



Porthmellon Waste Management Facility

Site Closure Plan

On Behalf of

Council of the Isles of Scilly



Date: February 2015

Our Ref: JER6282

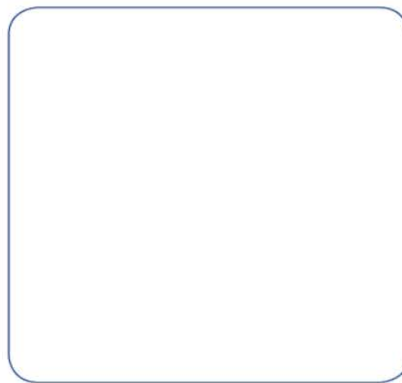
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Quality Management

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Amendment Record

Revision No.	Date	Reason for Change	Authors Initials
1	23 rd February 2015	Inclusion and review of Client Comments	JB / EF
2	2 nd March 2015	Inclusion of EA comments	EF
3	13 th March 2015	Inclusion of EA comments	EF

Executive Summary

- S.1 The Council of the Isles of Scilly recognises that operations during the life of the environmental permit should not lead to any deterioration of the land on which the Installation activity is undertaken. Consequently, the Council of the Isles of Scilly has prepared the following Site Closure Plan for the incinerator at the Porthmellon Waste Management Site and this plan will be regulated under the Environmental Permit (TP3732SE).
- S.2 This Site Closure Plan has been prepared to support the decommissioning and demolition of the incinerator at the Porthmellon Waste Management Site.
- S.3 The Environment Agency were been formally notified on the 3rd of February 2015 in writing of the cessation of activities. This will enable the Environment Agency to inspect the site, approve the closure and to agree the actions that will need to occur following closure.

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SLR 002 Rev0

Permit Boundary

1 Introduction

- 1.1.1 The Council of the Isles of Scilly (“CoIS”) operates an incinerator facility located at the Porthmellon Waste Facility under Environmental Permit (reference TP3732SE). RPS has been commissioned to prepare an updated Site Closure Plan (SCP) for the facility to support the decommissioning, demolition and redevelopment of the site.
- 1.1.2 This SCP follows the requirements set out in the Environment Agency’s Guidance ‘How to Comply With Your Environmental Permit’ (EPR1.00) [Ref. 1] and details how the site will be decommissioned to return it to a satisfactory state following cessation of activity. Other relevant guidance has also been consulted in compiling this site closure plan, in particular, the Environment Agency’s Pollution Prevention Guidelines (PPG6) which provides best practice guidance on demolition activities.
- 1.1.3 A detailed plan for the decommissioning or closure of the site, or part thereof is included to support the works proposed to be undertaken during 2015.
- 1.1.4 Following acceptance by the EA, this plan shall be fully implemented and the closure activities outlined shall be commissioned. The successful implementation of this plan will enable the CoIS to verify that there will be no continuing risk to the environment as a result of decommissioning the Installation.

2 Scope of the Site Closure Plan

- 2.1.1 This SCP is associated with the incinerator at the Porthmellon Waste Facility, St Mary's, Isles of Scilly which is regulated under Section 5.1, Part A (2)(a) of the Environmental Permitting (England and Wales) Regulations 2010 (EPR) which allows:

“the incineration of non-hazardous waste in an incineration plant with a capacity of less than 1 tonne per hour”.

- 2.1.2 The Installation boundary includes the incinerator itself and its associated infrastructure including stack, waste reception, storage, waste fuel and air supply systems, facilities for the treatment of exhaust gases and on site facilities for the storage of residues and waste water. The Installation boundary is shown in shown in Drawing SLR 002 Rev0. This SCP is relevant only to those parts of the site included in the Installation boundary, therefore does not include the landfill, waste transfer station, recycling facility and the council waste collection depot.
- 2.1.3 The activities at the Installation include the operation of the incinerator and its directly associated infrastructure and surface water drainage via an interceptor.
- 2.1.4 The Installation is owned and operated by the Council of the Isles of Scilly (CoIS). The site is situated on the island of St Mary's south-east of Hugh Town. The surrounding area includes the landfill to the north-west with an industrial estate beyond and residential properties to the south and west. A low lying wetland designated SSSI is situated to the north and east of the site. The OS Grid Reference is SV 90549 10431. The site is located at the following address:

Porthmellon Waste Management Site
St Mary's
Isle of Scilly
TR21 0JY

- 2.1.5 Two other permitted activities are in place on the wider Porthmellon Waste Management Site. Permit HP3639EQ relating to the clearance and processing of up to 40,000 tonnes of legacy wastes currently in stockpiles on the site adjacent to the incinerator and to accept, store and process additional IBA and permit BB3407MC for the use of suitable waste in construction of a screening bund and engineered base as part of the new improved Porthmellon Waste Management Site.
- 2.1.6 The incinerator formally ceased operations in 20th December 2014 and once this Closure Plan is accepted by the EA the actions that will be taken to avoid any pollution risk and to return the site to a satisfactory condition for redevelopment are set out below.

3 Installation Operations

3.1 Process Description

3.1.1 The activities undertaken include the operation and maintenance of the following plant and equipment:

- Waste reception pit;
- The incinerator;
- Cyclone and Exhaust Stack;
- Conveyor;
- Gas cleaning plant;
- Composter;
- Workshop;
- Interceptor;
- Fuel Oil Tank;
- Sewage Tank.

3.1.2 Between 2011 and April 2014 the use of a fragmenter as a Directly Associated Activity (DAA) was included in the permitted activities at the site. This was situated in a separate location outside the current permit boundary and has subsequently been transferred to another permit at the facility, as such it is not considered further within this Site Closure Plan.

3.1.3 Other infrastructure relevant to this SCP includes all containment provisions such as bunds and impermeable surfaces and drainage.

3.1.4 The incinerator itself is a 0.5 tonne per hour municipal waste incinerator which incinerates primarily household and business waste from the Isles of Scilly; clinical and hazardous wastes are not treated at the incinerator. The process is as follows.

3.1.5 Waste is stored in the waste reception pit prior to being fed into the primary reciprocating grate combustion chamber by a mechanical grab. Ash residues leaving the end of the grate are quenched in a water bath before being conveyed to a storage hopper (bottom ash skip). Gases leaving the primary chamber are passed to a secondary chamber where an oil fired burner maintains the temperature at 850°C. The oxygen content of the chamber is maintained in excess of 6% and the gas residence time is greater than 2 seconds.

3.1.6 The waste gases are then cooled to 180°C by the introduction of ambient air before and after a cyclone, before entering the bag filter house which uses sodium bicarbonate and activated carbon as sorbents. The treated gases are then released via the 22.5m stack. Ash from the cyclone also empties into the bottom ash skip.

3.1.7 The diesel storage tank is located to the south east of the site and is a double skinned, self bunded and alarmed tank on a hard standing area.

- 3.1.8 Waste water from the utilities (including shower, wash basin and toilet) and from quenching the ash conveyor is collected in a double skinned, self bunded, vented tank also located on hard standing. An appointed contractor empties the waste water tank and transports to the local sewerage works for treatment.
- 3.1.9 Both tanks and bunding are visually inspected several times a day.
- 3.1.10 The water used to quench the ash conveyor is contained within a tank which is topped up as required by a conventional level control valve arrangement. This tank is emptied and cleaned once a year and the dirty water pumped to the waste water tank above.
- 3.1.11 Activated carbon and sodium bicarbonate, along with any other chemicals used in the gas treatment process are stored in purpose built weather-proof housing adjacent to the hopper and injection system, on hard standing.
- 3.1.12 There are no underground pipes or sewers on site.

3.2 Operational Safeguards

- 3.2.1 Systems are in place at the installation relating to operational control. These systems include:
- An Environmental Management System (EMS) that is consistent with Horizontal Guidance Note H6 Environmental Management Systems (under development at the time of writing);
 - An Accident Management Plan;
 - A Planned Preventative Maintenance Programme;
 - An inspection, testing and maintenance programme in accordance with infrastructure manufacturers recommendations;
 - An inspection, testing and maintenance programme to comply with Health and Safety Regulations;
 - Specified operational procedures (where necessary).
- 3.2.2 The EMS encompasses the whole of the Porthmellon Waste Management Facility and is such is not specific to the permit installation boundary.
- 3.2.3 Such procedures will continue during the life of the Permit, and these procedures will be subject to review and modification following any changes to infrastructure, working practices or any guidance/statutory requirement the procedure was based upon.
- 3.2.4 As part of the EMS, a training and development program is in place designed to ensure that staff are suitably trained to undertake their duties. The roles and responsibilities of all staff on site are clearly defined and training records for each staff member maintained and reviewed regularly to ensure competence is maintained and up to date.
- 3.2.5 All staff receive a basic induction programme, which includes training on environmental awareness and the EMS.

- 3.2.6 Spill training is also provided for all employees who may have the potential to cause or responsibility for responding to oil/chemical spills.
- 3.2.7 Industry standards training is also provided for relevant individuals as required by job roles. Within the CoIS waste and recycling department the Operation, Maintenance and Engineering Officer currently holds the relevant Certificates of Technical Competence from the Waste Management Industry and Training and Advisory Board (WAMITAB). This staff member is based onsite to ensure that operations are undertaken in line with all policies and procedures as incorporated into the Environmental Management System. The CoIS will review the number of technically competent staff on site on a regular basis and provide training for additional staff members as and when required.
- 3.2.8 In accordance with the procedure related to the competence, training and awareness in the existing EMS, all contractors visiting the site a copy of the site rules within their induction onto site to ensure that they are aware of the scope of their work and the accident management /emergency procedures for the site. Contractors and visitors are expected to comply with the site rules.

4 Operation and Decommissioning

4.1 General Considerations

- 4.1.1 During the operation of the Installation, activities shall be undertaken in a manner which shall not lead to deterioration in the condition of the site. Systems are in place in accordance with best available techniques (BAT) specified in the guidance notes EPR1.00 [Ref. 2] and EPR1.01 [Ref. 3] to ensure that should any instances arise which have, or might have, impacted on the state of the site they are recorded, together with any further investigation or remediation work carried out. This will ensure that there is a coherent record of the state of the site throughout the period of the environmental permit.
- 4.1.2 During the life of the Permit, an Operational Phase Site Condition Report (SCR) has been maintained in order that the CoIS can demonstrate that the land is in a 'satisfactory state' should the Permit be surrendered. Relevant information, including any changes to the Installation boundary or to the activities, inspection records, pollution incidents and soil and water quality monitoring, has been collected and recorded throughout the life of the Permit.
- 4.1.3 During the operational life of the Installation, the placement of new vessels and underground pipe work has been avoided where possible. All such plant and equipment will be adequately protected by secondary containment and/or a suitable monitoring programme.
- 4.1.4 Plans of all pipe work and storage vessels throughout the site shall be retained and kept up to date. This includes pipe work used for the transportation of fuel (diesel), water and utilities.
- 4.1.5 Now that the decision to close the incinerator has been made, the Council will assemble a team of professionals to assist in managing the phased closure and decommissioning of the site.
- 4.1.6 Upon closure, the Council will activate this SCP to ensure that the site and facilities are rendered safe and that the environmental risk is reduced to a minimum. Part of this process may require the sale or disposal of some plant and equipment.
- 4.1.7 When the decommissioning and demolition work has been completed an intrusive site investigation shall be commissioned to ascertain whether the condition of the site has deteriorated from its baseline condition. The earliest data relating to the site was gathered in 1983 by WRc on groundwater; however it wasn't until 2005 that the first SCR was undertaken in support of the incinerator application and 2009 when the first data on ground conditions within the site boundary was collected by SLR.
- 4.1.8 It is anticipated that the decommissioning process will consist of a phased programme over a short period of time. The EA will be informed of the exact nature of this phasing prior to the commencement of decommissioning activities.
- 4.1.9 Photographs will be taken at each key stage of the commissioning process in order to visually log progress.

- 4.1.10 A Decommissioning Environmental Management Plan (DEMP) will be produced by the Contractor that details the programme and associated controls and procedures to oversee the decommissioning of permitted activities and restoration to a satisfactory state. The DEMP will incorporate all method statements and provide the management framework to safeguard the environment and to ensure compliance with environmental legislation, planning permissions and permit conditions.

4.2 Roles and Responsibilities

- 4.2.1 A nominated responsible person will undertake the following in advance of decommissioning activities:
- Communicate updated raw materials/chemicals list to contractors;
 - Communicate demolition/dismantling activities to residents/interested parties;
 - Review chemical storage on site;
 - Be responsible for the development and delivery of the DEMP;
 - Communicate with the EA and other Regulators (as appropriate);
 - Identify additional dust/noise from contractor activity;
 - Communicate appropriate spillage/waste handling procedures to contractors;
 - Assess changes in site condition;
 - Arrange remediation of the site to baseline conditions or other agreed standard; and
 - Review this SCP.

5 Monitoring and Testing

- 5.1.1 The Installation has established procedures that ensure effective management of the collection and reporting of environmental monitoring data.
- 5.1.2 Emissions monitoring is undertaken in accordance with Schedule 2 of the Environmental Permit (TP3732SE) and reported in accordance with Schedule 3 & 4 of the same permit. A short summary is provided below.
- 5.1.3 Environmental monitoring data for point source emissions to air (A1) has been submitted to the Environment Agency in accordance with the reporting requirements in Schedule 4 of the permit (TP3732SE) demonstrating the Installation's adherence to the monitoring requirements in Schedule 2 of the permit (TP3732SE).
- 5.1.4 There are no emissions to controlled water or to sewer from the site.

5.2 Monitoring

- 5.2.1 As part of the permit conditions, emission from the exhaust stack (A1) is continuously monitored for nitrogen oxides (NO_x), sulphur dioxide (SO₂), hydrogen chloride (HCl), total organic carbon (TOC), particulate matter and carbon monoxide (CO). Periodic monitoring of hydrogen fluoride (HF), metals, and dioxins and furans is also undertaken.
- 5.2.2 This is undertaken by continuous monitoring analysers at the secondary chamber exit and their performance is verified annually by independent emissions measurements. In addition they are routinely sent away for servicing and a spare carbon monoxide analyser is maintained on site, should any fault ever occur.
- 5.2.3 Emissions of dioxins / furans were found not be non-compliant with the limits set out in condition 2.2.1.3 of the permit TP3732SE, namely 0.1 ng/m³ periodic over a minimum of 6 hours, maximum 8 hour period, prompting the Environment Agency to issue a third Enforcement Notice in May 2014 (previous enforcement notices for other emission breaches were issued in June 2011 and April 2012).
- 5.2.4 Monitoring of bottom ash and APC residues on an annual basis have also been undertaken. Numerous breaches of the permit limit of TOC content less than 3% have been recorded throughout the life of the installation.

5.3 Ground Conditions

- 5.3.1 Over the period of operation of the permit a number of ground investigations and baseline monitoring have been undertaken over the wider Porthmellon Waste Management Site, some of which have included the area within the permit boundary. A short summary of each of these works within the installation boundary is presented below. For full details on the wider

investigations see the SLR document 'Environmental Baseline Review & Hydrogeological Risk Assessment (March 2014)' submitted as part of the Moorwell Landfill Closure Report.

- 5.3.2 Between 1982 and 1991 WRc installed borehole BHJ which is located between the workshop and the composter within the site boundary. They also undertook 6 rounds of groundwater sampling and leachability testing of the incinerator residues.
- 5.3.3 In 2006 the EA undertook sampling at the existing boreholes and undertook surface water sampling in the Lower Moors SSSI.
- 5.3.4 In 2009, as part of wider site investigations, SLR monitored the borehole BHJ and the existing groundwater wells: the old round incinerator well and the old square incinerator well within the permit boundary. In 2011 SLR again undertook groundwater monitoring within the old round incinerator well.
- 5.3.5 Most recently in January 2014, SLR undertook an extensive site investigation on the landfill in order to inform the Moorwell landfill closure report. This included the drilling of MGLGW5/14, a dual gas and groundwater monitoring well along the south eastern boundary of the site, and the collection and analysis of groundwater samples from the 4 boreholes within the permit boundary; BHJ, Old round incinerator well, Old square incinerator well and MGLGW5/14.
- 5.3.6 Within the shallow soils across the wider waste management site no contaminants above the appropriate GACs were identified. The leachate tested was found to be weak in nature, comparative to aged waste rather than IBA.
- 5.3.7 Groundwater samples from across the waste management site and hydraulically down gradient show elevated levels (above the WQS's) of metals, particularly lead, manganese, zinc and iron, chloride and ammoniacal nitrogen. The groundwater has therefore been historically impacted by activities at the site but the trends show that groundwater quality is improving over time.

6 Site Closure Operations

- 6.1.1 In order to demonstrate that the Installation will be left in a satisfactory state and that pollution risks have been removed, the general scope of works for site closure are outlined below.
- Removal of any IBA & APC residue and raw waste materials etc. left within the site boundary;
 - Identification, removal and disposal of potentially hazardous materials, e.g. bag filters and housing, reagent systems, kiln refractory, fuels and oils, decontamination residues etc; and
 - Decontamination, decommissioning and dismantling of all existing structures and infrastructure;
 - Excavation and removal of potentially contaminated ground and foundations to a depth of 1m;
 - Disposal of plant, metals, electrical equipment; and
 - Identification, treatment and segregation of all materials suitable for recycling as secondary aggregate on the islands.
- 6.1.2 The permitted activity will be decommissioned following a prescribed timetable which will include the following elements.

6.2 Plant, Equipment and Facilities

Equipment Cleaning

- 6.2.1 All equipment and infrastructure associated with the incinerator will be emptied and cleaned of all process/waste materials. Appropriate cleaning procedures will be used to ensure that no residual product or wastewater remains in the equipment that is likely to pose a threat to personnel and the environment.

Materials Removal

- 6.2.2 Upon cessation of activities, the Installation will ensure that prior to plant closure the inventory of stored and in-process materials will be reduced. This will include all raw waste, chemicals and oils and treated waste (i.e. IBA & APC). Where surplus waste material cannot be fully treated prior to plant closure, it will be disposed of via the alternative method at the adjacent Porthmellon Waste Management Facility. Where surplus fuel oils and chemicals cannot be fully utilised prior to plant closure, it will be sold or utilised for other purposes. If this is not possible, the Council will try to return stock to the suppliers. As a last resort, stock shall be appropriately disposed of, paying due regard to all applicable waste legislation.
- 6.2.3 All potentially hazardous substances, such as oils and chemicals will be removed in such a way as to protect land and groundwater from potentially harmful contents. Furthermore, the Installation will ensure, wherever practicable, that materials used in the decommissioning phase are recyclable (having due regard for operational and other environmental objectives).

Plant and Equipment Decommissioning

- 6.2.4 Plant and equipment will be decommissioned in an orderly manner and in accordance with the manufacturer's recommendations. In the event that the equipment is to remain on site for a prolonged period of time following decommissioning, the manufacturer's recommendations for long term storage of the equipment will be followed. All plant and equipment that cannot be reused will be recycled wherever possible as scrap value.

Storage Tanks and Ancillary Equipment

- 6.2.5 Storage tanks are provided on site as follows:
- Fuel tank;
 - Sewage tank.
- 6.2.6 All storage tanks and associated ancillary equipment are positioned on hard standing, are bunded and located above ground. Upon cessation of site activities all tanks and bunds will be fully drained of their contents and cleaned prior to dismantling. Bunds will be inspected for integrity and, should the integrity be in doubt, full inspection and decontamination of the area will occur. Any residual materials remaining in the storage tanks upon decommissioning will be pumped out and disposed of in accordance with all relevant waste legislation. All storage vessels and related equipment such as bunds, valves and pipework will be thoroughly cleaned to ensure that no residues remain inside and then capped, or valves closed to prevent spillages. Depending on the system being cleaned all effluent and residues will be managed in one of the following ways:
- Directly to sewer or ground with no treatment following agreement with the CoIS and the Environment Agency; or
 - Offsite treatment and/or disposal at an authorised facility.
- 6.2.7 All storage tanks and related equipment shall either be stored or sold for reuse or where neither of these options is possible, disposed of at an authorised facility. Prior to removal from site, all tanks shall be thoroughly checked to ensure they are clean and that no residues are present.
- 6.2.8 All storage tank bunds shall be demolished in order to facilitate redevelopment of the site. Due regard will be paid to the Environment Agency's Pollution Prevention Guidelines for working on demolition sites (PPG6) and any materials that are contaminated with hazardous substances will be appropriately disposed of in accordance with relevant waste legislation.

Hard standing

- 6.2.9 The majority of the site currently sits on a concrete hard standing. As part of the redevelopment works it is proposed that this shall remain in situ to provide an engineered base to the screening bund.

Waste Reception Pit

- 6.2.10 The waste reception pit will be emptied of any remaining waste and subject to an engineer integrity survey. If the integrity of the pit is found to be acceptable it is considered that the pit will be infilled. However if the pits integrity is found to be unacceptable a suitable strategy will be developed at this time.

6.3 Utilities Equipment and Facilities

Electricity and Gas Supply Systems

- 6.3.1 All systems shall be isolated from the main supply and shall be emptied to protect them from frost damage. The electricity supply system to the incinerator is from the main electricity substation located on the wider Porthmellon Waste Facility Site, there are therefore no transformers within the incinerator site boundary. The supply systems shall be identified and clearly marked before any demolition work begins and precautions taken to avoid damage to them.

Drains and Interceptor

- 6.3.2 Upon decommissioning of the Installation, a suitably qualified and competent contractor shall be employed to fully flush and clean all drainage systems to remove any debris and blockages. All high-risk drains and the interceptor will be removed, isolated or made inert (filled with concrete, etc.).
- 6.3.3 Drains shall be protected from the risk of contamination during site demolition works. Surface water and foul sewer drains manholes and gullies will be identified and colour- coded using blue for surface water and red for foul sewer systems. All contractors will be made aware of the colour- coding to ensure that precautions are taken to prevent potentially polluting materials, including silty water, from entering the surface water drains.

Boreholes

- 6.3.4 There are two boreholes and two wells onsite; BHJ, MLGW5/14, old square incinerator well and old round incinerator well. When site activities have ceased, these will be maintained for monitoring prior to surrender of the permit and will be decommissioned prior to redevelopment of the site. During demolition works these will be clearly marked and sealed to ensure they do not act as preferential pathways for contaminants to ground.

Water Systems

- 6.3.5 All water systems will be drained. Upon cessation of activities, the Council will also liaise with their water department to advise them of the closure of the site.

6.4 Asbestos and other Fibrous Insulating Materials

- 6.4.1 Prior to undertaking works, an appropriately qualified contractor shall undertake a full asbestos survey of the site. Should any asbestos be found, it will be appropriately decommissioned, handled and disposed of by licensed and experienced asbestos removal contractors.
- 6.4.2 It is not anticipated that an issue will arise with any other fibrous insulating materials at the site, however, should any such material be encountered, the area will be sheeted or contained until it can be safely removed by a specialist contractor as necessary.

6.5 Waste Disposal

Hazardous Waste

- 6.5.1 All hazardous wastes including waste oils, diesel, chemicals, batteries, filters, fluorescent tubes and other hazardous liquid or solid wastes listed as an “absolute” entry in the List of Wastes Regulations 2005 shall be disposed of or recovered at an authorised hazardous waste landfill site or recovery facility on the mainland. All documentation relevant to the transfers of this waste shall be retained by the CoIS.
- 6.5.2 All wastes removed off site will be handled and treated in accordance with the BAT requirements outlined in guidance note IPPC S5.06.
- 6.5.3 Hazardous wastes include all residues from the cleaning of plant and equipment, storage vessels and ancillary equipment, oil- and chemical- contaminated wastes (i.e. spill kits), empty chemical/solvent/paint containers, waste electrical and electronic equipment (WEEE).
- 6.5.4 Wherever possible all wastes will be recycled or recovered rather than disposed of to landfill. Where wastes are stored on site awaiting removal, they shall be stored in a secure container or compound to prevent unauthorised access and vandalism.

Non Hazardous Waste

- 6.5.5 Non-hazardous wastes including glass, general mixed wastes those from offices and other administration buildings, maintenance areas and operational areas shall be disposed of in accordance with relevant legislation at the adjacent Porthmellon Waste Management Site. Non-hazardous wastes include all those that are not marked with an asterisk (*) in the List of Wastes (LoW) Regulations 2005. Where wastes form part of a mirror entry in the LoW, they will be assessed to determine whether they are hazardous or not and then be appropriately disposed of or recovered at authorised facilities.
- 6.5.6 All wastes produced as a result of demolition activities will be treated as inert where they meet the requirements for inert waste specified in the Landfill Regulations 2002. Recovery and recycling routes or methods for inert wastes will be identified and used wherever possible to minimise the quantities which are landfilled. Where no such method can be found, the wastes will be sent to an inert landfill site on the mainland for final disposal.

- 6.5.7 Wherever possible all wastes will be recycled or recovered on the islands rather than disposed of to landfill.

6.6 Fixtures and Fittings

- 6.6.1 As the site is to be redeveloped as a screening bund as part of the new improved Porthmellon Waste Facility, it will be necessary to completely demolish all buildings on site and dispose of specific fixtures and fittings.
- 6.6.2 Any fixtures and fittings from offices and other administration areas shall be removed offsite if necessary and sold or transferred to the new Porthmellon Waste Management Facility for further use.

6.7 Contractor Management

- 6.7.1 The CoIS will appoint (a) specialised contractor(s) for the decommissioning of its permitted activities, including the remediation of any contaminated operational areas. The contractor (s) will be suitably qualified to ensure safe removal of all plant and associated wastes. A method statement for the removal of potentially contaminated plant and land will be produced by the contractor for agreement with CoIS management and the Environment Agency prior to commencement.
- 6.7.2 All contractors will consider the management of site operations such as the import, storage and handling of materials and substances on site and the export of material from site. Consideration will also be given to the location of storage compounds, and the quantities of oil, fuel and chemicals on site will be kept to the minimum required.
- 6.7.3 A dedicated plant wash down area will be designated for use by contractors undertaking the decommissioning works. This shall not be located in the vicinity of any surface water drains. Cleaning will only be permitted in the designated area. All wash waters shall either be recycled or fully contained and treated prior to disposal. This water shall either be disposed of to foul sewer with written consent from the CoIS or disposed of as hazardous waste.
- 6.7.4 All contractors involved in plant decommissioning will be supervised by the Council or its sub-contractors.

6.8 Soil and Groundwater Contamination

- 6.8.1 Following the demolition works, a comprehensive ground investigation shall be undertaken to determine the contamination status of the land at the site. This will target in particular the waste reception pit and will include the advancement of up to two boreholes through the concrete hardstanding, utilising appropriate telescopic drilling techniques, to ensure no contamination has occurred beneath the site.

- 6.8.2 The following risk based monitoring scheme will be in place for the wider Porthmellon Waste Management site (Moorwell Landfill) and it is anticipated that this will be sufficient to fulfil the monitoring requirements for the incinerator site.

Surface Water Monitoring

- 6.8.3 Surface water is currently monitored in the Lower moors SSSI which is considered to be hydraulically down gradient of the site at 5 locations and this shall continue. Monitoring parameters include; water level, electrical conductivity, pH, dissolved oxygen, ammoniacal nitrogen, chloride, total alkalinity, arsenic, zinc, cadmium, iron, copper, chromium, manganese, nickel, mercury, selenium, lead, polycyclic aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs). This will occur at least once a year.

Groundwater Monitoring

- 6.8.4 Annual groundwater monitoring is proposed from three existing locations; Old Moorwell up gradient of site and BHL and MLGW7/14 down gradient. The same suite of determinands as with surface water monitoring above are to be included.

6.9 Pre- Demolition Site Drainage Works

- 6.9.1 In planning any demolition work, precautions shall be taken to ensure the complete protection of water courses and groundwater against pollution.
- 6.9.2 There is no sub surface drainage infrastructure at the site. Instead the interceptor and surface water drainage system shall remain in use for as long as possible.
- 6.9.3 During demolition, to ensure that no water accumulates on or adjacent to the surfaces of the works, temporary watercourses, ditches drains, pumping or other means of maintaining a dry working surface will be employed.

6.10 Site Closure Management

- 6.10.1 In addition to adherence to the decommissioning method statements supplied, the plant associated with the incinerator will be steam cleaned (with any residues being removed by a licensed operator). Photographs will be taken at each key stage of the decommissioning process in order to visually log progress.
- 6.10.2 A Site Waste Management Plan and or Construction Environmental Management Plan/Code of Construction Plan (or equivalent) shall be prepared on behalf of CoIS (by an appropriate contractor) in order to detail management mitigations for the environmental risks associated with the decommissioning process.
- 6.10.3 The Accident Management Plan, which has been produced as part of the site's environmental management system (EMS) and in line with guidance note IPPC S5.06 section 2.8, shall be reviewed in advance of site closure and copies shall be provided to all contractors involved in

the decommissioning activities who must adhere to this plan during all stages of decommissioning. All CoIS employees have been made aware of the requirements of the accident management plan and, in addition, all those to be involved in site closure activities shall be reminded of its contents.

- 6.10.4 The number, contents and location of spill kits will be reviewed by CoIS prior to the commencement of any decommissioning works. Additional kits/containment materials suitable for the types and quantities of hazardous substances stored on site will be made available to contractors.
- 6.10.5 Prior to the cessation of any activities, a noise management plan shall be produced in order to ensure that noise levels arising from the decommissioning/demolition works are minimised as far as practicable. This plan shall be in line with the best available techniques (BAT) outlined in section 2.9 of the guidance document IPPC S5.06. The best practicable means (BPM) shall be used to prevent or minimise noise nuisance. Noise and vibration shall be taken into account when considering best available working method and selection of plant appropriate for the required works. Before any potentially noisy operations commence all potentially noise sensitive receptors within a 300m radius of the site will be identified and notified of forthcoming temporary work via a letter drop. The duration of the works will be included in the letter.
- 6.10.6 This plan shall be agreed with the Environment Agency and the local authority in advance of any decommissioning work taking place.
- 6.10.7 A dust management plan will be produced and implemented prior to the cessation of any site activities. This will have consideration of section 2.2.4 of guidance note IPPC S5.06 for the control of fugitive emissions to air. All releases shall be controlled using good housekeeping techniques wherever possible, however, where more substantial dust abatement measures are necessary the following techniques shall be applied throughout the duration of the decommissioning work:
 - Damping down on site during periods of dry weather;
 - Use of covered wagons and skips for the transportation of materials to and from the site, which have the potential to cause dust or be deposited on public highways;
 - Wheel washing of all heavy plant leaving the site and accessing the public highway, where necessary; and
 - Use of the existing complaints procedure to record and investigate any complaints arising as a result of nuisance issues including dust and noise.

6.11 Closure Activities to Date

- 6.11.1 A number of minor closure activities have already been undertaken at the site (as of 13th February 2015). These include:
 - Removal of all APC residue, briskcarb and carbon from site;
 - Removal of fuel from the Fuel tank;

- Draining and clearing of the grate, upper chamber, drag link and ash screw;
- Shutdown of the Continuous Emissions Monitoring System, Authority to be notified;
- Removal of all gas cylinders and return to manufacturer where possible;
- Cornwall Lifeline System removed, Truro notified, and Authority to be notified;
- All IBA within the incinerator compound double bagged ready for removal;
- Small Boge Compressor made ready for reuse in Council Workshop;
- Large Boge Compressor in process of being purchased by AddAir (Cornwall) – to be removed at the same time as the IBA bags;
- Two old ID Fan Invertors and original monitoring equipment removed to WEEE Facility; and
- Hydraulic oil removed from the Grate Power Pack Reservoir.

7 Restoration & Redevelopment of the Installation

- 7.1.1 Once the site has been decommissioned, the site area has been included in the redevelopment plan for the new, improved Porthmellon Waste Management Facility and will be within the permitted boundary for the use of waste in construction of a screening bund and engineered base (Permit BB3407MC). Once restored the site will then be redeveloped as part of the screening bund around this new site.
- 7.1.2 As part of the restoration process, all structures will be decommissioned using the methods outlined in section 6 above. All methods used will prevent or, where this is not possible, minimise pollution risk to the surrounding environment.
- 7.1.3 Once all structures have been demolished or removed from the site, an assessment will be undertaken to assess its conditions relative to the baseline conditions outlined in past site condition reports. A Phase 2 investigation will be commissioned in order to identify whether any additional contamination (surrender data) has occurred since the baseline conditions were determined by comparing the contamination sources identified from the surrender data with the initial site condition. If areas of deterioration during the operation of the Installation are identified, then these areas will be remediated to return them to a satisfactory state as defined by the initial site report.
- 7.1.4 As part of the process that restores the site to a satisfactory state, it will be ensured that earth from the site, where appropriate, is not moved off the land and that instead it is used for re-landscaping the site.
- 7.1.5 Once this restoration process is complete, a final assessment report will be submitted to the Environment Agency along with a permit surrender application. This will include any relevant up to date site plans, for example, a drainage plan and a utilities and services plan.

8 Access & Security

- 8.1.1 As during normal operating periods, it will be necessary to ensure that the Installation has suitable access and security during the decommissioning, demolition and restoration phases of work. As such, security provisions will be audited to ensure that the site is in a secure condition, that unauthorised access is avoided and that the site and any buildings on it do not present an unacceptable nuisance in the area.
- 8.1.2 For example, site security will be maintained by the use of perimeter fencing and lockable gates to prevent unauthorised access to the site. In addition, regular patrols of the site and inspections of the fencing and the gates will be undertaken and damage will be repaired as practicable. It may be necessary to implement temporary repairs until permanent repairs can be carried out.

9 Legislation and Regulation

- 9.1.1 Upon cessation of site activities, the Operator will implement this Site Closure Plan upon agreement from the EA. The principles described above will be followed and all existing legislative and regulatory requirements shall be met.
- 9.1.2 As required by the Environmental Permitting (England and Wales) Regulations 2010 (as amended), a surrender SCR will be prepared in accordance with the Agency's Site Condition Report- Guidance and Templates (H5) [Ref. 9]. This will be submitted to the EA for approval. The surrender SCR will describe the condition of the land and groundwater at the point at which an application to surrender the Permit is submitted. The SCR will:
- Explain how the site was decommissioned;
 - Provide information regarding any reference/surrender data collected;
 - Confirm that the permitted activities have stopped;
 - Confirm that decommissioning is complete and the pollution risk has been removed; and
 - Confirm the land is in a satisfactory condition.
- 9.1.3 The surrender SCR will detail any testing which is believed to be required to ascertain the degree of any contamination caused by activities at the Installation during the life of the permit. Any remediation considered necessary to return the site to a satisfactory state (as defined by the initial site report) will be outlined and undertaken.
- 9.1.4 In addition to the implementation of this site closure plan and the preparation of a surrender SCR, a permit surrender application shall be submitted to the Agency. This application will provide details of the measures taken to avoid pollution risk and demonstrate that the site has been returned to a satisfactory state.

References

1. How to Comply With Your Environmental Permit (EPR1.00), Environment Agency, November 2010
2. SLR 2014, Porthmellon Waste Management Facility, Moorwell Landfill Site, Environmental baseline review & Hydrogeological Risk Assessment to Inform Closure Report, March 2014, SLR Ref: 416-03263-00001-HRA

Drawings
