Caulmert Limited

Engineering, Environmental & Planning Consultancy Services

Deerplay Landfill Reverse Osmosis Plant

FCC Waste Services (UK) Limited

Environmental Permit Variation Application

Odour Management Plan Annex

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Caulmert
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APPROVAL RECORD

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Odour Management Plan Annex

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1.0 INTRODUCTION

1.1 Background

1.1.1 FCC Waste Services (UK) Limited have appointed Caulmert Limited to prepare a bespoke environmental permit variation application to install a new Reverse Osmosis (RO) Plant at Deerplay Landfill Site, Bacup Road, Cliviger, in Lancashire.

1.1.2 This application is to vary the existing WRG Environmental Limited (a subsidiary of FCC Environment (UK) Limited) permit ref. EPR/KP3734LL/V007 to include the proposed Reverse Osmosis Plant located within the Deerplay Landfill Site 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 ends up at the Burnley Wastewater Treatment Works.

1.1.3 This document is an annex to the Deerplay Landfill Site Odour Management Plan (*Doc. Ref.* DEER KP3734LL – IMP COND 4 SUB 03-11-2008) prepared by TerraConsult in 2008 for WRG Environmental Limited. It also forms part of the operating techniques for the proposed RO Plant at the Deerplay Reverse Osmosis Plant site.

1.2 Objectives

1.2.1 This Odour Management Plan provides a means of assessing the effectiveness of control measures at the site. The proposed Odour Action Plan should be implemented in cases of failure of control measures and odour emission events. This document also reviews the current procedures for investigating odour emission events and includes reference information on the understanding of odour nuisance.

1.2.2 This Odour Management Plan has been prepared with reference to the Environment Agency's technical guidance 'H4 Odour Management – how to comply with your environmental permit' published April 2011, and to the 'Best available techniques for the assessment and control of odour' published June 2005.

1.2.3 In addition, an Environmental Risk Assessment report has been produced which considers any potential risks (including odour) associated with the proposed operations, under document ref. 5987-CAU-XX-XX-RP-V-0303.

1.2.4 The Operator intends to use this OMP during the facilities' expected operational life. The Plan will be reviewed on a regular basis and when a new element of site infrastructure is introduced, as is the case with this most recent permit variation.

1.3 Site Location & Setting

1.3.1 The site is located approximately 5.92km to the Northeast of Towneley Hall. It is centred on National Grid Reference SD 85857 28402.

1.3.2 The site is within the predominantly semi-natural upland vegetation used primarily for rough grazing with the residential areas towards Southeast and Northeast.

1.3.3 Access to the site is from Bacup Road which links with the A671 road. The site location is shown below in Figure 1:

Figure 1 - Site Location Plan

1.4 Existing Site Operations

1.4.1 The Deerplay Landfill Site operations includes the treatment of non-hazardous leachate via a biological Leachate Treatment Plant (LTP) with a capacity of more than 50 tonnes per day, for discharge to sewer, including restoration activities and landfill gas utilization. The latter being used on-site by the gas engine for energy generation, where any excess is flared.

1.5 Proposed Site Operations

1.5.1 As part of this permit variation application, the Operator proposes to install a new Reverse Osmosis plant to treat leachate from the adjacent Deerplay Landfill Site only. The RO Plant will take the raw non-hazardous landfill leachate and treat it via a series of filters, and with the addition of reagents, to produce a permeate which can be discharged to sewer.

1.5.2 The non-hazardous raw leachate will be piped directly from Deerplay Landfill to the existing but relocated 54.5m^3 self-bunded raw leachate reception tank. The leachate generated from the landfill site will be collected via a series of pipes which converge at the leachate tank

located to the west of the compound. The tank will be connected to the RO Plant via sealed hoses and the leachate is then passed through the reverse osmosis process. The leachate will be separated into approximately 75% clean water (permeate), to be discharged to sewer and 25% highly concentrated reject to be tankered off-site for further treatment.

1.5.3 The overall site layout of the proposed RO Plant and tanks within the existing permit boundary is shown in Figure 1 (i.e., drawing ref. WR7979/01/03 'Proposed Site Layout'). The RO Plant and associated infrastructure will be installed within a gated and fenced compound with impermeable surfacing, sealed drainage and 2.4m high palisade fencing.

1.5.4 The RO Plant would be capable of treating circa 200m³ of leachate per day. This represents the equivalent of circa 11 tanker loads of leachate which otherwise would have been removed from the landfill site by road as current practice involves the movement of the concentrated leachate off-site in circa 3 tankers daily for further treatment at a specialised wastewater treatment plant. The proposed use of the RO Plant for treating the leachate therefore reduces daily vehicle movements of approx. 8 tankers per day, thereby giving rise to significant benefits to the site, such as decreased vehicular traffic as well as carbon emissions reduction.

2.0 POTENTIAL SOURCES OF ODOUR

2.1 Raw Leachate Storage

2.1.1 Leachate from the Reverse Osmosis (RO) Plant will be pumped directly from the storage tanks via sealed pipework into the RO Plant for treatment on-site, hence the potential for odour from this activity is lower as no tankers will be loading leachate for removal off site.

2.1.2 There is the potential for accidental spillages of raw leachate from connecting pipework and holding tanks (i.e., storage tanks), however this will be minimised by pumping supervision by the trained operatives on-site and any spillages will be contained and cleaned up as quickly as possible using on-site spill kits, followed by appropriate disposal of the used spill kits and restocking as required. Storage tanks as well as its associated infrastructure (e.g., balancing tanks, aeration tanks) for handling the leachate prior to RO Plant operations will have level floats fitted with alarms to alert the operative of liquid levels in the tanks and an automatic cut-off valve to prevent overfilling. The tanks are on impermeable surfacing with bunding and sealed drainage system.

2.2 Reverse Osmosis Plant Operation

2.2.1 Potential odour sources from raw leachate transferred to RO Plant for treatment and during treatment. Transfer of raw leachate from storage tanks to RO Plant will be pumped via sealed pipework and leachate will not be exposed to the air during transfer. Treatment processes within the RO Plant will be fully contained within the RO container, before the resulting permeate is discharged directly to sewer and concentrate is discharged from the RO Plant to a storage tank (concentrate).

2.2.2 Avoiding odour being generated on site is dependent on maintaining all systems, storage tanks and pipework associated with the RO Plant. Any leaks, spillages or other areas where potentially odorous liquids are exposed to the air could emit odours.

2.2.3 Final resulting permeate from the RO Plant is unlikely to be odorous. Concentrate has the potential to be odorous, however this will be fully contained within a bunded sealed storage tank prior to removal off-site by tanker.

2.2.4 Risk of odour from the RO Plant is considered minor due to the containment of the liquid waste and method of operation, ensuring potentially odorous liquids or substances are contained.

2.3 Storage of Potentially Odorous Substances

2.3.1 Potential sources of odour from the storage of liquids and substances on-site associated with the leachate treatment plant (RO Plant) are caustic soda, sulphuric acid, aqueous permeate and aqueous concentrate.

2.3.2 These are stored in individual bunded tanks within the proposed RO Plant compound. The risk of odour releases from these substances associated with the leachate storage infrastructure appears low due to the leachate management system being fully enclosed from point of extraction to discharge.

2.4 Summary

2.4.1 Based on the above, the potential odour sources on-site are therefore as follows:

- Odour from storage of non-hazardous waste leachate;
- Odour from RO Plant treatment activities and agitation of leachate;
- Odour from storage of potentially odorous liquids/substances; and,

3.0 RECEPTORS & PATHWAYS

3.1 Local Sensitive Receptors

3.1.1 The main receptors sensitive to odour are humans living or working near to the site, particularly if downwind of the site. Receptors surrounding the permitted boundary are shown in drawing ref. 5987-CAU-XX-XX-DR-V-1800 'Sensitive Receptors Plan'. The majority of receptors surrounding the site are agricultural fields or habitats such as woodland and therefore not particularly sensitive to odour.

3.1.2 The closest human receptors to the site are users of the A671 (50m west of the site boundary) and farms and cottages around 300m - 900m away from site. There are no schools or hospitals within 1km of the site. The Singing Ringing Tree, a local tourist attraction, is located 911m to the northwest of the site boundary.

3.1.3 The nearest residential receptors to the site are Long Shay Cottage, Stone House Cote Farm, and Stone House Fold located 395m southwest, 450m southwest, and 750m northeast from the site boundary, respectively. Further towards north is the Ranwook Farm and Dyenely Farm, both 900m from the site.

3.1.4 Lake Easden Clough is located 180m east of the site.

3.1.5 A search of the surrounding area using the DEFRA Magic Maps website has no National Nature Reserves (LNRs) within 1km of the site: the closest is Wigan Flashes NNR, over 35km southwest of the site. According to the EA Conservation Screen Report as part of the Pre-Application Advice for this permit application (see ERA report), there are six Local Wildlife Sites (LWS) as well as 1 Ancient Woodland located within 2km of the site, and 1 Special Area of Conservation (SAC) and 1 Special Protection Area (SPA) within 10 km of the site. These habitats are unlikely to be sensitive to odour, however human users of these sites may be affected by odour.

Figure 2: 1 km radius from the proposed RO plant.

3.2 Meteorological Setting

3.2.1 Fugitive emissions of odour from the site are likely to be affected by local weather conditions, particularly by wind direction. Wind statistics observed from Widnes weather station, the closest weather station actively recording wind statistics, are considered to be representative of the typical conditions at the site (Figure 3 below). Widnes weather station is located over 3.5km to the northwest of the site.

3.2.2 A review of the data recorded daily between September 2015 and September 2023 on the Windfinder.com[1] website indicates that the most dominant wind direction is from the west-southwest towards the east-northeast. With reference to the Sensitive Receptor Plan ref. 5987-CAU-XX-XX-DR-V-1800, predominant annual wind conditions are likely to blow towards west of the site which is mostly semi-natural upland vegetation used for rough grazing.

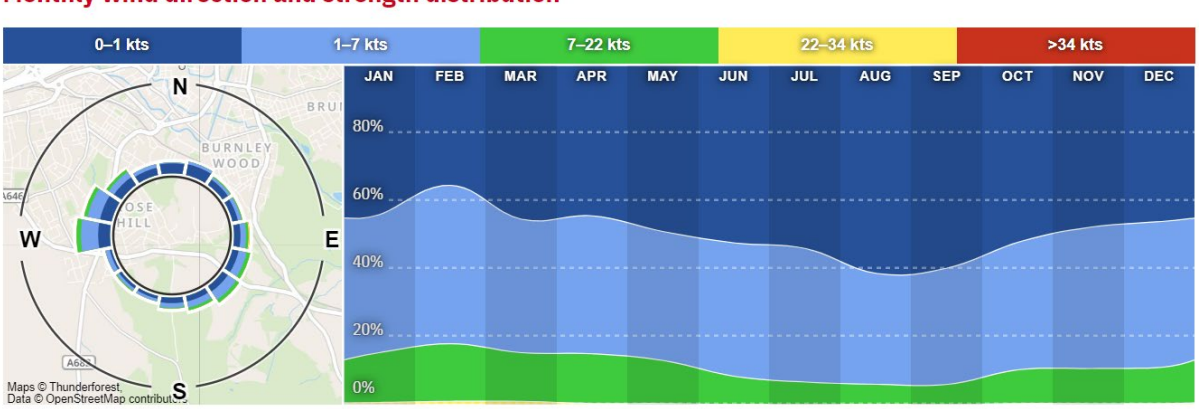


Figure 3 – Widnes wind statistics – average wind direction & strength 2015-2023.

3.3 Odour Complaints

3.3.1 There has been no history of previous complaints relating to odour at the Deerplay Leachate Treatment Plant site as it is managed in accordance with the management system for the landfill (please refer to the ERA report).

[1] https://www.windfinder.com/windstatistics/widnes

4.0 WASTE OPERATIONAL ODOUR CONTROLS

4.1 Control Measures – Leachate Treatment at RO Plant

Raw Leachate Storage

4.1.1 To ensure odours are kept to a minimum during the reception of raw leachate, the following measures will be undertaken:

4.1.2 The leachate from Deerplay Landfill immediately to the west is pumped by sealed pipeline from the landfill to a storage tank for storage prior to treatment within the Leachate Treatment Plant area.

4.1.3 There is the potential for accidental spillages of raw leachate from pipework or the storage tanks, however this will be minimised by pumping being inspected regularly by a trained site operative and any spillages contained cleaned up as quickly as possible using on-site spill kits, appropriate disposal of used booms/spill pads and reporting of the incident to site management immediately and instigating repairs. Storage tanks will have level floats fitted with alarms to alert the operatives of liquid levels in the tanks and an automatic cut-off valve to prevent overfilling. The tanks and tanker parking area for collection of concentrate are on impermeable surfacing with bunding and sealed drainage system with sumps in place.

Reverse Osmosis Plant Operation

4.1.4 Operations at the RO Plant are to be carried out in a manner that ensures that potential nuisances and hazards arising at the site due to odour are minimised. The effectiveness of the control measures is assessed by odour monitoring at the site and its perimeter by competent site staff and all site personnel will be responsible for reporting any odour problems as soon as reasonably possible to the site management team.

4.1.5 There are potential odour sources from raw leachate being transferred to the RO Plant for treatment and during treatment. Transfer of raw leachate from storage tanks to the RO Plant will be pumped through sealed pipework and leachate will not be exposed to the air during transfer. Treatment processes within the RO Plant will be fully contained within the RO container, before the resulting permeate is discharged directly to sewer and concentrate is discharged from the RO Plant to a storage tank (concentrate).

4.1.6 Avoiding odour being generated on site is dependent on maintaining all systems, storage tanks and pipework associated with the RO Plant. Any leaks, spillages or other areas where potentially odorous liquids are exposed to the air could emit odours.

4.1.7 Final resulting permeate from RO Plant is unlikely to be odorous. Concentrate has potential to be odorous, however this will be fully contained within a bunded sealed storage tank prior to removal off-site by tanker. Permeate will be discharged directly into sewer.

4.1.8 Risk of odour from the RO Plant is considered minor due to the containment of the liquid waste and method of operation, ensuring potentially odorous liquids or substances are contained.

Storage of Potentially Odorous Substances

4.1.9 Potential sources of odour from the storage of liquids and substances on-site associated with the leachate treatment plant (RO Plant) are caustic soda, sulphuric acid, aqueous permeate and aqueous concentrate.

4.1.10 Risk of odour from the storage of substances on-site is considered minor due to the tanks being fully contained and substances not exposed to the air.

4.1.11 Daily site inspections of the site by trained staff will include checking the site for odour emissions and the source of any odours detected. Inspections will include checking substances and liquids on site are stored correctly in the correct containers/tanks and no tanks have been overfilled and bunds are clear of liquids. In the event that odour is detected at the site boundary, additional monitoring will be undertaken at the sensitive receptors downwind of the site.

5.0 ACCIDENT MANAGEMENT PLAN

5.1 Accident Scenarios

5.1.1 In accordance with Environment Agency (EA) guidance, the following abnormal situations have been considered:

5.2 Spillages or leaks of raw leachate, concentrate, or other odorous substances

Situation

5.2.1 Leaks or spillages of odorous liquids (i.e., raw leachate, concentrate) from pipeworks or storage tank on-site. Spillages of caustic soda or sulphuric acid releasing odours.

Control Measure

5.2.2 Only trained tanker drivers will operate manifolds and connect tanker to tanks for off-loading raw leachate, to prevent accidental spillages. The tanker area is situated on impermeable concrete surfacing, and spill kits will be available on-site for trained site staff to contain and clean up any spillages as quickly as possible, reducing potential for odour emissions. Pipework connecting tanks to the RO Plant will be situated above impermeable concrete surfacing, allowing for easy clean-up of spills, and near to tanks pipework will be within bunded areas, catching any potential leaks of odorous liquids if faulty.

5.3 Plant failure or malfunction

Situation

5.3.1 Breakdown or malfunction of the RO Plant, resulting in the raw leachate being unable to be treated at the site and being left for extended periods of time within the storage tank.

Control Measure

5.3.2 It is unlikely this would cause an odour issue or lead to an odour emission due to the raw leachate being stored in a bunded tank and any liquid within the RO Plant upon breakdown also contained within sealed pipework.

5.3.3 Leachate piped from Deerplay Landfill Site will be stopped temporarily (for which emergency procedures to deal with this would be within the landfill site's Management System) until such time that the RO Plant can be operational again.

5.3.4 In the event of a plant failure or malfunction, alternative equipment will be sourced as soon as possible until the equipment can be repaired or hired in as necessary.

5.3.5 All plant and equipment will be maintained and regularly serviced in accordance with the manufacturer's recommendations and planned maintenance procedures to minimise

breakdowns. Replacement RO Plant will be available within 24-48 hours. Specialist equipment such as tanks or bunds will be replaced or repaired as soon as practicably possible.

5.4 Adverse meteorological conditions

Situation

5.4.1 Periods of adverse weather conditions including high rainfall leading to flooding, low / high temperatures, temperature inversions and high winds towards the direction of the sensitive receptor.

Control Measure

5.4.2 It is unlikely adverse weather such as heavy rainfall or high winds would affect the infrastructure as the pipework and tanks will be sealed units. Bunded areas will be checked daily to ensure they are not filled with excess rain in extreme conditions.

5.4.3 The site is within a Flood Zone 1 according to the GOV.UK Flood Risk Maps website, which indicates that the site has a low probability of flooding from rivers and the sea or from surface water flooding. Again, flooding would unlikely affect the site's infrastructure or cause an odour issue. However, the control panel in the RO Plant is powered by electricity and so may require isolating if floodwaters rise.

5.4.4 Following adverse weather conditions, if sensitive receptors have complained of odour issues from the site, liaison and dealing with complaints from neighbours will be undertaken.

5.5 Site staff

Situation

5.5.1 Shortage of trained operational staff resulting in waste material being stored for longer periods without processing in the reception tank.

Control Measure

5.5.2 This is unlikely to cause an odour issue as the raw leachate will be stored within a bunded storage tank, minimising the release of odorous emissions, even if stored for long periods of time. In the event there is a shortage of operational staff at the site, alternative staff will be sourced from other FCC facilities or hired in as necessary. If necessary, pumping of leachate from Deerplay Landfill will be controlled or sent to alternative sites until the situation can be rectified.

5.6 Concentrate transport haulier

Situation

5.6.1 The identified outlet for the concentrate end product is no longer able to accept the waste at short notice or the transport haulier is unavailable.

Control Measure

5.6.2 This is unlikely to cause an odour issue at the site. FCC have a number of alternative waste hauliers who can be contacted in the event the regular haulier is unavailable to remove the concentrate from the site, ensuring the treatment process can continue.

5.7 Force Majeure and Odour

5.7.1 Finally, unexpected circumstances such as a fire or explosion on site or an act of vandalism could trigger the release of discernible odours. Under these circumstances odour related contingency measures will be covered under the Odour Action Plan and will be dealt with as promptly as possible. Remediation and reporting procedures for the above are as required within the Permit.

6.0 ENGAGING WITH THE NEIGHBOURS

6.1 Complaints Procedure

6.1.1 As part of this Odour Management Plan, engagement with the neighbours will be undertaken.

6.1.2 Typically, complaints about the site are usually received via the Environment Agency, although the Operator also deals with complaints received directly where necessary. In the event of a complaint being received the following can be implemented:

- Information can be provided to the local neighbours (through the Environment Agency) regarding the point and method of contact for the site in the event an odour has been detected or they want to discuss any activities etc. at the site.

- Complainants can be advised that any complaints/concerns will be addressed immediately following identification/notification and contingency actions implemented.

- Complainants can be advised of any corrective action and a follow up call carried out if required.

6.1.3 The Operator will continue to maintain a routine liaison with the Environment Agency regarding odour nuisance. In the event of an odour complaint being received by the EA, the complaint is passed to the Operator for the investigation. Every complaint is recorded on an Odour Complaint Form as detailed in the existing OMP for the landfill and inputted into FCC's designated Safeguard incident reporting system, as detailed below:

- All complaints are recorded on to Safeguard by the site manager or site staff, describing the complaint and severity.

- The complaint is forwarded to the Regional Environment Manager to undertake further investigation.

- Depending on the severity, the complaint can be escalated to senior management for investigation if necessary.

- The system is a digital process and records a wide range of reporting.

6.1.4 The Safeguard Reporting System is already in place as part of the company's accredited environmental management system and includes reporting to the EA of the findings of the odour investigation.

6.1.5 The odour investigation procedure will also include the following elements:

- Site walk-around coupled with olfactory monitoring along the site boundary, an assessment of the site operations which took place prior to and at the time of the complaint in relation to their odour potential, and other on-site sources of odour.

- Assessment of the weather conditions prior to and at the time of the complaint.

- A suitably trained person who is familiar with the site conditions and the 'sniff-testing' monitoring technique will carry out odour investigations at the site. In the event of a substantiated complaint being received, then mitigation measures will be used for the areas/activities which were cause of the particular odour event.

6.1.6 A follow up report on the investigation will be issued to the EA if the complaint is found to be substantiated and, if requested, to the Local Authority. The report will identify improvements proposed to reduce the potential for future complaints. Any new recommendations will then be incorporated in the Odour Management Plan and the operating procedures for the site.

7.0 MONITORING

7.1 Schedule

7.1.1 Since the proposed RO Plant and its associated infrastructure will be situated within the existing Deerplay Landfill Site, odour monitoring is expected to encompass the site. Monitoring will, therefore, assess the success of the RO Plant's operational management and mitigating control measures and identify, if necessary, whether the odour is causing a potential nuisance to ensure that appropriate remediation measures are adopted early.

7.1.2 Monitoring will be undertaken by designated staff who will be fully trained by Site Management. All site personnel will be responsible for reporting any odours problem identified during their day-to-day operations.

7.1.3 Monitoring at the site will consist of the following:

Parameter	Monitoring Technique	Frequency
Meteorological Monitoring	Local weather information	Manually checked at start of each working day and logged (inc. wind direction).
Off-Site Olfactory Monitoring	As mentioned in Section 7.1.1, regular inspections of the entire site, its perimeter, including the RO Plant complex will be carried out by the Site Manager as per the existing OMP to identify any sources of odour and to establish whether any odours are detectable at the site's perimeter.	Daily (or more frequently following odour complaints).
Complaints Monitoring	Logged in accordance with Complaints procedure.	Ad-Hoc

7.2 Meteorological Monitoring

7.2.1 The nearest weather station will be utilised for meteorological monitoring at the site and will as a minimum include monitoring for wind speed, direction, precipitation, rainfall, temperature etc.

7.2.2 Weather conditions will be noted at a time of an odour survey and assessed in terms of any odour effects beyond the site boundary. This would indicate which local receptors lie downwind of the site. The following weather conditions are considered to be unfavourable

with regard to the effects of the potential odour emissions and should be considered when assessing odour events:

- Weather conditions, especially wind speed and direction, are important factors which influence odour dispersion. Stronger winds (>6 m/s) reduce the impact of odours due to greater dilution and dispersion than lighter winds, whereas wind direction determines the direction of odour dispersion.

- The greatest risk of poor odour dispersion tends to occur on cool nights, with low wind speed, during anti-cyclonal conditions and in the presence of a temperature inversion. These conditions often happen during the cold part of the year and can result in odours being transported over long distances from the source.

- Calm weather spells (wind speed <0.1m/s) results in omni-directional dispersion of odours from the site as it is regulated largely by diffusion in the air. Under such conditions, all locations directly adjacent to the source would be expected to be impacted by fugitive emissions.

- The mean wind direction recorded at the nearest station at Widnes, is recorded as from the east-southeast.

7.2.3 In the event of odour complaints, the data enables complaints to be assessed against the meteorological conditions for the relevant period. Meteorological information will be recorded on the Safeguard system which is logged internally and sent to the EA.

7.3 Olfactory Monitoring

7.3.1 As part of the daily inspections, appropriately trained and experienced site personnel will carry out olfactory monitoring on- and off-site at selected locations.

7.3.2 Additional locations for monitoring may also be included, depending on the frequency and location of any complaints received at the site.

7.3.3 The monitoring results will be recorded on the daily Site Inspection Form which forms part of the Site's Management System.

7.3.4 Olfactory monitoring will be carried out in accordance with the recommendations detailed in the Environment Agency H4 guidance, including avoid strong foods or drinks and strongly scented deodorisers or toiletries etc for at least half an hour prior to the monitoring. In addition, individuals suffering from a cold, sore throat, or sinus problems that may impair their ability to detect odours will not undertake the olfactory monitoring.

7.3.5 The designated person will exit their vehicle and remain in the locality for a minimum of 1 minute whilst breathing normally. Any external activities that may contribute to odour generation in the surrounding area will also be noted on the form and an assessment of the intensity of the odour will be made using the key provided. The routine monitoring points

have already been assessed for sensitivity, but should any additional locations be used, the sensitivity will be entered using the key provided.

7.3.6 In the event odour is detected above intensity ranking 3 (moderate odour), the site management will be informed immediately, and the approximate location and extent of the odour plume assessed, and site operations reviewed and remediated.

7.4 Complaints Monitoring

7.4.1 Any complaints received directly by the Site or via the Regulatory Bodies, including the EA and Local Authority, will be recorded on the Safeguard System. Investigation will then be undertaken via olfactory monitoring at the location of the complaint and on-site to substantiate the extent and location of the plume and to identify the source of the odour.

7.4.2 If necessary, odour monitoring will also be carried out at the nearest sensitive receptors to the site and the monitoring results recorded.

8.0 REMEDIAL ACTION PLAN

8.1 Action Plan

8.1.1 Following receipt of a complaint or identification of an odour at the site, the following action plan will be undertaken, including:

- Additional olfactory monitoring as detailed above to identify the extent of the odour plume and potential cause for the odour i.e. waste material and/or process activity.
- Examination of the operational activities at the site at the time of the odour complaint or odour identification.
- Examination of the meteorological conditions at the time of the complaint or odour identification
- Examination of the process conditions i.e. waste types, length of storage etc.
- Carry out a review of the operational procedure and process controls and instigate any control measures immediately following identification of the problem.

8.1.2 Further olfactory monitoring will be carried out to ensure the issue has been addressed and to monitor the effectiveness of any control measures undertaken.

8.2 Record Keeping and Reporting

8.2.1 The Odour Management Plan will be stored as hardcopy within the Site Office and an electronic copy on the Operator's computer system, available on-site for reading and printing as required.

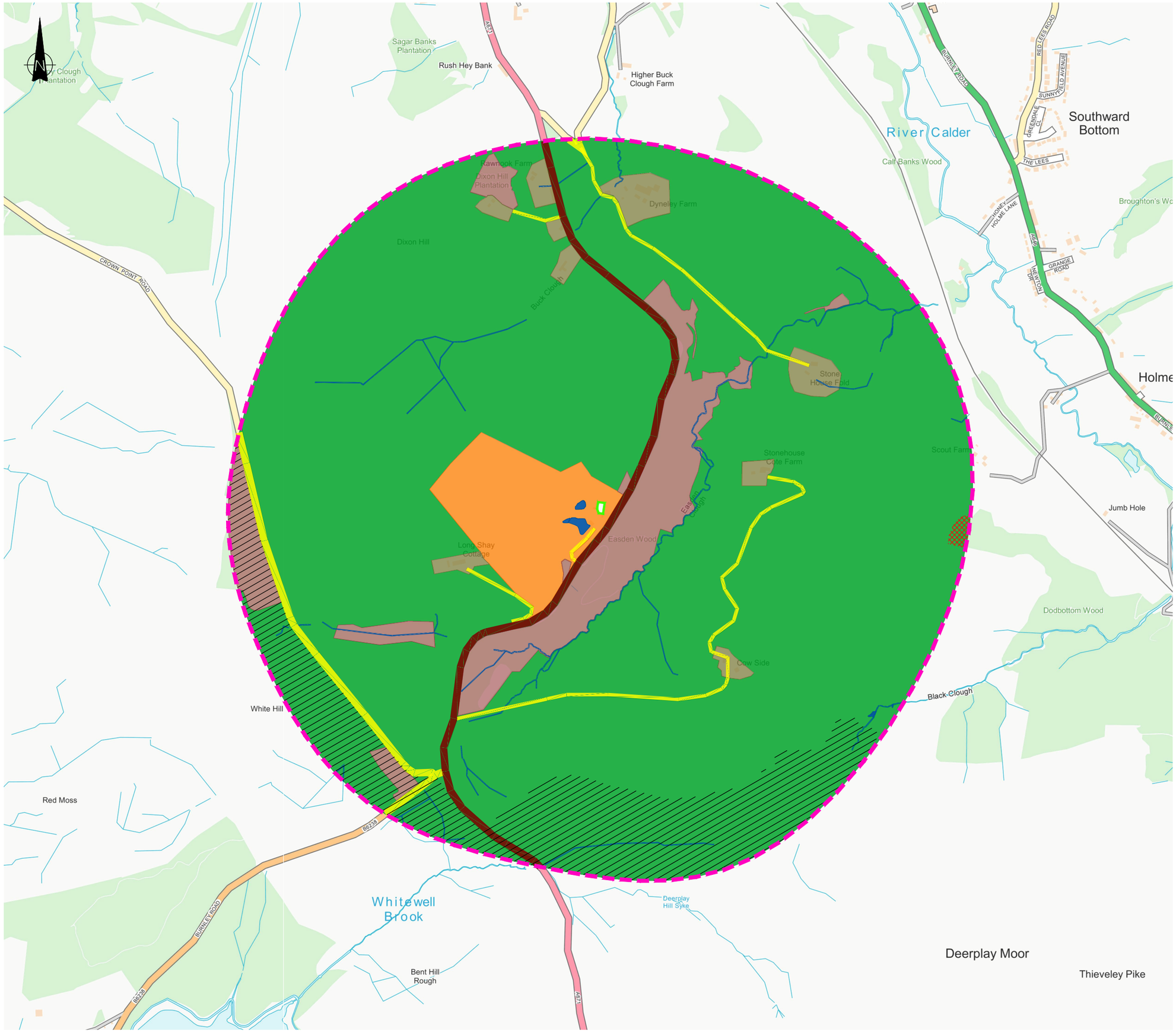
8.2.2 The procedure for recording via the FCC Safeguard System will be undertaken as detailed above. All information is recorded digitally and maintained within a digital database. All information can be accessed via computer within the Site Office and will be made available to the Environment Agency on request. This record keeping already forms part of the Site's Management System.

8.3 Odour Management Plan Review

8.3.1 This Odour Management Plan (OMP) will be reviewed on a regular basis, at least annually, or if there are relevant changes in the site operations or procedures or following receipt of a significant and substantiated complaint that requires a change in management procedures for the site.

DRAWINGS

5989-CAU-XX-XX-DR-V-1800	Sensitive Receptor Plan
WR7979/01/03	Site Layout Plan



LEGEND

- RO PLANT BOUNDARY
- 1000m OFFSET
- SURFACE WATER
- WOODLAND / SCRUBLAND
- COMMERCIAL / LEISURE
- EDUCATIONAL FACILITY
- LANDFILL
- RESIDENTIAL
- MEDICAL FACILITY
- MAJOR ROAD
- MINOR ROAD
- RAIL
- ANCIENT WOODLAND
- LOCAL WILDLIFE SITES

REV	MODIFICATIONS	BY	RE	AP	DATE
P01	ISSUED FOR INFORMATION	EJD	SH	SH	29.01.24

PURPOSE OF ISSUE: FOR INFORMATION

STATUS: S2

CLIENT: WRG ENVIRONMENTAL

PROJECT: DEERPLAY RO PLANT

TITLE: SENSITIVE RECEPTOR PLAN

DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY
EJD	EJD	SH	SH

DATE	SCALE @ A3	JOB REF:	REVISION
26.01.2024	1:10000	5987	P01

DRAWING NUMBER: 5987-CAU-XX-XX-DR-V-1800

Caulmert
engineering environmental planning

WWW.CAULMERT.COM

Registered Office: InTec, Parc Menai, Bangor, Gwynedd, LL57 4FG Company Registered No: 06716319

NOTES

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM.

2. DO NOT SCALE FROM THIS DRAWING.

3. ANY ANOMALIES IDENTIFIED WITH THE DETAILS SHOWN ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF SIRIUS ENVIRONMENTAL PRIOR TO CONSTRUCTION WORKS COMMENCING.

KEY

FCC OWNERSHIP BOUNDARY

PROPOSED RO PLANT BOUNDARY

ACID TANK

CAUSTIC TANK

EXISTING SLAB TO BE UPGRADED AND EXTENDED AS SHOWN WITH EDGE KERBING TO COMPLY WITH CIRIA DOCUMENT IN TERMS OF STORAGE AND RETENTION DUE TO TANK FAILURE BASED ON SIZE OF TANKS.

RO CONTAINER DISCHARGE TO BE LINKED TO EXISTING DISCHARGE SYSTEM

EMERGENCY SHOWER SLAB DRAINAGE GULLY

EXISTING AND NEW SLAB TO FALL TO MAIN GULLY WHICH WILL BE RECIRCULATED THROUGH THE RO PLANT, NO DIRECT DISCHARGE FORM SLAB DRAINAGE TO SEWER OR SITE OUTLETS

RELOCATED LEACHATE TANK

110m3 CONCENTRATE TANK DOUBLE BUNDED

EXISTING TANK

GAS FLARE

MICRO GENERATION UNIT RELOCATED

REV	DESCRIPTION	DATE	BY
2	MICRO GENERATION UNIT ADDED	15/01/24	ARK
1	REVISED LAYOUT	11/12/23	JE

CLIENT

FCC Environment

FCC Environment (UK) Limited
6 Sidings Court, White Rose Way, Doncaster, DN4 5NU

Sirius Environmental
4245 Park Approach, Thorpe Park, Leeds. LS15 8GB. 0113 264 9960

JOB TITLE

DEERPLAY LANDFILL SITE
PROPOSED RO PLANT

DRAWING TITLE

PROPOSED SITE LAYOUT

DRAWN	DATE	APPROVED	DATE
JE	16/11/2023	A.K	17/11/2023

SCALE	SHEET	DRAWING NUMBER	REVISION
1:200	RO	WR7979 01 03	2

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