

Caulmert Limited

Engineering, Environmental & Planning
Consultancy Services

Deerplay Landfill Site

WRG Environmental Limited

Environmental Permit Variation Application

Supporting Document

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Supporting Document

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1.0 INTRODUCTION

1.1 Application Context

- 1.1.1 WRG Environmental Limited ('the Operator') (a subsidiary of FCC Environment (UK) Limited) have appointed Caulmert Limited to prepare a bespoke environmental permit variation application to permit ref. EPR/KP3734LL/V005 install a new Reverse Osmosis (RO) Plant at Deerplay Landfill Site, Bacup Road, Cliviger, in Lancashire. The RO Plant will be installed in the area that is currently the gas compound on-site, which will be repurposed for the RO Plant and associated infrastructure.
- 1.1.2 This permit variation application also includes consolidating the existing permit for the 'Gas Utilisation Scheme' into the landfill permit, retaining the flare and adding a microgenerator to the listed Directly Associated Activities (DAAs) in Table S1.1 of the landfill permit. The landfill permit to which this application relates is EPR/KP3734LL/V005. The 'Gas Utilisation Scheme' permit is to be consolidated into the existing landfill permit is permit ref. EPR/PP3032SY.
- 1.1.3 The RO Plant will be installed in a compound (the existing gas compound to be repurposed) within the current permit boundary. The RO Plant will treat the non-hazardous landfill leachate at the site prior to disposal to sewer. The existing discharge point to sewer is situated on Bacup Road, which ultimately discharges into the Burnley Wastewater Treatment Works.
- 1.1.4 The microgenerator and flare will be part of the existing landfill gas management system at the site, for continued landfill gas abstraction and utilisation. Due to declining volumes of landfill gas being produced by the landfill over time, it is considered that the microgenerator is suitable and appropriate for the gas generation volumes at Deerplay Landfill Site and can be incorporated into the landfill permit as a DAA.

1.2 Application Documents

- 1.2.1 The documents included within this application are as follows:
- Supporting Document (including Non-Technical Summary, Pre-Application Advice and summary of the Management System)
 - Application forms Part A, B3, C2, C3, C6 and F1
 - Operational Techniques & BAT Review (ref. 5987-CAU-XX-XX-RP-V-0302)
 - Environmental Risk Assessment (ref. 5987-CAU-XX-XX-RP-V-0303)
 - H1 Surface Water Pollution Risk Assessment (ref. 5987-CAU-XX-XX-RP-O-0300).

1.3 Document Structure

- 1.3.1 This Supporting Document has been prepared to provide additional information to support that provided in Parts A, B3, C2, C3, C6 and F1 of the environmental permit application forms for varying a bespoke installation permit.

- 1.3.2 To aid cross-referencing between this document and the application forms, the answers to questions are presented in the same order as in the application form and the headings in this document include the specific question number to which the information relates.

2.0 PART A – ABOUT YOU

2.1 Q5c – Details of Directors

- 2.1.1 This application is a bespoke permit variation application and the relevant persons for WRG Environmental Limited are listed below in Table 1. The Director’s dates of birth are included in Appendix 1.

Table 1 – Details of Directors

Directors
Mr. Fraser Wilson McKenzie
Mr. Steven John Longdon

3.0 PART C2 – GENERAL – VARYING A BESPOKE PERMIT

3.1 Q1a. Discussions Before Your Application

3.1.1 Pre-Application Advice was received from the Environment Agency (EA) on 26/09/2023 and consisted of a Basic Advice document about permit applications and a Nature and Heritage Conservation Screen for the site, provided in Appendix 2. The pre-application advice reference is EPR/KP3734LL/P001.

3.1.2 The Nature and Heritage Conservation Screen identified 6 Local Wildlife Sites (LWS) and 1 Ancient Woodland within 2km of the site, and 1 Special Area of Conservation (SAC) and 1 Special Protection Area (SPA) within 10km of the site:

- Dodbottom Woods LWS & Ancient Woodland
- Thieveley Scout LWS
- Heald Moor and Deerplay Moor LWS
- Broughton's Pasture LWS
- Red Moss LWS
- Low Side Banking LWS
- South Pennine Moors SAC and SPA

3.2 Q1b. Permit Number

3.2.1 The permit number this application relates to is EPR/KP3734LL/V005 for Deerplay Landfill Site. It is proposed to consolidate existing permit EPR/PP3032SY for the 'Gas Utilisation Scheme' into the landfill permit to retain but relocate the flare and add this and a microgenerator to the listed Directly Associated Activities (DAAs) in Table S1.1 of the landfill permit.

3.3 Q1c. Site Details

3.3.1 The site is called Deerplay Landfill, on Bacup Road, Cliviger, Burnley, Lancashire, BB11 3RL.

3.4 Q2a. Type of Variation

3.4.1 This application is for adding a Section 5.4 A(1)(a)(ii) listed activity to the permit, for the operation of a Reverse Osmosis (RO) Plant at Deerplay Landfill, for the treatment of non-hazardous landfill leachate prior to discharge to sewer under an existing United Utilities trade effluent discharge consent ref. 716T4-2-148.

3.4.2 This application is also to consolidate the existing permit EPR/PP3032SY for the 'Gas Utilisation Scheme' into the landfill permit to retain but relocate the flare and add this and a microgenerator to the listed Directly Associated Activities (DAAs) in Table S1.1 of the landfill permit.

3.4.3 This application is being submitted on the basis of adding a new bespoke activity (new application fee) and consolidating the 'Gas Utilisation Scheme' into the landfill permit (as a

minor technical variation fee) and so the appropriate forms have been completed and the appropriate application fee will be paid to the Environment Agency, as outlined in Section 7.0 of this document.

3.5 Q2b & Table 1: Changes or Additions to Existing Activities

3.5.1 The following changes and additions are proposed:

Reverse Osmosis (RO) Plant

- Addition of new listed activity '*Section 5.4 A(1)(a)(ii) 'Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment (D8)'*' to Deerplay Landfill permit ref. EPR/KP3734LL, for the treatment of non-hazardous leachate at the proposed new Reverse Osmosis (RO) Plant.
- Addition of a Directly Associated Activity (DAA) to the permit for the '*discharge of treated leachate to sewer from the reverse osmosis plant*'.
- Addition of a DAA to the permit for the '*temporary storage of leachate prior to disposal off-site*' to cover the storage of raw leachate prior to treatment and concentrate prior to tankering off-site for disposal.

3.5.2 See 'Operating Techniques & BAT Review' report ref. 5987-CAU-XX-XX-RP-V-0302 for further information on the proposed RO Plant activities, operating techniques and processes.

Permit Consolidation

- Consolidating the existing permit for the 'Gas Utilisation Scheme' (ref. EPR/PP3032SY) into the landfill permit (ref. EPR/KP3734LL) in order to retain but relocate the flare and add this and a microgenerator as listed DAAs in Table S1.1 of the landfill permit.

3.6 Q2c2. Table 2 Consolidating (combing) or updating existing permits

3.6.1 It is proposed to consolidate existing permit EPR/PP3032SY for the 'Gas Utilisation Scheme' into existing permit EPR/KP3734LL/V005 for Deerplay Landfill.

3.6.2 The purpose of the consolidation is to retain but relocate the flare and add this and a microgenerator to the listed DAAs in Table S1.1 of the landfill permit.

3.7 Q3a. Relevant Offences

3.7.1 The Operator or any other relevant persons have not been convicted of any relevant offences.

3.8 Q3b. Technical Ability

3.8.1 The Operator, WRG Environmental Limited, are a wholly owned subsidiary of FCC Environment (UK) Limited and FCC operates a Competency Management System (CMS) which

is applicable to Deerplay Landfill Site and has been approved by LRQA. The relevant certificate is attached as Appendix 3.

3.9 Q3c. Finances

3.9.1 There are no relevant persons that have current or past bankruptcy or insolvency proceedings against them.

3.10 Q3d. Management Systems

3.10.1 The Operator, WRG Environmental Limited, are a wholly owned subsidiary of FCC Environment (UK) Limited and FCC has implemented an Environmental Management System (EMS) across the whole company and its subsidiaries to control the operations at their sites. The management of the installation activities will continue to be in line with ISO14001 standard for Environmental Management. A summary of the Environmental Management System (EMS) and the relevant EMS certificate is attached as Appendix 4.

3.11 Q4a. Could the waste operation or installation involve releasing any substance into any of the following: A sewer managed by a sewerage undertaker?

3.11.1 Yes - once the non-hazardous leachate has been sent through the RO Plant and treated by a 3-stage process, the resulting permeate will be of suitable quality for discharge to sewer under the existing Trade Effluent Discharge Consent (TEDC) ref. 716T4-2-148 (dated 26th February 2024) issued by United Utilities (see Appendix 5). A H1 Surface Water Pollution Risk Assessment has been undertaken on the receiving waters and is included within this application as document ref. 5987-CAU-XX-XX-RP-O-0300 and concluded that the risks to the receiving water body via the wastewater treatment works from the discharged treated leachate will be 'low' to 'negligible'.

3.11.2 The permeate will be discharged using existing sewer connections at the site, situated on Bacup Road, which ultimately discharges into the Burnley Wastewater Treatment Works.

3.11.3 The waste concentrate liquid from the reverse osmosis treatment process will be stored in a bunded tank awaiting removal from site by tanker for suitable disposal to a permitted treatment facility such as Davyhulme Waste Water Treatment Works (United Utilities) or FCC Knostrop.

3.12 Q5a. Provide a Plan or Plans for the Site

3.12.1 The proposed RO Plant will sit within the repurposed gas compound within the existing landfill permit boundary at Deerplay Landfill Site and the relocated flare and microgenerator will sit adjacent to this to the southeast. The landfill permit boundary will remain unchanged. The RO Plant, storage tanks and pipework will be situated within an impermeable concrete surfaced and bunded area. The tanker parking area for the RO Plant is also surrounded by the bund wall and kerbing to contain any liquids accidentally spilled. Plant design and process diagrams for the RO Plant, and further information on the operational techniques are

presented in the 'Operating Techniques and BAT Review' report ref. 5987-CAU-XX-XX-RP-V-0302. The microgenerator and flare will sit within a compound with impermeable concrete surfacing.

3.12.2 The following drawings are included within the 'Operating Techniques and BAT Review' document ref. 5987-CAU-XX-XX-RP-V-0302 and show the proposed site layout of the RO Plant, storage tanks and infrastructure/pipework:

- WR7979/01/01 'Site Location'
- WR7979/01/02 'Existing Site Layout'
- WR7979/01/03 'Proposed RO Plant Site Layout'
- WR7979/01/04 'Proposed RO Plant Elevations'
- WR7979/02/07/R2 'Pipe and Cable Runs'

3.12.3 The following drawings are included in this 'Supporting Document' and show the physical sizes of the microgenerator and compound, and the location of the microgenerator and flare:

- RPS-CP-002 'Site Layout'
- RPS-CP-001 'Site Elevations'
- WR7979/01/03 'Proposed RO Plant Site Layout'

3.12.4 The following drawing is included within the 'Environmental Risk Assessment' report ref. 5987-CAU-XX-XX-RP-V-0303 showing the sensitive receptors within 1 km radius of the site:

- 5987-CAU-XX-XX-DR-V-1800 'Sensitive Receptor Plan'

3.13 Q5b. Do any of the variations you plan to make need extra land to be included in the permit?

3.13.1 The proposed RO Plant will sit within the repurposed gas compound, and the microgenerator and flare will sit to the southeast of this, all within the existing landfill permit boundary at Deerplay Landfill Site and therefore the landfill permit boundary will remain unchanged. No extra land will be required.

3.14 Q5c. Provide a Non-Technical Summary of your Application

3.14.1 The site to which this application relates is Deerplay Landfill Site, on Bacup Road, Cliviger, Burnley, Lancashire, BB11 3RL.

3.14.2 This application is for adding a new bespoke Section 5.4 A(1)(a)(ii) listed activity to the landfill permit ref. EPR/KP3734LL, for the operation of a Reverse Osmosis (RO) Plant at Deerplay Landfill for the treatment of non-hazardous landfill leachate prior to discharge to sewer under an existing United Utilities trade effluent discharge consent (TEDC) ref. 716T4-2-148 (dated 26th February 2024).

- 3.14.3 In addition, this application is also for varying the landfill permit in order to consolidate the existing permit EPR/PP3032SY for the 'Gas Utilisation Scheme' into the landfill permit (EPR/KP3734LL) in order to retain but relocate the flare and add this and a microgenerator to the listed Directly Associated Activities (DAAs) in Table S1.1 of the landfill permit.
- 3.14.4 Therefore, this application is being submitted on the basis of adding a new bespoke activity and also a minor technical variation to the landfill permit (to consolidate) and the appropriate application fees will be paid to the Environment Agency, as outlined in Section 7.0 of this document.
- 3.14.5 There will be no changes to the landfill permit (EPR/KP3734LL) boundary, waste types or tonnages for the landfill as part of this permit variation.
- 3.14.6 The Operator will continue to implement their Environmental Management System (EMS) to control the operations at their site and this will be in line with ISO14001 standard for Environmental Management. A summary of the Environmental Management System (EMS) and the relevant EMS certificate is attached as Appendix 4 of this Supporting Document. The Operator will also continue to implement their Competency Management System (CMS) for technical ability which is applicable to Deerplay Landfill Site and approved by LRQA, and the relevant certificate is attached as Appendix 3 of this Supporting Document.

Reverse Osmosis (RO) Plant

- 3.14.7 The RO Plant will treat non-hazardous leachate under '*Section 5.4 Part A(1)(a)(ii) for the physico-chemical treatment of non-hazardous waste with a capacity exceeding 50 tonnes per day for disposal*' and this is to be added to the landfill permit as a listed activity.
- 3.14.8 The Directly Associated Activity (DAA) for the discharge of treated leachate from the landfill to sewer is already included within the landfill permit for the existing Leachate Treatment Plant (LTP). An additional DAA will be added to the landfill permit for the 'discharge of treated leachate to sewer from the reverse osmosis plant'. A DAA for the 'temporary storage of leachate prior to disposal off-site' is also required to be added to Table S1.1 of the landfill permit to cover the storage of raw leachate prior to treatment and concentrate prior to tankering off-site for disposal.
- 3.14.9 The treatment process will be based on a reverse osmosis system that removes organic and inorganic contaminants from the leachate and produces a treated permeate, suitable for disposal to sewer. The RO Plant will treat the non-hazardous leachate from Deerplay Landfill Site only, with no other leachate from off-site proposed to be imported. Discharge of permeate will be to sewer under existing Trade Effluent Discharge Consent (TEDC) ref. 716T4-2-148 issued by United Utilities (dated 26th February 2024) (see Appendix 5). The permeate will be discharged using existing sewer connections at the site, situated on Bacup Road, which ultimately discharges into the Burnley Wastewater Treatment Works.

- 3.14.10 The overall site layout of the proposed RO Plant and tanks within the existing permit boundary is shown on drawing ref. WR7979/01/03 'Proposed Site Layout' included within the 'Operating Techniques and BAT Review' report ref. 5987-CAU-XX-XX-RP-V-0302.
- 3.14.11 The RO Plant and associated infrastructure will be installed within a compound with impermeable concrete surfacing, in the old gas compound adjacent to the landfill.
- 3.14.12 Non-hazardous raw leachate will be piped directly from Deerplay Landfill to the existing but relocated 54.5m³ self-bunded reception tank adjacent to the RO Plant area. The other storage tanks and the RO Plant will be within a fully bunded area capable of holding 110% volume of the largest tank (see drawing ref. WR7979/01/04).
- 3.14.13 The small volume of aqueous concentrate generated (a concentrated liquid containing pollutants removed from the leachate) will be temporarily stored in a 110m³ tank that will be double bunded and sat within the impermeable concrete bunded area of the RO Compound, prior to being tankered off-site for suitable disposal or further treatment at a licensed facility.
- 3.14.14 Permeate will be tested regularly prior to discharge to sewer to ensure quality is monitored and consented parameter limits within the TEDC are not exceeded.
- 3.14.15 Additives will be required to be added into the RO process and these will be caustic soda and sulphuric acid. These will be stored in integrally bunded storage tanks adjacent to the RO Plant within the concrete bunded area and will be 30m³ and 15m³ volume tanks respectively.

Permit Consolidation

- 3.14.16 This permit variation application also includes consolidating the existing permit ref. EPR/PP3032SY for the 'Gas Utilisation Scheme' into the landfill permit (EPR/KP3734LL/V005) for Deerplay Landfill in order to retain but relocate the flare and add this and a microgenerator to the listed Directly Associated Activities (DAAs) in Table S1.1 of the landfill permit.
- 3.14.17 The microgenerator and flare will be part of the existing landfill gas management system at the site, for continued landfill gas abstraction and utilisation. Due to declining volumes of landfill gas being produced by the landfill over time, it is considered that the microgenerator is suitable and appropriate for the gas generation volumes at Deerplay Landfill Site and can be incorporated into the landfill permit as a DAA.
- 3.14.18 The 65kW electrical output microgenerator is a much smaller unit that is considered suitable and appropriate for the gas generation volumes at Deerplay Landfill Site. Based on the electrical efficiency of 29% of the microgenerator, as stated by the manufacturer (see Appendix 6), it is estimated that the total thermal input of the microgenerator is 224kWth, which is below the 1MWth threshold of the regulations for Medium Combustion Plant (MCP) and specified generators.
- 3.14.19 The high temperature flare stands at 3.6m tall for the safe combustion of landfill gas during engine downtime. The associated plant items for the flare and microgenerator include 3 No.

gas clean-up drums, gas booster cabin (1.7m long by 2.1m wide and 1.9m tall), oil tanks, transformers, connecting pipework, cabling and control systems. This, together with the flare and microgenerator, will all be housed within a compound adjacent to the previous gas compound area (new RO Plant area).

Application Documents

3.14.20 The documents included within this application are as follows:

- Supporting Document (including Non-Technical Summary, Pre-Application Advice and summary of the Management System)
- Application forms Part A, B3, C2, C3, C6 and F1
- Operational Techniques & BAT Review report (ref. 5987-CAU-XX-XX-RP-V-0302)
- Environmental Risk Assessment (ref. 5987-CAU-XX-XX-RP-V-0303)
- H1 Surface Water Pollution Risk Assessment (ref. 5987-CAU-XX-XX-RP-O-0300).

3.14.21 In preparing this application an evaluation of the potential environmental and health impacts from the RO process activity were undertaken in 'Environmental Risk Assessment' report ref. 5987-CAU-XX-XX-RP-V-0303, and it was concluded that the overall risks to the environment and human health from the proposed RO Plant activities is considered to be low, provided control measures are in place.

3.14.22 The EA's Nature and Heritage Conservation Screen identified 6 Local Wildlife Sites (LWS) and 1 Ancient Woodland within 2km of the site, and 1 Special Area of Conservation (SAC) and 1 Special Protection Area (SPA) within 10km of the site:

- Dodbottom Woods LWS & Ancient Woodland
- Thieveley Scout LWS
- Heald Moor and Deerplay Moor LWS
- Broughton's Pasture LWS
- Red Moss LWS
- Low Side Banking LWS
- South Pennine Moors SAC and SPA

3.14.23 Assessment of the RO treatment process against the requirements of S5.06 Guidance for the 'Recovery and Disposal of Hazardous and Non-hazardous waste' in line with 'Best Available Techniques' (BAT) reference document for Waste Treatment, IED 2010/75/EU IPPC, has demonstrated that BAT requirements have been satisfied. See 'Operating Techniques and BAT Review' report ref. 5987-CAU-XX-XX-RP-V-0302.

3.14.24 A 'H1 Surface Water Pollution Risk Assessment' has been undertaken as part of this permit variation, as document ref. 5987-CAU-XX-XX-RP-O-0300. The leachate at Deerplay is well characterised and the H1 Assessment provides information on the composition of the treated effluent (permeate) after processing, which is considered suitable for discharge to sewer.

Drawings

3.14.25 The following drawings are included within the 'Operating Techniques and BAT Review' document ref. 5987-CAU-XX-XX-RP-V-0302 and show the proposed site layout of the RO Plant, storage tanks and infrastructure/pipework:

- WR7979/01/01 'Site Location'
- WR7979/01/02 'Existing Site Layout'
- WR7979/01/03 'Proposed RO Plant Site Layout'
- WR7979/01/04 'Proposed RO Plant Elevations'
- WR7979/02/07/R2 'Pipe and Cable Runs'

3.14.26 The following drawings are included in this 'Supporting Document' and show the physical sizes of the microgenerator and compound, and the location of the microgenerator and flare:

- RPS-CP-002 'Site Layout'
- RPS-CP-001 'Site Elevations'
- WR7979/01/03 'Proposed RO Plant Site Layout'

3.14.27 The following drawing is included within the 'Environmental Risk Assessment' report ref. 5987-CAU-XX-XX-RP-V-0303 showing the sensitive receptors within 1 km radius of the site:

- 5987-CAU-XX-XX-DR-V-1800 'Sensitive Receptor Plan'

3.15 Q6. Environmental Risk Assessment

3.15.1 The following environmental risk assessments have been undertaken and are included as part of this permit application, as follows:

- Environmental Risk Assessment ref. 5987-CAU-XX-XX-RP-V-0303; and,
- H1 Surface Water Pollution Risk Assessment ref. 5987-CAU-XX-XX-RP-O-0300.

3.16 Appendix 2 – Date of Birth Information for Relevant Offences and/or Technical Ability Questions Only

3.16.1 The Operator or any other relevant persons have not been convicted of any relevant offences.

3.16.2 The Operator, WRG Environmental Limited, are a wholly owned subsidiary of FCC Environment (UK) Limited and FCC operates a Competency Management System (CMS) which is applicable to Deerplay Landfill Site and has been approved by LRQA. The relevant certificate is attached as Appendix 3.

4.0 PART C3 – VARIATION TO A BESPOKE INSTALLATION PERMIT

4.1 Q1a What activities are you applying to vary?

- 4.1.1 It is proposed to vary environmental permit ref. EPR/KP3734LL/V005 for Deerplay Landfill Site as a minor technical variation to consolidate permit ref. EPR/PP3032SY for the 'Gas Utilisation Scheme' into the landfill permit, in order to retain but relocate the flare and add this and a microgenerator to the listed Directly Associated Activities (DAAs) in Table S1.1 of the landfill permit.
- 4.1.2 The microgenerator and flare will be part of the existing landfill gas management system at the site, for continued landfill gas abstraction and utilisation. Due to declining volumes of landfill gas being produced by the landfill over time, it is considered that the microgenerator is suitable and appropriate for the gas generation volumes at Deerplay Landfill Site and can be incorporated into the landfill permit as a DAA.
- 4.1.3 The 65kW electrical output microgenerator is a much smaller unit that is considered suitable and appropriate for the gas generation volumes at Deerplay Landfill Site. Based on the electrical efficiency of 29% of the microgenerator, as stated by the manufacturer (see Appendix 6), it is estimated that the total thermal input of the microgenerator is 224kWth, which is below the 1MWth threshold of the regulations for Medium Combustion Plant (MCP) and specified generators.
- 4.1.4 The high temperature flare stands at 3.6m tall for the safe combustion of landfill gas during engine downtime. The associated plant items for the flare and microgenerator include 3 No. gas clean-up drums, gas booster cabin (1.7m long by 2.1m wide and 1.9m tall), oil tanks, transformers, connecting pipework, cabling and control systems. This, together with the flare and microgenerator, will all be housed within a compound adjacent to the previous gas compound area (new RO Plant area).
- 4.1.5 The microgenerator and flare are to be incorporated into the landfill permit as DAAs, as Table 2 below:

Table 2 – Additional Directly Associated Activities

Activity listed in Schedule 1 of the EP Regulations / Associated Activity	Description of specified activity and WFD Annex I and II operations	Limits of specified activity
Directly Associated Activity		
Burning of waste as a fuel	Combustion of landfill gas for the purpose of electricity generation.	Utilisation of landfill gas arising from Deerplay Landfill using a microgenerator. Receipt of landfill gas is from the inlet of the isolation valve at the

		knockout pot; for condensate return the limit will be the outlet of the condensate return isolation valve. Permission is for the operation of one microgenerator and the landfill gas flare.
Flaring of landfill gas	Flare stack height a minimum of 3.6m tall from ground level.	Flaring of landfill gas in an enclosed flare.
Oil and coolant storage	Storage and handling of utility materials (oil, coolant and waste oil).	Receipt of utility materials, storage of raw materials and storage of waste materials after use.

4.1.6 This is being applied for on the basis of a minor technical variation and the appropriate fee will be paid to the Environment Agency, as outlined in Section 7.0 of this document.

4.2 Q1b Types of Waste Accepted

4.2.1 There will be no changes or addition to the list of wastes in the landfill permit as part of this permit variation. Only landfill gas from Deerplay Landfill will be utilised in the microgenerator and flare, and only non-hazardous leachate from Deerplay Landfill Site will be treated in the RO Plant. It is not proposed to import leachate from other sites for treatment and so this is not considered further in this application.

4.3 Q2 Point source emissions to air, water and land

4.3.1 There will be no changes to existing point source emissions to air, water or land as part of this application.

4.3.2 The standby flare and microgenerator will be moved to a new location on site (see drawing ref. WR7979/01/03) and the flare stack height will be 3.6m tall from ground level. The performance of the plant and equipment installed shall be subject to formal inspection and management under a written environmental management system.

4.3.3 Point source emissions from the proposed additional activity at the RO Plant are already considered in detail within the 'Operating Techniques and BAT Review' report ref. 5987-CAU-XX-XX-RP-V-0302, included within this application.

4.4 Q3a Technical Standards

4.4.1 There are no changes to the existing operating techniques and technical standards for the landfill and associated activities as a result of the proposals within this permit variation.

4.4.2 The technical standards relevant to the proposed new RO Plant activity are covered in the 'Operating Techniques and BAT Review' report ref. 5987-CAU-XX-XX-RP-V-0302, included within this application.

4.5 Q3b General Requirements

4.5.1 There are no changes to the general requirements to the existing activities as part of this permit variation.

4.6 Q3c Types and amounts of raw materials

4.6.1 There are no changes to the types and amounts of raw materials used at the landfill for the existing activities as part of this permit variation.

4.6.2 Oil and coolant will be used and stored within appropriate containment as part of the maintenance of the microgenerator and flare.

4.6.3 Raw materials to be used at the RO Plant are detailed in the 'Operating Techniques & BAT Review' report ref. 5987-CAU-XX-XX-RP-V-0302.

4.7 Q3d Information for Specific Sectors: Appendix 1 Combustion Sector

4.7.1 Q1 – Fuel: The proposed microgenerator (and stand-by flare) will only burn landfill gas from Deerplay Landfill.

4.7.2 Q2 – Composition Range of Fuel: Not applicable – only landfill gas to be burned.

4.7.3 Q3 – Nox Factors: Not applicable.

4.7.4 Q4 – Will your combustion plant be subject to Chapter III of the Industrial Emissions Directive 2010/75/EU? : No, the microgenerator is below the threshold at approximately 224 kWth.

4.7.5 Q5-12: Not applicable to this application.

4.8 Q3d Information for Specific Sectors: Appendix 4 Landfill and recovery of hazardous waste on land

4.8.1 There are no changes required to be made to any existing Environmental Setting and Installation Design (ESID) report, Hydrogeological Risk Assessment (HRA) report, Stability Risk Assessment (SRA) report, Landfill Gas Risk Assessment (LFGRA) report or other documents relating to the landfill as part of this permit variation.

5.0 PART C6 – VARIATION TO A POINT SOURCE EMISSION TO WATER FROM AN INSTALLATION

5.1 Q1a: About the variation you are applying for – Give a brief description

5.1.1 A Reverse Osmosis (RO) Plant will be used to treat non-hazardous leachate derived from Deerplay Landfill Site by a 3-stage process and the permeate will be discharged to sewer under existing Trade Effluent Discharge Consent (TEDC) ref. 716T4-2-148 (dated 26th February 2024) issued by United Utilities (see Appendix 5). The permeate will be discharged using existing sewer connections at the site, situated on Bacup Road, which ultimately discharges into the Burnley Wastewater Treatment Works.

5.2 Q1b: Give this effluent a unique name

5.2.1 The treated leachate that will be discharged from the RO Plant is called a permeate.

5.3 Q1d: Have you obtained all the necessary permissions in addition to this environmental permit to be able to carry out the discharge?

5.3.1 Yes – the permeate (treated leachate) will be discharged to foul sewer under existing Trade Effluent Discharge Consent (TEDC) ref. 716T4-2-148 issued by United Utilities (see Appendix 5). It is proposed to discharge up to 200 tonnes (200m³) per day of permeate to sewer. The route the permeate takes to final discharge to sewer is shown on drawing ref. WR7979/02/07/R2, along with the location the permeate leaves the RO Plant at the Sampling Point 'SP'.

5.4 Q2a What date do you want the permit for this effluent to start?

5.4.1 As soon as possible.

5.5 Q2c: About the effluent – Will the discharge take place all year?

5.5.1 Yes – the discharge will take place continuously, 24 hours a day, all year round.

5.6 Q3a and 3b: What is the daily dry weather flow and what is the maximum volume of effluent you will discharge in a day?

5.6.1 The answer to both these questions is the same – 200m³ maximum discharge of permeate from the RO Plant all year round. The RO plant has been designed to treat non-hazardous leachate and discharge up to 200m³ (200 tonnes) per day of permeate and will operate continuously for 24hours. This is also in accordance with the daily discharge limit of treated leachate in the TEDC of 200m³ per day. In accordance with the TEDC, the highest rate at which the trade effluent may be discharged shall not exceed 7 litres per second.

5.7 Q3c: What is the maximum rate of discharge?

5.7.1 The maximum rate of discharge the TEDC allows to sewer is 7 litres per second, however the RO Plant will be less than this.

5.8 Q3d: What is the maximum volume of non-rainfall dependent effluent you will discharge in a day?

5.8.1 As per Q3a/b above.

5.9 Q3f: For each answer in question 3, show how you worked out the figure on a separate sheet.

5.9.1 The RO Plant is designed to discharge up to 200m³ of permeate per day, no other calculations necessary.

5.10 Qu4 and 5

5.10.1 Questions 4 and 5 of the application form do not apply to this application. The proposed discharge to sewer is to be continuous, not intermittent as per Question 4. The proposed discharge will be going to sewer therefore Question 5 is not relevant.

5.11 Q6a, b & c: Do you treat your effluent?

5.11.1 Yes – see ‘Operating Techniques and BAT Review’ report ref. 5987-CAU-XX-XX-RP-V-0302 for further detail on the treatment process of the leachate at the Reverse Osmosis (RO) Plant. The permeate from the RO Plant will be discharged to sewer in accordance with the TEDC.

5.11.2 See also the H1 Surface Water Pollution Risk Assessment ref. 5987-CAU-XX-XX-RP-O-0300 which has been undertaken as part of this permit variation.

5.12 Q7a, b, c, d, e: What will be in the effluent?

5.12.1 A H1 Surface Water Pollution Risk Assessment has been undertaken as part of this permit variation, as document ref. 5987-CAU-XX-XX-RP-O-0300. The leachate at Deerplay is well characterised and the H1 Assessment provides information on the composition of the treated effluent (permeate) after processing, which is considered suitable for discharge to sewer.

5.13 Q7f: What is the maximum temperature of your discharge?

5.13.1 As per the TEDC, the maximum temperature of the effluent will not exceed 43.3°C.

5.14 Q7g: What is the maximum expected temperature change compared to the incoming water supply?

5.14.1 To be determined, but typically minimal changes from ambient temperatures. As per the TEDC, the maximum temperature of the effluent leaving the RO Plant will not exceed 43.3°C.

5.15 Q8e: Discharges to freshwater (non-tidal) rivers from an installation, including discharges via sewer

5.15.1 A H1 Surface Water Pollution Risk Assessment has been undertaken as part of this permit variation, as document ref. 5987-CAU-XX-XX-RP-O-0300.

5.16 Q9a, b, c, d, e, f, h and i: Monitoring Arrangements

5.16.1 The maximum discharge volume of permeate from the RO Plant will be 200m³ per day, therefore detail on monitoring is required.

5.16.2 An inlet sampling point is not relevant to this application.

5.16.3 The effluent sampling point ('SP') will be a tap within the RO Plant prior to discharging via a pipe to sewer and the location of this and the flow meter ('FM') is shown on attached drawing ref. WR7979/02/07/R2. All permeate will be channelled through this point. The National Grid Reference of the effluent sampling point is approximately: TL 18834 35327. This has not been surveyed in yet and so an approximate NGR has been provided based on the 'Grid Reference Finder' website¹.

5.16.4 The Urban Waste Water Treatment Directive does not apply to this application.

5.16.5 The National Grid Reference of the flow monitoring point is approximately: TL 18835 35328. This has not been surveyed in yet and so an approximate NGR has been provided based on the 'Grid Reference Finder' website¹. The flow monitor will be a magnetic inductive flow meter monitoring permeate continuously as it flows out of the RO Plant.

5.16.6 A UV disinfection efficacy monitoring point and an event duration monitoring point is not required for the proposed discharge and is not considered further.

5.16.7 The locations where the permeate leaves the RO Plant, the Sampling Point ('SP') and the flow meter ('FM') are shown on attached drawing ref. WR7979/02/07/R2.

5.17 Q10a, b and c: Where will the effluent discharge to?

5.17.1 As above, the permeate from the RO Plant will be discharged to foul sewer under existing Trade Effluent Discharge Consent (TEDC) ref. 716T4-2-148 issued by United Utilities (see Appendix 5). It is proposed to discharge up to 200 tonnes (200m³) per day of permeate to sewer. The locations where the permeate leaves the RO Plant, the Sampling Point ('SP') and the flow meter ('FM') are shown on attached drawing ref. WR7979/02/07/R2. A H1 Surface Water Pollution Risk Assessment has been undertaken as part of this permit variation, as document ref. 5987-CAU-XX-XX-RP-O-0300 for the receiving waters.

¹ <https://gridreferencefinder.com/#gr=TL1915235708|arlesey|1,TL1863435529|Point s B|1>

6.0 PART B3 – NEW BESPOKE INSTALLATION PERMIT

6.1 Operating Techniques

6.1.1 The answers to questions 1 to 5 in application form Part B3 are presented in Section 2.0 of the 'Operating Techniques and BAT Review' report ref. 5987-CAU-XX-XX-RP-V-0302, included within this application.

6.1.2 The above report also provides an assessment of compliance for the proposed new Reverse Osmosis (RO) Plant at Deerplay Landfill reviewing the Best Available Techniques (BAT) from the following documents:

- Best Available Techniques (BAT) reference document for waste treatment, IED 2010/75/EU (Integrated Pollution Prevention and Control) (Updated October 2018);
- Best Available Techniques (BAT) Conclusions for Waste 'Establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament of the Council. (updated August 2018); and,
- The Environment Agency's Sector Guidance Note (SGN IPPC 5.06) 'Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste.

7.0 PART F1 – CHARGES AND DECLARATIONS

7.1 Q1. Table 1 and Table 2: Working Out Charges

7.1.1 The application fee relates to adding the following listed activity to the landfill permit:

- *Section 5.4 A1 (a)(ii) 'Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment'.*

7.1.2 In addition, a minor variation charge is required where the 'Gas Utilisation Scheme' permit is to be consolidated with the landfill permit and Directly Associated Activities (DAAs) added to the landfill permit for the microgenerator and flare.

7.1.3 As per Environment Agency Charging Scheme 2022/23, the charging ref. 1.16.2.2 applies to the above Section 5.4 activity to be added to the permit. For the addition of the above activity to the permit, a new permit application charge applies, as below in Table 3. The minor permit variation charge of the landfill permit is also included below as charging ref. 1.17.2.

Table 3 – Environment Agency Application Fees

Charging Ref.	Description	Fee
1.16.2.2	Section 5.4 (a)(ii) – non-hazardous waste installation – physico-chemical treatment for disposal.	£13,443
1.17.2 Minor variation	Section 5.2 – landfill for non-hazardous waste and lagoons/dredging sites subject to the Landfill Directive.	£6,832
-	Habitats Assessment	£779
	Total	£21,054

7.1.4 A BACS payment for the amount of **£21,054** will be made by the Operator to the Environment Agency under BACS reference: **PSCAPPWRGE5987**. This may be made as part of a bulk payment by FCC.

APPENDIX 1

Directors Dates of Birth
CONFIDENTIAL AND NOT TO BE INCLUDED
ON PUBLIC REGISTER

APPENDIX 1

DIRECTORS DATES OF BIRTH

(CONFIDENTIAL – DO NOT PLACE ON THE PUBLIC REGISTER)

Company Name	Company Number
WRG Environmental Limited	02206141
Director Name	Date of Birth
Mr. Fraser Wilson McKenzie	■■■■■■■■■■
Mr. Steven John Longdon	■■■■■■■■■■



Certificate Number 9113
ISO 9001, ISO 14001

Caulmert Limited

Registered Office: InTec, Parc Menai, Bangor, Gwynedd, LL57 4FG

Company Registered No. 06716319

Company Registered in Cardiff



APPENDIX 2

Pre-Application Advice

Nature and Heritage Conservation

Screening Report: Bespoke Installation

Reference	EPR/KP3734LL/P001
NGR	SD 85857 28402
Buffer (m)	50
Date report produced	26/09/2023
Number of maps enclosed	4

The nature conservation sites identified in the table below must be considered in your application.

Nature and heritage conservation sites	Screening distance (km)	Further information
Special Areas of Conservation (cSAC or SAC) South Pennine Moors	10	Joint Nature Conservation Committee
Special Protection Area (pSPA or SPA) South Pennine Moors - Phase 2	10	Joint Nature Conservation Committee

Local Wildlife Sites (LWS)	2	Appropriate Local Record Centre (LRC)
Dodbottom Woods		
Thieveley Scout		Appropriate Wildlife Trust
Heald Moor and Deerplay Moor		
Broughton's Pasture		
Red Moss		
Low Side Banking		
Ancient Woodland	2	Woodland Trust
Dodbottom Wood		Forestry Commission
		Natural England

Where protected species are present, a licence may be required from Natural England or the Welsh Government to handle the species or undertake the proposed works.


The relevant Local Records Centre must be contacted for information on the features within local wildlife sites. A small administration charge may also be incurred for this service

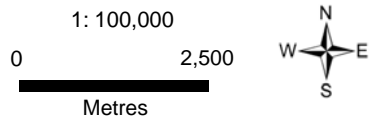
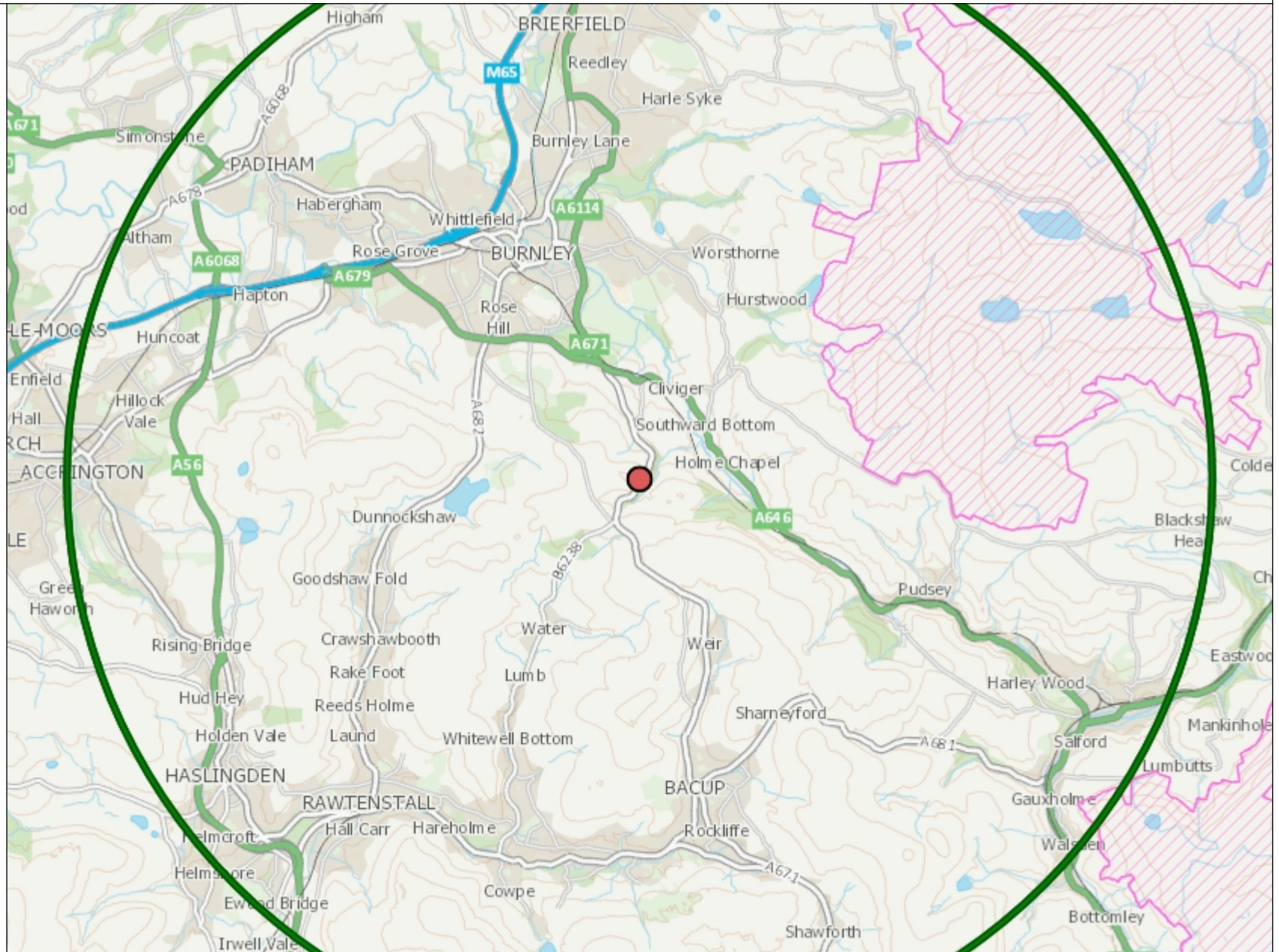
Please note we have screened this application for protected and priority sites, habitats and species for which we have information. It is however your responsibility to comply with all environmental and planning legislation, this information does not imply that no other checks or permissions will be required.

Please note the nature and heritage screening we have conducted as part of this report is subject to change as it is based on data we hold at the time it is generated. We cannot guarantee there will be no changes to our screening data between the date of this report and the submission of the permit application, which could result in the return of an application or requesting further information.

Special Areas of Conservation

Legend


 SAC (England)

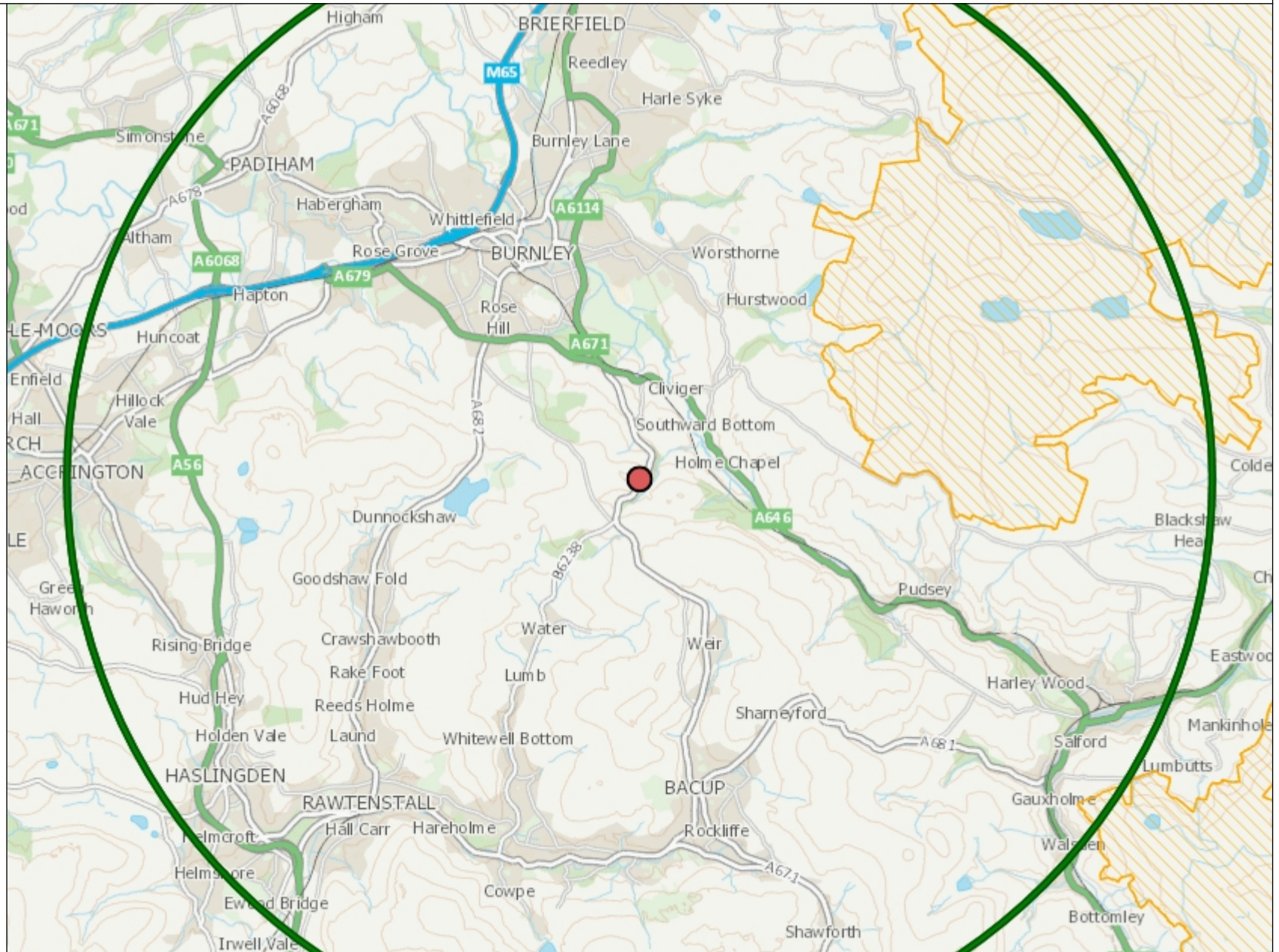


Special Protection Area



Legend

 SPA (England)



1: 100,000

0 2,500

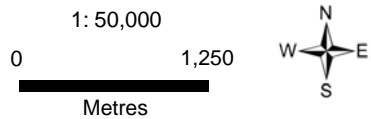
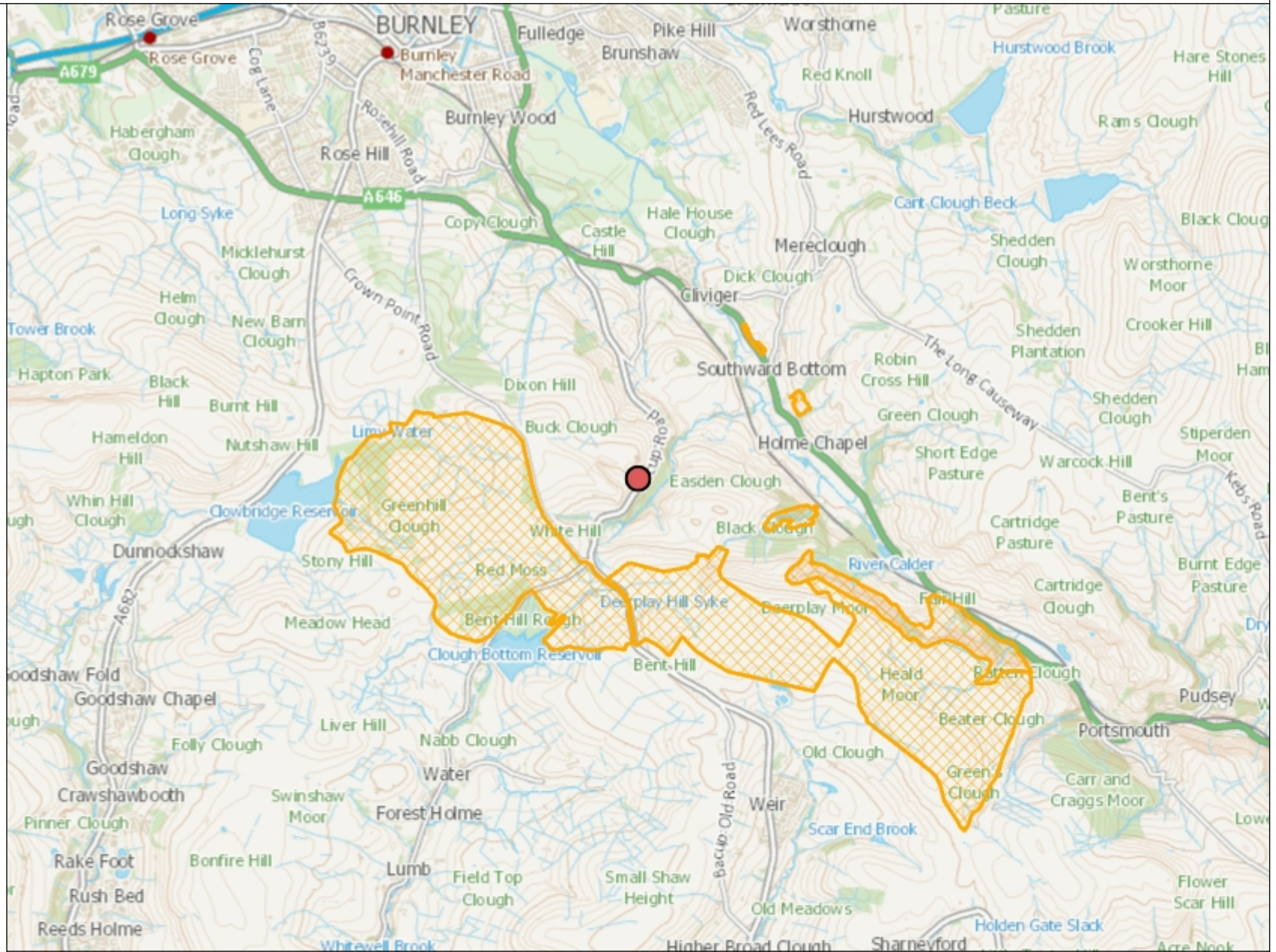
Metres



Local Wildlife Sites


Legend

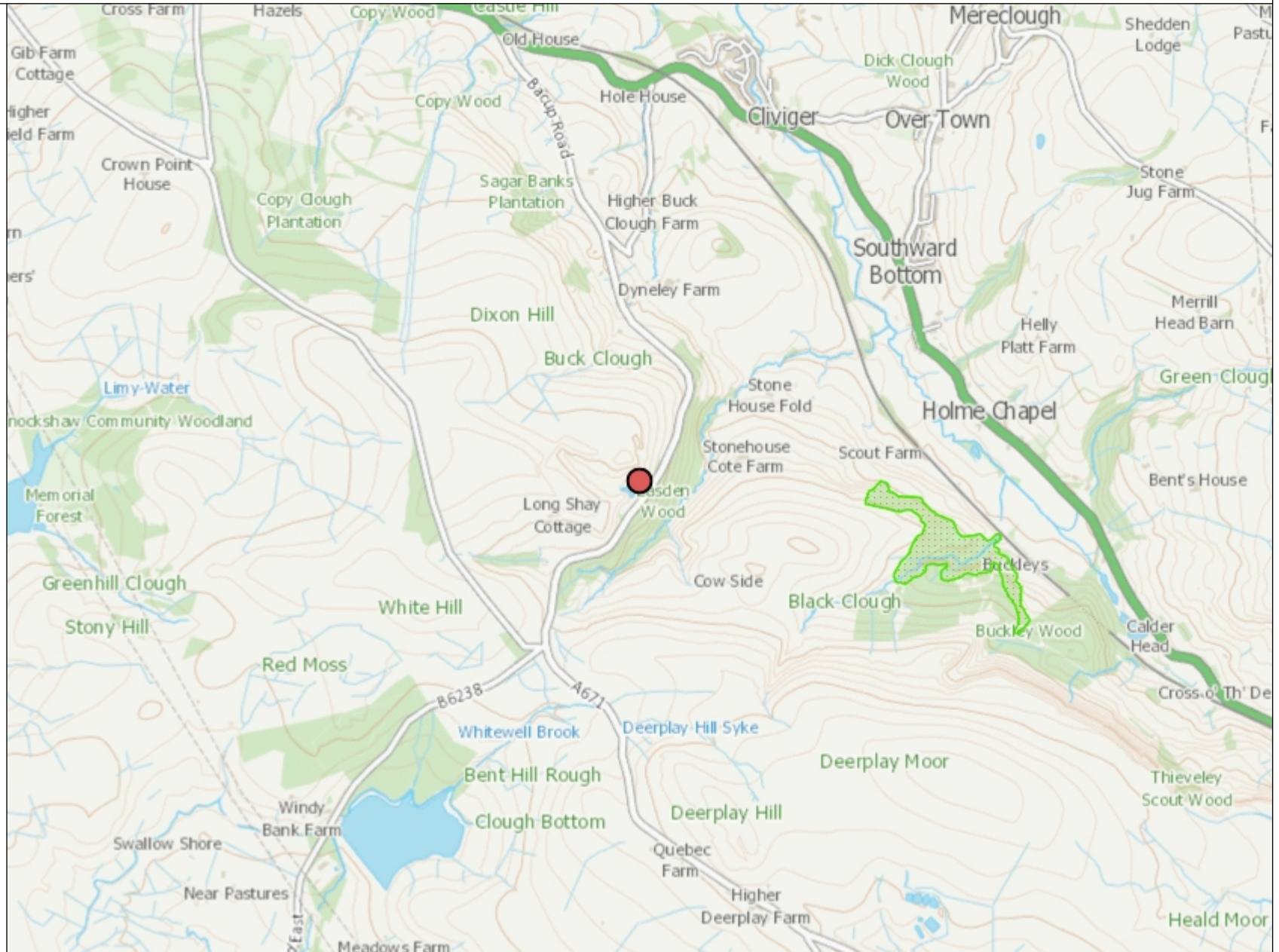
 Local Wildlife Sites



Ancient Woodland

Legend

 Ancient Woodland (England)



1: 25,000

0 625

Metres



APPENDIX 3

Competence Management System Certificate

Certificate of Approval

This is to certify that the Management System of:

FCC Environment (UK) Ltd

3 Sidings Court, White Rose Way, Doncaster, DN4 5NU, United Kingdom

has been approved by LRQA to the following standards:

Competence Management System - Energy & Utility Skills (Private Standard) Version 5

Approval Number(s): CMS – 00040022

The scope of this approval is applicable to:

The operation of a Competence Management System for the management and operation of FCC sites with an environmental permit or exemption including Landfills; Household Waste Recycling Centres; Transfer Stations; Material Recycling Facilities; Composting; In-vessel Composting; Mechanical Biological Treatment Facilities; Quarries; Leachate Treatment Plants and Liquid Waste Treatment Plants.

Marta Escudero

Regional Director, United Kingdom and Americas (UKAM)

Issued by: LRQA Limited



APPENDIX 4

EMS Summary & Management System Certificate

Caulmert Limited

Engineering, Environmental & Planning
Consultancy Services

Deerplay Landfill

WRG Environmental Limited

Environmental Permit Variation Application

Management System Summary

Prepared by:

Caulmert Limited

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Document Reference: 5987-CAU-XX-XX-RP-V-0305.A0.C1

March 2024



APPROVAL RECORD

Site: Deerplay Landfill

Client: WRG Environmental Limited

Project Title: Environmental Permit Variation Application

Document Title: Management System Summary

Document Ref: 5987-CAU-XX-XX-RP-V-0305.A0.C1

Report Status: **Final**

Project Manager: Andy Stocks

Caulmert Limited: Strelley Hall, Main Street, Strelley, Nottingham, NG8 6PE

Author	Samantha Hayden Senior Environmental Consultant	Date	25/01/2024
Reviewer	Andy Stocks Director of Environment	Date	25/01/2024
Approved	Andy Stocks Director of Environment	Date	25/01/2024

Revision Log			
Revision	Description of Change	Approved	Effective Date
C1	Initial Release	AS	15/03/2024

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Management System Summary

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APPENDICES

Appendix 1	EMS & CMS Certificates
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1.0 INTRODUCTION

- 1.1.1 WRG Environmental Limited ('the Operator') (a subsidiary of FCC Environment (UK) Limited) operate Deerplay Landfill Site located in on Bacup Road, Cliviger, Burnley, Lancashire, at postcode BB11 3RL.
- 1.1.2 The Operator has appointed Caulmert Limited to prepare a bespoke environmental permit variation application to install a new Reverse Osmosis (RO) Plant at Deerplay Landfill Site, but also includes consolidating the existing permit for the 'Gas Utilisation Scheme' into the landfill permit, retaining the flare and adding this and a microgenerator to the listed Directly Associated Activities (DAAs) in Table S1.1 of the landfill permit.
- 1.1.3 The permit to which this application relates is EPR/KP3734LL/V005 and the permit to be consolidated into the existing landfill permit is EPR/PP3032SY. The RO Plant will be installed in a compound within the existing permit boundary. The RO Plant will treat non-hazardous landfill leachate at the site prior to disposal to sewer. The microgenerator and flare will be located in a compound adjacent to the RO compound to the southeast.
- 1.1.4 The Operator has developed a management structure and a site-specific Environmental Management System (EMS) accredited to ISO14001. The EMS will be part of the facility's overall management system and will establish an organisational structure, responsibilities, practices, procedures and resources for achieving, reviewing and maintaining the company's commitment to environmental protection. Copies of ISO certificates are contained in Appendix 1 of this document.
- 1.1.5 The operation of an EMS is an assurance to the regulator, neighbouring businesses, stakeholders, and others alike that the facility operations are undertaken in strict compliance with the regulations in force and with the management seeking continual improvements. It requires the company to work in a transparent way, to maintain and improve the confidence of regulators and neighbours, and to have a proactive approach to environmental improvement.

2.0 MANAGEMENT SYSTEM

2.1 Overview

- 2.1.1 The operator already benefits from an environmental management system accredited to ISO14001 and a quality management system accredited to ISO9001 to control the existing operations at the site.
- 2.1.2 The EMS defines the sites management structure, as well as setting out the roles and responsibilities of all staff. The development of the EMS will also include:
- An Environmental Policy;
 - Health and Safety Procedures; and
 - An operational guidance manual which will include process plant operating procedures for both standard and emergency conditions.
- 2.1.3 To ensure appropriate operation of the landfill site, RO Plant, gas control infrastructure and other associated activities, the operator will develop documented management procedures and written work instructions which incorporate environmental considerations into the construction and operation of the facility.
- 2.1.4 The management system will also incorporate a number of other procedures and documents, which are used in the current operations of the site. These will be updated where applicable to incorporate the activities associated with the RO Plant and microgenerator.

2.2 Identifying and minimising risks of pollution

- 2.2.1 An environmental risk assessment has been carried out for the purpose of this variation which assesses the environmental risks from the activities proposed to be covered under the permit (document reference 5987-CAU-XX-XX-RP-V-0303).
- 2.2.2 The risk assessment was also used as a tool for identifying the risk management measures that are important in minimising the risks of pollution. The identified risk management measures are considered to be the minimum technical standards which the site should operate to.
- 2.2.3 A plan showing the sensitive receptors around the site and a site layout plan have also been prepared as part of this permit variation application.

2.3 Operations and maintenance

- 2.3.1 With regards to the proposed changes, the control measures identified within document reference 5987-CAU-XX-XX-RP-V-0303, will form the technical standards for the site. Any new operational procedures needing to be developed for the site will incorporate these technical standards as a minimum.

2.3.2 A Planned Preventative Maintenance programme (PPMP) will be employed on site to minimise the risk to safety, health and the environment by ensuring that all relevant plant and equipment used at the site are serviced and inspected on a regular basis or to the manufacturers' maintenance schedules.

2.3.3 Specific procedures relevant to this will be:

- IMS-PRO-003 Training - Employee New and Existing Procedure
- IMS-PRO-010 Risk Assessment Procedure
- IMS-PRO-024 Machinery Project Sign-off Procedure
- IMS-PRO-033 Monitoring and Measurement Equipment Calibration
- IMS-PRO-051 Environmental Permit Compliance Installation Check
- IMS-PRO-093 Amenity Impact Control Procedure
- IMS-PRO-095 Flow Metering Procedure
- IMS-PRO-101 Monthly Site Inspection Procedure
- IMS-UG-016 Environmental Permit Installation Checks Guidance
- IMS-UG-018 Environmental Aspects Assessment Guide
- IMS-FRM-063 Environmental Permit Compliance Installation Check Form
- IMS-FRM-074 Risk Assessment – Task and Equipment List
- IMS-FRM-088 Training Record
- IMS-FRM-100 Monthly Site Inspection Form

2.4 Accidents/Incidents and Non-Conformances

2.4.1 The operator will develop an accident management plan which:

- Identifies the likelihood and consequence of accidents;
- Identifies actions to prevent accidents and mitigate any consequences;
- Documented procedures for handling, investigating, communicating and reporting actual or potential non-compliance with operating procedures or any emission limits;
- Documented procedures for handling, investigating, communicating and reporting environmental complaints and implementation of appropriate actions; and,
- Documented procedures for investigating incidents, (and near misses) including identifying suitable corrective action and following up.

2.4.2 To ensure ongoing conformance to the management requirements and a system of continuous improvement, the operator will have periodic audits undertaken by independent auditors.

2.4.3 Any incidents or non-conformances will be recorded in the daily site records. A daily site inspection is carried out by a technically competent manager. Staff are also encouraged to report any issues to a competent manager.

2.4.4 Specific procedures relevant to this will be:

- IMS-FRM-019 Environmental Aspects and Impacts Form
- IMS-FRM-025 Daily Monitoring Form
- IMS-FRM-037 Fire Risk Assessment Report
- IMS-FRM-065 Environmental Monitoring Non-Conformance Form
- IMS-FRM-068 Emergency Management Plan
- IMS-PRO-005 CAR Response Procedure
- IMS-PRO-013 Accident and Incident Reporting Procedure
- IMS-PRO-014 Preventive and Corrective Action
- IMS-PRO-016 Aspects and Impacts Procedure
- IMS-PRO-017 Environment Incident Reporting Procedure
- IMS-PRO-031 Fire Prevention Procedure
- IMS-PRO-051 Environmental Installation Checks Procedure
- IMS-PRO-093 Amenity Impact Control Procedure
- IMS-PRO-101 Monthly Site Inspection Procedure
- IMS-PRO-176 Environmental Incident/Near Miss/Complaint and CAR Reporting Procedure
- IMS-UG-015 Permit Breach Notification Guidance
- IMS-UG-016 Environmental Permit Installation Checks Guidance
- IMS-UG-017 Landfill Monitoring and Analysis Guidance
- IMS-UG-018 Environmental Aspects Assessment Guide
- IMS-UG-037 Environmental Incident/Near Miss/Complaint and CAR Reporting

2.5 Complaints

2.5.1 The company has a Complaints Procedure, which forms part of the management system for the site. Specific procedures relevant to this will be:

- IMS-PRO-176 Environmental Incident/Near Miss/Complaint and CAR Reporting Procedure

2.6 Staff training and competence

2.6.1 The documented managements systems will include training requirements for all relevant staff which cover:

- Awareness of the regulatory implications of the Permit for the activity and their work activities;
- Awareness of all potential environmental effects from operation under normal and abnormal circumstances;
- Awareness of the need to report deviation from the Permit; and
- Prevention of accidental emissions and action to be taken when accidental emissions occur.

- 2.6.2 The skills and competencies necessary for key posts should be documented and records of training needs and training received for these posts maintained. The key posts will include contractors and those purchasing equipment and materials.
- 2.6.3 The potential environmental risks posed by the work of contractors should be assessed and instructions provided to contractors about protecting the environment while working on site.
- 2.6.4 Where industry standards or codes of practice for training exist they should be complied with.
- 2.6.5 Training is provided so that all workers have a satisfactory understanding of their duties in relation to environmental and health & safety issues on site.
- 2.6.6 Specific procedures relevant to this will be:
- IMS-PRO-001 Training - Planning Procedure
 - IMS-PRO-003 Training - Employee New and Existing Procedure
 - IMS-PRO-103 Change of Manager Handover Induction Procedure
 - IMS-FRM-101 Change of Manager Form
 - IMS-FRM-060 Working with Waste Form
- 2.6.7 FCC Environment has recently introduced a Competency Management System (CMS), which has been certified by its accrediting body (Appendix 1).
- 2.6.8 The Competency Management System is an alternative mechanism to the Certificate of Technical Competence (COTC) / Technically Competent Management (TCM) regime for demonstrating competence at sites with environmental permits.
- 2.6.9 Primarily, employees who are part of the CMS Scheme (Managers, Supervisors, Technicians, Advisors etc) are required to:
- Satisfactorily complete their CMS assessments within the timeframe set out by their assessor,
 - Review and maintain their competency through a process of Continued Professional Development (CPD), i.e. attendance on both Permit Compliance and Duty of Care courses which should be refreshed every 3 years.
 - Submit CPD records during IDS review for discussion with line manager
 - Be familiar with and operate in accordance with the requirements of the relevant IMS procedures (detailed below) and their associated user guides and forms.
 - Update relevant site documents and procedures including management plans and working plans to reflect the changes
- 2.6.10 Management procedures relating to the competency scheme are:
- IMS-FRM-170 CMS Standardisation Meeting Agenda

- IMS-POL-007 Competence Management System Policy 2019
- IMS-PRO-086 Continued Professional Development Procedure
- IMS-PRO-087 CMS Planning Procedure
- IMS-PRO-168 Performance Monitoring and Measurement Procedure
- IMS-UG-030 CMS User Guide
- IMS-UG-054 CMS Assessment Strategy User Guide
- IMS-UG-055 Introduction to Task Books

2.6.11 A copy of the Competency Management System Policy is contained within Appendix 1.

2.7 Odour, dust, noise and emissions management

2.7.1 The management system includes measures that will be taken to manage odour, dust, noise and emissions.

2.7.2 In addition, the technical standards proposed for the management of dust, odour, noise and other emissions, which were identified through the following documents for this application, will form part of the management system for the site:

- Environmental Risk Assessment ref. 5987-CAU-XX-XX-RP-V-0303

2.7.3 The management measures are supported by the daily checks which are carried out by the technically competent managers who will consider the most appropriate action to take.

2.7.4 Specific procedures relevant to this will be:

- IMS-FRM-019 Environmental Aspects and Impacts Form
- IMS-FRM-025 Daily Monitoring Form
- IMS-FRM-065 Environmental Monitoring Non-Conformance Form
- IMS-FRM-068 Emergency Management Plan
- IMS-PRO-005 CAR Response Procedure
- IMS-PRO-013 Accident and Incident Reporting Procedure
- IMS-PRO-014 Preventive and Corrective Action
- IMS-PRO-016 Aspects and Impacts Procedure
- IMS-PRO-044 Environmental Monitoring Procedure
- IMS-PRO-051 Environmental Installation Checks Procedure
- IMS-PRO-062 Control of Noise at Work Procedure
- IMS-PRO-093 Amenity Impact Control Procedure
- IMS-PRO-101 Monthly Site Inspection Procedure
- IMS-UG-015 Permit Breach Notification Guidance
- IMS-UG-016 Environmental Permit Installation Checks Guidance
- IMS-UG-017 Landfill Monitoring and Analysis Guidance
- IMS-UG-018 Environmental Aspects Assessment Guide

2.8 Documentation of legislative and other requirements

2.8.1 Copies of planning permissions, environmental permits and other relevant permissions are kept either as paper records or electronically.

2.8.2 The technically competent managers keep up-to-date with other legal requirements and changes to relevant environmental legislation through trade magazines and the Environment Agency website.

- IMS-UG-042 Site Filing System Guidance
- IMS-UG-001 IMS1 Document Library User Guide

2.9 Management reviews

2.9.1 Management periodically review the environmental performance of the company through their review of environmental audit reports and the daily site records.

2.9.2 The environmental policy statement is also reviewed periodically to ensure it reflects the company's operations and its environmental objectives.

2.9.3 Specific procedures relevant to this will be:

- IMS-FRM-007 FCC Objectives and Target Report Template
- IMS-PRO-006 Management Review Procedure
- IMS-FRM-003 Management Review Agenda
- IMS-FRM-004 Management Review Meeting Minutes Template
- IMS-FRM-007 FCC Objectives and Target Report Template

APPENDIX 1

EMS & CMS Certificates

Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that:

FCC Environment (UK) Ltd
3 Sidings Court
White Rose Way
Doncaster
DN4 5NU
United Kingdom

Holds Certificate Number:

EMS 592767

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

Recycling, waste management and quarrying activities at operational recycling/waste management sites, vehicle depots, workshops and quarries.

For and on behalf of BSI:

Matt Page, Managing Director Assurance - UK & Ireland

Original Registration Date: 2010-07-18

Latest Revision Date: 2022-04-04

Effective Date: 2022-02-12

Expiry Date: 2025-02-11

Page: 1 of 34



...making excellence a habit.™

Certificate No: EMS 592767

Location	Registered Activities
FCC Environment (UK) Limited Ollerton Road Arnold Nottinghamshire NG5 8PR United Kingdom	Landfill
FCC Environment (UK) Limited Bridlington Bay Road Carnaby Bridlington North Yorkshire YO16 4UU United Kingdom	Landfill
FCC Environment (UK) Limited Bacup Road Cliviger Burnley Lancashire BB11 3RL United Kingdom	Leachate Treatment Plant
FCC Environment (UK) Limited Drummond Moor Rosewell Midlothian EH26 8QF United Kingdom	Landfill
FCC Environment (UK) Limited The Oakery Lodge Road Feltwell Thetford Norfolk IP26 4DR United Kingdom	Landfill
FCC Environment (UK) Limited Lea Road Gainsborough Lincolnshire DN21 1AP United Kingdom	Landfill

Original Registration Date: 2010-07-18

Latest Revision Date: 2022-04-04

Effective Date: 2022-02-12

Expiry Date: 2025-02-11

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This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract.

An electronic certificate can be authenticated [online](#).

Printed copies can be validated at www.bsigroup.com/ClientDirectory

Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 345 080 9000
BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.
A Member of the BSI Group of Companies.

Certificate of Approval

This is to certify that the Management System of:

FCC Environment (UK) Ltd

3 Sidings Court, White Rose Way, Doncaster, DN4 5NU, United Kingdom

has been approved by LRQA to the following standards:

Competence Management System - Energy & Utility Skills (Private Standard) Version 5

Approval Number(s): CMS – 00040022

The scope of this approval is applicable to:

The operation of a Competence Management System for the management and operation of FCC sites with an environmental permit or exemption including Landfills; Household Waste Recycling Centres; Transfer Stations; Material Recycling Facilities; Composting; In-vessel Composting; Mechanical Biological Treatment Facilities; Quarries; Leachate Treatment Plants and Liquid Waste Treatment Plants.

Marta Escudero

Regional Director, United Kingdom and Americas (UKAM)

Issued by: LRQA Limited



WWW.CAULMERT.COM



Registered Office: InTec, Parc Menai, Bangor, Gwynedd, LL57 4FG

Tel: 01248 672666

Email: contact@caulmert.com

Web: www.caulmert.com

APPENDIX 5

Trade Effluent Discharge Consent

WATER INDUSTRY ACT 1991**NOTICE OF DIRECTION CONCERNING THE DISCHARGE OF TRADE
EFFLUENT**

To **FCC Waste Services (UK) Limited**

of **Ground Floor West
900 Pavilion Drive
Northampton Business Park
Northampton
NN4 7RG**

United Utilities Water Limited (hereinafter called "the Company") hereby give you Notice as **owner/occupier** of the trade premises situate at **Deerplay Landfill Site Bacup Road Burnley Lancs BB11 3RL**

that the Company in exercise of the powers conferred upon them by Section 124 of the above Act DIRECT that as from <<date>> all conditions attaching the CONSENT dated the **24 July 2007** to the discharge of trade effluent into the public sewer from the said trade premises as requested by a Trade Effluent Notice dated the **15 August 2005** shall be varied and the following conditions be substituted, namely:

**Nature of
discharge**

- 1a) Subject to the provisions of conditions 6,7,8 and 9 below the nature or composition of the trade effluent to be discharged under this Notice of Direction shall be solely as specified in the said application form and shall consist solely of waste water derived from **endogenous leachate and associated effluent from landfilling of non-hazardous waste.**
- 1b) The trader shall give to the Company prior written notice of any change in the process or the process materials or any other circumstances likely to alter the constituents of the trade effluent as set out in condition 1(a). In such circumstances, no substance of which the Company has not had previous notice, may be discharged unless and until the Company has agreed to accept the substance at a limit imposed by the Company which shall then be deemed to be incorporated in this Notice of Direction by agreement and shall not prejudice the right of the Company to serve a Direction earlier than two years from the date of such incorporation.

The Trader shall also give not less than seven days written notice to the Company of any change in the name of the occupier or owner.

**Sewer
affected**

2. The sewer into which the trade effluent may be discharged and the point of discharge is the foul sewer situate at **Todmorden Road (MH at HS).**

- Connections** 3. No connections shall be made to the said sewer without the prior approval of the Company and all such connections shall be constructed and maintained to the satisfaction of the Company at the expense of the Trader.
- Maximum volume of discharge** 4. The maximum amount of the trade effluent discharged in any one day of twenty four hours shall not exceed **500 m³**, of which not more than **200 m³** shall be treated leachate, without prior written consent of the Company.
- Maximum rate of discharge** 5. The highest rate at which the trade effluent may be discharged shall not exceed **7 litre/sec**.
- Matters to be eliminated prior to discharge to sewers** 6. The following matters shall be eliminated from the trade effluent before it is discharged into the sewers of the Company:
- a) petroleum spirit;
 - b) calcium carbide;
 - c) carbon disulphide;
 - d) except as provided in paragraph 7 hereof, the prescribed substances listed in Schedule 1 to The Trade Effluents (Prescribed Processes and Substances) Regulations 1989, as amended from time to time, insofar as they are in concentration greater than the background concentration (as defined in the said Regulations);
 - e) where the trade effluent derives from a prescribed process mentioned in Schedule 2 to the said Regulations, and except as provided in paragraph 7 hereof, asbestos (as defined in the said Regulations) and chloroform in concentration greater than the background concentration (as defined in the said Regulations);
 - f) organo-halogen compounds including pesticide residues and degreasing agents;
 - g) any substances which either alone or in combination with each other or with any other matter lawfully present in the said sewers would be likely to;
 - i) cause a nuisance or produce flammable, harmful or toxic vapours either in the sewers or at the sewage works of the Company;
 - ii) injure the sewers or interfere with the free flow of their contents or affect prejudicially the treatment and disposal of their contents or have injurious effects on the sewage treatment works to which it is conveyed or upon any treatment plant there;
 - iii) be dangerous to or cause injury to any person working in the sewers or at the sewage treatment works;
 - iv) affect prejudicially any watercourse, estuary or coastal water into which the treated effluent will eventually be discharged.

Matters to be limited prior to discharge to sewer

7. The trade effluent shall not contain
- a) Ammonia and its compounds as N in excess of **100 mg/l**
 - b) Cyanides and cyanogen compounds which produce hydrogen cyanide on acidification in excess of **1 mg/l**
 - c) Methane in solution in excess of **0.14 mg/l**
 - d) Nitrate (as N) in excess of **1,000 mg/l**
 - e) Nitrate (as N) load in excess of **200 kg/d** in any one period of 24 hours, such load being determined by multiplying the Nitrate (as N) concentration of a composite sample of the trade effluent taken during that 24 hour period and the volume of the trade effluent discharge during that 24 hour period.
 - f) Separable grease and oil in excess of **100 mg/l**
 - g) Settled chemical oxygen demand in excess of **1,000 mg/l**
 - h) Sulphates as SO₄ in excess of **1,000 mg/l**
 - i) Sulphides, hydrosulphides, polysulphides and substances producing hydrogen sulphide on acidification in excess of **1 mg/l**
 - j) Total Phosphorus as P in excess of **15 mg/l**
 - k) Total suspended solids at pH 7.0 and dried at 110° C in excess of **500 mg/l**
 - l) Toxic metals in excess of **10,000 µg/l** either individually or in total ie Antimony, Beryllium, Chromium, Copper, Lead, Nickel, Selenium, Silver, Tin, Vanadium, Zinc;

Temperature

8. No trade effluent shall be discharged which has a temperature higher than **43.3°C (110°F)**.

pH value

9. No trade effluent shall be discharged having a pH of less than **6** or greater than **10**

Inspection Chamber

10. a) An inspection chamber or manhole shall be provided and maintained by the Trader in a suitable position in connection with each pipe through which the trade effluent is discharged and shall be so constructed and maintained as to enable a person readily to obtain at any time samples of the trade effluent so discharged, to the approval of the Company.
- b) There shall be provided, operated and maintained in working order by the Trader a meter in such a position and of such specification as shall be approved by UUWLtd such as will measure and provide a continuous record of the quantity and rate of discharge of any trade effluent being discharged from the premises into the said sewer and following the written request of UUWLtd to have the accuracy of the meter independently tested by an agreed body, and such apparatus or other facilities in such position and of such specification as shall be approved by UUWLtd as will provide

for a continuous flow proportional sample as will enable the nature and composition or constituents as set out in these conditions of any trade effluent being discharged from the premises into the said sewer to be ascertained.

- c) If the measuring and recording apparatus as aforesaid ceases to function satisfactorily, then the Company shall have the right to make estimates of the volume and composition of the trade effluent until such time as the said apparatus is again operating to the satisfaction of the Company.
- d) Records shall be kept by the Trader of the volume, rate of discharge, nature and composition of the trade effluent discharged to the sewer, together with any records required to be kept by the Trader under the provisions of any Notice of Determination issued by the Secretary of State under Sections 120 and 132 of the Water Industry Act 1991. Such records shall be kept available for inspection at all reasonable times by an authorised officer of the Company and copies shall be sent to the Company on demand.
- e) The foregoing provision of this condition shall be deemed to be complied with if other methods of sampling the trade effluent, determining its nature and composition, and measuring and recording the discharge are agreed and confirmed in writing by the Company.

Dated 26 February 2024

Issuing Office Wastewater Services
Lingley Mere Business Park
Lingley Green Avenue
Great Sankey
Warrington
WA5 3LP

Signed


PP

WASTEWATER ASSET MANAGER
for and on behalf of United Utilities Water Limited

1. Your attention is drawn to the following provisions of Section 126 (1) of the Water Industry Act 1991 relating to Appeals to the Director General of Water Services. The owner or occupier of any trade premises may within two months of the giving to him under Subsection (5) of the Notice of a Direction under that Section, or with the written permission of the Director at any later time, appeal to the Director against the Direction.
2. The Notice of Direction must state the date, being a date not less than two months after the giving of the Notice on which the Direction is to take effect. If an appeal is brought under Section 126 (1) before that date the Direction shall not take effect until the appeal is withdrawn or finally disposed of. Provided that so far as a Direction which is the subject of an appeal relates to the making of Charges payable by the occupier of the trade premises, it may take effect on any date after the giving of the Notice.

On appeal under Section 126 (3) and (4) the Director General of Water Services shall have power to annul the Direction given by the Sewerage Undertaker and to substitute for it any other Direction, whether more or less favourable to the appellant and any Direction given by the Director of Water Services may include provision as to the charges to be made for any period between the giving of the Notice by the Sewerage Undertaker and the determination of the appeal.

APPENDIX 6

Microgenerator Specifications

CR65 & CR65-ICHP MicroTurbine Renewable



Robust power system achieves ultra-low emissions and reliable electrical/thermal generation from waste gas.

- Years of renewable experience
- Ultra-low emissions
- Operates on landfill or digester gas
- One moving part: Minimal maintenance and downtime
- Patented air bearing: No lubricating oil or coolant
- 5 and 9 year Factory Protection Plans available
- Remote monitoring and diagnostic capabilities
- Integrated utility synchronization and protection
- Small, modular design allows for easy, low-cost installation
- Reliable: Tens of millions of run hours and counting



CR65 MicroTurbine

Electrical Performance⁽¹⁾

Electrical Power Output	65kW
Voltage	400 to 480 VAC
Electrical Service	3-Phase, 4 wire
Frequency	50/60 Hz
Maximum Output Current	100A, grid connect operation
Electrical Efficiency LHV	29%

Fuel/Engine Characteristics⁽¹⁾

Digester/Landfill Gas HHV	13.0 MJ/m ³ to 22.4 MJ/m ³ (350 to 600 BTU/scf) 20.5 MJ/m ³ to 32.6 MJ/m ³ (550 to 875 BTU/scf)
H ₂ S Content	<5,000 ppmv
Inlet Pressure	517-552 kPa gauge (75-80 psig)
Fuel Flow HHV	888 MJ/hr (842,000 BTU/hr)
Net Heat Rate LHV	12.4 MJ/KWh (11,800 BTU/kWh)



CR65-ICHP MicroTurbine

Exhaust Characteristics⁽¹⁾

NO _x Emissions @ 15% O ₂ ⁽²⁾	9 ppmvd (18 mg/m ³)
NO _x /Electrical Output ⁽²⁾	0.16 g/bhp-hr (0.46 lb/MWhe)
Exhaust Gas Flow	0.49 kg/s (1.08 lbm/s)
Exhaust Gas Temperature	309°C (588°F)

Reliable power when and where you need it. Clean and simple.

C65-ICHP Heat Recovery⁽³⁾

Integrated Heat Recovery Module Type	Stainless Steel Core
Hot Water Heat Recovery	74kW (251,000 BTU/hr)
Total System Efficiency LHV	62%

Dimensions & Weight⁽⁴⁾

	CR65	CR65-ICHP
Width x Depth ⁽⁵⁾ x Height ⁽⁶⁾	0.76 x 2.0 x 2.1 m (30 x 77 x 83 in)	0.76 x 2.2 x 2.4 m (30 x 87 x 94 in)
Weight	758 kg (1,671 lb)	1000 kg (2,200 lb)

Minimum Clearance Requirements⁽⁷⁾

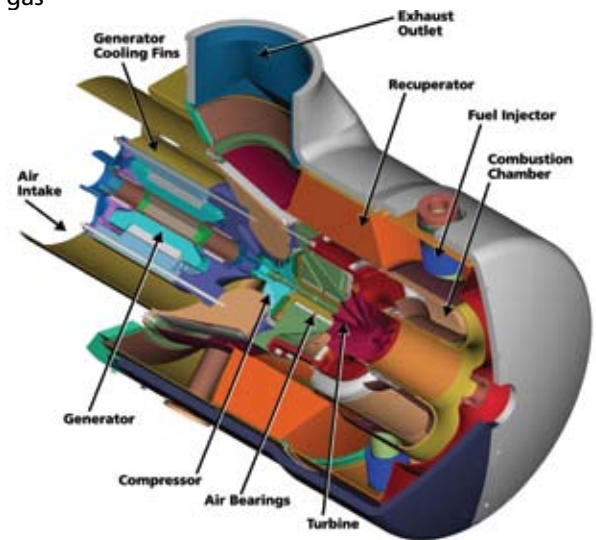
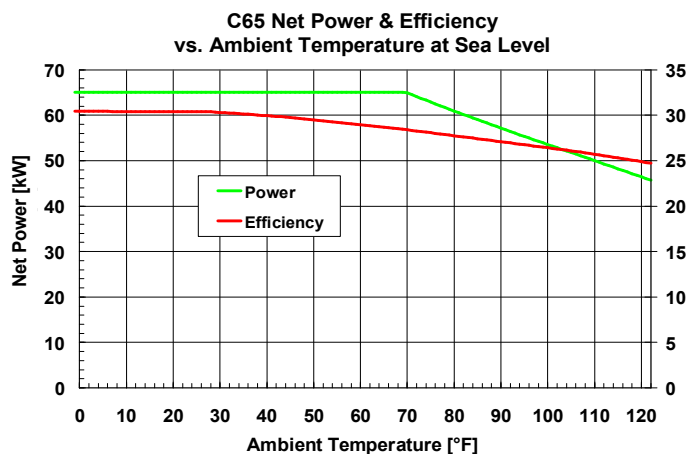
	CR65	CR65-ICHP
Vertical Clearance	0.61 m (24 in)	0.61 m (24 in)
Horizontal Clearance		
Left & Right	0.76 m (30 in)	0.76 m (30 in)
Front	0.76 m (30 in)	0.76 m (30 in)
Rear	0.91 m (36 in)	0.76 m (30 in)

Sound Levels

	CR65	CR65-ICHP
Acoustic Emissions at Full Load Power ⁽⁸⁾		
Nominal at 10 m (33 ft)	70 dBA	65 dBA

Certifications

- Classified UL 2200 and UL 1741 for raw natural gas and biogas operation (UL file AU5040)
- Complies with IEEE 1547 and meets statewide utility interconnection requirements for California Rule 21 and the New York State Public Service Commission
- Models available with optional equipment for CE Marking
- Models available with optimal 2008 CARB certification for waste gas



- (1) Nominal full power performance at ISO conditions: 59°F, 14.696 psia, 60% RH
 - (2) For surrogate landfill and digester gases. Please contact Capstone for additional details
 - (3) Heat recovery for water inlet temperature of 38°C (100°F) and flow rate of 2.5 l/s (40 GPM)
 - (4) Approximate dimensions and weights
 - (5) Depth includes 10 inch extension for the heat recovery module rain hood on ICHP versions
 - (6) Height dimensions are to the roof line. Exhaust outlet extends at least 7 inches above the roof line
 - (7) Clearance requirements may increase due to local code considerations
 - (8) The optional acoustic inlet hood kit can reduce acoustic emissions at the front of the MicroTurbine by up to 5 dBA
- Specifications are not warranted and are subject to change without notice.*



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