014	Standard Rules Permit (SR2008 No10) for Inert and excavation waste transfer station. Manual sorting and separation of waste for disposal (no more than 50 tonnes per day) or recovery. Maximum waste throughput 75,000 tonnes per year.	No screening or crushing activity as part of this permit
G20	AP3594FZ	Transfer Station	Glan Y Don Depot	Pwllheli, Gwynedd	Gwynedd Council	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	4,999	02/11/2001	Waste Management Licence only for a waste transfer station	No modern style permit. Limited tonnage import of 4999 tonnes per year.
G21	RP3494FM	Transfer Station	Gwrtaith Gwynedd	Pwllheli, Gwynedd	Harri Morrus Parry	Biological Treatment	Inert waste transfer station (including treatment), windrow composting	24,999	26/05/2004	Bespoke Permit allowing biological treatment of non hazardous wastes. Maximum waste storage for maturation not to exceed 3,000 tonnes at any one time. Maximum throughput of waste 75 tonnes per day.	Composting

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
G22	PP3594FM	Recycling	Rhwngyddwyryd Civic Amenity Site	Garndolbenmaen, Gwynedd	Gwynedd Council	Fixed Collection	Household Waste Recycling Centre	5000	15/12/1994	No details supplied by NRW	
G23	VB3893HC	Transfer Station	Gelert House MRF	Porthmadog, Gwynedd	Maybrook Investments Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75000	17/12/2014	Standard Rules Permit (SR2008 No3) for household, commercial and industrial waste transfer station with treatment. Manual sorting, separation, screening, baling, shredding, crushing or compaction of waste for disposal (no more than 50 tonnes per day) or recovery. Maximum waste throughput 75,000 tonnes per year.	
G25	AB3494FG	Transfer Station	Ty'n Coed	Penrhndeudraeth, Gwynedd	Gwynedd Environmental Waste Services Ltd	Fixed Collection	Household, commercial and industrial transfer station	20000	31/05/2017	Bespoke Permit for a non-hazardous waste transfer station with treatment. Manual and/or mechanical sorting and separation, de-watering of non hazardous wet well	Restricted annual waste input

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										waste, gully waste and street sweeping residues. Maximum waste throughput 20,000 tonnes per year. All waste treatment on an impermeable surface.	
G26	XP3696EW	Quarry	Minffordd Quarry	Porthmadog	Tarmac Trading Limited	Disposal	Mining and extractive waste facility	0	17/11/2015	Standard Rules Permit SR2009 No8 - the management of inert waste and soil resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries.	Permit allows the storage, treatment and disposal of inert extractive wastes and soils resulting from the working of the quarry and the approved Waste Management Plan. No limit on volumes/tonnages however, restricted only to materials generated at the quarry.

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
G27	ZP3798VA	Transfer Station	Grays Penrhndeudraeth Works	Penrhndeudraeth	Grays Waste Management Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	75,000	12/05/2016	Bespoke Permit for household, commercial and industrial waste transfer station with treatment and asbestos storage and vehicle depollution and dismantling (authorised treatment) facility. Manual sorting, separation, screening, baling, shredding, shearing, crushing, cutting or compaction of waste for disposal or recovery.	
G28	PP3294FJ	Recycling	Ffridd Rasus Landfill (Area 2) & Civic Amenity Site	Harlech, Gwynedd	Gwynedd Council	Fixed Collection	Household Waste Recycling Centre	4,999	26/05/2017	Closure report agreed for landfill site (March 2012). Consolidated permit for the onsite Civic Amenity Facility	
G29	YB3897TF(V002)	Transfer Station	Ffridd Rasus Landfill Site	Harlech, Gwynedd	Gwynedd Council	Fixed Collection	Household, commercial and industrial transfer station	75,000	19/03/2015	Standard Rules Permit (SR2008 No1) for household, commercial and industrial waste transfer station.	Transfer only - no treatment

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										Manual sorting, separation of waste for disposal (no more than 50 tonnes per day) or recovery. Maximum waste throughput 75,000 tonnes per year.	
G30	BP3398EW	Treatment	Ffridd Rasus IVC Site	Harlech, Gwynedd	Gwynedd Council	Biological Treatment	In Vessel Composting	24,999	02/03/2008	Bespoke Permit for in vessel waste composting and waste transfer	Composting
G31	MB3637AA	Quarry	Llechwedd Slate Mines	Blaenau Ffestiniog	Greaves Welsh Slate Co Ltd	Disposal	Mining and extractive waste facility	0	19/12/2012	Standard Rules Permit SR2009 No8 - the management of inert waste and soil resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries.	Permit allows the storage, treatment and disposal of inert extractive wastes and soils resulting from the working of the quarry and the approved Waste Management Plan. No limit on volumes/tonnages however, restricted only to materials generated at the quarry.

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
G32	EB3836AC	Recycling	Recycling Centre at Blaeneau Ffestiniog	Blaeneau Ffestiniog, Gwynedd	Gwynedd Council	Fixed Collection	Household Waste Recycling Centre	74999	14/02/2012	Standard Rules Permit SR2008 No13 non hazardous & hazardous household waste amenity site. Maximum quantity of hazardous waste stored treated on site not to exceed 10 tonnes per day. Operations to include sorting, separation, shredding or compaction of waste for disposal (no more than 50 tonnes per day) or recovery. Maximum throughput of waste 75,000 tonnes per year.	
G33	AB3494CM	Transfer Station	Llechwedd Quarry	Blaenau Ffestiniog, Gwynedd	Northern Welsh Recycling Ltd	Fixed Collection	Inert waste transfer stations (including treatment)	75,000	26/05/2017	Standard Rules Permit SR2008 No11 for an inert and excavation waste transfer station with treatment. Treatment consisting of manual sorting,	

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										separation, screening or crushing of waste for disposal (no more than 50 tonnes per day) or recovery. Maximum waste through put of 75,000 tonnes per year. No liquid or sludge wastes	
G35	LB3730RJ	Transfer Station	Coed Ffridd Arw	Dolgellau, Gwynedd	Gwynedd Council	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	9,000	18/12/2012	Bespoke Permit for a household, commercial and industrial waste transfer station with treatment. Dry recyclables and sweep cleanings plus waste electrical and electronic equipment (WEEE) treatment by sorting, baling, screening, shredding, crushing, compacting and bulking. Maximum waste throughput 9000 tonnes per year.	

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
G36	YP3794EV	Recycling	Gwynedd Council	Dolgellau, Gwynedd	Gwynedd Council	Fixed Collection	Household Waste Recycling Centre	4,999	26/05/2011	Household Waste Recycling Centre	
C1	RP3695VS	Quarry	Penmaenmawr Quarry	Penmaenmawr, Conwy	Hanson Quarry Products Europe Ltd	Disposal	Mining and extractive waste facility	0	01/02/2011	Standard Rules Permit SR2009 No8 - the management of inert waste and soil resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries.	Permit allows the storage, treatment and disposal of inert extractive wastes and soils resulting from the working of the quarry and the approved Waste Management Plan. No limit on volumes/tonnages however, restricted only to materials generated at the quarry.
C2	UP3794FZ	Transfer Station	Worldcare Wales Ltd	Llandudno Junction, Conwy	Worldcare Wales Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	0	16/02/1993	No details supplied by NRW	
C3	AP3494FF	Transfer Station	Bron Y Nant Waste Transfer and Materials	Colwyn Bay, Conwy	Conwy County Borough	Fixed Collection	Household, commercial and industrial	22,671	07/10/2016	Bespoke Permit for a waste transfer and materials	

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
			Reclamation Facility		Council		transfer stations (including treatment)			reclamation facility	
C4	NB3634RX	Treatment	Caerhurn Farm	Conwy	Sion Roberts	Biological Treatment	Open Windrow Composting	4,000	25/09/2014	Bespoke Permit allowing for physical treatment, storage and composting of wastes. All treatment to be undertaken on a sealed concrete surface.	Composting
C5	ZP3097ET	Treatment	Morfa Uchaf	Conwy	Alwyn Jones Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	49,999	24/08/2011	Waste Recovery Permit to allow a land raise of 2m to prevent water logging and permit winter grazing. Maximum inert waste import of 50,000 cubic metres.	Maximum waste limit (total) at site is 49,999 tonnes Recovery operation
C6	SP3594FG	Transfer Station	Plas Y Dre, Llanwrst	Llanwrst, Conwy	Conwy County Borough Council	Fixed Collection	Household, commercial and industrial transfer stations	0	18/03/2014	Permit for household, commercial and industrial waste transfer station. Various variations to add additional waste codes including hazardous waste electronic electrical	

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										equipment (WEEE).	
C7	YP3091ED	Quarry	Raynes Quarry	Colwyn, Conwy	Cemex UK Minerals Ltd	Disposal	Mining and extractive waste facility	0	15/06/2011	Standard Rules Permit SR2009 No8 - the management of inert waste and soil resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries.	Permit allows the storage, treatment and disposal of inert extractive wastes and soils resulting from the working of the quarry and the approved Waste Management Plan. No limit on volumes/tonnages however, restricted only to materials generated at the quarry.

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
C8	EB3931AM	Transfer Station	Llanddulas Quarry waste treatment	Abergele, Conwy	FCC Recycling (UK) Ltd	Fixed Collection	Household, commercial and industrial transfer station (including treatment)	110,000	13/06/2017	Bespoke Permit for a waste treatment centre for a non hazardous materials recycling facility and waste transfer station. Maximum waste input 100,000 tonnes per year. Waste will be subject to physical treatment ready for transfer off site. Residual materials will be taken to Llanddulas landfill for disposal. Wastes for recycling and transfer shall be stored and treated on an impermeable surface inside a building with a sealed drainage system.	This facility is not yet up and running and is understood to be on hold awaiting change in market conditions
C9	CB3432AA/V002	Treatment	Llanddulas composting facility	Abergele, Conwy	3 C Waste Ltd	Biological Treatment	Open Windrow Composting	20,000	01/07/2015	Bespoke Permit allowing for physical treatment consisting of sorting, shredding, screening, bulking, composting and maturation of wastes. All	Composting biodegradable wastes, maximum quantity 20,000 tonnes per year.

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										treatment to be undertaken on a sealed concrete surface.	
C10	BU0800IZ	Landfill	Llanddulas Landfill Site	Abergele, Conwy	3C Waste Limited	Disposal	Inert and Non Hazardous Landfill Site	600,000	10/06/2016	Bespoke Non Hazardous Waste Disposal Permit. Waste input limited to 600,000 tonnes per year	Additional 750,000 cubic metre capacity for restoration soils, not detailed in permit therefore assumed to be exempt from landfill tax and conditioned under planning. Site closure 2025 for general waste and 2030 for restoration soils
C11	BP3330LS	Landfill	Ty Mawr Farm Landfill	Abergele, Conwy	Griffiths, Griffith Wyn	Disposal	Inert Landfill Site	99000	29/03/2007	Bespoke Permit for disposal of inert wastes into a stream valley (maximum capacity 690,000 tonnes of waste)	Original waste licence granted in 1987, permit granted in 2007 as a continuation of licence. Site approaching completion.

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
											There is evidence on google earth of tipping having extended beyond permitted site boundary.
C12	HP3591EZ	Treatment	Gofer Bulking Station	Abergele, Conwy	Conwy County Borough Council	Physical Treatment	Inert and construction waste material recycling facility	24999	14/05/2011	Permit for bulking/storage and transfer of food waste, cans and plastics. Discharge of treated sewage and trade effluent to surface water (wash down from food waste)	Food wastes, cans and plastics
C13	JP3894FM	Transfer Station	Thorncliffe Building Supplies Ltd	Abergele, Conwy	Thorncliffe Building Supplies Ltd	Fixed Collection	Household, commercial and industrial transfer stations (including treatment)	200000	06/07/2015	Waste Transfer Station for the treatment and storage of non hazardous and inert waste, Manual and mechanical sorting. Permit allows cement bonded asbestos, waste oils, batteries, gas bottles and treated wastes from refuse derived fuels	Wide range of waste treatment activities

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										(RDF). Maximum waste throughput 200,000 tonnes per year.	
C14	MB3097TG	Recycling	Abergele Civic Amenity Site	Abergele, Conwy	Bryson Recycling Ltd	Fixed Collection	Household Waste Recycling Centre	25000	31/03/2016		
C15	EB3635RQ	Treatment	Foryd Harbour	Rhyll, Conwy	Denbigh County Council	Physical Treatment	Treatment of inert waste for land reclamation or construction	99,999	10/04/2012	Standard Rules Recovery Permit (SR2010 No8) for the use of waste for construction. Total quantity of waste that can be stored and subsequently spread not to exceed 100,000 tonnes.	Maximum waste limit (total) at site is 100,000 tonnes Recovery operation
D2	DP3494FN	Treatment	K M Environmental Ltd	St Asaph, Denbighshire	K M Environmental Ltd	Physical Treatment	Construction and demolition waste material transfer station	75,000	23/08/2004	Permit for a Materials Recycling Facility. Treatment consisting of mechanical and/or manual sorting, screening, shredding of the permitted wastes (Inert, construction	Treatment to produce secondary aggregate

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										and demolition) for the purposes of recovery. Maximum waste throughput 74,999 tonnes per annum on a hard standing or an impermeable surface with sealed drainage system. Maximum storage capacity 2500 tonnes.	
D4	CP3594FE	Treatment	Moel Y Faen Quarry	Llangollen, Denbighshire	Jones Bros Ruthin (Civ Eng) Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	360000	12/03/2012	Former slate quarry with a waste disposal licence, definitive closure in 2010 but with paragraph 9 exemption for import of selective inert wastes (for site restoration) converted to a waste for recovery permit. Recycling by mechanical treatment (crushing screening blending) using mobile plant to produce aggregate. Maximum waste input 360,000	Maximum waste input limited to 360,000 tonnes (Note total and not per annum) Recovery operation

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										tonnes, maximum storage limit at any one time 100,000 tonnes.	
D5	MP3492EA	Treatment	Isfryn Field	Corwen, Denbighshire	Hywell Glyn Roberts	Physical Treatment	Treatment of inert waste for land reclamation or construction	49,999	30/05/2015	Standard Rules Recovery Permit (SR2010 No9) for the use of waste for reclamation, restoration or improvement of land. Total quantity of waste that can be stored and subsequently spread not to exceed 50,000 tonnes. Waste shall only be spread to a thickness not exceeding 2m.	Maximum waste limit (total) at site is 49,999 tonnes Recovery operation

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
F2	FB3497TK	Quarry	Fron Haul Quarry	Mold, Flintshire	Breedon South Limited	Disposal	Mining and extractive waste facility	0	26/07/2013	Standard Rules Permit SR2009 No8 - the management of inert waste and soil resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries.	Permit allows the storage, treatment and disposal of inert extractive wastes and soils resulting from the working of the quarry and the approved Waste Management Plan. No limit on volumes or tonnages however, restricted only to materials generated at the quarry.
F3	FB3897TV	Treatment	Meas Mynan Quarry	Mold, Flintshire	Breedon Southern Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	80000	26/09/2016	Registered under Permit DB3435RA. Original waste recovery permit granted in 2013 to Lloyds Quarries Ltd for restoration of a quarry, maximum waste import of 80,000 tonnes. Permit conditions for landfill gas borehole monitoring. Part	Maximum waste limit (total) at site is 80,000 tonnes. Different permit number to that on NRW website Recovery operation

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										transfer of Permit to Breedon in 2013.	
F4	FB3735AT	Treatment	Cambrian concrete	Rhosemoor, Mold	Lloyd Holdings (NW) Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	74999	30/05/2012	Site operating under Standard Rules SR2010 No13 Maximum 75,000 tonnes per year. Permit for use of waste to manufacture timber or construction products. Maximum storage of 40,000 tonnes at any one time, although some waste restricted to 10,000 tonnes storage limit.	Treatment to produce timber and construction products

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
F6	MB3733RU	Treatment	Alltami Soil & Aggregate Recycling Facility	Mold, Flintshire	Brock Plc	Physical Treatment	Treatment of inert waste for land reclamation or construction	75000	19/06/2013	Tier 2 Bespoke Permit base on SR2010 No12 allowing treatment of inert waste to produce soils and aggregate. Maximum quantity of 75,000 tonnes waste per year. Waste storage limits of Table S1.1 of 50,000 tonnes per year on a hard standing or an impermeable surface with sealed drainage system. The site will only accept dry, inert and non hazardous wastes for treatment (sorting, separation, screening, crushing and blending).	Treatment to produce soils and aggregate
F7	TB3590HJ	Treatment	Parry's Quarry Waste Transfer & Processing Centre	Mold, Flintshire	Mold Investments Ltd	Physical Treatment	Construction and demolition waste material recycling facility	100,000	11/09/2015	Permit for a Materials Recycling Facility. Treatment consisting of mechanical and/or manual sorting, screening, separation,	Principally recycling and waste treatment

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County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										shredding, compaction and baling of the permitted wastes for the purposes of recovery. Max waste throughput 100,000 tonnes per annum on a hard standing or an impermeable surface with sealed drainage system.	
F8	CB3593HF	Treatment	Parry and Evans Ltd	Deeside Industrial Park	Parry and Evans Ltd	Physical Treatment	Industrial and commercial waste material recycling facility	250,000	07/04/2015	Tier 3 Bespoke permit for a materials recycling facility. Treatment shall consist of mechanical and/or manual sorting, screening, separation, shredding, compaction and baling of the permitted wastes for the purposes of recovery. Max waste throughput 250,000 tonnes per annum on a hard standing or an impermeable surface with sealed drainage system. All treatment to be	Principally recycling and waste treatment

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										undertaken within a building with storage also allowed outside.	
W2	JB3237WU	Treatment	Ballswood Quarry	Wrexham	DP Williams Holdings Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	74,999	05/11/2015	Tier 2 Bespoke Permit base on SR2010 No12 allowing treatment of inert waste to produce soils and aggregate. Maximum quantity of 75,000 tonnes waste per year. Waste storage limits of Table S1.1 of 50,000 tonnes per year on a hard standing or an impermeable surface with sealed drainage system. The site will only accept dry, inert and non hazardous construction, excavation and demolition wastes for treatment	Treatment to produce secondary aggregate

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
										(crushing) using mobile plant for follow on sale as secondary aggregate.	
W3	XP3695VK	Quarry	Borras Quarry	Wrexham	Tarmac Trading Limited	Disposal	Mining and extractive waste facility	0	17/11/2015	Standard Rules Permit SR2009 No8 - the management of inert waste and soil resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries.	Permit allows the storage, treatment and disposal of inert extractive wastes and soils resulting from the working of the quarry and the approved Waste Management Plan. No limit on volumes/tonnages however, restricted only to materials generated at the quarry.

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
W4	XP3691EG	Treatment	Clays Site	Wrexham	Clays Farm Golf Centre Ltd	Physical Treatment	Treatment of inert waste for land reclamation or construction	99,999	05/10/2011	Standard Rules Recovery Permit (SR2010 No8) for the use of waste for construction. Total quantity of waste that can be stored and subsequently spread not to exceed 100,000 tonnes.	Maximum waste limit (total) at site is 99,999 tonnes Recovery operation
CH2	CP3632RR	Landfill	Gowy Landfill Site	Chester, Cheshire	3C Waste Limited	Disposal	Non Hazardous Landfill Site	480,000	19/05/2016	Bespoke Non Hazardous Waste Disposal Permit. Waste input 480,000 tonnes per year	The site is due to close in November 2022
CH10	KP3336DE	Landfill	Holford Brinefield Landfill site	Lostock Gralam, Cheshire	Inovyn Chlovinyls Ltd	Disposal	Non Hazardous Landfill Site	220,000	30/11/2016	Bespoke Non Hazardous Waste Disposal Permit. Waste input 220,000 tonnes per year and limited to solid salts and solutions	Solid salts and solutions waste types only
CH11	JP3134WB	Landfill	Winsford Rock Salt Mine Waste Disposal Site	Middlewich, Cheshire	Veolia ES (UK) Ltd	Disposal	Hazardous Landfill Site	99,000	14/11/2014	Bespoke Permit for the underground storage of hazardous waste. Waste input 99,000 tonnes per year.	Waste types include construction and demolition wastes (including excavated soil from

Appendix 2 - Table 2: Summary Active Waste Permits within North Wales and Cheshire											
County ref no	Permit Number	Facility	Site Name	Location	Operator	Type	Category	Limit (tonnes/Yr)	Permit Date	Permit/ Licence Comments	Other comments
											contaminated sites)
CH12	GP3636DW	Landfill	Hilltop Farm Brinefields	Warmingham, Cheshire	British Salt Ltd	Disposal	Non Hazardous Landfill Site	35,000	30/11/2016	Bespoke Non Hazardous Waste Disposal Permit. Waste input 35,000 tonnes per year and limited to wastes from potash and rock salt processing	Wastes from potash and rock salt processing only
CH14	EP3794CA	Landfill	Maw Green Landfill	Crewe, Cheshire	3C Waste Ltd	Disposal	Non Hazardous Landfill Site	900,000	15/02/2017	Bespoke Non Hazardous Waste Disposal Permit. Waste input 900,000 tonnes per year	The site is due to close in December 2027

Table 3: Mineral and waste related planning consents within Anglesey, Gwynedd and Conwy.

Site Reference	Site Name	Planning Application Reference	Operator or Applicant	Details of Application	Approved	Operating Hours	Noise Limits	Blasting Limits/Other Constraints	Other Constraints	Waste Constraints	End Date	Site Location	Comments
Permit A1	Efail Newydd Recycling Station	13C42B	Mr Kevin Humphreys	Change of use of land from that of an engineering fabrication yards to that of a waste transfer and recycling station site at Efail Newydd, Caergeilliog.	19/07/2011	(6) Monday to Friday 0800 - 1800, Saturday 0800 - 1300.	(3) Noise levels not to exceed 10 dB above background at nearby dwellings at any time.	Not applicable	(3) Screening, shredding, crushing and packaging of waste material shall take place solely within the transfer building (Unit 1).	(4) All skips, processed and packaged waste ready for haulage shall be stored to the rear of the transfer building (Unit 1).	Not conditioned	Caergeilliog, Anglesey.	
Permit A2	Gwalchmai Civic Amenity Site	48LPA851/CC	Isle of Anglesey County Council	Change of use form waste sorting, bulking and treatment depot to a waste sorting, bulking and treatment depot with a waste transfer station and household waste recycling centre, together with the provision of additional storage areas, a	08/02/2005	(3) Monday to Saturday 0730 - 1800, Sunday and Bank Holidays 1930 - 1730.	Not conditioned	Not applicable	(5) All waste sorting activities shall be carried out within the building.	(4) No more than 20,000 tonnes per annum of waste shall be accepted to the site.	Not conditioned	Gwalchmai, Anglesey.	

				weighbridge and an information centre on adjoining land.									
Permit A3 (Mineral Extraction AQ1)	Recycling at Caer Glaw Quarry	48C79A	Hogan Group	Importation of glass for crushing and use in the production of asphalt at Caer Glaw Quarry, Gwalchmai.	24/07/2003	Not conditioned	Not conditioned	Not applicable	(2) No more than 5000 tonnes to be stored.	(3) No waste material other than glass shall be imported for crushing and all such material imported shall be used in the production of asphalt.	Not conditioned	Gwalchmai, Anglesey.	
Mineral Extraction AQ1 (Permit A3)	Recycling at Caer Glaw Quarry	48C79C	Hogan Group	Importation, processing and storage of road planings and associated highway maintenance waste at Caer Glaw Quarry, Gwalchmai.	21/05/2009	(5) Monday to Friday 0700 - 1900, Saturday 0700 - 1200.	Not conditioned	Not applicable	(1) No burning of waste. (4) Appropriate measures shall be adopted for the safe disposal of any waste materials arising from the aggregate recycling operations.	(3) No waste material other than materials arising from highway maintenance work shall be imported to the site for recycling.	Not conditioned	Gwalchmai, Anglesey.	
Mineral Extraction AQ1 (Permit A3)	Recycling at Caer Glaw Quarry	48C79D	Hogan Group c/o Oaktree Environmental Ltd	Application to vary Condition (03) from planning consent	21/11/2011	Not conditioned	Not conditioned	Not applicable	Not applicable	(1) Only waste material arising from highways maintenance work, building work and	Not conditioned	Gwalchmai, Anglesey.	All other planning conditions in 48C79C are relevant.

				48C79C so as to allow the importation of general construction and demolition waste including wood in addition to the permitted importation of road planings and associated highway maintenance waste onto the site at Caer Glaw Quarry, Gwalchmai.						builders waste material shall be transported into the site to be recycled.			
Mineral Extraction AQ1 (Permit A3)	Caer Glaw Quarry	48C79F/VAR	Hogan Group c/o Oaktree Environmental Ltd	Application to vary Condition (14) (ground vibration) from planning permission 48LPA627A\CC so as to be in accordance with current planning policy guidance at Caer Glaw Quarry,	19/02/2014	Not conditioned	Not conditioned	(14) <6 mm/s for 95% of blasts over 12 months, no individual blast to exceed 10 mm/s. (12) Blasting between 1000 - 1530 Monday to Friday, 1000 - 1300	Not applicable	Not applicable	(1) Quarrying 21/02/2042 Restoration 21/02/2043	Gwalchmai, Anglesey.	Application to extend quarry submitted in June 2018.

				Gwalchmai.				Saturday.					
Mineral Extraction AQ2 (No Permit)	Gwndy Quarry	14C155H	Hogan Group	Application to vary Condition 15 of planning permission 14LPA621A/CC to lower the current blast limit of 10 mm/s to 6 mm/s in accordance with the current guidance at Gwndy Quarry, Llandrygam	16/10/2014	(12) Quarry operations Monday to Saturday 0600 - 1900. (13) Roadstone coating plant Monday to Saturday 0500 - 1900 (can exceed on 6 occassions per year with prior written approval).	Not conditioned	(17) <6 mm/s for 95% of blasts over 6 months, no individual blast to exceed 10 mm/s.	(2) Final restoration water based.	(7) No imported soils, refuse or waste materials of any description shall be employed in restoration works or otherwise disposed of within the site.	(1) 21/02/2042	Llandrygam, Anglesey	
Permits A5 and A7	Oaktree Environmental Ltd	14C28F/1	Grays Waste Management Ltd	Full application for the re-location and enlargement of the transfer building, extension to the baler shed, and addition of a first floor to the garage	08/07/2013	(9) Monday to Friday 0700 - 1900, Saturday Sunday and Bank Holidays 0700 - 1600.	(11) 65 dB (A) Leq (1 hour) freefield at any point 10m from the site boundary.	Not applicable	(5) Construction and demolition waste shall be deposited in storage bays not exceeding wall height, all other waste shall be stored in	(3) No waste other than non-hazardous household, commercial and industrial waste shall be accepted at the site.	Not conditioned	Mona, Anglesey.	

				building and the acceptance of putrescible waste on site at Plot 6, Mona Industrial Estate, Mona.					the waste transfer building				
Permit A6	Anglesey Ecoparc Mon Ltd c/o Oaktree Environmental Ltd	14C28U/ECON	Anglesey Ecoparc Mon Ltd	Change of use from vacant land to recycling centre and erection of new transfer building at Plot 8+, Mona Industrial Park, Mona	04/06/2008	(7) Recycling operation Monday to Friday 0700 - 1900, Saturday 0700 - 1600	Not conditioned	Not applicable	(3) All non-inert waste material shall be dealt with within the transfer building and contained within an enclosed skip.	(12) No more than 4 skips to be stored overnight. Any putrescible material to be stored indoors.	Not conditioned	Mona, Anglesey.	
Permit A8 (Mineral Extraction AQ3)	Recycling at Nant Newydd Quarry	26C14H	Gwilym Owen	Full application for an inert recycling centre at Nant Newydd Quarry, Brynteg.	23/01/2013	(4) Monday to Friday 0800 - 1800, Saturday 0830 - 1300.	Not applicable	Not applicable	(6) Return HGV loads in respect of recycling centre shall not exceed 4 per hour or 32 per day.	(9) Nothing other than inert waste material shall be deposited and treated on site, acceptable wastes related to European Waste catalogue.	Not conditioned	Brynteg, Anglesey.	
Mineral Extraction AQ3 and Disposal	Nant Newydd Quarry	23C14G/EIA	W J Owen and Sons	Variation of Condition 2 on planning permission ref: 26C14/B to allow winning/worki	06/11/2009	Not applicable	Not applicable	Not applicable	(2) Two groundwater monitoring boreholes to be provided, agree trigger levels and	Not applicable	(No number) Quarrying 31/12/2020, tipping 31/12/2021. clear site	Brynteg, Anglesey.	Variation to end date

(Permit A9)				ng of mineral until 31/12/2020, tipping operation until 31/12/2021 and retention of buildings, vehicles, plant and machinery until 31/03/2022 at Nant Newydd Quarry, Brynteg.					mitigation plan.		31/03/2022		
Mineral Extraction AQ4 and Disposal (Permit A11)	Rhuddlan Bach Quarry	23C160D/ EIA	C & M Parry Plant Hire Ltd (CMP)	Extension to existing limestone quarry at Rhuddlan Bach Quarry, Brynteg.	08/06/2006	(11) Monday to Friday 0800 - 1800 Saturday 0800 - 1300	(12) 55 dB (A) Leq (1 hour) at nearest residential property.	(15) <6 mm/s for 95% of blasts over 12 months, no individual blast to exceed 8.5 mm/s. (14) Blasting between 1000 - 1600 Monday to Friday.	(10) No extraction below groundwater levels indicated. (19) Groundwater monitoring scheme	(28) No material other than inert waste shall be accepted at the site for landfilling for restoration purposes.	(2) 31/12/2040	Brynteg, Anglesey	No planning consent provided for A10 - Transfer Station including treatment.
Mineral Extraction AQ4 and Disposal (Permit	Rhuddlan Bach Quarry	23C160G	CMP trading as Clive Hurt Plant Hire Ltd	Variation of Condition 2 from planning permission 23C160A which states "The operations to	19/08/2010	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	(1) 31/12/2040	Brynteg, Anglesey.	Variation to end date. Consolidated application 23C160N to cover all

A11)				which this permission relates shall cease on or before 31/01/2010 to allow operations to continue until 31/12/2040 at Rhuddlan Bach Quarry, Brynteg									activities under 23C169G, 23C160D/ EIA and 23C160J submitted to planning authority.
Mineral Extraction AQ5 (No Permit)	Bwlch Gwyn Quarry	33C190	Tarmac, now Mr Efion Rowlands	Application for the review of conditions under the Environment Act (1995) at Bwlch Gwyn Quarry, Gaerwen.	20/07/1999	(6) Quarrying and processing Monday to Saturday 0700 - 1800, Asphalt Plant and dispatch of dry stone Monday to Saturday 0600 - 1900.	(16) 55 dB (A) Leq (1 hour) freefield or 10 dB (A) above background noise levels between 0700 and 1900. Operations outside these hours shall not exceed 10 dB (A) above background at any neighbouring property.	(11) 8 mm/s and an air overpressure of 120 dB for 95% of blasts over 6 months. No individual blast to exceed 10 mm/s and an air overpressure of 125 dB. (14) Blasting between 1000 - 1200 and 1400 - 1600 Monday to Friday, 1000 - 1200 Saturday.	(13) No extraction below 37m AOD	(24) No refuse or waste materials from outside shall be deposited within the site without prior written permission.	(1) 21/02/2042	Gaerwen, Anglesey.	Superceded by 33C190Q/ VAR
Mineral Extraction	Bwlch Gwyn	33C190Q/ VAR	Mr Efion Rowlands Anglesey	Application under section 73 to vary	31/07/2017	(14) Quarrying and	(23) 55 dB (A) Leq (1 hour) freefield or 10	(19) 6 mm/s for 95% of blasts over	(24) No extraction below 37m	(32) No refuse or waste materials from	(1) 21/02/2042	Gaerwen, Anglesey.	Application for a waste transfer

AQ5 (No Permit)	Quarry		Aggregates	condition (03) of planning permission reference 33C190 (Review of planning conditions in accordance with the Environment Act (1995) so as to allow the use of the original access at Bwlch Gwyn Quarry, Gaerwen.		processing Monday to Saturday 0700 - 1800, Asphalt Plant Monday to Saturday 0600 - 1900, dispatch of dry stone Monday to Friday 0800 - 1900 and Saturday 0800 - 1300.	dB (A) above background noise levels, whichever is the greater, at any neighbouring property between 0700 and 1900. Operations outside these hours shall not exceed 10 dB (A) above background at any neighbouring property.	12 months. No individual blast to exceed 10 mm/s. (21) Blasting between 1000 - 1200 and 1400 - 1600 Monday to Friday, 1000 - 1200 Saturday.	AOD. (3) Access shall be restricted to the access subject to this planning permission and that approved under planning permission 33C190C.	outside shall be deposited within the site without prior written permission.			Station expected during 2018.
Mineral Extraction AQ6 (No Permit)	Hengae Quarry	45C290	Hogan Group	Application for the review of conditions under the Environment Act (1995) at Hengae Quarry, Llangaffo.	24/04/2003	(4) Monday to Friday 0700 - 1900, Saturday 0700 - 1300.	(14) 55 dB (A) Leq (1 hour) freefield for any residential property or occupied building.	(18) 10 mm/s in 95% of all blasts measured in a 3 month period. No individual blast to exceed 12 mm/s at or near the foundations of any sensitive building or residential premises. (19)	(5) No extraction below 5m AOD.	(6) Annual output not to exceed 20,000 tonnes, with no more than 1600 tonnes in any one month.	(1) Mineral extraction 21/02/2042, clear site 21/05/2042, restoration completed 21/05/2044.	Llangaffo, Anglesey.	

								Blasting between 1000 - 1600 Monday to Friday, 1000 - 1200 Saturday.					
Permit A14	Green Skips Environmental Ltd, Gaerwen	33C20P/1	Green Skips Environmental Ltd	Erection of administrative building together with a waste transfer facility on Plot 12, Industrial Estate, Gaerwen.	08/01/1996	Not conditioned	(4) 45 dB (A) Leq (1 hour) at site boundary	Not applicable	Not applicable	(2) 2.4m high screening fence. No waste material to be stored above 2m in height	Not conditioned	Gearwen, Anglesey	
Permit A14	Green Skips Environmental Ltd, Gaerwen	33C20Q/3/ECON	Green Skips Environmental Ltd	Full application for the regularisation of a skip hire and waste recycling business together with the construction of a new waste transfer building that also consists of office and welfare facilities, Plot 12, Green Skps Environmental Ltd, Gaerwen	06/03/2014	(6) Recycling operations Monday to Friday 0700 - 1900, Saturday, Sunday and Bank Holidays 0700 - 1600. (7) No crushing on Sundays or Bank Holidays.	(8) 65 dB (A) Leq (1 hour) freefield at any point 10m from the site boundary.	Not applicable	(5) No burning of waste	(4) Collected inert UPVC plastics, wood and green wastes brought to the site shall be deposited within storage bays, height not to exceed walls (2.4m). All other waste to be stored on the waste transfer/storage building.	Not conditioned	Gaerwen, Anglesey.	

				Industrial Estate.									
Permit A15	Potters Waste Management, Gaerwen	33C20Z/3/ECON	Potters Waste Management (Richard Carter)	Full application for the change of use of building from B2 (general industrial) to Sui Generis (Waste Transfer), demolition of lean to building to create parking area, relocation of weighbridge, the siting of portable cabin together with alterations to the access at 4 Stad Diwydianal, Gaerwen Industrial Estate, Gaerwen.	03/01/2017	(7) Monday to Friday 0600 - 2000, Saturday 0700 - 1600, Sunday 0800 - 1600.	(9) 55 dB (A) Leq (1 hour) where background exceeds 45 dB (A), or 5 dB (A) above background where background is less than 45 dB (A) on Monday to Saturday 0730 - 1730 and less than 42 dB (A) on Sunday and Bank Holidays.	Not applicable	Not applicable	(3) All wastes delivered in suitably enclosed vessels/containers/trailers and similarly leaving site.	Not conditioned	Gaerwen, Anglesey.	
Permit A18	Penhesgyn In Vessel Composting	17LPA494G/CC/ECOIN	Ynys Mon County Council	The development of an in vessel composting facility and associated access, infrastructure	10/03/2006	(3) Monday to Saturday 0730 - 1800, Sunday and Bank Holidays	(4) 45 dB (A) Leq (1 hour) at closest façade of residential properties.	Not applicable	(6) No burning shall take place on site.	(2) Imported material shall not exceed 25,000 tonnes annually. Records to be made available.	Not conditioned	Menai Bridge, Anglesey.	

				and landscaping at Penhesgyn landfill site, Penneynydd, near Menai Bridge.		1730 - 1300.							
Permit A20	Recycling Centre, Penhesgyn.	41LPA957/CC	Head of Services (Waste) (presumably Ynys Mon County Council?)	Full application for the erection of a household waste recycling centre together with associated works at Penhesgyn Landfill, Menai Bridge.	26/06/2012	(8) Monday to Sunday 0800 - 1800.	Not conditioned	Not applicable.	Not applicable	(2) Store waste in designated areas, no waste to be left on the ground at any time.	Not conditioned	Menai Bridge, Anglesey.	
Permit A21	Waste Transfer and Materials Recovery, Penhesgyn.	17C254E/ECON	Cwmni Gwastraff Mon-Afgon Cyf (Ynys Mon County Council)	Development of a waste transfer station and materials recovery facility at Penhesgyn Landfill Site, Menai Bridge.	08/07/2005	(5) Monday to Saturday 0730 - 1800, Sunday 0730 - 1300	(7) 45 dB (A) Leq (1 hour) at closest façade of residential properties.	Not applicable	(10) No burning shall take place on site.	(9) All waste sorting operations shall be carried out within the building hereby approved.	Not conditioned	Menai Bridge, Anglesey.	
Certificate of Lawful Use for waste related operations	Various waste operations, Ynys Uschaf, Brynteg	30C630B	Par Contractors Ltd, Pandrig Huws.	Application for a certificate of lawfulness for existing use as a haulage yard, agricultural	22/06/2010	Not conditioned	Not conditioned	Not applicable	Not applicable	Not applicable	Not conditioned	Brynteg, Anglesey.	Certificate of Lawful Use, no provision for imposing planning conditions.

(No Permit)				contractors and septic tank operations yard, waste management and composting site and plant hire yard at Ynys Uschaf, Brynteg.									
Permit G2	Llandygai Waste Recycling Centre	C96A/0122/16/CL	Watkin Jones and Son Ltd	Waste Recycling Centre.	09/08/1996	Not conditioned	Not conditioned	Not applicable	Not applicable	Not applicable	Not conditioned.	Bangor, Gwynedd	
Permit G2	Llandygai Transfer Station	C00A/0582/18/LL	Watkin Jones and Son Ltd	Installation of stone crusher and processing stone and brick.	06/04/2001	Not conditioned	Not conditioned	Not applicable	Not applicable	Not applicable	Not conditioned.	Bangor, Gwynedd	
Permit G2	Llandygai Transfer Station	C07A/0754/16/LL	Watkin Jones Construction	Change of use of part of plot 30 to store building materials.	19/02/2008	Not conditioned	Not conditioned.	Not applicable.	(2) Development shall be carried out in conformity with plans SK01, SK02 submitted to the local authority. (4) No building materials shall be stored higher than four metres in	(3) The site shall be used for storage purposes and for no other purposes.	Not conditioned.	Bangor, Gwynedd	

									height. (5) No storage containers or structures shall be placed on top of another.				
Permit G3	Llandygai Civic Amenity Site	C05A/0522/16/R3	Gwynedd Council	Establishment of a Civic Amenity Site	05/10/2005	(6) Monday to Friday 0700 - 2100, Saturday and Sunday 0830 - 1800.	Not conditioned.	Not applicable.	Not conditioned.	(2) Waste materials shall be placed for segregation within the re-cycling compound and area designated for skips.	Not conditioned.	Bangor, Gwynedd	
Permit G4	Nant y Garth Landfill site	C16/0214/18/LL	Mr Paul Wills Treborth Leisure Ltd	Application under Section 73 of the Town and Country Planning Act 1990 to amend conditions 1, 2 and 5 of planning permission C01A/0392/18/LL for minor amendments to the finished profile of the existing inert landfill site so as to allow ease of reinstatement	11/05/2016	(13) Monday to Saturday 0730 - 2000.	Not conditioned.	Not applicable.	(12) Only the following materials shall be deposited at the site; topsoil, subsoil, hardcore, brickwork, stone, set concrete, clay, sand, silica (excluding finely powdered waste) glass, solid or granular dry materials free from any noxious	(11) No soils, overburden or inert waste materials shall be removed from the site except with prior written approval.	(1) 31/07/2021	Y Felinheli, Gwynedd.	

				and create a landform capable of establishing a woodland.					poison or polluting substance.				
Mineral Extraction GQ1 (Permit G5)	Penrhyn Quarry	C16/1164/16/MW	Welsh Slate Ltd	Application under the Environment Act 1995 for the determination of conditions under periodic review - Permissions Ref: C96A/0020/16/MW, C08A/0039/16/MW, C12/0874/16/MW, C15/1344/16/MW.	03/02/2017	(24) Blasting operations Monday to Friday 1000 - 1600 and Saturday 10.00 - 1300, drilling operations, soil stripping and overburden removal Monday to Friday 0700 - 1900 and Saturday 0700 - 1300.	(17) Noise levels not to exceed noise limits (45 to 55 dB (A) Leq 1 hour) set at noise sensitive properties between 0700 and 1900 hours, and not to exceed 42 dB between 1900 and 0700 hours at any noise sensitive property. (18) Temporary operations not to exceed 67 dB for no longer than 8 weeks in any 12 month period.	(26) <6mm/s in 95% of all blasts in any continuous 6 month period, no individual blast to exceed 10mm/s measured at the nearest vibration sensitive property. (27) Blasting limit at Marchlyn Dam spillway 1mm/s at any time.	(13) Only slate and other mineral waste shall be removed from the mineral working deposits and no material shall be removed below the original ground level beneath the deposit.	(15) No more than 650,000 tonnes per annum shall be removed from the site by road at a maximum rate of 2,600 tonnes per day, except with prior written agreement.	(1) Quarrying 31/12/2032, restoration 31/12/2034.	Bethesda, Bangor.	
Permit G6	Coed Bolyn Mawr	C03A/0111/18/LL	Mr R L Davies	Siting of mineral crusher to be used in conjunction with waste transfer station, amendment to design of	15/09/2003	(8) Monday to Friday 1000 - 1500. No operations of powered machinery on	(15) Noise level shall not exceed 51 dB A Leq (1 hour) free field at Coed Bolyn Lodge Monday to Friday 0900 - 1740 and Saturdays 0900 - 1330. Noise	Not applicable.	Not conditioned.	(6) No more than 25,000 tonnes of material per annum shall be put through the site at a maximum rate of no more than 100	Not conditioned.	Caernarfon, Gwynedd	

				approved building to house plant and machinery (alteration of planning condition 2 and 9 of consent C01A/0015/18/LL.		Sundays, Bank Holidays and Public Holidays. (16) Temporary operations shall not be carried out outside the hours of 0600 - 1900.	levels not to exceed 40 dB A Leq (5 minutes) free field at any noise sensitive property at all other times. (16) Temporary operations shall not exceed 70 dB (A) Leq (1 hour) and shall not be carried out for longer than a total of 8 weeks in any 12 month period.			tonnes per day.			
Permit G6	Coed Bolyn Mawr	C06A/0563/18/LL	Mr R L Davies	Extension to existing waste transfer station.	14/10/2008	(10) Monday to Friday 0900 - 1730, Saturday 0900 - 1330. No site activities on Sundays, Bank Holidays and Public Holidays.	Not conditioned.	Not applicable.	(2) All stockpiles of waste and stockpiles of segregated and processed materials shall at any time measure no more than six metres above the ground.	(3) The extension of use of the waste transfer station shall relate only to the stockpiling and storage of material derived from Coed Bolyn Mawr waste transfer station. Nothing shall be construed to permit anywhere within the application area operations involving the mechanical crushing, processing and	Not conditioned.	Caernarfon, Gwynedd	

										screening of any type of materials.			
Permit G6	Coed Bolyn Mawr	C03A/0111/18/LL	Mr R L Davies	Siting of mineral crusher to be used in conjunction with waste transfer station, amendment to design of approved building to house plant and machinery (alteration of planning condition 2 and 9 of consent C01A/0015/18/LL.	15/09/2003	(8) Monday to Friday 1000 - 1500. No operations of powered machinery on Sundays, Bank Holidays and Public Holidays. (16) Temporary operations shall not be carried out outside the hours of 0600 - 1900.	(15) Noise level shall not exceed 51 dB A Leq (1 hour) free field at Coed Bolyn Lodge Monday to Friday 0900 - 1740 and Saturdays 0900 - 1330. Noise levels not to exceed 40 dB A leq (5 minutes) free field at any noise sensitive property at all other times. (16) Temporary operations shall not exceed 70 dB (A) Leq (1 hour) and shall not be carried out for longer than a total of 8 weeks in any 12 month period.	Not applicable.	Not conditioned.	(6) No more than 25,000 tonnes of material per annum shall be put through the site at a maximum rate of no more than 100 tonnes per day.	Not conditioned.	Caernarfon, Gwynedd	
Permit G9	Unit A15, Cibyn Industrial Estate.	C05A/0663/14/R3	Gwynedd Council	Change of use of part of the council depot to a waste transfer station, new workshop, access and	04/04/2006	(7) Monday to Friday 0700 - 2100, Saturday and Sunday 0830 -	Not conditioned.	Not applicable.	Not conditioned.	(3) Waste materials shall be placed for segregation within the re-cycling compound and area designated for skips. Waste	Not conditioned.	Caernarfon, Gwynedd	

				office.		1800.				materials shall not at any time be stored outside the designated area.			
Permit G9	Unit A15, Cibyn Industrial Estate.	C11/0980/14/R3	Gwynedd Council	Part of a retrospective application from a use previously granted for the storage of recycling materials to a mixed waste transfer station with external alterations to the building and site boundary.	06/03/2012	(5) Monday to Saturday 0600 - 1800, Sunday 0800 - 1700.	Not conditioned.	Not applicable.	(4) Materials shall be placed for storage and dispatch only within the building shown on the application plans. No loaded skips or loaded haulage vehicles shall be stored within the site compound.	(2) Notwithstanding planning permission C11/0374/14/LL, the waste transfer facility shall not operate above a maximum rate of 10 loads per day and no more than 60 loads per week.	Not conditioned.	Caernarfon, Gwynedd	
Permit G9	Unit A15, Cibyn Industrial Estate. Transfer Station	C11/0374/14/R3	Gwynedd Council	Change of use of unit from an industrial use to a use for the storage of recycling materials.	20/06/2011	(6) a) Monday to Saturday 06.00 - 1800, b) Sunday 0800 - 1700.	(4) Noise limits must be controlled using manufacturers specification for the plant and operation equipment.	Not applicable.	Not conditioned.	(3) No materials other than dry recyclates shall be put through the waste transfer facility at a maximum rate of 10 loads per day, no more than 40 loads per week.	Not conditioned.	Caernarfon, Gwynedd	
Permit G10	Waste Recycling Centre,	C08A/0209/14/LL	Gwynedd Skip and Plant Hire	Extension to the existing recycling site	16/05/2008	(16) a) Mondays to Friday	(9) Plant and machinery operated to	Not applicable.	(12) All stockpiling shall measure	(8) No more than 75,000 tonnes per	(7) Six months from date	Caernarfon, Gwynedd	

	Cibyn Industrial Estate.		Ltd	with the erection of a new waste transfer building, parking facilities and erection of a 5 metre high perimeter screen.		0730 - 2000, b) Saturday 0730 - 1700, c) No site activities on Sunday and Bank Holidays.	manufacturers specification to reduce noise. (10) Within two years a background noise survey shall be undertaken		no more than 5 metres.	annum of household, commercial and industrial wastes, at a maximum rate of 570 tonnes per day, and no more than 2000 tonnes per week.	of this permission or upon completion of the waste transfer building, whichever sooner.		
Permit G10	Vacant land adjacent to Antur Waunfawr, Cibyn Industrial Estate.	C07A/0475/14/LL	Gwynedd Skip Hire Ltd	Retrospective application for a temporary change of use of land for the storage of empty skips and containers, and erection of 2.4m height security fencing.	31/07/2007	Not conditioned.	Not conditioned.	Not applicable.	(2) Only temporary storage of empty skips and containers permitted.	Not conditioned.	(1) Expires 31/12/2008	Caernarfon, Gwynedd	Only for the storage of skips and does not contribute to the waste management infrastructure.
Permit G10	Land by Penningtons, Cibyn Industrial Estate	C15/0730/14/LL	Gwynedd Skip Hire Ltd	Change of use of land for the storage of skips including engineering works, new access from an adjoining site and security	17/08/2015	Not conditioned.	Not conditioned.	Not applicable.	(5) Only storage of empty skips and containers permitted. (7) Skips and containers cannot be stacked higher than 4 m from the	Not conditioned.	Not conditioned.	Caernarfon, Gwynedd	Only for the storage of skips and does not contribute to the waste management infrastructu

				fence.					ground.				re.
Former mineral extraction site GQ2 (No permit)	Seiont Works, Caernarfon Brickworks.	C17/0011/19/MW	Jones Bros, Ruthin	Application for works associated with the construction of the proposed A147 Caernarfon to Bontnewydd bypass including; use of land as an extension to the existing site compound area and provision of a maintenance shed, office accommodation, welfare and car parking facilities, fuel store, sewage storage tank, mobile concrete batching plant and construction of haul route (temporary); construction of a new haul road on the northern	04/07/2017	(20) Monday to Friday 0700 - 1900, Saturday 0700 - 1300, no activities on Sundays and Bank Holidays. (22) Temporary operations shall not be carried out outside the hours of 0700 - 1900.	(21) Between the hours of 0700 - 1900, the noise levels shall not exceed 55 dB (A) Leq (1 hour) freefield at any noise sensitive property. Night time limits shall not exceed 42 dB (A) Leq (1 hour) freefield at any noise sensitive dwellings. (22) Temporary operations shall not exceed 67 dB (A) Leq (1 hour) freefield at any noise sensitive property and operations shall exceed the noise limit for longer than a total of 8 weeks in any 12 month period.	Not applicable.	(6) The import of materials for recovery and restoration, raw materials for processing and export of finished product shall be restricted to the use of the dedicated haul routes. (7) Haulage operations involving the import of materials for site restoration shall be completed within 3 years of notification of completion of materials haulage operations in connection with the bypass construction works.	(3) Nothing other than inert excavation materials, that are surplus to the requirements of the Caernarfon to Bontnewydd bypass project, shall be deposited at the site.	(2) The development shall cease and the site cleared of all plant machinery and structures within FIVE years of the notification of commencement. Thereafter the site shall be completely restored in accordance with the requirements of conditions 8 - 20.	Caernarfon, Gwynedd	

				boundary of the existing quarry with temporary connection to the proposed A147 Caernarfon to Bontnweydd bypass route during the construction period; continued extraction of minerals, removal of material from mineral working deposit and existing stockpile of materials; construction of hardstanding and siting of plant machinery for the processing and screening of materials; disposal of inert waste materials for long term quarry engineering/restoration									

				works.									
Mineral Extraction GQ3 (Permit G14) (68)	Ty Mawr West Slate Quarry	C09A/0046/22/MW	D and E Jones	Proposed extension of mineral waste extraction area and rationalisation of existing development to include a revised scheme of working and restoration to that previously approved under planning permission C01A/0646/22/MW for the removal of material from a mineral working deposit.	22/04/2009	(9) Monday to Friday 0730 - 1800 and Saturday 0830 - 1300. No operations on Sunday or Bank Holidays.	(14) Between 0730 and 1800 weekdays and 0730 and 1300 Saturdays noise shall not exceed 65 dB (A) Leq at the site boundary. Outside of these times should not exceed 45dB (A) Leq (5 minutes) freefield at any existing noise sensitive property. (15) Temporary operations should not exceed 70dB (A) Leq (1 hour) freefield at any noise sensitive property, for not more than 8 weeks in any 12 month period.	Not conditioned.	(10) No more than 30,000 tonnes per annum shall be removed from the site at a maximum rate of 300 tonnes per day. (11) Vehicular access is from the existing access to Ty Mawr East Quarry and by no other means. (21) The site shall be progressively restored. (23) All tunnels and underground passages on the permitted site shall be left open to secure access for bats.	(3) Operation of plant and machinery processing waste slate is restricted to site boundary of permission C01A/0646/22/MW. (4) Only slate and other mineral waste is removed from site, no material is to be removed from below original ground level. (5) No soils, sub-soils or waste materials of any description shall be brought into or disposed of within the site. (8) Plant and machinery shall be used for processing mineral waste only from the site. (10) No more than 30,000 tonnes per annum at a maximum rate	(1) Extraction of minerals by 31/12/2021, restoration by 31/12/2023.	Penygroes, Gwynedd	Application C18/0410/22/LL submitted to vary conditions 1, 5 and 8 to extend timescale and allow import of inert wastes for processing and use in restoration.

										of 300 tonnes per day to be removed from site.			
Soils Importation Permit G14 (Mineral Extraction GQ3)	Ty Mawr West Slate Quarry	C13/0452/22/LL	D and E Jones	Variation of existing planning permission C11/1139/22/LL involving the importation and placement of inert soils for site restoration purposes.	10/07/2013	(9) Monday to Friday 0730 - 1700 and Saturday 0830 - 1300. No operations on Sunday or Bank Holidays. (15) Temporary operations 0730 - 1900.	(14) Noise levels shall not exceed 40 dB (A) Leq (5 minutes) measured freefield at any existing noise sensitive property. (11) Temporary operations shall not exceed 70 dB (A) Leq (1 hour) and shall not be carried out for longer than a total of 8 weeks in any 12 month period.	Not conditioned.	(6) Vehicular access is from the existing access to Ty Mawr East Quarry and by no other means.	(5) No more than 8,000 tonnes of soils and inert waste shall be imported to the site for restoration purposes. (7) No material other than soil and inert waste shall be deposited at this site	(2) Disposal of inert waste, soils and ancillary operations shall cease by 31/12/2018, plant and machinery removed by 21/12/2018, restoration completed by 31/12/2019.	Penygroes, Gwynedd	Application C18/0410/22/LL submitted to vary conditions 1 and 2 to extend timescale for commencement and implementation.
Soils Storage Permit G14 (Mineral Extraction GQ3)	Ty Mawr West Slate Quarry	C15/1020/22/LL	Mr D Roberts	Application to establish a repository for the temporary storage of inert soils for future recovery and beneficial use in restoration	19/11/2015	(9) Monday to Friday 0800 - 1700 and on Saturday 0830 - 1300, no operations on Sunday and Bank Holidays. (13) Temporary	(12) Noise levels shall not exceed 40 dB (A) Leq (5 minutes) measured freefield at any existing noise sensitive property. (13) Temporary operations shall not exceed 70 dB (A) Leq (1 hour) and shall not be carried out for longer	Not applicable.	(3) Materials not to be stacked or deposited to a height exceeding 5m from the ground. (7) Vehicular access by the existing access to Ty Mawr East Quarry for the duration of the	(5) No more than 20,000 tonnes of inert soils within 2 years of commencement of development. (6) No more than 200 tonnes per week of materials to be transported to site. (8) No other materials other	(2) Use of the site for temporary soils repository shall cease within 8 years of the date of commencement. Soils are to be removed.	Penygroes, Gwynedd	

						operations not to be carried out outside of 07.00-19.00.	than a total of 8 weeks in any 12 month period.		development.	than soil and inert waste should be deposited at the site.			
Mineral Extraction GQ5 (No Permit)	Cefn Graianog Quarry	C10D/0487/34/MW	Ellesmere Sand and Gravel Company Ltd	Vary conditions of an existing planning permission to extend the life of quarrying operations. Conditions 1 and 2, planning permission 2/14/12G, Cefn Graianog and Graianog Farm and continuation of variation of conditions 1 and 2 previously granted under planning permission C00D/0005/34/MW amended scheme of extraction and	23/08/2011	(4) No operations other than water pumping, servicing and environmental monitoring shall be carried out in phases 11 - 5 except Monday to Friday 0700 - 1800 and Saturday 0800 - 1400, and in phase 6 Friday 0800 - 1800 and Saturday 0800 - 1400. No servicing between	(35) Noise levels arising from operations at the site shall not exceed 55 dB (A) Leq (1 hour) freefield at any noise sensitive residential property other than for soil stripping and restoration operations when noise levels shall similarly not exceed 65 dB (A) Leq.	Not applicable	(13) Progressive and even spreading of overburden shall be carried out during the period of mineral extraction. The overburden shall be levelled and graded in accordance with the approved restoration contours. (14) Upon completion of grading of overburden it shall be covered evenly with subsoil to at least depth of 30 cm.	(46) No refuse or waste materials shall be imported into the site.	(1) Extraction of minerals shall cease by 31/12/2020 by which time all plant and machinery shall have been removed from the site; restoration shall be completed by 30/06/2022.	Llanllyfni, Gwynedd	

				restoration.		2100 and 0700 on any day. No operations involving stripping and storage of topsoils and subsoils and land restoration measures shall be carried out except Monday to Friday 0800 - 1800 and Saturday 0800 - 1300. No operations to take place on Sundays or public holidays.							
Mineral Extraction GQ5 (No Permit)	Cefn Graianog Quarry	C15/0299/34/LL	Ellesmere Sand and Gravel Company Ltd	Construction of 3 ancillary silting lagoons and associated works to provide the	22/06/2015	(5) No operations to take place outside the hours of 0700 -	(11) Noise levels from operations shall not exceed 55dB (A) Leq (1 hour) freefield at any noise	Not applicable.	(19) The soil material set aside for agricultural restoration shall be spread	(7) Soils shall be kept in storage mounds of no more than 3m in height. (8) All organic	(2) Permitted use will cease by 31/12/2020, restoration shall be	Llanllyfni, Gwynedd	

				necessary capacity to enable the ongoing working of minerals and the provision of a closed system for the control of quarry water on site.		1800 Monday to Friday or 08.00 - 1400 on Saturday, nor at any time on Sunday, Bank Holidays or Public Holidays.	sensitive residential property, other than for soil stripping and restoration when noise levels shall not exceed 65dB (A) Leq (1 hour).		uniformly over the base material and shall be scarified to full depth. Minimum soil depth of 300mm and 700mm of free draining material above the ripped base material shall be provided over all areas.	layers, soils and overburden stripped and stored as condition 7 shall be used in bund construction and/ or restoration. No such materials shall be removed from the site without written permission.	completed by 30/06/2022 or upon cessation of operations, whichever is sooner.		
Permit G19	Bryn Gwydd Waste Transfer Station	C14/0129/42/LL	Griffith Williams	Change of use of farmyard to a waste transfer station for the storage and bulking-up of 1000 tonnes of building materials and excavation arisings.	25/06/2014	(6) The transport of materials, inclusive of movement of vehicles to and from the site, shall be confined to the hours of 0730 - 1730 Monday to Friday.	(16) The noise level arising from the development shall not exceed 40 dB (A) Leq (1 hour) freefield measured at the nearest noise sensitive property.	Not applicable.	(4) Materials shall not be stacked or deposited to a height exceeding 2 metres as measured from the ground of the application site and no more than 1000 tonnes of materials shall be stored at any time.	(5) No more than 5000 tonnes of material per annum shall be put through the site at a maximum rate of no more than 2 loads per day.	Not conditioned.	Pwllheli, Gwynedd.	
Permit G20	Glan y Don Civic Amenity	C06D/0481/45/R3	Gwynedd Council	Construction of a new civic amenity	08/01/2007	(6) Monday to Friday	Not conditioned.	Not applicable.	Not conditioned.	(2) Waste materials shall be placed for	Not conditioned	Pwllheli, Gwynedd.	

	Site			waste recycling centre together with a new access road.		0700 - 2100, Saturday and Sunday 0830 - 1800.				segregation within the recycling compound and area designated for skips.	.		
Permit G21	Gwrtaith Gwynedd Transfer Station	C11/0649/41/LL	H M Parry	Part retrospective application for a change of use from green composting site to a waste transfer station including the storage and processing of green waste and regularisation of operations for the processing, recycling and storage of wood waste and street/gully waste, using mobile plant.	21/11/2011	(2) Monday to Friday 0730 - 1800 and Saturday 0800 - 1400. No activities on Sundays and Bank Holidays.	Not conditioned.	Not applicable.	(9) All stockpiles of waste and stockpiles of segregated and processed materials shall at any time measure no more than four metres above ground level.	(1) No more than 25,000 tonnes of material per annum shall be put through the site.	Not conditioned.	Pwllheli, Gwynedd.	
Permit G21	Gwrtaith Gwynedd Transfer Station	C07D/0301/41/LL	H M Parry	Extension of existing yard to store and process green waste and alterations to	13/09/2017	(5) No operations involving the use of powered machiner	Not conditioned.	Not applicable.	Not conditioned.	(4) No more than 25,000 tonnes of material per annum shall be put through the	Not conditioned.	Pwllheli, Gwynedd.	

				the service road.		y shall take place on Sunday, Bank Holidays or Public Holidays.				site.			
Permit G23	Waste Transfer Station, Land west of Gelert House.	C14/1148/44/LL	O J Jones and Sons Ltd	Application under section 73 to vary conditions 3, 14, 15 and 16 on planning permission C12/1611/44/LL to construct a haulage depot and workshop together with an inert waste recycling facility.	27/01/2015	(7) Monday to Friday 0730 - 1900 and Saturday 0800 - 1400. No activities on Sundays and Bank Holidays. (24) Temporary operations shall not be carried out outside the hours of 0800 - 1800.	(22) (i) Noise levels between 0700 - 1900 shall not exceed 45 dB (A) Leq (1 hour) freefield at neighbouring noise sensitive properties, where the existing background noise level is equal to or less than 35 dB (A) L90, or (ii) Noise levels shall not exceed the existing background noise level by more than 10 dB (A) Leq (1 hour) freefield at neighbouring noise sensitive properties, where the background noise level is greater than 35 dB, subject to a maximum level 55 dB.	Not applicable.	(6) Waste materials shall be placed for segregation and processing only within the waste transfer area within Phase 1 of the development and such materials shall not exceed a height of 4m, measured form the finished floor level of the site.	(4) Nothing other than construction waste and excavation materials shall be deposited/treated at the site in accordance with the permitted use as a waste transfer/recycling facility.	Not conditioned.	Porthmadog, Gwynedd.	

							(23) Between the hours of 0500 and 0700, the noise level arising from the development shall not exceed 42 dB (A) Leq (1 hour) at any noise sensitive property. (24) Temporary operation shall not exceed 70 dB (A) Leq (1 hour) freefield at any noise sensitive property for longer than 8 weeks out of any 12 month period.						
Permit G25	Cooks Industrial Estate.	C16/1305/08/TC	GEWS Ltd (Gwynedd Environmental Services Ltd)	Application for a Lawful Development Certificate in relation to a waste treatment and disposal depot at Tyn Y Coed, Minffordd, Penhydeudraeth, Gwynedd.	07/02/2017	Not conditioned.	Not conditioned.	Not applicable.	Not conditioned.	Not conditioned.	Not conditioned.	Penhydeudraeth, Gwynedd.	Lawful use certificate, no provision within the planning regulations to impose conditions.
Mineral Extraction GQ7	Minffordd Quarry	C16/1385/05/MW	Tarmac	Environment Act 1995: First Periodic ROMP	16/04/2018	(7) (i) Operations associate	(15) Noise levels shall not exceed the limits specified	(22) Ground vibrations shall not exceed a	Not conditioned.	Not applicable.	(1) Winning and working, processing,	Minffordd, Gwynedd.	

(Mining and Extractive Waste Permit G26)				Review. IDO Permission Ref. 538, subject to Initial Review Ref. 5/76/198 and Permissions Ref. 5/76/198A and C10M/0116/05/MW.		d with the winning and working of minerals, the operation of crushing and screening plant, servicing and maintenance shall be carried out Monday to Friday 0600 - 2000 and Saturday 0600 - 1700. Crushing and screening 0600 - 1300 on a maximum of 15 Sundays per year. (ii) Asphalt plant operated Monday to	in the planning consent at identified properties. (16) Temporary operations shall not exceed 67 dB (A) Leq (1 hour) freefield for longer than 8 weeks in any 12 month period.	peak particle velocity of 6 mm/sec in 95% of all blasts measures over any continuous 6 month period and no individual blast shall exceed 10 mm/sec as measured at any blast vibration sensitive building.			stockpiling of minerals and the depositing of mineral waste shall cease by 21/02/2042. Restoration works shall be completed by 21/02/2044.		

						Saturday 0530 - 2000, and 0730 - 1630 on a maximum of 15 Sundays per year. (iii) Blasting Monday to Friday 0900 - 1600, no blasting on Sundays or Bank Holidays. (iv) No operations on Sundays or Public and Bank Holidays. (16) Temporary operations shall not be carried out outside 0700 and 1900.							
Permit G27	Waste Transfer Station,	C08M/0142/08/LL	Porthmadog Services	Retrospective applications for a Waste	03/12/2008	(11) Operating hours	Not conditioned.	Not applicable.	(8) All stockpiles of waste and of	(4) The development shall operate	Not conditioned	Penhydeudraeth,	

	Cookes Industrial Estate		Ltd	Transfer Station.		Monday to Saturday 0700 - 1800 and Sunday 0830 - 1300, no activities on Bank Holidays or Public Holidays.			segregated and processed materials shall at any time measure no more than 6 metres above ground level.	solely in connection with the waste transfer and recycling activities of the operating company. (10) Operations involving the crushing processing and screening of inert waste, demolition/excavation arisings, stone, quarried material and/or primary or secondary aggregate not permitted at any time.	.	Gwynedd.	
Permit G27	Waste Transfer Station, Cookes Industrial Estate	C07M/0054/08/LL	Porthmadog Services Ltd	Erection of building with 2 metres high perimeter fence and associated works for the development of a waste transfer station.	03/12/2007	(11) Operating hours Monday to Saturday 0700 - 1800 and Sunday 0830 - 1300, no activities on Bank Holidays or Public Holidays.	Not conditioned.	Not applicable.	(8) All stockpiles of waste and of segregated and processed materials shall at any time measure no more than 6 metres above ground level.	(4) Mixed waste materials shall be placed for primary segregation and processing only within the waste transfer building. Waste materials shall not at any time be stored outside the designated areas. (4) The development shall operate	Not conditioned.	Penhydeudraeth, Gwynedd.	

										solely in connection with the waste transfer and recycling activities of the operating company. (10) Operations involving the crushing processing and screening of inert waste, demolition/excavation arisings, stone, quarried material and/or primary or secondary aggregate not permitted at any time.			
Permit G32	Civic Amenity Centre	C10M/0146/03/R4	Gwynedd County Council	Change of use of land to a centre for the collection and sorting of materials for recycling, erection of an ancillary office and 2.4 m height perimeter fence.	07/04/2011	(5) No operations involving the operation of plant and movement of skips shall be carried out other than between the hours of 0900 - 1700.	Not conditioned.	Not applicable.	Not conditioned.	(2) Waste materials shall be placed for segregation within the recycling compound and area designated for skips.	Not conditioned.	Blaenau Ffestiniog, Gwynedd.	

Permit G33 (Mineral Extraction GQ8)	Llechwedd Quarry Waste Transfer Station	C17/0102/03/LL	Northern Welsh Recycling Ltd	Application for a waste transfer station to accept and process inert materials.	10/04/2017	(6) operating hours Monday to Friday 0700 - 1800 and Saturday 0800 - 1300, no activities on Sunday and Bank Holidays	(16) Noise shall not exceed (i) 45 dB (A) Leq (1 hour) freefield at neighbouring noise sensitive premises where background is 35 dB LA90 (1 hour), or (ii) no more than 10 dB above background where background exceeds 35 dB (A) Leq up to a maximum of 55 dB (A) Leq (1 hour).	Not applicable.	(4) Stockpiles to be stored in designated areas no more than 5 metres in height, storage not to exceed 30,000 tonnes. Permitted materials are soils, rock, excavation arisings and building materials.	(5) No more than 75,000 tonnes of materials throughput per annum at no more than 15 loads per day.	(2) Operations shall cease within 25 years of commencement of development, restoration to commence within 2 years after cessation, or within 6 months of the permanent cessation of site operations.	Blaenau Ffestiniog, Gwynedd.	No formal notification of commencement received by planning authority (June 2018).
Mineral Extraction CQ1 (Mining and Extractive Waste Permit C1)	Penmaenmawr Quarry	0/21469	Hanson UK	Environment Act 1995: First periodic review of mining site.	20/08/2012	Not conditioned, covered by main consent.	Not conditioned.	(19) Blast vibration levels shall not exceed 6 mm/s peak particle velocity in any plane calculated with a 95% confidence limit, measured at the nearest residential or other noise	No working below 290 m AOD without prior written approval.	(3) No materials, other than soils and overburden for restoration purposes, shall be deposited within the application site. (4) No soils or soil forming materials shall be imported without prior written approval, and no waste shall be imported at any time.	(1) Operations completed by 2042, final restoration by 21/02/2044.	Penmaenmawr, Conwy.	

								sensitive property. (17) Blasting operations Monday to Friday 1000 - 1700 and Saturday 1000 - 1300.					
Mineral Extraction CQ1 (Mining and Extractive Waste Permit C1)	Penmaenmawr Quarry	D3/11.1,	Hanson UK	Environment Act 1995: First periodic review of mining site.	20/08/2012	(B2) No aggregate transported by road outside Monday to Friday 0600 - 2200 and at any time on Sunday and Bank Holidays. (D1) Roadstone coating plant operated Monday to Saturday 0600 - 1900. (D2). Material not to be loading into	Not conditioned.	(E10) Blast vibration levels shall not exceed 6 mm/s peak particle velocity in any plane calculated with a 95% confidence limit, measured at the nearest residential or other noise sensitive property. (E8) Blasting Monday to Friday 1000 - 1700 and Saturday 1000 - 1300.	(C4) No materials shall be stored in the stocking areas other than minerals quarried at Pemmaenmawr Quary.	(C12) No soil or soil forming materials to be imported without prior written approval, and no waste materials shall be imported at any time. (C13) Such soils only to be used in restoration works. (C18) All soils to be retained on site.	(C10) Final restoration by 21/02/2044.	Penmaenmawr, Conwy.	

						coating plant before 0700 hours. (D3) Bitumen tankers not to be admitted before 0630. (D5) Concrete batching plant operated Monday to Saturday 0700 - 1900. (D8) Dry stone bays operated Monday to Saturday 0500 - 2200 and Sunday 0730 - 1800.							
Permit C2	The Old Brickworks (Worldcare Ltd)	4/14/270C	Northern Land Agricultural Improvements Ltd	Plans approved relating to Condition 3 a), b), and c)	19/01/1983	Not conditioned.	Not conditioned.	Not applicable.	Not conditioned.	Not conditioned.	Not conditioned.	Llandudno Junction, Conwy.	Proposed detail, phasing and landscape sections for infilling with inert

													waste material conditionally granted by Consent Notice 4/14/270C.
Permit C2	The Old Brickworks (Worldcare Ltd)	0/20492	Robin Jones and Sons	Change of use from Transport Depot to Inert Waste Materials Reclamation and Transfer Station.	Withdrawn	Not conditioned.	Not conditioned.	Not applicable.	Not conditioned.	Not conditioned.	Not conditioned.	Llandudno Junction, Conwy.	Application withdrawn, but site used as transfer station at some stage subsequently. Later consents all relate to erection of offices and superstore on parts of the brickworks site.
Permit C3	Bron-y-Nant Depot	0/24149	Conwy County Borough Council	Provision of a waste transfer facility for council use, erection of salt store and associated works as part of relocation of Council Contract Services	06/12/2000	Not conditioned.	Not conditioned.	Not applicable.	Not conditioned.	Not conditioned.	Not conditioned.	Mochdre, Conwy	

				Department.									
Permit C3	Bron-y-Nant Depot	0/30827	Conwy County Borough Council	Construction of new access road and hard standing area (at Civic Amenity Site).	05/01/2006	Not condition ed.	Not conditioned.	Not applicable.	Not conditioned.	Not conditioned.	Not conditioned .	Mochdre, Conwy	
Permit C3	Bron-y-Nant Depot	0/37197	Conwy County Borough Council	Demolition of existing building and erection of replacement modular building	04/11/2010	Not condition ed.	Not conditioned.	Not applicable.	Not conditioned.	(3) No storage containers, waste, equipment, or other materials shall be stored within the application site outside the open storage areas shown. Height of any items stored not to exceed 2 metres above ground level.	Not conditioned .	Mochdre, Conwy	
Permit C3	Bron-y-Nant Depot	0/37197	Conwy County Borough Council	Change of use to form an outlet for the sale of second hand goods, construction of first floor, entrance lobby, first floor storage area and secure store room. To	03/05/2017	Operating hours Monday to Friday 0700 - 1800, Saturday 0800 - 1800 and Sunday and Bank Holidays 0800 - 1700.	Not conditioned.	Not applicable.	(3) The site shall only be used as a Civic Amenity site and for the sale of second hand goods, which shall be ancillary to the existing Civic Amenity site and as a Depot and	(3) No storage containers, waste, equipment, or other materials shall be stored within the application site outside the open storage areas shown. Height of any items stored not to exceed 2	Not conditioned .	Mochdre, Conwy	

				divide the existing depot grounds and erection of fencing and gates.					Offices for Conwy County Borough Council Environmental Services Department.	metres above ground level.			
Permit C4	Caerhun Farm	0/36140	T P Roberts	Change of use from silage and slurry storage to on farm composting operation.	06/11/2009	Not conditioned.	Not conditioned.	Not applicable.	(2) The use of the application site as an on-farm composting operation shall be carried out only by the applicant, Mr Sion Roberts. In the event that the applicant no longer occupies the Dwelling……the composting operation shall cease.	(6) The site shall only be used for the storage and composting of garden green wastes for on-farm composting. No other waste materials (including kitchen waste and non-compostable wastes) shall be stored and treated. (7) Each load of garden green waste shall be inspected upon unloading.	Not conditioned.	Tal Y Bont, Conwy	
Permit C5	Morfa Uchaf Waste Treatment Site	0/36819	Mark Wright	Proposed engineering groundworks to raise level of agricultural land.	20/08/2010	Not conditioned.	Not conditioned.	Not applicable.	(3) The development shall not be commenced until a Construction Method Statement has been	(4) Raised ground level shall only be constructed and finished in accordance with the approved	Not conditioned.	Dolgarrog Tal Y Bont, Conwy	

									submitted and approved.	plans.			
Permit C6	Plas y Dre Waste Transfer Station	0/28968	Conwy County Borough Council	Depot refurbishment including erection of salt dome, replacement warehouse, gritter parking canopy, siting of 6 new portable buildings, sign storage area and recycling area.	Withdrawn	Not conditioned.	Not conditioned.	Not applicable.	Not conditioned.	Not conditioned.	Not conditioned.	Plas y Dre Llanwrst, Conwy	Application withdrawn, but Permit indicates there is a waste operation at the site
Mineral Extraction CQ3 (Mining and Extractive Waste Permit C7)	Raynes Quarry	0/36336	Cemex UK	Application under the Environment Act 1995 for the determination of conditions under periodic review.	19/01/2012	(3) Quarry operations Monday to Friday 0600 - 1700, Saturday 0700 - 1500, and Sunday 0800 - 1300. (7) No export by road after 1300 on Saturday and at any time on	(14) Noise not to exceed levels specified at listed noise sensitive properties, and not to exceed 42 dB (A) Leq (1 hour) between 0600 and 0700 at any noise sensitive property except 6 Station Terrace. (15) Temporary operations shall not exceed 67 dB (A) Leq (1 hour) freefield at any residential or other noise	(17) Blast vibration levels shall not exceed 6 mm/s Peak Particle Velocity (PPV) in any plane calculated with 95% confidence limit, with no blast exceeding 10 mm/s PPV measured at the nearest vibration	Not applicable.	Not applicable.	(1) Completed and restored 31/12/2028.	Llysfaen, Conwy.	

						Sunday. (5) Shiploading may take place outside these hours according to tides. (15) Temporary operations restricted to Monday to Friday 0600 - 1700 and Saturday 0700 - 1500.	sensitive property for 8 weeks in any 12 month period.	sensitive property. (9) Drilling restricted to 0700 - 1700 Monday to Friday and blasting restricted to 1000 - 1500 Monday to Friday.					
Mineral Extraction CQ3 (Permits C8, C9 and C10)	Llanddulas Quarry	1/CBA/5173	Powell Duffryn Quarries Ltd	Extension to limestone quarry	28/07/1981	(14) c) All other quarrying operations Monday to Friday 0600 - 2200 excluding Bank and Public Holidays, except for tertiary crushing and screening	Not conditioned	(14) a) All blasting Monday to Friday between 0730 and 1730, no blasting at any other time including Bank or Public Holidays. b) All drilling Monday to Friday 0730	(10) The maximum height of any working face in the extension area shall be of the order of 40 ft. As soon as practicable, the height of the working faces within the existing quarry shall be reduced to	(8) Any waste material produced by working the existing quarry and the extension area shall be deposited in approved locations.	(2) 31/12/2025	Abergele, Conwy.	

						plants. d) Transhipment of limestone by road or rail Monday to Friday 0600 - 1800 and Saturday 0600 - 1200 excluding Bank and Public Holidays. All shiploading shall take place daily as dictated by local tides.		- 1730 and Saturday 0730 - 1200, no drilling on Bank or Public Holidays.	a similar height. (16) Weekly rate of production of limestone shall not exceed 30,000 tonnes subject to a maximum within any 12 months period of 1 million tonnes. (18) (iii) The final slope angle to be no steeper than 12 degrees from the vertical. (18) (vi) The nature and quantity of any material to be imported and the locations where such material shall be spread shall be approved in writing.				
Mineral Extraction CQ3 (Permit	Llanddulas Quarry	1/11758	Powell Duffryn Quarries Ltd	Extension to existing quarrying operations - refused but	Appeal documents dated 16/02/1990	Not provided	Not provided	Not provided	Not provided	Not provided	Not provided	Abergele, Conwy.	No copy of planning consent and conditions

s C8, C9 and C10)				allowed on appeal, no appeal conditions initially provided and also following a specific request quoting the reference details.									provided.
Mineral Extraction CQ3 (Permits C8, C9 and C10)	Llanddulas Quarry	0/32924	Waste Recycling Group plc	Variation of condition no C2 of Review of Minerals Permission Approval Ref. D3/11.3 to revise extent of extraction.	19/03/2007	Not conditioned	Not conditioned	(4) No blasting operations shall be carried out during the months of June, July, August, December, January of February inclusive.	(10) Except for condition C2, as hereby modified, all conditions on the review of old mineral permissions (ref D3/11.3 dated 26th September 2002) shall remain in full force and effect.	Not conditioned	Not conditioned	Abergele, Conwy.	
Permit C10	Llanddulas Landfill	1/CBA/0506	Colwyn Borough Council	1. Erection of pulverisation plant 2. Use of land for disposal of refuse after pulverisation.	No decision date provided	Not provided	Not provided	Not provided	Not provided	Not provided	Not provided	Abergele, Conwy.	
Permit C10	Llanddulas Landfill	1/LYS/7074	Colwyn Borough Council	The use of land for the deposit refuse and other waste -	16/02/1984	Not provided	Not provided	Not provided	Not provided	Not provided	Not provided	Abergele, Conwy.	

				deemed planning consent granted.									
Permit C10	Llanddulas Landfill	1/13973	ARC Powell Duffryn Ltd	Continued use of land for the deposit of refuse and other waste materials	29/08/1991	(5) Refuse and other waste materials received Monday to Friday 0800 - 1630, Saturday 0800 - 1200 and Sunday 0900 - 1100. (6) Other operations Monday to Friday 0700 - 1900 and Saturday 0700 - 1700.	Not conditioned.	Not applicable.	Not conditioned.	(1) The use of land identified as phase 2 shall not be used for permanent tipping of refuse and other waste materials until a scheme showing final land levels has been submitted and approved,	Not conditioned.	Abergele, Conwy.	
Permit C10	Llanddulas Landfill	1/14171	ARC Powell Duffryn Ltd	Alteration of conditions 6 and 7 imposed under planning permission 1/13973 to permit site cover activities on Sundays from	29/08/1991	(5) Refuse and other waste materials received Monday to Friday 0800 - 1630, Saturday 0800 -	Not conditioned.	Not applicable.	Not conditioned.	(1) The use of land identified as phase 2 shall not be used for permanent tipping of refuse and other waste materials until a scheme showing final	Not conditioned.	Abergele, Conwy.	

				0830 to 1130.		1200 and Sunday 0900 - 1100. (6) Other operations Monday to Friday 0700 - 1900, Saturday 0700 - 1700 and Sunday 0830 - 1130.				land levels has been submitted and approved,			
Permit C10	Llanddulas Landfill	1/16360	Greenways Landfill	Landfill restoration, variation of planning conditions 1, 4 and 8 of planning permission 1/14171, amended sequence of phasing for landfilling and minor extensions to landfill area.	27/07/1995	(5) Refuse and other waste materials received Monday to Friday 0800 - 1630, Saturday 0800 - 1200 and Sunday 0900 - 1100. (6) Other operations Monday to Friday 0700 - 1900, Saturday 0700 - 1700 and Sunday	Not conditioned.	Not applicable.	Not conditioned.	Not conditioned.	Not conditioned.	Abergele, Conwy.	

						0830 - 1130.							
Permit C10	Llanddulas Landfill	0/23317	Hanson Waste Management	Use of land for the storage of skips.	Not dated	(2) Skips to be handled within the site and transported to and from the site Monday to Friday 0800 - 1730 and Saturday 0800 - 1300.				(3) No skips other than empty skips shall be stored or placed on the application site without written approval.	(1) Skip storage shall cease on 31/12/2004	Abergele, Conwy.	
Permit C10	Llanddulas Landfill	0/23331	Hanson Waste Management	Continued landfill operations (including an amendment to the sequence of landfill and restoration phasing approved under planning permission 1/16360) and to construct a screening bund tunnel.	Not provided	Not provided	Not provided	Not provided	Not provided	Not provided	Not provided	Abergele, Conwy.	
Permit C10	Llanddulas Landfill	0/24338	Hanson Waste Manage	Change of use of part of landfill site for	Not provided	Not provided	Not provided	Not provided	Not provided	Not provided	Not provided	Abergele, Conwy.	Application dated 10/10/200

			ment	the processing of inert materials to be used on the restoration of the landfill site.									0
Permit C10	Llanddulas Landfill	0/27248	Waste Recycling Group plc	Continued landfilling and restoration of existing landfill site, without complying with conditions (4) and (8) of planning permission 1/16360, to allow for the revised sequence of landfill and restoration phasing.	21/01/2004	(6) a) Waste or cover material can be admitted into the site or deposited on the site Monday to Friday 0800 - 1630, Saturday 0800 - 1200 and Sunday 0900 - 1100. Other operations (including the movement and spreading of soils) can be carried out	(11) Noise levels measured freefield at any dwelling or other noise sensitive property over any 60 minute period shall not exceed 55 dB (A) Leq Monday to Friday between 0700 and 1730, 55 dB (A) Leq on Saturdays 0730 - 1230 and at all other times 42 dB (A) Leq. (12) Noise levels measured freefield at any dwelling or other noise sensitive property over any 15 minute period shall not exceed 60 dB (A) Leq Monday to Friday between 0700 and 1730, 60 dB (A) Leq on Saturdays 0730	Not applicable.	(13) No materials shall be burnt within or upon the application site. (14) No waste, other than restoration materials, shall be stockpiled in the application site.	(2) Waste disposal operations shall be carried out sequentially in accordance with the phasing sequence on the approved drawings. (3) No waste disposal or other operation shall be carried out in Phases 3a, 3b or 3c until a detailed scheme has been submitted and approved.	(19) Pre-settlement restoration of the site shall be completed by the following dates: Phase 3a by 30/08/2017, Phase 3b by 30/08/2022. and Phase 3c by 30/08/2055.	Abergele, Conwy.	

						Monday to Friday 0700 - 1900, Saturday 0700 - 1700 and Sunday 0830 - 1130.	- 1230 and at all other times 55 dB (A) Leq.						
Permit C10	Llanddulas Landfill	0/35764	Waste Recycling Group plc	Variation of condition 1 and 3i of planning permission granted under 0/27248 to allow non-hazardous waste within the valley phase west amend the restoration contours at Llanddulas landfill site.	Not provided	Not provided	Not provided	Not provided	Not provided	Not provided	Not provided	Abergele, Conwy.	
Permit C9	Llanddulas Landfill	0/32442	Waste Recycling Group plc	Change of use from vacant quarry to green waste compost facility.	09/02/2007	(3) Monday to Friday 0800 - 1730, no operations on Saturday, Sunday or Bank Holidays.	Not conditioned.	Not applicable.	(4) Deoderising equipment shall remain present at all times.	(5) No surface water shall be permitted into the public sewerage system.	(1) Consent shall expire on 30/04/2012	Abergele, Conwy.	

Permit C9	Llanddulas Landfill	0/38492	3C Waste Ltd	Extension to existing green waste compost facility to increase operational area and to allow for the continued use of the operation in accordance with the lifespan of the wider landfill site.	11/05/2012	(5) Monday to Friday 0800 - 1730, no operations on Saturday, Sunday or Bank Holidays, except for the turning of compost waste material.	Not conditioned.	Not applicable.	Not conditioned.	(7) The amount of green waste to be processed by the green waste compost facility shall not exceed 20,000 tonnes per annum.	(1) Consent expires on 1/01/2022.	Abergele, Conwy.	
Permit C8	Llanddulas Landfill	0/38815	Waste Recycling Group plc	Proposed removal of existing brickworks and ancillary structures and development and operation of a materials recycling facility and ancillary infrastructure including development of a surface water lagoon.	16/10/2012	(4) Demolition and construction work Monday to Friday 0800 - 1800 and Saturday 0800 to 1300. (8) Use of Materials Recycling Facility Monday to Friday 0730 - 1730 and Saturday 0830 - 1200.	Not conditioned.	Not applicable.	(3) The vehicular delivery doors of the recycling building shall remain closed at all times, except when delivery vehicles are entering of exiting the building. The unloading, loading and sorting of materials shall only take place inside the building when the vehicular delivery doors	(12) The maximum throughput of waste at the facility will be limited to 110,000 tonnes per annum. Waste processed by the facility will be restricted to solid, non-hazardous commercial, industrial and municipal waste (including road sweepings).	Not conditioned.	Abergele, Conwy.	

									are closed. (14) No waste shall be stored (including waste prior to and after processing) outside the main recycling building.				
Permit C8	Llanddulas Landfill	0/43047	Caulmert Ltd	Change of use and extension to former workshop to form a waste transfer station and use of land for the storage of recovered wastes and processing and storage of inert waste.	03/02/2017	(8) Construction work Monday to Friday 0800 - 1800 and Saturday 0800 - 1300, operation and deliveries Monday to Friday 0730 - 1730 and Saturday 0830 - 1200.	(10) Noise levels measured at any nearby noise sensitive properties shall not exceed a) Monday to Saturday 0730 - 1730 55 dB (A) Leq (1 hour) freefield where background noise levels exceed 45 dB (A), and background noise levels + 5 dB (A) where background noise levels are less than 45 dB (A) b) On Bank Holidays 42 dB (A).	Not applicable.	Not conditioned.	(3) All waste shall be delivered to the site in suitably enclosed vessels/containers/ trailers and no laden delivery vehicles shall be permitted to leave the site unless the vessels/ containers/trailers are suitably enclosed.	Not conditioned.	Abergele, Conwy.	
Permit C12	Gofer Bulking Station	1/15555	C J Davies	Use of land for recycling/trade waste and	13/01/1994	(6) Operating hours 0700 -	Not conditioned.	Not applicable.	(10) No development shall take place until a	(4) The premises shall be used as a waste transfer	Not conditioned.	Abergele, Conwy.	

				reaction of operation building and office.		1900.			gas monitoring scheme has been drawn up to commence no later than the date of development and shall continue for a period of not less than two years.	station, for the sorting and storage of recyclable materials and as a Civic Amenity Site and for no other purpose			
Permit C12	Gofer Bulking Station	1/27977	J Parry Jones	Erection of building to enclose existing re-cycling yard	29/01/2004	(5) Operating hours 0700 - 1900.	Not conditioned.	Not applicable.	(4) No plant or machinery or vehicles shall be brought onto the site unless it is directly required in connection with the operation of the waste recycling depot unless otherwise approved in writing.	(3) The building shall only be used as a waste transfer station, for the sorting and storage of recyclable materials and as a Civic Amenity Site in association with the adjacent waste recycling depot.	Not conditioned.	Abergele, Conwy.	
Permit C12	Gofer Bulking Station	1/29812	J Parry Jones	Change of use of land and engineering operations to form Waste Transfer Station for topsoil and	22/06/2005	(6) Operating hours 0700 - 1900.	Not conditioned.	Not applicable.	(4) No other plant or machinery or vehicles other than those referred to in the application or those not	(3) The premises shall only be used as a waste transfer station, for the sorting and storage of recyclable materials and	Not conditioned.	Abergele, Conwy.	

				builder's rubble and sale of topsoil and rubble and landscaping of the site.					being used directly in connection with the permission hereby granted shall be brought onto the site for any repair, maintenance or parking.	for no other purpose. (10) There shall be no open storage of waste material within the application site above a maximum height of 3 metres from the finished floor level.			
Permit C12	Gofer Bulking Station	1/32857	Boyce Associates	Erection of a baling enclosure.	14/05/2007	Not conditioned.	Not conditioned.	Not applicable.	Not conditioned.	The building shall only be used as a waste transfer station, for the sorting and storage of recyclable materials and as a Civic Amenity Site in association with the adjacent waste recycling depot.	Not conditioned.	Abergele, Conwy.	
Permit C13	Thorncliffe Building Supplies Ltd	0/29617	Conwy Borough County Council	User of land for Bulking Dry Recycling Station including erection of maintenance shed, offices, storage areas, wash areas and	13/06/2005	(12) Operating hours Monday to Friday 0700 - 1800 and Saturday 0800 - 1500, including	Not conditioned.	Not applicable.	(13) The development shall ensure only for the benefit of Conwy Borough County Council and shall only be operated as a	(15) The site shall be limited to a maximum throughout in any calendar year of 50,000 tonnes. (12) The site shall not at any time be used for the disposal	Not conditioned.	Abergele, Conwy.	

				parking facilities.		the arrival and departure of vehicles, but not at any time on a Public or Bank Holiday unless otherwise improved in writing.			bulking station for clean and dry recyclables that have minimum pollution potential (comprising glass, cardboard/paper, metals, plastics or other goods approved in writing, but excluding liquids, vehicles, household goods, garden waste, hazardous substances/waste and bulky items).	of waste nor for waste incineration.			
Permit C13	Thorncliffe Building Supplies Ltd	0/35776	Conwy Borough County Council	Variation of condition no 12 and 13 granted under planning reference 0/30252 to allow for amended operating hours and to include food waste collection and	17/06/2009	(3) Operating hours Monday to Friday 0700 - 1900 (including Bank Holidays but excluding Christmas Day and	Not conditioned.	Not applicable.	(4) The development shall ensure only for the benefit of Conwy Borough County Council and shall only be operated as a bulking station for clean and dry recyclables	(4) The site shall not at any time be used for the disposal of waste nor for waste incineration. (5) The household food waste collection shall only be transferred through the bulking station	(5) Household food waste until 30/06/2010.	Abergele, Conwy.	

				bulking.		Boxing Day) and Saturday and Sundays 0800 - 1700, including the arrival and departure of vehicles.			and household food waste that have minimum pollution potential (comprising glass, cardboard/paper, metals, plastics or other goods approved in writing, but excluding liquids, vehicles, household goods, garden waste, hazardous substances/waste and bulky items).	in accordance with the sealed bag/container system hereby permitted. Such transfers shall cease if any form of associated pollution or nuisance is created, or by 30/06/2010 unless an extended period has been approved in writing.			
Permit C13	Thorncliffe Building Supplies Ltd	0/35433	Conwy Borough County Council	Extension of existing Bulking Station Building, construction of extended hardstanding/ external storage area and installation of portacabin.	19/01/2011	(10) Operating hours Monday to Friday 0700 - 1900 (including Bank Holidays but excluding Christmas Day and Boxing	Not conditioned.	Not applicable.	(11) The development shall ensure only for the benefit of Conwy Borough County Council and shall only be operated as a bulking station for clean and dry recyclables that have	(4) The site shall not at any time be used for the disposal of waste nor for waste incineration. (12) No food waste shall be admitted into the application site unless it is contained within sealed bags and either: a) tipped	Not conditioned.	Abergele, Conwy.	

						Day) and Saturday and Sundays 0800 - 1700, including the arrival and departure of vehicles.			minimum pollution potential (comprising glass, cardboard/paper, metals, plastics or other goods approved in writing, but excluding liquids, vehicles, household goods, garden waste, hazardous substances/waste and bulky items).	directly into containers and closed, or b) handled in accordance with a method statement submitted and approved in writing. (14) The tonnage of materials admitted into the site shall not exceed 25,000 tonnes in any calendar year.			
Permit C14	Abergele Civic Amenity Site	1/14269	Colwyn Borough Council	Continued use of land as Civic Amenity Site.	16/01/1992	(2) Operation hours 0700 - 1900.	Not conditioned.	Not applicable.	Not conditioned.	Not conditioned.	Not conditioned.	Abergele, Conwy.	
Permit C14	Abergele Civic Amenity Site	0/28084	Conwy Borough County Council	Construction of Civic Amenity Site, site remodelling, site fencing, drainage, access improvements and office building.	15/01/2004	(12) Operating hours Monday to Saturday 0800 - 1800 and Sunday and Bank Holidays 0900 - 1700. (10) The	(9) The site shall not generate noise exceeding the following levels measured at monitoring locations specified at Gofer, Pen Y Ffordd and Coed Derw (limits range from 50 to 64	Not applicable.	(10) The shredder shall only be sited on the lower level part of the site adjacent to the proposed screen bund.	(4) The throughput of material received shall not exceed 25,000 tonnes per year, unless otherwise approved in writing.	Not conditioned.	Abergele, Conwy.	

						shredder shall only be used Monday to Friday 0800 - 1800 and Saturday 1000 - 1800 and shall not be used for any period exceeding 2 hours and there shall be a minimum period of 4 hours between each usage.	dB (A) Leq (1 hour) and 44 to 50 dB L90 (1 hour).						

Figures

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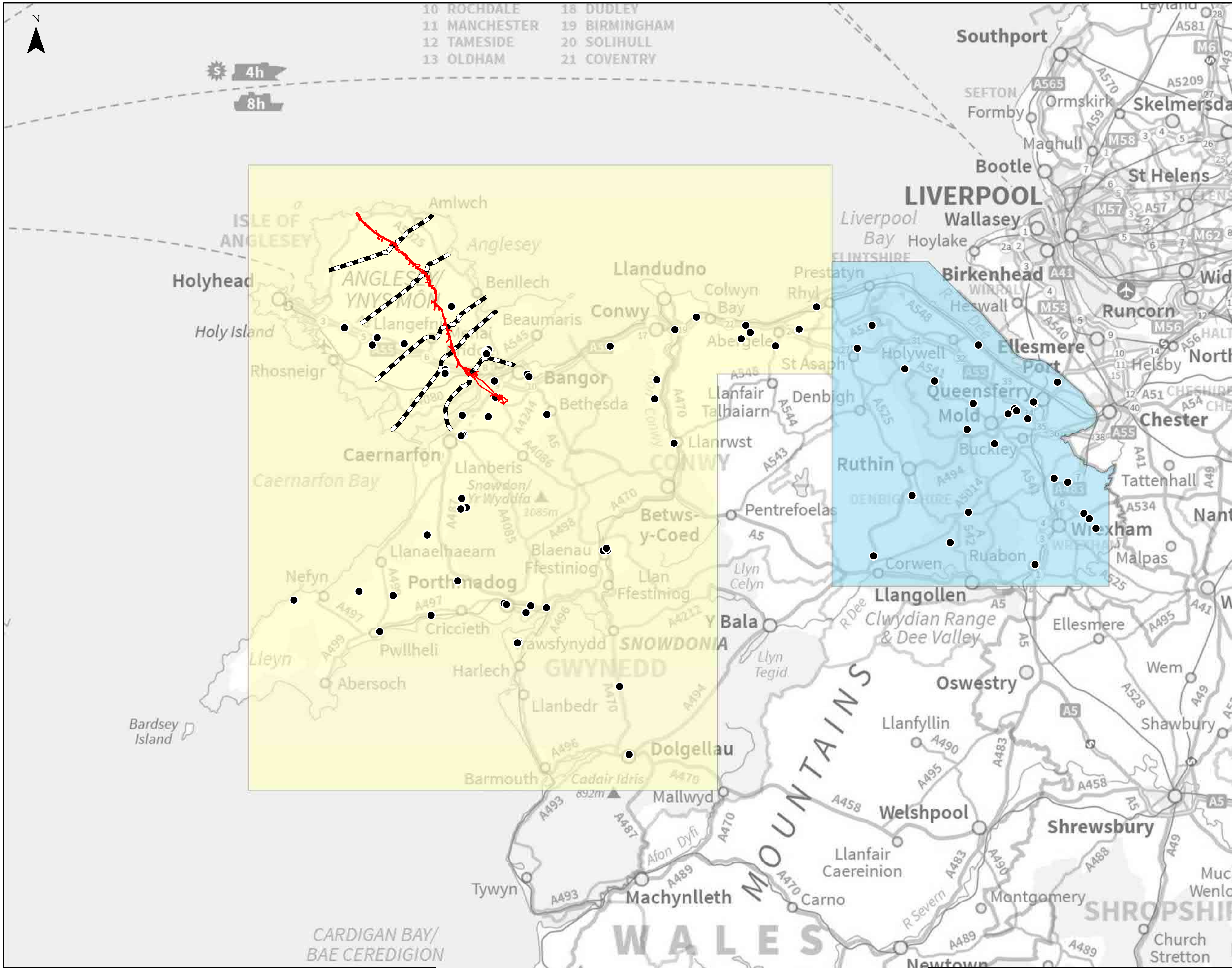

NWC ROUTE LEGEND

LEGEND

- ORDER LIMITS - OPTION A
- SECTION CUTLINES
- WASTE PERMIT
- WASTE PERMIT SEARCH AREA
- SEARCH AREA FOR WASTE DISPOSAL AND TREATMENT PERMITS ONLY

NOTES

1: ACTIVE AND CLOSED WASTE PERMIT SITES LISTED ON NATURAL RESOURCES WALES (NRW) WEBSITE. REFER TO TABLE 1 APPENDIX 2 FOR DETAILS.

Rev	Date	Description	GIS	Chk	App
A	01/08/2018	OWMP	JB	MG	KZ

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 1 WASTE PERMIT SEARCH AREA SECTION C OPTION A

Creator:	Date:	Checker:	Date:	Approver:	Date:
JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

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FIGURE	1:500,000	A3	1 of 1 Option A	A

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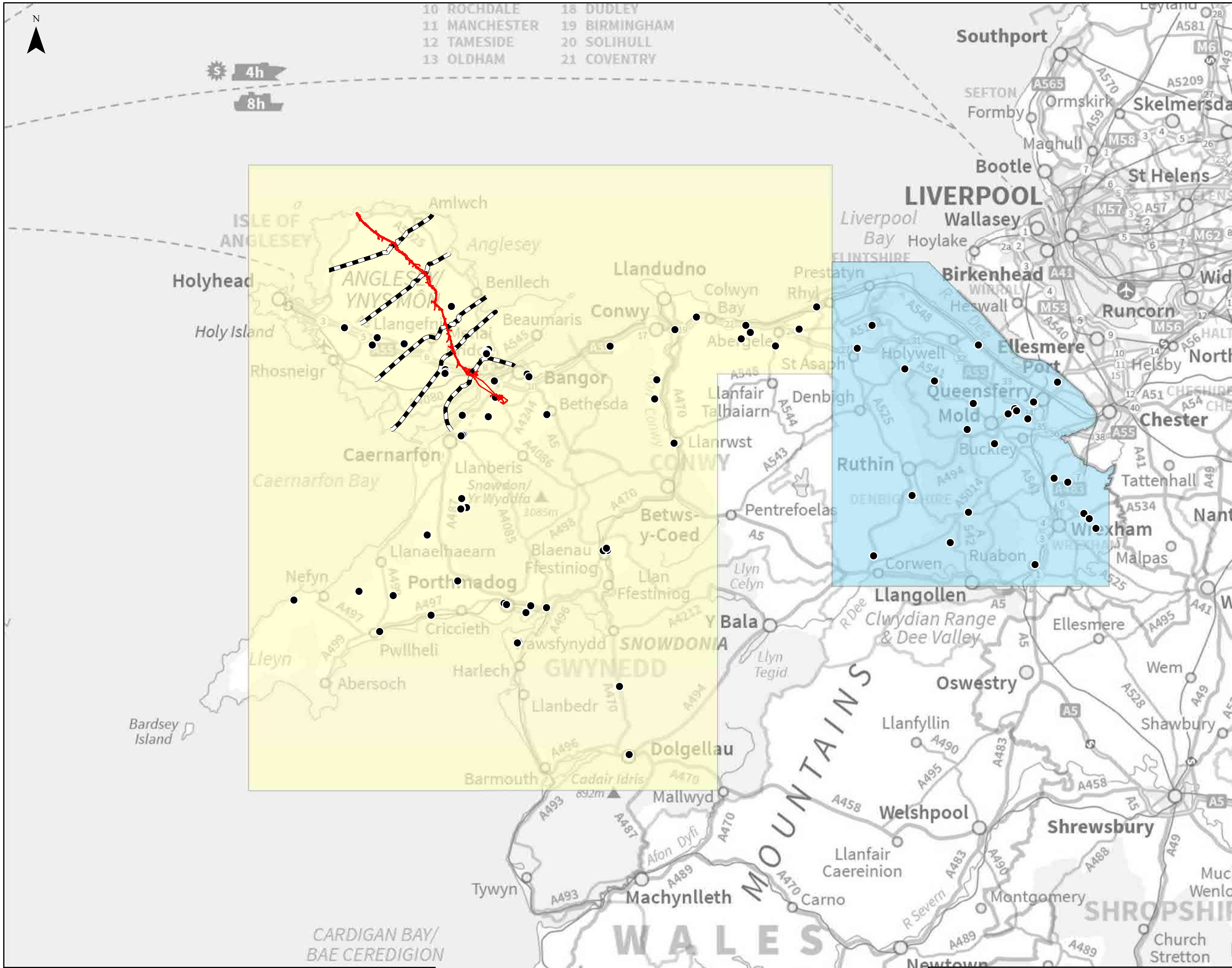
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Wallasey
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Ormskirk
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St Helens
Runcorn
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Chester
Wrexham
Holyhead
Holy Island
Rhosneigr
Amlwch
Anglesey
ANGLESEY/ YNYS MÔN
Benllech
Llangefni
Beaumaris
Bangor
Bethesda
Llandudno
Conwy
Colwyn Bay
Abergele
Prestatyn
Rhyl
St Asaph
Denbigh
Holywell
Queensferry
Mold
Buckley
Ruthin
Llanrwst
Llanfair Talhaiarn
Pentrefoelas
Betws-y-Coed
Caernarfon
Caernarfon Bay
Llanberis
Snowdon/ Yr Wyddfa
1085m
Llanaelhaearn
Blaenau Ffestiniog
Llan Ffestiniog
Porthmadog
Nefyn
Criccieth
Pwllheli
Llŷn
Abersoch
Harlech
Trawsfynydd
SNOWDONIA
GWYNEDD
Llanbedr
Bardsey Island
Dolgellau
Barmouth
Cadair Idris
892m
Mallwyd
Bala
Llyn Tegid
Llyn Celyn
Corwen
Llangollen
Ruabon
Clwydian Range & Dee Valley
Oswestry
Ellesmere
Wem
Malpas
Tattenhall
Llanfyllin
Welshpool
Shrewsbury
Llanfair Caereinion
Carno
Machynlleth
Tywyn
Montgomery
Church Stretton
Newtown
SHROPSHIRE
CARDIGAN BAY/ BAE CEREDIGION
WALES
MOUNTAINS
10 ROCHDALE
11 MANCHESTER
12 TAMESIDE
13 OLDHAM
18 DUDLEY
19 BIRMINGHAM
20 SOLIHULL
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NWC ROUTE LEGEND

LEGEND

- ORDER LIMITS - OPTION B
- SECTION CUTLINES
- WASTE PERMIT
- WASTE PERMIT SEARCH AREA
- SEARCH AREA FOR WASTE DISPOSAL AND TREATMENT PERMITS ONLY

NOTES

1: ACTIVE AND CLOSED WASTE PERMIT SITES LISTED ON NATURAL RESOURCES WALES (NRW) WEBSITE. REFER TO TABLE 1 APPENDIX 2 FOR DETAILS.

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Document Title: FIGURE 1
WASTE PERMIT SEARCH AREA
SECTION C OPTION B

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NWC ROUTE LEGEND

LEGEND

- ORDER LIMITS - OPTION A
- SECTION CUTLINES
- ROADS
- WASTE PERMITS

NOTES

COUNTY ABBREVIATION TO SITE FLAG
A - ANGLESEY
C - CONWY
D - DENBIGHSHIRE
F - FLINTSHIRE
G - GWYNEDD
W - WREXHAM

ACTIVE AND CLOSED WASTE PERMIT SITES LISTED ON NWR WEBSITE. REFER TO TABLE 1 APPENDIX 2 FOR DETAILS.

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 2
WASTE PERMIT LOCATIONS
SECTION C OPTION A

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JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

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NWC ROUTE LEGEND

LEGEND

- ORDER LIMITS - OPTION B
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- ROADS
- WASTE PERMITS

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 2
WASTE PERMIT LOCATIONS
SECTION C OPTION B

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JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

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NWC ROUTE LEGEND

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- ORDER LIMITS - OPTION A
- SECTION CUTLINES
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COUNTY ABBREVIATION TO SITE FLAG
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WASTE PERMIT LOCATIONS
SECTION C OPTION A

Creator:	Date:	Checker:	Date:	Approver:	Date:
JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

Document Type:	Scale:	Format:	Sheets:	Rev:
FIGURE	1:400,000	A3	1 of 1 Option A	A

0 10 20 40
Kilometres

Document Path: \\Ukmcr1fp002\ukmcr1fp002-v1ie\Proposal\3512\North Wales Connection - NG\GIS\02 Maps\Land Use & Agriculture\Outline Waste Mang Plan\OWMP_2_WastePermitLocations_KP_JB_20180814.mxd

N

NWC ROUTE LEGEND

LEGEND

- ORDER LIMITS - OPTION B
- SECTION CUTLINES
- ROADS
- WASTE PERMITS

NOTES

COUNTY ABBREVIATION TO SITE FLAG
A - ANGLESEY
C - CONWY
D - DENBIGHSHIRE
F - FLINTSHIRE
G - GWYNEDD
W - WREXHAM

ACTIVE AND CLOSED WASTE PERMIT SITES LISTED ON NWR WEBSITE. REFER TO TABLE 1 APPENDIX 2 FOR DETAILS.

Rev	Date	Description	GIS	Chk	App
A	01/08/2018	OWMP	JB	MG	KZ

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 2
WASTE PERMIT LOCATIONS
SECTION C OPTION B

Creator:	Date:	Checker:	Date:	Approver:	Date:
JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

Document Type:	Scale:	Format:	Sheets:	Rev:
FIGURE	1:400,000	A3	1 of 1 Option B	A

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Kilometres

Document Path: \\Ukmcr1fp002\ukmcr1fp002-v1ie\Proposal\3512\North Wales Connection - NG\GIS\02 Maps\Land Use & Agriculture\Outline Waste Mang Plan\OWMP_2_WastePermitLocations_KP_JB_20180814.mxd

N

Nant Newydd Quarry - A9

Rhuddlan Bach Quarry Landfill - A11

Penmaenmawr Quarry - C1

Llanddulas Landfill Site - C10

Raynes Quarry - C7

Foryd Harbour - C15

Meas Mynan Quarry - F3

Fron Haul Quarry - F2

Ty Mawr Farm Landfill - C11

Morfa Uchaf - C5

Nant Y Garth Landfill Site - G4

Ty Mawr (East Quarry) - G14

Borras Quarry - W3

Clays Site - W4

Llechwedd Slate Mines - G31

Moel Y Faen Quarry - D4

Isfryn Field - D5

Minffordd Quarry - G26

NWC ROUTE LEGEND

Bangor

LEGEND

- ORDER LIMITS - OPTION A
- SECTION CUTLINES
- ROADS
- WASTE PERMIT: DISPOSAL FACILITIES
- LANDFILL
- MINING & EXTRACTIVE WORKS
- RECOVERY OPERATION

NOTES

ACTIVE AND CLOSED WASTE PERMIT SITES LISTED ON NATURAL RESOURCES WALES (NRW) WEBSITE. REFER TO TABLE 1 APPENDIX 2 FOR DETAILS.

Rev	Date	Description	GIS	Chk	App
A	01/08/2018	OWMP	JB	MG	KZ

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 3
WASTE PERMIT LOCATIONS: DISPOSAL FACILITIES OPTION A

Creator:	Date:	Checker:	Date:	Approver:	Date:
JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

Document Type:	Scale:	Format:	Sheets:	Rev:
FIGURE	1:400,000	A3	1 of 1 Option A	A

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Kilometres

Document Path: \\Ukmcr1fp002\ukmcr1fp002-v1ie\Proposal\3512\North Wales Connection - NG\GIS\02 Maps\Land Use & Agriculture\Outline Waste Mang Plan\OWMP_3_WastePermitLoc_DisposalFac_KP_JB_20180814.mxd

N

Nant Newydd Quarry - A9

Rhuddlan Bach Quarry Landfill - A11

Penmaenmawr Quarry - C1

Llanddulas Landfill Site - C10

Raynes Quarry - C7

Foryd Harbour - C15

Meas Mynan Quarry - F3

Fron Haul Quarry - F2

Ty Mawr Farm Landfill - C11

Morfa Uchaf - C5

Nant Y Garth Landfill Site - G4

Ty Mawr (East Quarry) - G14

Borras Quarry - W3

Clays Site - W4

Llechwedd Slate Mines - G31

Moel Y Faen Quarry - D4

Isfryn Field - D5

Minffordd Quarry - G26

0 10 20 40

Kilometres

NWC ROUTE LEGEND

LEGEND

- ORDER LIMITS - OPTION B
- SECTION CUTLINES
- ROADS
- WASTE PERMIT: DISPOSAL FACILITIES
- LANDFILL
- MINING & EXTRACTIVE WORKS
- RECOVERY OPERATION

NOTES

ACTIVE AND CLOSED WASTE PERMIT SITES LISTED ON NATURAL RESOURCES WALES (NRW) WEBSITE. REFER TO TABLE 1 APPENDIX 2 FOR DETAILS.

Rev	Date	Description	GIS	Chk	App
A	01/08/2018	OWMP	JB	MG	KZ

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 3
WASTE PERMIT LOCATIONS: DISPOSAL FACILITIES OPTION B

Creator:	Date:	Checker:	Date:	Approver:	Date:
JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

Document Type:	Scale:	Format:	Sheets:	Rev:
FIGURE	1:400,000	A3	1 of 1 Option B	A

Document Path: \\Ukmcr1fp002\ukmcr1fp002-v1ie\Proposal\3512\North Wales Connection - NG\GIS\02 Maps\Land Use & Agriculture\Outline Waste Mang Plan\OWMP_3_WastePermitLoc_DisposalFac_KP_JB_20180814.mxd

N

Caer Glaw Quarry (Gwalchmai) - A3

Nant Newydd Quarry - A8

Penhesgyn IVC Facility - A18

Llanddulas composting facility - C9

Gofer Bulking Station - C12

K M Environmental Ltd - D2

Parry's Quarry Waste Transfer & Processing Centre - F7

Alltami Soil & Aggregate Recycling Facility - F6

Caerhurn Farm - C4

Phoenix Metals and Colin Davies Non Ferrous Metals - A13

Caergylchu waste Management Facility - G9

Cambrian Concrete - F4

Parry and Evans Ltd - F8

Ballswood Quarry - W2

Llwyn Isaf AD Plant - G16

Gwrtaith Gwynedd - G21

Ffridd Rasus IVC Site - G30

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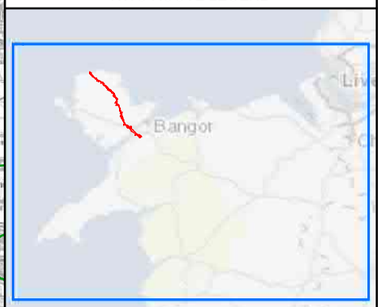
Kilometres

NWC ROUTE LEGEND



LEGEND

- ORDER LIMITS - OPTION A
- SECTION CUTLINES
- ROADS
- WASTE PERMITS: TREATMENT FACILITIES
- SOILS, AGGREGATE AND CONSTRUCTION PRODUCTS
- COMPOSTING/ANEAROBIC DIGESTION
- METALS, FOOD WASTES, OTHER

NOTES

ACTIVE AND CLOSED WASTE PERMIT SITES LISTED ON NATURAL RESOURCES WALES (NRW) WEBSITE. REFER TO TABLE 1 APPENDIX 2 FOR DETAILS.

Rev	Date	Description	GIS	Chk	App
A	01/08/2018	OWMP	JB	MG	KZ

nationalgrid

Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 4
WASTE PERMIT LOCATIONS: TREATMENT FACILITIES OPTION A

Creator:	Date:	Checker:	Date:	Approver:	Date:
JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

Document Type:	Scale:	Format:	Sheets:	Rev:
FIGURE	1:400,000	A3	1 of 1 Option A	A

Document Path: \\Ukmcr1fp002\ukmcr1fp002-v1ie\Proposal\3512\North Wales Connection - NG\GIS\02 Maps\Land Use & Agriculture\Outline Waste Mang Plan\OWMP_4_WastePermitLoc_TreatmentFac_KP_JB_20180814.mxd

N

Caer Glaw Quarry (Gwalchmai) - A3

Nant Newydd Quarry - A8

Penhesgyn IVC Facility - A18

Llanddulas composting facility - C9

Gofer Bulking Station - C12

K M Environmental Ltd - D2

Parry's Quarry Waste Transfer & Processing Centre - F7

Alltami Soil & Aggregate Recycling Facility - F6

Caerhurn Farm - C4

Phoenix Metals and Colin Davies Non Ferrous Metals - A13

Cambrian Concrete - F4

Parry and Evans Ltd - F8

Caergylchu waste Management Facility - G9

Ballswood Quarry - W2

Llwyn Isaf AD Plant - G16

Gwrtaith Gwynedd - G21

Ffridd Rasus IVC Site - G30

NWC ROUTE LEGEND

LEGEND

- ORDER LIMITS - OPTION B
- SECTION CUTLINES
- ROADS
- WASTE PERMITS: TREATMENT FACILITIES
- SOILS, AGGREGATE AND CONSTRUCTION PRODUCTS
- COMPOSTING/ANEAROBIC DIGESTION
- METALS, FOOD WASTES, OTHER

NOTES

ACTIVE AND CLOSED WASTE PERMIT SITES LISTED ON NATURAL RESOURCES WALES (NRW) WEBSITE. REFER TO TABLE 1 APPENDIX 2 FOR DETAILS.

Rev	Date	Description	GIS	Chk	App
A	01/08/2018	OWMP	JB	MG	KZ

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 4
WASTE PERMIT LOCATIONS: TREATMENT FACILITIES OPTION B

Creator:	Date:	Checker:	Date:	Approver:	Date:
JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

Document Type:	Scale:	Format:	Sheets:	Rev:
FIGURE	1:400,000	A3	1 of 1 Option B	A

0 10 20 40
Kilometres

Document Path: \\Ukmcr1fp002\ukmcr1fp002-v1ie\Proposal\3512\North Wales Connection - NG\GIS\02 Maps\Land Use & Agriculture\Outline Waste Mang Plan\OWMP_4_WastePermitLoc_TreatmentFac_KP_JB_20180814.mxd

N

Rhuddlan Bach Quarry Landfill - A10

Mona Industrial Estate, Plot 6 - A5

Refail Newydd - A1

Penhesgyn Waste Household Recycling Facility - A20

Gwalchmai Civic Amenity Site - A2

Llandygai Civic Amenity Site - G3

Llandygai Civic Amenity Site - G3

Cymru Lan - A15

Penrhyn Quarry - G5

Green Skips Environmental Ltd - A14

Coed Bolyn Mawr - G6

Thomas Skip and Plant Hire Ltd

Gwynedd Skip and Plant Hire Ltd - G10

Recycling Centre at Blaeneau Ffestiniog - G32

Llechwedd Quarry - G33

Melin Plas Du - G17

Rhwngyddwyryd Civic Amenity Site - G22

Grays Penrhndeudraeth Works - G27

Bryn Williams Ltd - G19

Gelert House MRF - G23

Ty'n Coed - G25

Glan Y Don Depot - G20

Ffridd Rasus Landfill (Area 2) & Civic Amenity Site - G28

Ffridd Rasus Landfill Site - G29

Coed Ffridd Arw - G35

Gwynedd Council - G36

Bron Y Nant Waste Transfer and Materials Reclamation Facility - C3

Worldcare Wales ltd - C2

Thorncliffe Building Supplies Ltd - C13

Llanddulas Quarry Waste Treatment - C8

Plas Y Dre, Llanwrst - C6

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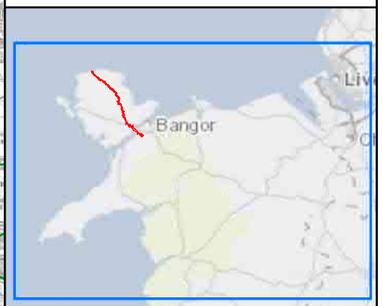
Kilometres

NWC ROUTE LEGEND



LEGEND

- ORDER LIMITS - OPTION A
- SECTION CUTLINES
- ROADS
- WASTE PERMITS: TRANSFER AND RECYCLING FACILITIES
- TRANSFER STATION
- RECYCLING

NOTES

ACTIVE AND CLOSED WASTE PERMIT SITES LISTED ON NATURAL RESOURCES WALES (NRW) WEBSITE. REFER TO TABLE 1 APPENDIX 2 FOR DETAILS.

Rev	Date	Description	GIS	Chk	App
A	01/08/2018	OWMP	JB	MG	KZ

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 5 WASTE PERMIT LOCATIONS: TRANSFER AND RECYCLING FACILITIES OPTION A

Creator:	Date:	Checker:	Date:	Approver:	Date:
JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

Document Type:	Scale:	Format:	Sheets:	Rev:
FIGURE	1:400,000	A3	1 of 1 Option A	A

Document Path: \\Ukmcr1fp002\ukmcr1fp002-v1ie\Proposal\3512\North Wales Connection - NG\GIS\02 Maps\Land Use & Agriculture\Outline Waste Mang Plan\OWMP_5_WastePermitLoc_TransfRecycFac_KP_JB_20180814.mxd

N

Rhuddlan Bach Quarry Landfill - A10

Mona Industrial Estate, Plot 6 - A5

Refail Newydd - A1

Penhesgyn Waste Household Recycling Facility - A20

Gwalchmai Civic Amenity Site - A2

Llandygai Civic Amenity Site - G3

Llandygai Civic Amenity Site - G3

Cymru Lan - A15

Penrhyn Quarry - G5

Green Skips Environmental Ltd - A14

Coed Bolyn Mawr - G6

Thomas Skip and Plant Hire Ltd

Gwynedd Skip and Plant Hire Ltd - G10

Recycling Centre at Blaeneau Ffestiniog - G32

Llechwedd Quarry - G33

Melin Plas Du - G17

Rhwngyddwyryd Civic Amenity Site - G22

Grays Penrhndeudraeth Works - G27

Bryn Williams Ltd - G19

Gelert House MRF - G23

Ty'n Coed - G25

Glan Y Don Depot - G20

Ffridd Rasus Landfill (Area 2) & Civic Amenity Site - G28

Ffridd Rasus Landfill Site - G29

Coed Ffridd Arw - G35

Gwynedd Council - G36

Bron Y Nant Waste Transfer and Materials Reclamation Facility - C3

Worldcare Wales ltd - C2

Thorncliffe Building Supplies Ltd - C13

Llanddulas Quarry Waste Treatment - C8

Plas Y Dre, Llanwrst - C6

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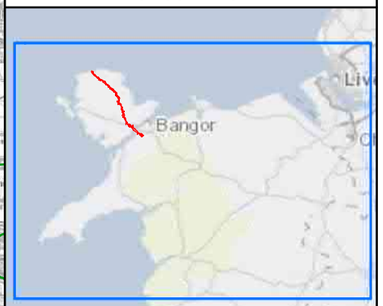
NWC ROUTE LEGEND



LEGEND

- ORDER LIMITS - OPTION B
- SECTION CUTLINES
- ROADS
- WASTE PERMITS: TRANSFER AND RECYCLING FACILITIES
- TRANSFER STATION
- RECYCLING

NOTES

ACTIVE AND CLOSED WASTE PERMIT SITES LISTED ON NATURAL RESOURCES WALES (NRW) WEBSITE. REFER TO TABLE 1 APPENDIX 2 FOR DETAILS.

Rev	Date	Description	GIS	Chk	App
A	01/08/2018	OWMP	JB	MG	KZ

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 5
WASTE PERMIT LOCATIONS: TRANSFER AND RECYCLING FACILITIES
OPTION B

Creator:	Date:	Checker:	Date:	Approver:	Date:
JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

Document Type:	Scale:	Format:	Sheets:	Rev:
FIGURE	1:400,000	A3	1 of 1 Option B	A

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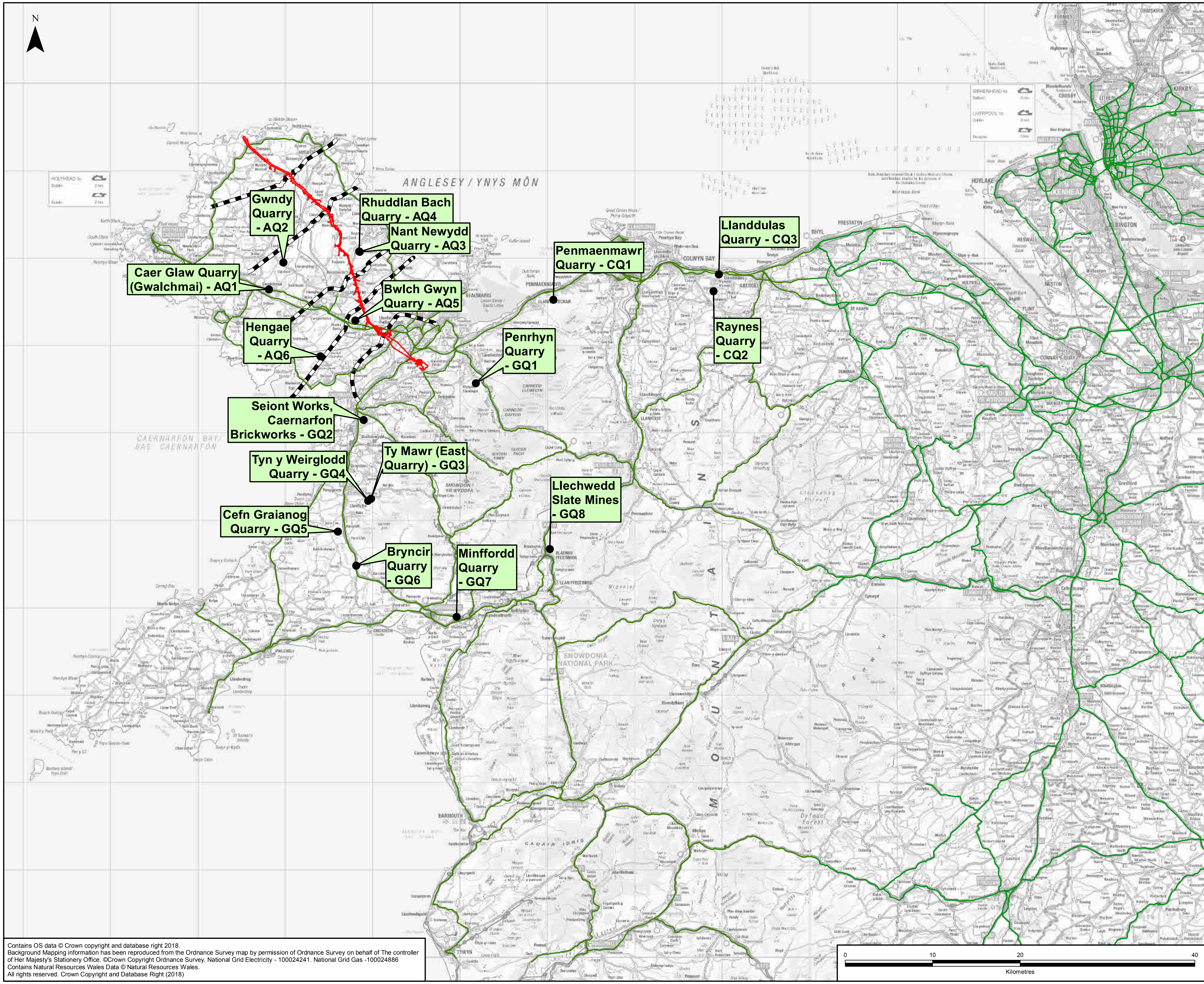

NWC ROUTE LEGEND

LEGEND

- ORDER LIMITS - OPTION A
- SECTION CUTLINES
- ROADS
- QUARRY LOCATION
- QUARRY NAME

A	01/08/2018	OWMP	JB	MG	KZ
Rev	Date	Description	GIS	Chk	App

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 6
QUARRY LOCATIONS
(REFERENCED IN OUTLINE WASTE MANAGEMENT PLAN)
OPTION A

Creator: JB	Date: 01/08/2018	Checker: MG	Date: 01/08/2018	Approver: KZ	Date: 01/08/2018
Document Type: FIGURE	Scale: 1:400,000	Format: A3	Sheets: 1 of 1 Option A	Rev: A	

Document Path: \\Ukmcr1fp002\ukmcr1fp002-v1ie\Proposal\3512\North Wales Connection - NG\GIS\02 Maps\Land Use & Agriculture\Outline Waste Mang Plan\OWMP_6_QuarryLocations_KP_JB_20180814.mxd

N

Gwndy Quarry - AQ2

Rhuddlan Bach Quarry - AQ4

Nant Newydd Quarry - AQ3

Caer Glaw Quarry (Gwalchmai) - AQ1

Bwlch Gwyn Quarry - AQ5

Hengae Quarry - AQ6

Penmaenmawr Quarry - CQ1

Llanddulas Quarry - CQ3

Raynes Quarry - CQ2

Penrhyn Quarry - GQ1

Seiont Works, Caernarfon Brickworks - GQ2

Tyn y Weirglodd Quarry - GQ4

Ty Mawr (East Quarry) - GQ3

Llechwedd Slate Mines - GQ8

Cefn Graianog Quarry - GQ5

Bryncir Quarry - GQ6

Minffordd Quarry - GQ7

ANGLESEY / YNYS MÔN

SNOWDONIA NATIONAL PARK

0 10 20 40
Kilometres

NWC ROUTE LEGEND

LEGEND

- ORDER LIMITS - OPTION B
- SECTION CUTLINES
- ROADS
- QUARRY LOCATION
- QUARRY NAME

Rev	Date	Description	GIS	Chk	App
A	01/08/2018	OWMP	JB	MG	KZ

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 7.11

Document Title: FIGURE 6
QUARRY LOCATIONS
(REFERENCED IN OUTLINE WASTE MANAGEMENT PLAN)
OPTION B

Creator:	Date:	Checker:	Date:	Approver:	Date:
JB	01/08/2018	MG	01/08/2018	KZ	01/08/2018

Document Type:	Scale:	Format:	Sheets:	Rev:
FIGURE	1:400,000	A3	1 of 1 Option B	A

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