



Passenham Quarry

Environmental Permit Variation Application

Dust Management Plan

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Prepared on behalf of GRS (Roadstone) Limited

GRS Group

Quay West at MediaCityUK, Trafford Wharf Road, Trafford Park, Manchester, M17 1HH
Tel: +44 (0)161 872 3223 Fax: +44 (0)161 872 3193
Email: info@wyg.com Website: www.wyg.com

WYG Environment Planning Transport Limited. Registered in England & Wales Number: 03050297
Registered Office: Arndale Court, Otley Road, Headingley, Leeds, LS6 2UJ



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1.0 Introduction

1.1 Regulated Facility Details

Site Location

- 1.1.1 Passenham Quarry is located approximately 625m east from the village of Deanshanger in South Northamptonshire. The proposed extension area is located to the east of the existing permitted area as shown on Drawing Number GRS/A099801/LOC/01, approximately 250m south of the hamlet of Passenham.

Site Classification

- 1.1.2 The regulated facility is an inert landfill.

Application Boundary and Site Security

- 1.1.3 The proposed application boundary is shown on Drawing Number GRS/A099801/LOC/01. The application site is located to the east of the existing Passenham Quarry site.
- 1.1.4 As part of the existing mineral extraction operations, fencing is established around the perimeter of the site to prevent unauthorised access to the site. Access to the site will be achieved from the existing access road off the A422 located in the north west of the existing permit area. The site entrance via the access road is secured by lockable gates.
- 1.1.5 The site is not located within an Air Quality Management Area.
- 1.1.6 Site gates and perimeter fencing are inspected on a daily basis. Any identified damage to the fence or gates that could prejudice the site security is recorded and temporarily repaired as necessary before the end of that working day. Permanent repair or replacement will be undertaken as soon as practicable.

Site Context

- 1.1.7 The application site is located to the east of the wider Passenham Quarry site as shown on Drawing Number GRS/A099801/LOC/01. This application is for an eastern extension to the current boundary of the permit. The immediate surroundings of the proposed extension area largely comprise agricultural land with the nearest residential area located approximately 240m north.



1.1.8 An Air Quality Assessment was undertaken as a function of the planning application and is provided for reference as Appendix A to this report. This report undertook a detailed quantitative assessment for properties within 1km of the extension boundary. This report concluded that the extension area would satisfy the UK Air Quality Objectives for PM₁₀ and that any dust occurrence event would be limited and of a short duration. Dust management techniques, as detailed within the assessment and this Dust Management Plan, will be implemented to minimise the effects of any dust emissions.



2.0 Dust Sensitive Receptors

2.1.1 Receptors within 1km of the proposed application boundary have been identified and are shown on Drawing Number GRS/A099801/REC/01. The main pathway for the identified sources will be atmosphere and as such, atmospheric conditions can affect dispersion rates and hence potential risk. As a result, the location of each receptor in relation to the site may influence the potential impact of the risk, as summarised in Table 1.

Receptor	Direction from Operational Area	Minimum Distance from Proposed Site Boundary (approx. m)
Designated ecological habitats/sites of geological importance e.g. Ramsar, SAC, SPA, SSSI, LNR, NNR		
N/A		
Domestic Dwellings		
Residential properties in Passenham	N	240
Residential properties in Lower Weald	SE	700
Residential properties in Stony Stratford	NE	840
Commercial and Industrial Premises		
N/A		
Local Wildlife Site		
N/A		
Schools / Hospitals / Shops		
N/A		
Recreation/Open Spaces		
Kingfisher Country Club	SW	530
Highways or Minor Roads		
Deanshanger Road (A422)	NW	850
Woodland		
Priority Habitat Inventory - Deciduous Woodland	N	125
Priority Habitat Inventory - Deciduous Woodland	W	575
Priority Habitat Inventory - Deciduous Woodland	W	740
Priority Habitat Inventory - Deciduous Woodland	E	585
Local Wildlife Sites		
Deanshanger Old Canal	W	1,000
Deanshanger Gravel Pits	SW	720
Footbridge at Mill Farm	SW	725
Parish Boundary Hedges, Wolverton	SW	210
Old Limestone Quarry	NE	300
Areas of Protected Species		
River Great Ouse – Migratory Route	W,N	75
Area of Protected Species	S	590
Area of Protected Species	NW	355
Area of Protected Species	NE	395
Historic buildings / Listed buildings / Archaeological sites		
Grade II Listed Buildings		

The Manor House and Attached Walls and Gates	N	320
Manor Farmhouse	N	500
Two Barns at Manor House	N	375
Headstone Approximately 9m South of Nave of Church of St Guthlac	N	295
Dovecote to South of the Manor House	N	225
Church of St Guthlac	N	315
Chest Tomb Approximately 5 Metres South of Chancel of Church of St Guthlac	N	315
Chest Tomb Approximately 14 Metres South of Chancel of Church of St Guthlac	N	330
Calverton House	E	465
Bridge in Park of Calverton House	E	580
Bridge south east of Calverton House, Near Calverton Road	E	740
30 Lower Weald	E	705
31 and 32 Lower Weald	SE	705
Park Wall of Calverton House Fronting Calverton Road	E	640
29 Lower Weald	SE	665
27 Lower Weald	SE	670
Row of 3 Cottages on Calverton Road South West of Manor Farm	E	655
The Old School House	E	675
Cowshed West of Manor Farmhouse	E	680
Coach House and Farm Building South West of Manor Farmhouse	E	710
Church of All Saints	E	730
Almshouses South East of Church of All Saints	E	750
The Shoulder of Mutton Public House	E	720
Barn, Shelter Sheds and South Closing Wall in Foldyard to North East of Rectory Farmhouse and to East of Numbers 18 and 19	SE	790
1-5 Lower Weald	SE	880
18 and 19 Lower Weald	SE	775
Barn at Right Angles to Rectory Farmhouse	SE	785
Rectory Farmhouse	SE	805
Barn to West of Rectory Farmhouse	SE	775
Sensitive land uses e.g. farmland, allotments, commercial fish farms		
Agricultural land	N, S, E	<50
Nearest Surface Water e.g. rivers and streams		
Lagoons	W	545
River Great Ouse	N	75
Lagoon to east of Kingfisher Country Club	SW	525
Groundwater (sensitivity)		
According to the Multi-Agency Geographic Information for the Countryside's (MAGIC) website, the site is not located within a Groundwater Source Protection Zone and overlies over a Secondary B aquifer (bedrock) and a Secondary A aquifer (Superficial Deposits).		



2.2 Climate

Rainfall

2.2.1 Long term average rainfall data (1993 to 2015) was obtained from a rain gauge in Deanshanger (NGR SP76115 39710) and is presented in Table 2 below.

Table 2: Monthly Rainfall Data from Deanshanger (1993 - 2015)

Month	Average Rainfall mm (1993 – 2015)
January	68
February	51
March	48
April	54
May	66
June	61
July	52
August	60
September	53
October	78
November	74
December	67
Annual (total)	680

Wind Rose

2.2.2 The wind rose data, based on findings recorded at Milton Keynes (located approximately 10km south east of the site) taken from www.windfinder.com shows that for the period February 2012 to January 2019, the prevailing wind direction is from the south west.



3.0 Operations

Waste Types and Quantities

- 3.1.1 In order to achieve the restoration profiles provided on the approved restoration scheme (Drawing Number P14/PL16/04) a volume of 90,000m³ of additional material will be required in order to achieve the proposed restoration profiles which equates to approximately 150,000 tonnes.
- 3.1.2 It is proposed that the site will continue to use the waste types that are permitted under the current Environmental Permit (EPR/AB3503UZ) for the proposed restoration works. These waste types are inert as classified under the Landfill Directive (1999/31/EC) and Council Decision (2003/33/EC) of 19 December 2002 'establishing criteria and procedures for the acceptance of waste landfills'.

Proposed Operational Phasing

- 3.1.3 The proposed phasing plan within the application site is detailed in Drawing Number P14/PL6/03. As detailed in the phasing plan, the application site will comprise two phases (Phases 13 and 14) which follow from the 12 phases that are covered within the existing permitted area regulated under permit EPR/AB3503UZ.
- 3.1.4 Works will commence in Phase 13 where soils will be stripped to create amenity bunds along the eastern boundary of Phase 13 (bund reference FT1) and to the south of Phase 14 (bund reference FT2). Subsoil will then be stripped and placed in Subsoil Store FS1 located to the south of Phase 13 and FS2 located to the south of Phase 14.
- 3.1.5 Overburden will then be stripped in Phase 13, commencing in the west of the phase and working in an easterly direction. If possible, this material will be transported to extraction areas that are present within the existing permitted area to facilitate the restoration of these areas or used to restore the void space that is generated within Phase 13 following mineral extraction.
- 3.1.6 Mineral extraction and subsequent infilling will then commence in Phase 13 which will advance in a west to east direction as shown on Drawing Number P14/PL6/03. It is the intention of GRS that the majority of Phase 13 will be restored using indigenous material to the site, with imported inert materials only used to supplement the operations in the east of the Phase.



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- 3.1.7 Following the completion of extraction operations in Phase 13, stripping operations will commence in Phase 14. The topsoil and subsoil will be directly placed into Phase 13 to facilitate restoration. If this is not possible, it is proposed that the topsoil will be stored in bund FT3 and subsoil will be used to expand bund FS3.
- 3.1.8 Following stripping activities, mineral extraction will commence to the north of Phase 14 and proceed in a north east to south west direction as shown on Drawing Number P14/PL16/03 (see attached).
- 3.1.9 On completion of mineral extraction in Phase 14, infilling operations will commence and Phase 13 will be restored to achieve the approved restoration profiles. Once filled, Phase 14 will be restored using subsoil that is stored in FS1 and FS2 and topsoil from the amenity bunds. The soil storage areas will be restored back to the original level by the spreading of topsoil bund FT1.

Final Landform and After Use

- 3.1.10 Details of the final landform are provided on the approved restoration scheme (Drawing Number P14/PL16/04) as approved under planning permission 17/01267/MIN. The site will be restored back to agriculture with some nature conservation habitats.



4.0 Dust and Particulate Management

4.1 Responsibility for the Implementation of the Dust Management Plan

- 4.1.1 The Site Manager will be responsible for the implementation of this Dust Management Plan. All site staff will receive instructions on how the plan is to be implemented during tool box talks on site.
- 4.1.2 A review of the plan will be undertaken every 12 months to ensure that it is fit for purpose and meets the requirements of current guidance.

4.2 Sources and Control of Dust

- 4.2.1 The sources and control measures for dust emissions are provided in Table 3 below.

What do you do that can harm and what could be harmed?			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence.
Dust emissions from vehicle movements	Occupiers of domestic dwellings listed in Table 1 above. Occupants on recreational areas identified in Table 1. Local Wildlife Sites identified in Table 1. Priority habitats identified in Table 1.	Atmosphere	The site benefits from an operational wheel wash which is used by HGV's before they leave the site. This facility will continue to be utilised as a result of this variation. Wastes being delivered will be covered or sheeted to prevent the emission of dust. All vehicle drivers will comply with the speed limits within the site and on the access roads. The Site Manager will undertake a daily visual assessment of dust levels and all site operatives will be vigilant and report any	Dust could potentially reach the nearby dwellings when a strong wind blows in their direction. Management actions should prevent this happening.	Local nuisance Potential respiratory health risk to public and staff. Smothering.	Not significant.

	Areas of protected species identified in Table 1.		<p>problems to the Site Manager.</p> <p>If necessary, a road sweeper will be contracted to clean the site access road where vehicles exit the site</p> <p>The site also benefits from a water bowser which is used to suppress dust on the haul roads in particular.</p>			
Dust generated during loading/unloading of waste	<p>Occupiers of domestic dwellings listed in Table 2 above.</p> <p>Occupants on recreational areas identified in Table 2.</p> <p>Local Wildlife Sites identified in Table 2.</p> <p>Priority habitats identified in Table 2.</p> <p>Areas of protected species identified in Table 2.</p>	Atmosphere	<p>The loading/unloading of wastes will be undertaken in a controlled manner to keep dust emissions to a minimum. Extra care will be taken with the deposit of waste during periods of prolonged dry weather or high winds.</p> <p>The Site Manager will undertake a daily visual assessment of dust levels and all site operatives will be vigilant and report any problems to the Site Manager.</p>	Dust could potentially reach the nearby dwellings when a strong wind blows in their direction. Management actions should prevent this happening.	<p>Local nuisance</p> <p>Potential respiratory health risk to public and staff.</p> <p>Smothering</p>	Not significant due to management techniques employed.

4.3 Dust Monitoring

4.3.1 All site personnel shall be trained as to the potential sources and effective mitigation of dust.

4.3.2 Daily visual inspections will be conducted within the site and on the local road network by the site personnel and especially during dry windy conditions to ensure that any dust sources are identified and dealt with promptly. All staff will remain vigilant and be required to identify when potentially dusty conditions are occurring on site. In the event that visible dust is being generated from the site activities, the remedial measures identified in Table 3 will be implemented.

4.3.3 In the event that dust emissions cannot be controlled, activities on site will cease until such



point as prevailing conditions change or a more permanent dust control measure has been implemented.

- 4.3.4 A complaints log will be held on site. In the event of receiving a dust complaint, the name and location of the complainant, the nature of the dust related complaint, the site activity and prevailing weather conditions at the time of the complaint shall be noted.
- 4.3.5 The site manager shall investigate the complaint and take any remedial action which is deemed appropriate.



5.0 Reporting and Complaints Procedure

5.1 Purpose of Complaints Procedure

- 5.1.1 A Dust Management Plan should show how the operator will respond to complaints. Any complaints should be investigated promptly and appropriate remedial action should be taken. The complainant and anyone else likely to be affected should be informed of any action taken in response to the complaint.
- 5.1.2 A procedure has been developed (see Table 4 below) to ensure that complaints will be handled by GRS appropriately and consistently and to reassure the Environment Agency and the public that any of their concerns will be acknowledged and acted upon where appropriate. The procedure will be reviewed on an annual basis or in the event of any significant dust issues.

5.2 Complaints Reporting Route

- 5.2.1 In order to ensure that members of the public are easily able to report any complaints relating to dust emissions from the site, there will be a display board at the site entrance which details the site name, the permit number, the Environment Agency's contact details and GRS contact details. By providing contact details for the EA as well as the operator, this ensures that the member of public can report their complaint and be confident that it will be received by the appropriate party even if they feel uncomfortable discussing directly with the operator.

5.3 Complaints Records

- 5.3.1 Auditable records will be kept of any complaints made and the investigations undertaken. This will provide an ongoing record of the causes incidents which will enable GRS to identify any patterns which would prompt a review in odour management procedures and control measures.

Figure 2: Reporting Route

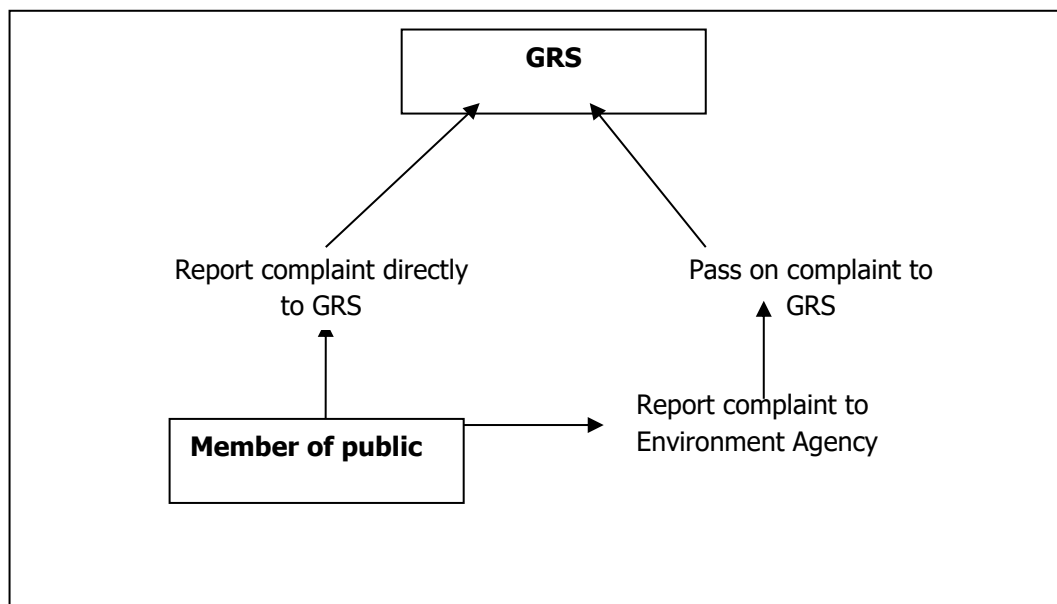


Table 4 Complaints Procedure

Action		Person responsible for ensuring action is carried out	Timescale for Action Completion
1.	The Site Manager will be notified of the complaint and will make the appropriate managerial staff and site operatives aware of the complaint. The Environment Agency will also be notified of the complaint. The complaint shall be formally recorded using the Complaint Report sheet contained within the site's Environmental Management System	Site Manager	Within two working day of receipt of the complaint.
2.	The complaint will be investigated by: a) Checking the monitoring records to see whether the complaint corresponds to the monitoring records. b) Checking the Site Diary and waste acceptance records to see if any particularly dusty waste was accepted. c) Checking the Site Diary to see whether the complaint corresponds to any operational issues at the site. If the cause of the complaint is established, it will be recorded within the Complaint Record Sheet. If no particular cause is identifiable then this will also be recorded.	Site Manager	Within one working day of receipt of the complaint.
3.	If a number of complaints are received about a particular incident, then it might be necessary to increase the frequency of dust monitoring.	Site Manager	Within one working day of receipt of the complaint.
4.	The Site Manager will instigate any necessary reviews of procedures and will implement any required changes.	Site Manager	Within seven working days of receipt of the complaint.

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5.	If appropriate, the complainant and the Environment Agency will be informed of any corrective actions taken.	Site Manager	Within seven working days of receipt of the complaint.
6.	A follow up audit on the corrective actions implemented shall be undertaken to ensure the complaint is not made again in the future and that the preventive procedure is effective.	Site Manager	Within two weeks of receipt of the complaint.
7.	Once the follow up audit has been completed, the Site Manager will ensure that the complaint and any action taken and the effectiveness of that action are recorded in the Environmental Management System. This record shall also note any amendments to procedures, both environmental and health & safety, which may be required following the investigation. The record shall be kept in the site office at all times or if it is an electronic record it will be accessible from the site.	Site Manager	Within two weeks of receipt of the complaint.



Appendix A – Air Quality Assessment