

Acciona

NESS Energy from Waste

Pollution Prevention and Control
Permit Application.
Information notice responses -
Guidance and standards

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This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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1 Introduction

EfW NESS Limited have applied to SEPA for a Pollution Prevention and Control (PPC) permit to operate the NESS Energy project¹ Energy from Waste (EfW) facility.

This report provides the response to Question 29d raised by SEPA in their Information Notice Response.

Table 1: SEPA Schedule 4 determination queries

Question number	SEPA comment	Report section
29 d	<p>Demonstrate that all the appropriate preventative measures are taken against pollution and in particular through application of the Best Available Techniques. The demonstration shall include as a minimum but not be restricted to:</p> <p>...</p> <p>d) confirmation that all appropriate guidance has been utilised when demonstrating that the measures to be employed at the installation will not result in significant pollution and represent BAT. This shall include reference the standards to which any civil structures have been designed to</p>	Section 2

2 Guidance and Standards

As part of the application process it is necessary to demonstrate that the new facility will meet the indicative BAT standards required by the PPC Regulations.

This report sets out guidance and standards that have been used in the permit application, to demonstrate that the measures to be employed at the installation will not result in significant pollution and will represent BAT.

A list of the civil standards use in the design of the plant has also be included, as requested by SEPA, to demonstrate the specification of the plant would maintain the structural integrity required for the operation and environmental performance of the installation.

2.1 General guidelines and standards

- Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
- Available Techniques (BAT) Reference Document for Waste Incineration; EUR 29971 EN; doi:10.2760/761437

¹ North East Scotland Shared Energy (from Waste) project.

- IED-PPC-TG4 - Pollution Prevention and Control (PPC) Technical Guidance: A practical guide for Part A activities
- Sector Guidance Note IPPC 5.01 (Guidance for the Incineration of Waste and Fuel Manufactured from or Including Waste) 2004.
- SEPA – Thermal Treatment of Waste Guidelines 2014 – including efficiency measures required and Energy Balance template.
- Waste Incineration (Scotland) Regulations 2003, Practical Guidance: Edition 2, April 2005, Paper 2005/7.
- SEPA, 2012. Pollution Prevention and Control (PPC) technical guidance: A practical guide for Part A activities.
- SEPA. Waste Incineration Template 2015.
- IPPC H1 (2003) Environmental Assessment and Appraisal of BAT

2.2 Air quality guidelines and standards

- EA (2016) Air emissions risk assessment for your environmental permit
Available at: [<https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>]
- APIS (Air Pollution Information System) www.apis.ac.uk
- SEPA (2002) IPPC H4: Horizontal Guidance for Odour
- Natural Scotland and SEPA (2010) Odour guidance 2010, Version 1, January 2010
- IAQM, Guidance on the assessment of odour for planning, May 2014
- Defra (2016) Local Air Quality Management Policy Guidance, PG16
- Defra (2016) Local Air Quality Management Technical Guidance, TG16
- Environment Agency (2012) Waste incinerators: guidance on impact assessment for group III metals stack (Version 4, June 2016)
- Air Quality Modelling and Assessment Unit, Environment Agency, Conversion Ratios for NO_x AND NO₂

2.3 Geo-environment guidelines and standards

- SEPA: PPC Technical Guidance Note Content and Scope of Site Reports (IED TG02). 06/12/2013
- SEPA: Soil and Groundwater Monitoring Technical Guidance for PPC Part A Installations (IED-TG-42). 13/01/2015

2.4 Noise guidelines and standards

- SEPA: Guidance on the control of noise at PPC installations.
- SEPA: Noise: Summary guidance for Pollution Prevention and Control (PPC) applicants
- SEPA. Environmental Best Practice Guidance Note – noise emissions from vehicle reversing alarms

2.5 Monitoring guidelines and standards

- SEPA. Monitoring Quick Guide 1, version 1.0. SM-QG-01 - Selecting Continuous Emission Monitoring systems (CEMs) and the validity of CEM unit's certificates.
- SEPA. Monitoring Quick Guide 2, version 1.0 SM-QG-02 Selecting Continuous Emission Monitoring systems (CEMs) for installations falling under the Waste Incineration Directive (WID).
- SEPA. Monitoring Quick Guide 3, version 1.0. SM-QG3 - Applying BS EN 14181 – Stationary Source Emissions; Quality assurance of automated measuring systems.
- SEPA. Monitoring Quick Guide 5, version 1.0. SM-QG-05 - Monitoring oxides of Nitrogen.
- SEPA. Monitoring Quick Guide 6, version 1.0. SM-QG-06 Calibrating particulate-monitoring Continuous Emission Monitoring systems (CEMs), especially for low concentrations of particulate matter.
- SEPA. Monitoring Quick Guide 7, version 1.0. SM-QG7 - Monitoring volatile organic compounds (VOCs)

2.6 Civil structures design standards

The civil design will comply with all regulations, codes and standards that are listed below.

- Building (Scotland) Regulations 2004+Amendments
- Designing for Deliveries – Freight Transport Association (July 2006)
- Manual of Contract Documents for Highway Works (MCHW)
- MCHW Volume 1 Specification for Highway works (SHW) and Interim Advice Notes (February 2016)
- Design Manual for Roads and Bridges (DMRB) – Highways Agency, particularly
- TD 9/93 – Highway Link Design (February 2002)
- TD 27/93 – Cross-sections and headrooms (February 2005)
- TA 85/01 – Guidance on minor improvement to existing roads (November 2001)
- TD 54/07 – Design of Mini Roundabouts (August 2007)
- TD 16/07 – Geometric Design of Roundabouts (August 2007)
- TD 42/95 – Geometric Design of Major/Minor Priority Junctions (January 1995)
- HD 24/06 – Traffic Assessment
- IAN 73/06 (Revision 1 2009) –Design Guidance for Road Pavement Foundations (draft HD 25)
- HD 26/06 – Pavement Design (2006)
- HD 27/15 – Pavement Construction Methods
- BS 13108 Bituminous mixtures- Material Specifications
- BS 594987 Asphalt for roads and other paved areas- Specification for transport, laying, compaction and type testing protocols
- HD 39/01 – Footway Design

- HD 36/06 – Surfacing Materials for New and Maintenance Construction
- HD 37/99 – Bituminous Surfacing Materials and Techniques [Incorporating Amendment No.1 dated May 1999]
- HD 38/97 Concrete Surfacing and Materials [Incorporating Amendment No.1 dated February 1999]
- The Building (Scotland) Amendment Regulations 2016 Technical Handbook 2017 Non- Domestic Environment
- BS EN 16933-2:2017 – Drain and Sewer Systems Outside Buildings
- BS EN 1295:2019 Structural design of buried pipelines under various conditions of loading.
- BS EN 1610: 2015 Construction and testing of drains and sewers
- Sewers for Scotland (3rd Edition)
- Civil Engineering Specification for the Water Industry (CESWI) - 7th Edition
- Drainage of Development Sites – A Guide by HR Wallingford/CIRIA
- The CIRIA SUDs Manual (December 2015)
- Pollution Prevention Guideline note PPG3
- Traffic Sign Manual 1982 amended 2016
- The Traffic Signs Regulations and General Directions 2016
- Concrete Societies’ Technical Report Number. 66 – External In-Situ Concrete Paving (TR66)
- Section 21 of the Roads (Scotland) Act 1984
- BS 8004:2015 Code of Practice for Foundations
- BS EN 1990:2002 Eurocode - Basis of structural design (plus UK National Annex)
- BS EN 1991:2002-2006 Eurocode 1 - Basis of structural design (plus UK National Annex)
- BS EN 1991-1-1:2002 Eurocode 1 – General actions -densities, self-weight and imposed loads (plus UK National Annex)
- BS EN 1991-1-2:2002 Eurocode 1 – General actions-actions on structures exposed to fire (plus UK National Annex)
- BS EN 1991-1-3:2003 Eurocode 1 -General actions – snow loads (plus UK National Annex)
- BS EN 1991-1-4:2005 Eurocode 1 – General actions – wind loads (plus UK National Annex)
- BS EN 1991-1-5:2003 Eurocode 1 – General actions-thermal actions (plus UK National Annex)
- BS EN 1991-1-6:2005 Eurocode 1 – General actions – actions during execution (plus UK National Annex)
- BS EN 1991-1-7:2006 Eurocode 1 – General actions-accidental actions (plus UK National Annex)
- BS EN 1992-1-1: 2004 Eurocode 2 - Design of concrete structures (plus UK National Annex)
- BS EN 1992-3: 2006 Eurocode 2 – Liquid retaining and containment structures
- BS EN 1993:2005 Eurocode 3 - Design of steel structures (plus UK National Annex)

- BS EN 1994: 2005 Eurocode 4 - Design of composite steel and concrete structures. (plus UK National Annex)
- BS EN 1996:2005 Eurocode 6 - Design of masonry structures (plus UK National Annex)
- BS EN 1997: 2004 Eurocode 7 - Geotechnical design (plus UK National Annex)
- CIRIA Guide C660, Early age crack control in concrete, London : CIRIA, Bamforth P (2007)
- BRE Special Digest 1 – Third Edition, Concrete in Aggressive Ground (2005), Watford: Building Research Establishment
- CCIP-016 A Design Guide for Footfall Induced Vibration of Structures, Surrey: The Concrete Centre, Willford and Young (2006)
- BS 6472-1:2008 Guide to evaluation of human exposure to vibration in building.
- TR 34 - Concrete industrial ground floors - The Concrete Centre (2018)
- BS EN 13001:2014 – Crane safety – general design
- BS EN 1991-3 :2006 Actions induced by cranes and machinery
- National Structural Steelwork Specification For Building Construction, 6th Edition (2017)
- National Structural Concrete Specification for Building construction, 4th Edition
- BS EN ISO 14713:2009 Zinc Coatings - guidelines and recommendations for the protection against corrosion of iron and steel in structures
- BS EN ISO 1461: 2009 Hot dip galvanized coatings on fabricated iron and steel articles - specifications and test methods
- BS EN ISO 12944:2018 Paints and varnishes - corrosion protection of steel structures by protective paint systems.
- BS EN 206-1:2000 Concrete-Specification, performance, production and conformity.
- BS 8500-2:2015+A2:2019
- BS 8500-1:2015