

Preface

This document is Volume 1: Main Text of the Environmental Statement that accompanies the planning application for the proposed Energy from Waste Combined Heat and Power Facility. The Environmental Statement also comprises the following separate volumes:

Volume 2: Figures

Volume 3: Appendices

Volume 4: Non-Technical Summary

Revision Schedule

Environmental Statement Volume 1: Main Text

Rev	Date	Details	Prepared By	Reviewed By	Authorised By
00	18 April 2011	Final Draft	Various Specialists and Alexis Huggins Environmental Consultant	Ian Roach Principal Environmental Planner	Andrew Wooddisse Associate Waste Planner
01	06 May 2011	Final Issued for Planning	Various Specialists and Alexis Huggins Environmental Consultant	Ian Roach Principal Environmental Planner	Andrew Wooddisse Associate Waste Planner

URS Scott Wilson Limited
Environment and Natural Resources
Mayflower House
Armada Way
Plymouth
PL1 1LD

Tel: +44 (0) 1752 676700
Fax: +44 (0) 870 238 6023

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The methodology adopted and the sources of information used by URS Scott Wilson in providing its services are outlined in this Report. The work described in this Report was undertaken between May 2009 and April 2011 and is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

Where field investigations are carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results of any measurements taken may vary spatially or with time and further confirmatory measurements might need to be made after any significant delay in issuing this Report.

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Table of Abbreviations

A

AAP	Area Action Plan
ACC	Air cooled condenser
ADF	Average daylight factor
AONB	Area of Outstanding Natural Beauty
APC	Air pollution control
APCR	Air pollution control residue
APHO	Association of Public Health Observatories
AQMA	Air Quality Management Area

B

BAP	Biodiversity Action Plan
BAT	Best available technique
BGS	British Geological Survey
BMW	Biodegradable waste strategy
BNF	Biodiversity Network Feature
BRE	Building Research Establishment
BTO	British Trust for Ornithology

C

CABE	Commission on Architecture and the Built Environment
CAFE	Clean Air for Europe
CBC	Common bird census
C&D	Construction and demolition
CCTV	Closed-circuit television
CEMP	Construction environmental management plan
CEMS	Continuous emission monitoring system
CHP	Combined heat and power
C&I	Commercial and industrial
CLEA	Contaminated Land Exposure Assessment
COMEAP	Committee on the Medical Effects of Air Pollution
CoPA	Control of Pollution Act
COPC	Compounds of potential concern
CRoW	Countryside and Rights of Way Act
CV	Calorific value
CWS	County Wildlife Site

D

DBRC	Devon Biodiversity Records Centre
DCLG	Department for Communities and Local Government
DDF	Devonport Distribution Facility
DEFRA	Department for Environment Food and Rural Affairs
DETR	Department of Environment Transport and the Regions
DfT	Department for Transport
DLCCP	Devonport Landing Craft Collocation Project
DMRB	Design Manual for Roads and Bridges
DNO	Distribution network operator
DPD	Development Plan Document

DRDL Devonport Royal Dockyard Limited

E

EA Environment Agency
EfW Energy from waste
EIA Environmental impact assessment
EPA Environmental Protection Act
EPI Environmental performance indicator
EQS Equality quality standard
ES Environmental Statement
ESG Environment Science Group

F

FRA Flood risk assessment

G

GAC Generic assessment criteria
GIS Geographic information system
GSV Gas screening value

H

HA Highways Agency
HAP Habitat action plan
HGBI Herpetofauna Groups of Britain and Ireland
HGV Heavy goods vehicle
HHRA Human health risk assessment
HMNB Her Majesty's Naval Base
HMWB Heavily modified water body
HWRC Household waste recycling centre

I

IAQM Institute of Air Quality Management
IBA Incinerator bottom ash
IED Industrial Emissions Directive
IEEM Institute of Ecology and Environmental Management
IEMA Institute of Environmental management and Assessment
IPPC Integrated Pollution Prevention and Control

J

JCA Joint character area
JMWMSS Joint municipal waste management strategy statement
JNCC Joint Nature Conservation Committee

K

ktpa thousand tonnes per annum
KWS Kelda Water Services

L

LAPPC	Local Authority Pollution Prevention Control
LATS	Landfill Allowance Trading Scheme
LCA	Life cycle assessment
LCA	Landscape character area
LCT	Landscape character type
LCZ	Landscape character zone
LDD	Local Development Document
LDF	Local Development Framework
LLC	Local Liaison Committee
LNR	Local Nature Reserve
LTP2	Local Transport Plan
LVIA	Landscape and visual impact assessment

M

MBT	Mechanical biological treatment
MJ/kg	Mega joules per kilogram
MLWS	Mean low water spring
MHWS	Mean high water spring
MNCR	Marine Nature Conservation Review
MoD	Ministry of Defence
MSW	Municipal solid waste
MWMS	Municipal waste management strategy

N

NBN	National Biodiversity Network
NCV	Net calorific value
NDA	Nuclear Decommissioning Authority
NERC	Natural Environmental and Rural Communities Act
NGO	Non-governmental organisation
NGR	National grid reference
NMR	National Monuments Record
NNR	National Nature Reserve
NTM	National transport model

O

OBC	Outline business case
ODN	Ordnance Datum Newlyn
ODPM	Office of the Deputy Prime Minister

P

PAH	Polycyclic aromatic hydrocarbon
PC	Process contribution
PCB	Polychlorinated biphenyl
PCC	Plymouth City Council
PFI	Private Finance Initiative
PHER	Plymouth City Council Historic Environment Record
PIA	Personal injury accident
PPG	Pollution Prevention Guidelines

PPS	Planning Policy Statement
ppv	Peak particle velocity
PRC	Practical reserve capacity
PZVI	Primary zone of visual influence

R

RBD	River basin districts
RBMP	River basin management plan
RDF	Refuse derived fuel
RPG	Registered Parks and Gardens
RSS	Regional Spatial Strategy
RWS	Regional Waste Strategy

S

SAC	Special Area of Conservation
SAM	Scheduled Ancient Monument
SAP	Species action plan
SFRA	Strategic flood risk assessment
SGV	Soil guidance value
SNCI	Site of Nature Conservation Importance
SNCR	Selective non catalytic reduction process
SoCC	Species of conservation concern
SOM	Soil organic matter
SPA	Special Protection Area
SPL	Significant pollutant linkage
SPZ	Source protection zone
SRN	Strategic road network
SSSI	Site of Special Scientific Interest
STW	Sewage treatment works
SUDS	Sustainable drainage scheme
SVOC	Semi-volatile organic compound
SWDWP	South West Devon Waste Partnership
SWMP	Site waste management plan
SWW	South West Water
SWWIM	South West Water internet mapping

T

tpa	Tonnes per annum
TPH	Total petroleum hydrocarbon
TRL	Transport Research Laboratory

U

UIWS	Unconfirmed wildlife site
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V

VOC	Volatile organic compound
VSC	Vertical sky component

W

WAC	Waste acceptance criteria
WCA	Waste collection authority
WDA	Waste disposal authority
WEEE	Waste electrical and electronic equipment
WFD	Water Framework Directive
WID	Waste Incineration Directive
WLP	Waste Local Plan
WRATE	Waste and Resources Assessment Tool for the Environment
WRG	Waste Recycling Group
WSE2007	Waste Strategy for England

Z

ZVI	Zone of visual influence
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Glossary of Key Terms

A

Administration Block and Community Area

Administration Block contains the staff welfare facilities, offices and meeting rooms and the Community Area accommodates visiting and community groups, including disabled visitors.

Air Cooled Condenser (ACC)

Condenses the exhaust steam from the steam turbine. The steam condenses under vacuum to extract the maximum practical mechanical energy from the expansion in the steam turbine.

Air Pollution Control (APC)

Area where flue gasses are cleaned using a dry reagent injection system before they are released into the atmosphere.

APC Residues

The residue from the bag filter, which contains fly ash, the reaction products from the acid gas neutralisation process and activated lignite with the absorbed metals and organic compounds.

B

Bale Store

Area where waste is received, stored, transferred or diverted when the facility is not available.

C

Continuous Emission Monitoring System (CEMS)

Records the concentrations of oxygen, carbon monoxide, oxides of nitrogen, volatile organic compounds, particles, hydrogen chloride and sulphur dioxide.

Control Room

Area where the facility will be operated and monitored, located within the waste bunker.

F

Fabric Filter

Acts as a foundation for the formation of a filter cake which serves as a reaction medium for both the acid gas neutralisation and the adsorption of heavy metals and organic compounds and provides particulate filtration.

M

Main Building

Where the majority of the waste treatment process takes place.

N

Net calorific value (NCV)

Is the amount of thermal energy released in the complete combustion of a given quantity of the waste and, due to the inconsistent nature of MSW, constantly varies.

S

Selective non catalytic reduction process (SNCR)

Process involves injecting urea as a reducing agent in the hot flue gas stream, which is optimised at temperatures between 850 °C and 1,000 °C.

South West Devon Waste Partnership (SWDWP)

A collaboration between Plymouth City Council, Torbay Council and Devon County Council, providing a long term solution to deal with waste from Southwest Devon.

T

Tipping Hall

Provides a reception area for incoming vehicles delivering waste to the facility.

Turbine/Boiler House

Area where the main incineration process takes place, containing the furnace and boiler.

W

Waste Bunker

Area where waste is stored and mixed prior to being loaded into the furnace.