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QUERCIA LIMITED

CLAYTON HALL LANDFILL

ODOUR MANAGEMENT PLAN

DECEMBER 2024

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QUERCIA LIMITED

CLAYTON HALL LANDFILL

ODOUR MANAGEMENT PLAN


DECEMBER 2024

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- Appendix 1 Odour Monitoring Log
- Appendix 2 Odour Complaint Log

DRAWINGS	TITLE	SCALE
ST18115-004A	Receptor Plan	1:20,000

VERSION CONTROL

Issue Date	Version	Prepared By	Key Changes
September 2024	1	DDA (Wardell Armstrong)	Original
December 2024	1.1	AC (Wardell Armstrong)	Finalise original

1 INTRODUCTION

- 1.1.1 Quercia Limited (“Quercia”) have commissioned Wardell Armstrong to prepare an environmental permit variation application for their Clayton Hall Landfill Site in Chorley, Lancashire.
- 1.1.2 The environmental permit allows the disposal of non-hazardous waste to landfill (permit reference is EPR/BV1364ID).
- 1.1.3 The permit variation seeks to revise to include an extension to the Phase 4 of Cell 4B located to the south of the landfill.
- 1.1.4 This Odour Management Plan has been prepared as part of a permit variation application relating to the extension of the landfill. The landfill is already permitted to accept a range of non-hazardous waste streams, and no new additional waste streams are proposed to be deposited into the landfill extension area.
- 1.1.5 This document outlines the methods by which Quercia will systematically assess, reduce and prevent potentially odorous emissions from wastes received onto Site and deposited into Clayton Hall Landfill.
- 1.1.6 This OMP provides the explicit list of ‘appropriate measures’ required for effective odour management and control and serves to aid the decision making process on the choice of controls, including general site design and operational practice, in line with current industry best practice. The Odour Management Plan (OMP) is a working document with the specific aim of ensuring that:
- all potential odour sources are identified;
 - odour impact is considered as part of routine inspections;
 - odour is primarily controlled at source by good operational practices, the correct use and maintenance of plant, and operator training;
 - all appropriate measures are taken to prevent, or where that is not reasonably practicable, to minimise odorous emissions to air from the installation that may be considered offensive at locations outside of the installation boundary;
 - people outside of the site are not exposed to levels of odour that would result in annoyance;
 - the risk of unplanned odour releasing incidents or accidents that would result in annoyance is minimised; and

- site developments take into account odour potential and potential impacts from work carried out.

1.1.7 This OMP has been prepared in accordance with Environment Agency guidance: 'Control and Monitor your Emissions'¹ and 'H4 Odour Management – How to Comply with your Environmental Permit'².

1.1.8 This plan will be used in conjunction with other documents that form part of Quercia's Environmental Management System to ensure that the new activities are managed in a way that prevents or at least minimises pollution.

¹ <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#odour>

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/296737/geho0411btqm-e-e.pdf

2 SITE SETTING AND SENSITIVE RECEPTORS

2.1 Site Location and Site Setting

2.1.1 The Site address is Clayton Hall Landfill, Clayton Hall Sand Quarry, Dawson Lane, Whittle-le-Woods, Chorley, PR6 7DT.

2.1.2 The National Grid Reference (NGR) for the Site is SD 56787 22022.

2.1.3 The Site is located approximately 9km south of Preston, and approximately 3km north of Chorley.

2.2 Sensitive Receptors

2.2.1 Sensitive receptors within proximity of the Site which may be particularly sensitive to odour emissions are listed in Table 2.1 below. Receptors particularly sensitive to odour include receptors such as domestic residences, care homes, schools, workplaces, holiday parks and pubs with beer gardens. Sensitive receptors comprising schools, nurseries, care homes and hospitals are also shown on Drawing No ST18115-004A.

Table 2.1: Receptors within 2km of Clayton Hall Landfill

Receptor	Receptor Type	Approximate distance/Direction from Installation Boundary
Houses off Spring Meadow, Clayton-le-Woods	Houses	20m, northwest
Leyland Golf Club Limited, golf course	Recreational	60m, southwest
Oak House	Houses	70m, west
Spring Meadow Community Centre	Recreational	150m, east
Happy House Preschool and Nursery	School	250m, west
Glenstone Manor Day Nursery	School	360m, south
Houses off Juniper Croft	Houses	375m, northeast
Lisieux Hall, Assisted Living Residence	Care Home	400m, southeast
Allotments	Recreational	580m, southeast
Willowbank Rest Home	Care home	600m, northwest
Lancaster Lane Community Primary School	School	640m, west
Rowandale Care Home	Care home	860m, northeast

Table 2.1: Receptors within 2km of Clayton Hall Landfill

Receptor	Receptor Type	Approximate distance/Direction from Installation Boundary
Buckshaw Retirement Village, Oakbridge Retirement Villages, The Lodge	Care homes	860m, southwest
Clayton-le-Woods Church of England Primary School	School	890m, northeast
Whittle-le-Woods CE Primary School	School	900m, east
Clayton-le-Woods Manor Road Primary School	School	900m, northeast
High Cliffe Retirement Village	Care home	1km, east
Buckshaw Hospital	Hospital	1.1km, west
Lilliput Nursery School	School	1.2km, east
Little Acorns Nursery School	School	1.2km, northeast
Future Champions Nursery	School	1.3km, east
St Catherine's Catholic Primary School	School	1.4km, northwest
Trinity Church of England Methodist Primary School/Talking Tots/Buckshaw Playgroup	School	1,4km, south
St Bede's Roman Catholic Primary School/Billington Bears Nursery	School	1.7km, northeast
Cambian Red Rose School	School	1.7km, northeast
Lever House Primary School	School	1.7km, northwest
Balshaw's Church of England High School	School	1.8km, west
Farrington Primary School	School	1.9km, northwest

2.2.2 Average wind direction data available from the Met Office for the nearest airfield, Blackpool Airport, which is located approximately 26.7km to the northwest from the Site indicates the prevailing wind direction is from the west/southwest. Figure 1 provides the wind rose from the Met Office website indicating the prevailing wind direction.

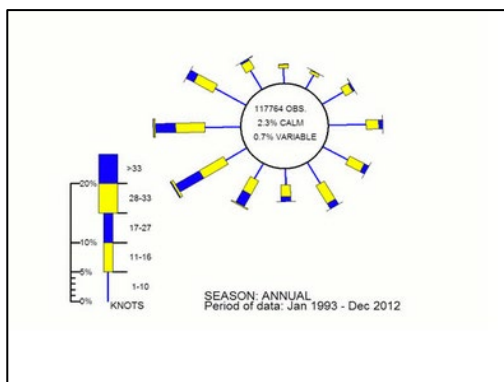


Figure 1: Met Office Windrose showing average prevailing wind direction at Blackpool Airport (January 1993 – December 2012).

2.2.3 The wind direction information is also shown on the receptor plan drawing ST18115-004.

2.3 Source-Pathway-Receptor Conceptual Site Model

2.3.1 Table 2.2 below provides the Source-Pathway-Receptor Conceptual Site Model for the landfill with respect to fugitive odour emissions, and the control measures required to be implemented.

Table 2.2: Source-Pathway-Receptor Conceptual Site Model			
Source	Pathway	Receptor	Control Measure
Unloading of odorous materials	Airbourne	Local residents	Waste to be placed, compacted and covered as soon as practicable Vehicles arriving on site will be enclosed or sheeted to prevent escape of odour
Wastes which have started to decompose prior to landfilling	Airbourne	Local residents	Stockpile of cover available to allow covering immediately on deposit
Waste undergoing aerobic or anaerobic conditions within the landfill	Airbourne	Local residents	Landfill cover comprising suitable materials to be applied daily Leachate and gas collection and extraction systems in place

Table 2.2: Source-Pathway-Receptor Conceptual Site Model

Source	Pathway	Receptor	Control Measure
Temporary stockpiles of odorous materials	Airbourne	Local residents	<p>Waste storage times will be minimised as far as possible</p> <p>Stockpiles will be covered if required</p> <p>General expectation that waste will be landfilled as soon as possible on arrival on site and temporary stockpiles will be minimised. All waste received on site to be landfilled and covered by the end of the working day.</p>
Exposed waste in the landfill, old waste disturbed by digging	Airbourne	Local residents	<p>Planned temporary potentially odorous activities will be carried out in accordance with the OMP</p> <p>Exposure of deposited waste will only be carried out where essential for the operation of the landfill e.g. installation of borehole</p> <p>Additional measures will be used where required (e.g. deodoriser).</p>
Fugitive emissions from leachate extraction and treatment	Airbourne	Local residents	<p>Leachate wells covered/sealed to prevent emissions. Leachate collection network inspected and maintained to prevent leaks.</p> <p>Leachate pumping systems maintained to ensure good extraction and minimise risk of outbreaks. Leachate treatment plant monitored and maintained to minimise emissions.</p>
Landfill Gas	Airbourne	Local residents	<p>Gas extraction wells and pipework properly sealed and subject to regular inspection and maintenance to prevent leaks.</p>

Table 2.2: Source-Pathway-Receptor Conceptual Site Model

Source	Pathway	Receptor	Control Measure
			<p>Landfill gas engine and flares subject to regular inspection and maintenance to ensure correct operation.</p> <p>Leachate levels managed and gas field balanced to maintain optimum gas extraction and minimise risk of gas migration.</p>

3 ON SITE SOURCES OF ODOUR

3.1.1 Clayton Hall Landfill is permitted to accept biodegradable wastes, such as:

- food and kitchen wastes, e.g. kitchen and canteen wastes, edible oils and fats;
- natural wastes, e.g. garden and park wastes;
- animal or plant matter.

3.1.2 As well as incoming wastes odour might arise from poor maintenance of the gas or leachate extraction systems, which could allow emissions of gas or leachate/leachate odour.

3.1.3 Odour is typically associated with trace components in landfill gas, the handling of odorous wastes and unsuitable emplacement and inadequate covering of biodegradable wastes. Given the fugitive nature of odour emissions, preventative measures have been implemented, which are:

- landfill gas management;
- Waste Acceptance Procedures;
- emplacement and covering;
- leachate management; and
- inspection and maintenance of gas and leachate systems.

3.1.4 Clayton Hall Landfill has existing gas infrastructure including two gas engines, associated pipework and a gas flare. A Gas Risk Assessment has been prepared as part of the environmental permit variation application.

3.1.5 Section 4 of this OMP provides the odour control measures to be implemented to reduce the likelihood of odour emissions arising from the handling and emplacement of potentially odorous wastes.

4 ODOUR CONTROL MEASURES

4.1 General

4.1.1 The effectiveness of the odour control measures will be reviewed at least once per year. This interval may be shorter if there have been odour complaints received or changes to the operations or infrastructure.

4.2 Process Description

4.2.1 Incoming vehicles carrying waste loads will be directed to the weighbridge, where loads are weighed and inspected.

4.2.2 Any wastes which are identified as being a banned waste (e.g. liquid waste, highly flammable waste such as lithium-ion batteries, textiles containing POPs) will be rejected from the site.

4.2.3 Materials are then diverted into the reception area.

4.2.4 Materials suitable for landfill cover/site road maintenance will be transferred to a dedicated storage area. Where required, materials may be crushed and screened to ensure that they are suitable for use as landfill cover. No odorous wastes will be used for this purpose.

4.2.5 Non-hazardous and inert materials suitable for disposal into the landfill are then transferred to the tipping face, deposited and then compacted within the landfill void.

4.3 Waste Reception and Storage

4.3.1 All waste received at the site is initially assessed by the weighbridge operator to ensure it complies with the waste transfer note description and the permitted waste types for the facility. Any unauthorised waste that has not been unloaded will be refused access to the site. Further details of waste acceptance procedures are contained within Quercia's Waste Acceptance Procedure.

4.3.2 Most waste is transported to the site in enclosed waste delivery vehicles, other vehicles must be sheeted to minimise emissions of dust and odour. Waste shall be discharged from the delivery vehicle directly into the waste reception area, allowing a full visual inspection. Waste will be transferred to the tipping face and consolidated by mobile plant after visual inspection.

4.3.3 Any unsuitable waste will be reloaded to the delivery vehicle where possible. Where this is not possible waste will be moved to the quarantine area. Any odorous waste in the quarantine area will be covered.

4.4 Landfill Cover

4.4.1 At the end of each working day a quantity of cover is applied to the top, working flanks and working faces of the operational area (except where this might damage the liner).

Daily cover will be sufficient to ensure that:

- windblown litter and debris is minimised;
- vermin is discouraged from entering the waste mass;
- scavenging is discouraged;
- cover assists in odour control.

4.4.2 A stockpile of cover material is maintained, as necessary, in the vicinity of the working face, in order to ensure that exposed waste can be covered at the end of each working day.

4.4.3 Where waste is particularly odorous or may give rise to excessive dust cover will be applied immediately to suppress emissions.

4.5 Planned Temporary Odorous Activities

4.5.1 If it is necessary to undertake planned temporary actions that have an associated high risk of significant off-site odour (e.g. removal of odorous unauthorised waste from site), site management will contact the Environment Agency and any high-risk potential receptors prior to such actions commence to advise them of:

- the operation being undertaken;
- the reason(s) for doing so;
- planned additional odour mitigation measures; and
- timescales for completion.

4.5.2 Consideration will be given to the prevailing weather conditions when undertaking such activities to minimise any potential off-site odour impact.

4.5.3 'Unplanned' temporary odorous activities, for example in the event of a site emergency, will be addressed immediately in accordance with the Action Plan set out in Section 6 of this OMP.

4.6 Plant and Equipment

- 4.6.1 The site management will ensure that sufficient plant and equipment is maintained at the facility to adequately handle all delivered waste in an efficient and, wherever possible, odour free manner.
- 4.6.2 All plant and equipment shall be maintained in good working order and in accordance with the supplier's or manufacturer's recommendations.
- 4.6.3 Plant operators shall be responsible for daily and weekly vehicle checks of their respective machines.
- 4.6.4 Any defects shall be reported to the site management promptly and rectified as soon as possible. Records will be retained on the operator maintenance and defect sheets.

4.7 Housekeeping

- 4.7.1 Site roads will be swept at regular intervals to prevent the accumulation of dusty or muddy material. General housekeeping will be undertaken daily, and checks will be carried out to ensure smooth and efficient running of the site.
- 4.7.2 Mobile plant will be subject to regular inspections to ensure waste does not accumulate on the machine.
- 4.7.3 Site infrastructure will be inspected for damage and wear by site management or an appointed responsible person at pre-defined intervals.

4.8 Leachate Management

- 4.8.1 All leachate extraction and monitoring wells and collection pipework will be inspected at a minimum of once a week. Where any leaks (including of odour) are detected arrangements will be made for repairs as soon as possible.
- 4.8.2 The leachate treatment plant will be inspected weekly to ensure it is operating effectively and that there are no emissions of odour. Where emissions are noted, repairs will be made as soon as possible.
- 4.8.3 Leachate levels within the landfill will be maintained in line with table S3.1 of the permit to minimise the risk of leachate outbreaks and allow for efficient collection of landfill gas.

4.9 Gas Management

- 4.9.1 A programme of improvements is in place to ensure that the gas extraction system is operating effectively.

- 4.9.2 Gas extraction wells, pipework, manifolds, knockout pots, engines and the flare will be inspected weekly to ensure that there are no leaks or other issues and that the gas extraction system is operating effectively.
- 4.10 Capping
- 4.10.1 Areas of permanent and temporary capping will be inspected at least monthly. Any damage to the capping system will be repaired as soon as possible to prevent fugitive emissions through the cap.
- 4.11 Odour Management Sprays
- 4.11.1 Odour management sprays are not used at Clayton Hall Landfill. The requirement to use odour neutralising agents around sensitive areas of the site or during specific activities remains subject to ongoing review by the Site Management Team.
- 4.11.2 These are used only as a backup with the first line of defence always being to prevent or minimise odour at source.
- 4.12 Training
- 4.12.1 All Quercia personnel working at the facility will be subject to a formal documented training programme in accordance with company procedures. Matters relating to site environmental management and control form part of this core training programme for all individuals.
- 4.12.2 Where possible odour assessments will be made by office staff, others not working directly with the waste or staff arriving on site for the day. Consideration will be given to the use of a third-party specialist where odour issues have been identified.
- 4.12.3 Where a third-party contractor is used the preferred standard for specialist monitoring contractors completing subjective odour surveys will be a formal assessment for odour sensitivity and detection threshold at a specialist facility in order to demonstrate suitability for this subjective monitoring role (i.e. a calibrated nose).
- 4.13 Community Liaison
- 4.13.1 Quercia operates an open-door policy and members of the public are welcome to visit the site to view operations and to discuss any issues with the site management team by prior agreement.
- 4.13.2 Site contact details and emergency (out-of-hours) numbers are shown on the site identification board and Company website and are provided to the Community Liaison Group.

4.13.3 Direct feedback to the site is always encouraged in relation to any perceived issues associated with operational activities.

4.14 Emergency Response

4.14.1 Quercia's Emergency Response Procedure is made available to all site staff. In the event of a site emergency, the site management will be notified without delay. The relevant action for odour control will be implemented by the responsible person(s).

5 ODOUR MONITORING

5.1 Meteorological Conditions

5.1.1 In promoting proactive management of the risks arising at the site, site management will maintain an awareness of the local weekly and daily weather forecast.

5.1.2 A daily record of the weather conditions will be maintained, including details of temperature, wind direction and strength and precipitation, which can be related to incidents or complaints to help build a picture of what is happening.

5.2 Regular Inspection and Olfactory Monitoring

5.2.1 All site personnel are responsible for reporting odour problems. The site management will be notified immediately of any detectable odours that are considered to have potential to give risk of an off-site odour impact.

5.2.2 The site management will ensure that routine inspections are made of the waste during operational periods in order to identify any odour sources and also to establish whether any odours are discernible at the perimeter of the site.

5.2.3 All staff responsible for assessing odour will receive training from the site management on the odour inspection procedure.

5.2.4 In the event that the site operation gives rise to persistent and repeated off site odour which causes a nuisance to neighbouring sensitive receptors, an inspection programme will be established and will be undertaken as follows.

- 1) The responsible person will visit each of the specified site boundary monitoring locations.
- 2) The responsible person will stand still and breathe deeply facing upwind for a period of up to 1 minute.
- 3) If odour is detected, but can only be detected in this manner, the odour 'intensity' should be recorded as 2 (faint). If odour is detected while walking or breathing normally, the intensity should be recorded as at least 3 (moderate).
- 4) The site management will be notified immediately of any detected odours that are assigned an odour intensity >3. This will trigger a supplementary off-site odour survey at any downwind off-site potential receptors.
- 5) Observations including time, date, weather conditions, odour type, location, intensity, extent and sensitivity, will be recorded on the Odour Survey Log

Sheet (Appendix 1). 'Abnormal' site operating conditions at the time of the survey e.g. infrastructure refurbishment etc. should also be recorded.

6 ODOUR ACTION PLAN

6.1 Odour Complaint Investigation

- 6.1.1 The following actions will be taken on receipt of an external odour complaint.
- 6.1.2 The responsible person receiving the complaint at the site will initially record the key details. Key information will be recorded at this time in order to facilitate further suitable investigation.
- 6.1.3 Site Management will be informed of the odour complaint as soon as possible, including the location, time and date of the complaint being lodged (where available).
- 6.1.4 In recognising that odour can be short-lived, timely notification of odour complaints directly from the complainant and/or the Environment Agency is important, to allow for appropriate investigation. If the odour complaint occurred more than 12 hours before notification is provided to Quercia, it may not be possible to fully investigate or substantiate the complaint. Quercia will, however, complete and record a complaint investigation, as set out below, as appropriate.
- 6.1.5 If the complaint is received within 12 hours of the incident, site management (or an appointed representative) will visit the complaint location as soon as practicable in order to subjectively determine odour presence or absence. Opportunities to meet the complainant to discuss the matter directly will be pursued, wherever possible provided the complainant is happy to do so.
- 6.1.6 If an odour is present at the complaint location, the key 'FIDOL' criteria will be assessed as follows.
- **Frequency** – is the odour intermittent or persistent; is there a history of complaints at this location?
 - **Intensity** – is the odour faint, moderate, strong, or very strong?
 - **Duration** – how long is the odour present at this location?
 - **Offensiveness** – provide a description of the odour; is it high, moderate or low offensiveness?
 - **Location** – is the odour present at a remote or highly sensitive location; is the odour plume localised or widespread?
- 6.1.7 The Site Management will subsequently undertake the following further assessment process:

- review the operations at the site prior to and at the time of the complaint;
- review the environmental control systems operative prior to and at the time of the complaint;
- review of the meteorological conditions (wind speed/wind direction/rainfall/atmospheric pressure) prior to and at the time of the complaint – to establish whether a pathway can be established between the site and the complainant;
- review of the previous complaint history at the location identified.

6.1.8 The odour complaint will be substantiated (or otherwise) by the site manager (or appointed representative) in accordance with the following (in order of priority).

- 1) The Environment Agency has visited the complaint location and has provided confirmation that the odour exists, is significant and is attributable to Clayton Hall Landfill.
- 2) The site management (or appointed representative) has visited the complaint location and has provided confirmation that the odour exists, is significant (based on the FIDOL assessment above) and is attributable to Clayton Hall Landfill.

6.1.9 Quercia will contact the Environment Agency to discuss any substantiated complaint incident as soon as possible following receipt of the details, allowing sufficient time for the above investigation to be completed.

6.1.10 If the necessary contact details are available and direct feedback has been requested, Quercia will also contact the complainant directly to discuss the issue, the findings of the subsequent investigation and any actions arising. The target response period for this during the normal working week is 48 hours from complaint receipt.

6.2 Action Plan

6.2.1 Odour ‘non-conformances’ may be determined at the site as follows:

- receipt of an odour complaint that is attributable to the landfill Site;
- detection of significant off-site odour that relates to the landfill during routine odour surveys.

6.2.2 In the event that either of the above odour ‘non-conformances’ are determined at the site, the following actions shall be taken.

6.2.3 *Responsible person(s)*: Quercia's primary point of contact for the facility on all matters associated with site operations and environmental performance will be the site manager. If the site manager is unavailable a deputy manager or site supervisor will take responsibility for managing the incident.

6.2.4 **Actions:**

1) The site manager or appointed deputy will be informed.

2) Thereafter the site manager will co-ordinate with (where appropriate):

Externally: Environment Agency Officer (alternatively the central Environment Agency call centre if outside of working hours)

Internally: Senior Manager, Compliance Team, Site Staff

3) If the incident relates to receipt of an external complaint, an investigation will be completed in accordance with Section 6.1 above.

4) Upon identification of the likely odour source(s), the appropriate corrective and preventative measures will be identified, as detailed below.

6.2.5 Key items for consideration will be as follows:

- material inputs – change in waste type, volume, odour characteristics;
 - waste reception area;
 - sufficient cover on tipping area;
 - integrity of all permanent and temporary caps;
 - proper operation of all parts of the leachate extraction system;
 - proper operation of all parts of the gas extraction system;
 - short-term abnormal weather patterns – e.g. wind direction, temperature inversions; and
 - abnormal operating conditions – temporary odorous activities.
- 5) Upon identification of the likely odour source(s), the appropriate corrective and preventative measures will be identified and implemented under the direction of the site manager. Additional support and technical expertise will be provided by internal/external technical specialists, as required. Corrective action would include use of additional cover, repairs to leaking pipes, repairs to damaged

capping, improved leachate or gas management etc dependent on the source of the odour.

6) In extreme conditions and where it is necessary to prevent unacceptable emissions, operations will temporarily cease until mitigating measures can be put in place. This will take place with close liaison with the Environment Agency.

7) This OMP will be reviewed in line with Section 7, below, in order to ensure it continues to represent 'all appropriate measures'.

6.3 Timescales

6.3.1 In the event that it proves impracticable to carry out adequate remedial measures within 5 working days, the site manager will agree with the Environment Agency the proposed actions and the timescales for their completion.

6.3.2 This will be communicated to local residents where appropriate.

6.4 Records

6.4.1 Details of odour 'non-conformances' including subsequent investigations, timescales and remedial measures taken, and notifications of the relevant internal and external bodies shall be recorded by the site management on the IMS or Daily Site Log as appropriate, and copies shall be maintained within the site office.

6.5 Additional Supportive Odour Monitoring

6.5.1 The requirement for (and frequency of) additional supportive odour monitoring will be agreed between the site management and the Environment team. This may include, but not be limited to:

- on-site subjective odour inspections;
- site perimeter subjective odour inspections; and
- off-site subjective odour inspections.

6.5.2 For example, odour monitoring may be carried out more frequently if persistent complaints have occurred or if unusual operations (such as the breakdown of a gas engine) might give rise to more significant odour.

7 DOCUMENT AUDIT AND REVIEW

7.1 Review Requirement and Timescale

7.1.1 While operations continue at the site that could give rise to the generation of odour, this Odour Management Plan will be formally reviewed at minimum bi-annual intervals to ensure it continues to reflect the ongoing site status and associated sensitivity/risk.

7.1.2 The Odour Management Plan will also be reviewed following a significant odour incident so that lessons learned can be implemented.

7.1.3 Any required changes to the conditions set out within this document will be formally agreed with the Environment Agency prior to their implementation.

7.1.4 A version control record will be made in the subsequent reissuing of the Odour Management Plan.

7.2 Audit

7.2.1 The processes described in this document will be audited by Quercia in accordance with the Company's auditing procedures, generally once a year.

7.3 Review and Plan Update

7.3.1 This management plan sets out the appropriate measures Quercia will undertake in controlling any odours or potentially odorous activities from the facility. If, on review of the performance of the facility, Quercia and/or the Environment Agency propose to seek a revision of this plan, then the following course of action will be undertaken by both parties.

- 1) In potentially critical circumstances where Quercia recognises the requirement for the immediate implementation of changes to the management plan to prevent or reduce significant odorous emissions, these changes will be discussed with the Environment Agency without delay but may be actioned by Quercia ahead of formal agreement with the Environment Agency.
- 2) Where Quercia proposes changes to the management plan that involve a more strategic and/or phased approach, rather than a need for immediate implementation, a formal proposal will be submitted by Quercia to the Environment Agency setting out the specific issues arising from document review, and the options/issues requiring Quercia's further attention following Agency approval.

- 3) The Environment Agency will review Quercia's submission/updated management plan and confirm they are satisfied with the proposed changes. Where possible, the response should be within 28 days of receipt of Quercia's submission. The agreed required changes will then form the future 'appropriate measures' for the site with regard to odour management and control.
- 4) Where changes to the management plan are proposed by the Environment Agency, these will be discussed with Quercia, setting out the Environment Agency's clear expectation from the changes in addition to timescales for their implementation. It is recognised that these changes may range from matters that require immediate implementation to those that may be implemented over an extended timeframe. In each case, the required changes will be discussed with Quercia and an appropriate action plan agreed. Quercia will (wherever possible) undertake the identified changes in accordance with the timescales proposed for the work, at which point the updated 'appropriate measures' will take effect.

APPENDICES

APPENDIX 1

Odour Monitoring Log

ODOUR MONITORING LOG

Date		
Time		
Monitoring carried out by		
Location	Odour detected	Rating (1-4)
Weather Conditions (temperature, precipitation, wind strength and direction)		
Activities on Site (is waste being delivered. Note anything unusual)		
Action Required		
Action Completed		
Action signed off		

Rating

1. Very faint and intermittent
2. Faint but noticeable when breathing deeply
3. Moderate odour noticed when walking and breathing normally
4. Strong noticeable constant unpleasant smell
5. Very strong very noticeable odour

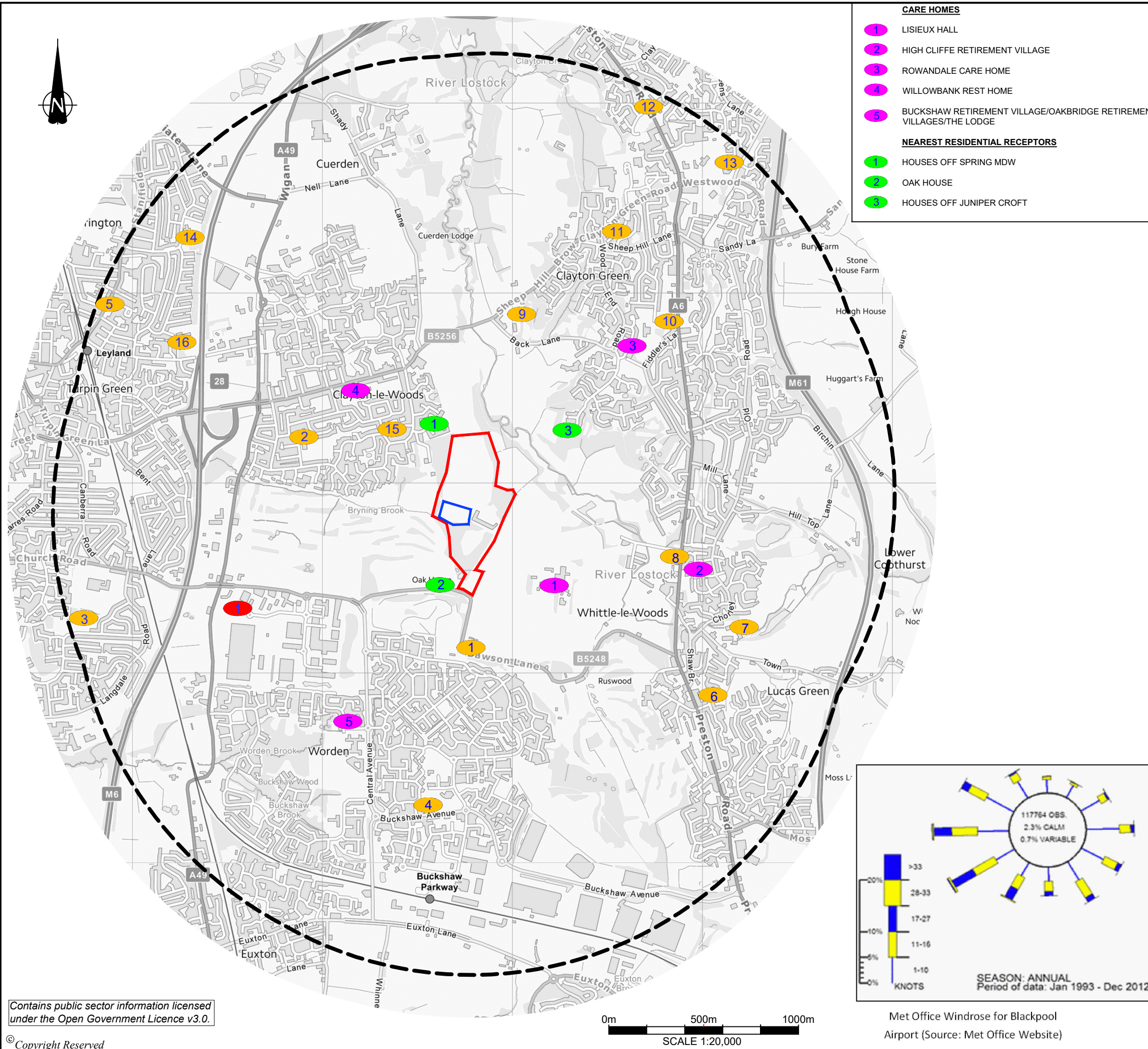
APPENDIX 2

Odour Complaint Log

ODOUR COMPLAINT LOG

Date		Time	
Person receiving complaint			
Complainant Name			
Complainant Address			
Complainant Phone number			
Nature of Complaint (when, how strong, what type of smell)			
Weather Conditions (temperature, precipitation wind strength and direction at time of incident)			
Investigation findings			
Environment Agency Advised (date/time)			
Action Required			
Action Taken			
Action signed off			

DRAWINGS



- CARE HOMES**
- 1 LISIEUX HALL
 - 2 HIGH CLIFFE RETIREMENT VILLAGE
 - 3 ROWANDALE CARE HOME
 - 4 WILLOWBANK REST HOME
 - 5 BUCKSHAW RETIREMENT VILLAGE/OAKBRIDGE RETIREMENT VILLAGES/THE LODGE
- NEAREST RESIDENTIAL RECEPTORS**
- 1 HOUSES OFF SPRING MDW
 - 2 OAK HOUSE
 - 3 HOUSES OFF JUNIPER CROFT

- KEY**
- CLAYTON HALL LANDFILL INSTALLATION BOUNDARY
 - CELL 4B PHASE 4 EXTENSION AREA
 - 2km BOUNDARY OFFSET FROM SITE
- SCHOOLS/NURSERIES**
- 1 GLESTON MANOR DAY NURSERY
 - 2 LANCASTER LANE COMMUNITY PRIMARY SCHOOL
 - 3 BALSHAW'S CHURCH OF ENGLAND HIGH SCHOOL
 - 4 TRINITY CHURCH OF ENGLAND METHODIST PRIMARY SCHOOL/TALKING TOTS/BUCKSHAW PLAYGROUP
 - 5 FARINGTON PRIMARY SCHOOL
 - 6 FUTURE CHAMPIONS NURSERY
 - 7 LILLIPUT NURSERY SCHOOL
 - 8 WHITTLE-LE-WOODS CE PRIMARY SCHOOL
 - 9 CLAYTON-LE-WOODS CHURCH OF ENGLAND PRIMARY SCHOOL
 - 10 CLAYTON-LE-WOODS MANOR ROAD PRIMARY SCHOOL
 - 11 LITTLE ACORNS NURSERY SCHOOL
 - 12 CAMBIAN RED ROSE SCHOOL
 - 13 BILLINGTON BEARS/NURSERY/ST BEDE'S CATHOLIC PRIMARY SCHOOL
 - 14 LEVER HOUSE PRIMARY SCHOOL
 - 15 HAPPY HOUSE PRESCHOOL AND NURSERY
 - 16 ST CATHERINE'S RC PRIMARY SCHOOL
- HOSPITALS**
- 1 BUCKSHAW HOSPITAL

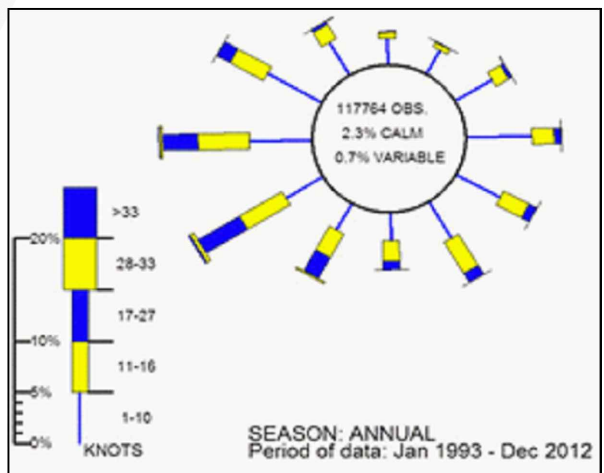
A	FIRST ISSUE	19/12/24	SJB	AC	AC
REVISION	DETAILS	DATE	DRN	CHK'D	APP'D

CLIENT
QUERCIA LIMITED

PROJECT
ENVIRONMENTAL PERMIT VARIATION

DRAWING TITLE
CLAYTON HALL LANDFILL RECEPTOR PLAN

DRG No.	ST18115-004	REV	A	SUIT. CODE	
DRG SIZE	A3	SCALE	1:20000	DATE	19-08-24
DRAWN BY	DR	CHECKED BY	AC	APPROVED BY	AC



Met Office Windrose for Blackpool Airport (Source: Met Office Website)

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