

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Horton Brook Quarry

Jayflex (Aggregates) Limited
Horton Brook Quarry
Horton
Slough
Berkshire
SL3 0LP

Permit number

EPR/AP3093VW

Horton Brook Quarry

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Introductory note

This introductory note does not form a part of the permit

The main features of the facility are as follows:

Horton Brook Quarry is adjacent to Queen Mother Reservoir in West London in the Royal Borough of Windsor and Maidenhead. This application is for a landfill to dispose of inert waste in the void created by quarrying activities. The site will be developed in ten phases, allowing for gravel excavation (not covered under this permit), and inert landfilling operations. This permit covers inert landfilling operations only.

Status Log of the permit		
Detail	Date	Response Date
Application EPR/AP3093VW/A001	Duly made	18/12/08
Additional Information Received	Request made 21/04/09	12/08/09
Additional Information Received	Request made 07/05/09	19/06/09
Additional Information Received	Request made 30/07/09	11/09/09 and 22/09/09
Permit EPR/AP3093VW determined	10/05/10	

End of Introductory Note

Permit

Permit number

EPR/AP3093VW

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010

Jayflex (Aggregates) Limited ("the operator"),

whose registered office is

107 Bell Street, London NW1 6TL

company registration number 03415570

to operate a facility comprising *waste operations* at

Horton Brook Quarry

Horton

Slough

Berkshire

SL3 0LP

to the extent authorised by and subject to the conditions of this permit.

Name **Helen Smith**

Date 10th May 2010

	
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Authorised on behalf of the Agency

1 Management

1.1 General management

- 1.1.1 The activities shall be managed and operated:
- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances and closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme or shall hold an appropriate certificate of technical competence or other approval issued by the Agency.

1.2 Accident management plan

- 1.2.1 The operator shall:
- (a) maintain and implement an accident management plan;
 - (b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
 - (c) make any appropriate changes to the plan identified by a review.

1.3 Finance

- 1.3.1 No activities authorised by this Permit shall be commenced unless the Operator has entered into an Agreement with the Agency to secure financial provision for meeting the obligations under this Permit and has provided the provision.
- 1.3.2 The Operator shall give prior notice to the Agency of its intention to commence operations at the site.
- 1.3.3 The Financial Provision provided under condition 1.3.1 above shall thereafter be maintained by the Operator throughout the subsistence of the Permit and the Operator shall produce evidence of such provision whenever required by the Agency.

- 1.3.4 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:
- (a) the costs of setting up and operating the landfill;
 - (b) the costs of the financial provision required by condition 1.3.1; and
 - (c) the estimated costs for the closure and aftercare of the landfill.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 2 to this permit.

2.3 Operating techniques

- 2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Agency.

(b) If notified by the Agency that the activities are giving rise to pollution, the operator shall submit to the Agency for approval within the period specified, a revision of any plan specified in schedule 1, table S1.2 or otherwise required under this permit, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Agency.

2.4 Improvement programme

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Agency, the operator shall notify the Agency within 14 days of completion of each improvement.

2.5 Pre-operational conditions

- 2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

2.6 Landfill Engineering

- 2.6.1 No construction of any new phase shall commence until the operator has submitted construction proposals and the Agency has confirmed that it is satisfied with the construction proposals.

- 2.6.2 The construction of a new phase shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Agency.
- 2.6.3 No disposal of waste shall take place in a new phase until the operator has submitted a CQA Validation Report and the Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.6.4 No construction of landfill Infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Agency has confirmed that it is satisfied with the construction proposals.
- 2.6.5 The construction of the landfill infrastructure shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Agency.
- 2.6.6 No new infrastructure shall become operational until the operator has submitted a CQA Validation Report and the Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.6.7 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.6.4 and 2.6.5 do not apply and the relevant Landfill Infrastructure may be constructed, provided that the construction proposals are submitted to the Agency as soon as practicable.
- 2.6.8 For the purposes of conditions 2.6.1 and 2.6.4, the Agency shall be deemed to be satisfied where it has not, within the period of 4 weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
- (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.

2.7 Waste acceptance

- 2.7.1 Wastes shall only be accepted for disposal if:
- (a) they are listed in schedule 3, and
 - (b) they are inert waste, and
 - (c) they are not liquid waste (including waste waters but excluding sludge), and
 - (d) all the relevant waste acceptance procedures have been completed, and
 - (e) they fulfil the relevant waste acceptance criteria, and
 - (f) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and
 - (g) they are wastes which have been treated, except for wastes for which treatment is not technically feasible.

- 2.7.2 The operator shall visually inspect:
- (a) without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill; and
 - (b) waste at the point of deposit;
- and shall satisfy itself that it conforms to the basic characterisation documentation submitted by the holder.
- 2.7.3 Where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.
- 2.7.4 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.7.5 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing ESID4.
- 2.7.6 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.
- 2.7.7 The operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, date of delivery and, where practicable, origin of any waste that is received for disposal or recovery and of the identity of the producer, or in the case of multiple collection vehicles, of the collector of such waste. Any information regarded by the operator as commercially confidential shall be clearly identified in the record.

2.8 Closure and aftercare

- 2.8.1 The operator shall maintain a closure and aftercare management plan.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 4 tables S4.1, S4.2 and S4.3, S4.4, S4.5.
- 3.1.2 The limits given in schedule 4 shall not be exceeded.

3.2 Fugitive emissions of substances

- 3.2.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including those specified in any approved fugitive emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:

- (a) if notified by the Agency that the activities are giving rise to pollution, submit to the Agency for approval within the period specified, a fugitive emissions management plan;
 - (b) implement the approved fugitive emissions management plan, from the date of approval, unless otherwise agreed in writing by the Agency.
- 3.2.3 All liquids, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.
- 3.2.4 The limits for landfill gas at the installation set out in schedule 4, table S4.3 shall not be exceeded.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
 - (a) if notified by the Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Agency for approval within the period specified, an odour management plan;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, including those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
 - (a) if notified by the Agency that the activities are giving rise to annoyance outside the site due to noise and vibration, submit to the Agency for approval within the period specified, a noise and vibration management plan;
 - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring and any other actions for the parameters specified in the following tables in schedule 4 to this permit:

- (a) Groundwater specified in table S4.1, S4.2;
- (b) Surface water specified in table S4.3, S4.4; and
- (c) Landfill gas specified in table S4.5.

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 A topographical survey of the site referenced to Ordnance Datum shall be carried out:

- (a) annually, or prior to the disposal of waste in any new phase or new development area of the landfill whichever is the shorter period, and
- (b) following closure of the landfill or part of the landfill.

The topographical survey shall be used to produce a plan of a scale adequate to show the surveyed features of the site.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made,
 - (i) the results of groundwater monitoring;
 - (ii) landfill gas monitoring;
 - (iii) waste types and quantities;
 - (iv) the specification and as built drawings of the basal and sidewall engineering systems

4.1.2 All records, plans and the management system required to be maintained by this permit shall be held on the site where practicable, or other location agreed in writing and controlled by the operator.

4.2 Reporting

- 4.2.1 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted in relation to this installation and any agreed amendments thereto;
 - (b) the topographical surveys required by condition 3.5.3 other than those submitted as part of a CQA validation report;
 - (c) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
 - (d) an assessment of the settlement behavior of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;
 - (e) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 5 table S5.1;
 - (b) for the reporting periods specified in schedule 5 table S5.1 and using the forms specified in schedule 5 table S5.2; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 Within one month of the end of each quarter, the operator shall submit to the Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.
- 4.2.5 The operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.6 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency.

4.3 Notifications

- 4.3.1 The Agency shall be notified without delay following the detection of:

- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
- (b) the breach of a limit specified in the permit; or
- (c) any significant adverse environmental effects.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 6 to this permit within the time period specified in that schedule.

4.3.3 Where the Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address;
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 7 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities	
Description of activities for waste operations	Limits of activities
D1: Deposit into or onto land	The deposit of inert waste into or onto land

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to Part B, section 5a and table 2 of the application form	18/12/08
	How to comply with your environmental permit - Getting the Basics Right	
	How to comply with your environmental permit - Additional guidance for Landfill (EPR5.02)	
Response to Schedule 5 notice dated 21/04/09	All responses.	12/08/09
Response to Schedule 5 notice dated 07/05/09	Excluding response to points 2, 4, 6, 7, 11, 20, 21(a), 22, 25, 26	19/06/09
Response to Schedule 5 notice dated 30/07/09	Excluding response to points 4, 6	11/09/09 and 22/09/09

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The interim control and trigger levels specified for boreholes BH1 and BH3 shall be reviewed and revised as appropriate, following the collection of a further 12 months worth of monitoring data from these locations. Results to be submitted to the Environment Agency for approval before the 14 month deadline.	14 months from date of permit issue
IC2	The monitoring frequency of the groundwater discharge point shall be reviewed following the collection of a further 12 months worth of monitoring data. Monitoring results and proposals, with justifications, for any changes to the monitoring frequency shall be submitted to the Environment Agency for approval before the 14 month deadline.	14 months from date of permit issue

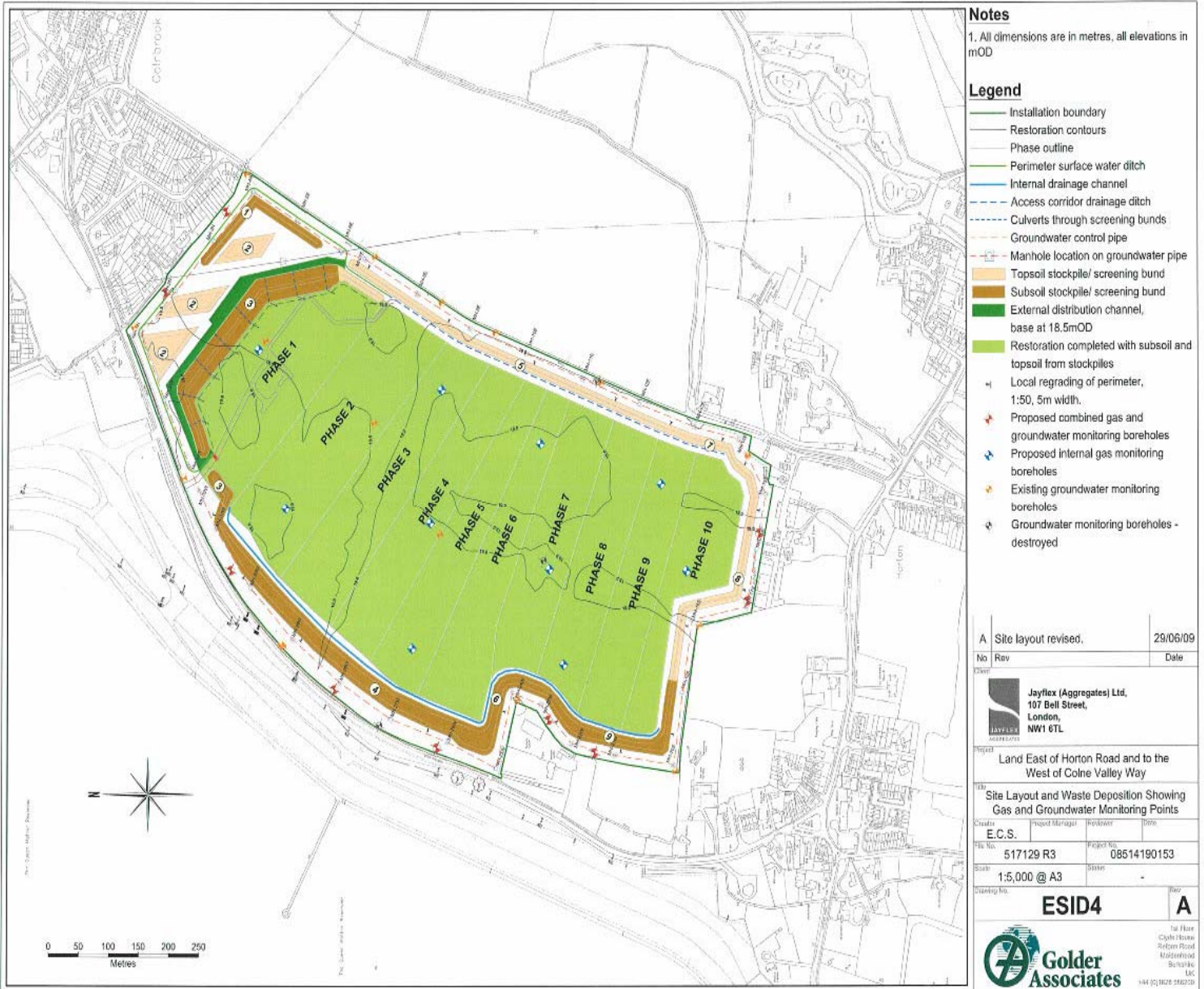
Table S1.4 Pre-operational measures

Reference	Pre-operational measures
PC1	<p>Submit a written procedure to the Environment Agency for approval. The procedure must apply to the pumps used to remove groundwater. The procedure must contain additional control measures to allow quicker remediation in the event of pump failure. For example, telemetry warning for the discharge volume for the pump, maintenance of a working back up pump available on the site or a redundant parallel system.</p> <p>The notification requirements of condition 2.5.1 will be deemed to have been complied with on approval by the Environment Agency.</p>
PC2	<p>Submit a written procedure to the Environment Agency for approval. The procedure must address the removal of non-conforming materials in the event of flooding. The procedure must contain either a) an improved response time to remove the material within 2 hours, or b) specify measures to be taken to protect non-conforming material from being flooded, (for example, raise out of the flood plain).</p> <p>The notification requirements of condition 2.5.1 will be deemed to have been complied with on approval by the Environment Agency.</p>
PC3	<p>Submit a written procedure to the Environment Agency for approval. The procedure must include boreholes 10 and 15 in the groundwater monitoring schedule, and confirm the fitness for purpose of these boreholes.</p> <p>The notification requirements of condition 2.5.1 will be deemed to have been complied with on approval by the Environment Agency.</p>
PC4	<p>Submit a written procedure to the Environment Agency for approval. The procedure must include a List 1 substances screen in the groundwater monitoring schedule.</p> <p>The notification requirements of condition 2.5.1 will be deemed to have been complied with on approval by the Environment Agency.</p>
PC5	<p>Submit a written procedure to the Environment Agency for approval. The procedure must include a timescale for all contingency action plans in the revised Hydrogeological Risk Assessment.</p> <p>The notification requirements of condition 2.5.1 will be deemed to have been complied with on approval by the Environment Agency.</p>
PC6	<p>The operator shall revise the Stability Risk Assessment (SRA). The parameters used in the assessment of the side slope sub-grade and geological barrier will be confirmed by site specific laboratory testing prior to construction on site, as stated in Section 5.2 of the revised SRA. Revision of the SRA shall be undertaken as appropriate in the light of these test results, prior to the commencement of construction works.</p> <p>The notification requirements of condition 2.5.1 will be deemed to have been complied with on approval by the Environment Agency.</p>
PC7	<p>Submit a written procedure to the Environment Agency for approval.</p> <p>The procedure must include a bird management plan with the aim to reduce the number of birds attracted to the site, details of the actions to be taken to disperse them when more than 50 birds are present on the site at any one time and details of how areas of open water will be minimized.</p> <p>The notification requirements of condition 2.5.1 will be deemed to have been complied with on approval by the Environment Agency.</p>

Table S1.5 Annual limits

Category	Limit Tonnes/Year
Inert Waste	400,000

Schedule 2 - Site plan



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Schedule 3 - Waste types, raw materials and fuels

Table S3.1 Permitted waste types and quantities
Group A Wastes acceptable without pre-testing

Waste code	Description
10	WASTES FROM THERMAL PROCESSES
10 11	wastes from manufacture of glass and glass products
10 11 03	waste glass-based fibrous materials
10 11 12	waste glass other than those mentioned in 10 11 11
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 07	glass packaging
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 01	Concrete, bricks, tiles and ceramics
17 01 01	Concrete
17 01 02	Bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	wood, glass and plastic
17 02 02	Glass
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 05	Glass
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions (except 15 01)
20 01 02	Glass
20 02	garden and park wastes (including cemetery waste)
20 02 02	soil and stones

Table S3.2 Permitted waste types and quantities for Group B wastes acceptable with pre-testing

Waste code	Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 01	wastes from mineral excavation
01 01 02	wastes from mineral non-metalliferous excavation
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 05	drilling muds and other drilling wastes
01 05 04	freshwater drilling muds and wastes
10	WASTES FROM THERMAL PROCESSES
10 12	wastes from manufacture of ceramic goods, bricks, tiles and construction products
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 06	Dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
17 09	other construction and demolition wastes
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 09	minerals (for example sand, stones)

Schedule 4 – Emissions and monitoring

Table S4.1 Groundwater – other monitoring requirements

Emission point ref. & location	Parameter	Source	Reference Period	Monitoring frequency	Monitoring standard or method
BH1, BH2, BH3, BH4, BH12, BH16 BH10 and BH15 in line Pre-Operational condition PC3	Groundwater level, temperature, pH, electrical conductivity, dissolved oxygen, ammoniacal nitrogen, chloride	Borehole	Spot sample	Monthly	In accordance with Agency document LFTGN02 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'
BH1, BH2, BH3, BH4, BH12, BH16 BH10 and BH15 in line with Pre-Operational condition PC3	As monthly plus; COD,TON, TOC, Total Alkalinity, chromium, copper, iron, manganese, magnesium, TPH, sulphate, nickel, lead, zinc, calcium, potassium, sodium.	Borehole	Spot sample	Quarterly	In accordance with Agency document LFTGN02 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'
BH1, BH2, BH3, BH4, BH12, BH16 BH10 and BH15 in line with Pre-Operational condition PC3	List I substances screen	Borehole	Spot sample	Quarterly for first 12 months. Annually thereafter.	In accordance with Agency document LFTGN02 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'
Groundwater under drainage discharge point*.	Temperature, pH, electrical conductivity, ammoniacal nitrogen, TON, TOC, chloride, sulphate	Groundwater under drainage	Spot sample	Monthly for first 12 months. Thereafter in line with Improvement Programme condition IC2	As above
Groundwater under drainage discharge point*.	Nickel	Groundwater under drainage	Spot sample	Quarterly for first 12 months. Thereafter in line with Improvement Programme condition IC2.	As above
Groundwater under drainage discharge point*.	List I substances screen	Groundwater under drainage	Spot sample	Quarterly for first 12 months. Annually thereafter.	As above

* Exact location to be proposed at CQA stage as per Response to Schedule 5 Notice (Golder June 2009) and 2nd Schedule 5 Notice issued 30/07/09.

Table S4.2 Trigger levels for emissions to Groundwater

Emission point ref. & location	Parameter	Source	Trigger Level (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
Groundwater monitoring point BH1, BH2, BH3	Chloride	Borehole	103 mg/l	Spot sample	Monthly	For first 12 months and then in agreement with the Agency
	Sulphate		141 mg/l			
	Nickel		0.008 mg/l			

Table S4.3 Trigger levels for surface water

Emission point ref. & location	Parameter	Source	Trigger Level (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
HBSW02	Chloride	Borehole	125 mg/l	Spot sample	Monthly	For first 12 months and then in agreement with the Agency
	Sulphate		194 mg/l			
	Nickel		0.012 mg/l			

Table S4.4 Surface water – other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method
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HBSW01, HBSW02, CBSW01, CBSW02, KLSW01.	Temperature, pH, electrical Conductivity, ammoniacal nitrogen, chloride, sulphate, COD	Monthly	In accordance with Agency document LFTGN02 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'
HBSW01, HBSW02, CBSW01, CBSW02, KLSW01.	As monthly plus: DO, TON, TOC, Total Alkalinity, Metals suite and total dissolved solids, suspended solids, nickel	Quarterly	In accordance with Agency document LFTGN02 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'

Table S4.5 Landfill gas monitoring requirements

Location or description of point of measurement	Parameter & Trigger Level		Monitoring frequency	Monitoring standard or method	Other specifications
As proposed in application document 'Section D Landfill Gas Risk Assessment and Management Plan', section 4.0 Landfill Gas Monitoring and Appendix GRA1	Methane, Carbon Dioxide, Oxygen, Atmospheric Pressure, Metrologic al Data	1% v/v 1.5% v/v No limit No limit No limit	Monthly for first six months of operation, then quarterly	Sampling protocol detailed in Appendix GRA1 of application document	In accordance with Agency document 'LTGN03 Guidance on the management of landfill gas'.

Schedule 5 - Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S5.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to groundwater Parameters as required by condition 3.5.1	BH1, BH2, BH3, BH4, BH10, BH12, BH15, BH16	Every 3 months	from date of issue of permit
List I substances - emissions to groundwater Parameters and limits as required by condition 3.5.1 and PC4	BH1, BH2, BH3, BH4, BH10, BH12, BH15 and BH16	Annually	from date of issue of permit
Surface water monitoring Parameters as required by condition 3.5.1	CBS W01, CBS W02, HBS W01, HBS W02, KLS W01	Every 3 months	from date of issue of permit
Landfill Gas monitoring Parameters as required by condition 3.5.1	As proposed in application document 'Section D Landfill Gas Risk Assessment and Management Plan', section 4.0 Landfill Gas Monitoring and Appendix GRA1	Every 6 months	from date of issue of permit

Table S5.2 Reporting forms		
Media/parameter	Reporting format	Date of form
Groundwater	Form Groundwater1 or other form as agreed in writing by the Agency	from date of issue of permit
Surface Water	Form Water1 or other form as agreed in writing by the Agency	from date of issue of permit
Landfill gas	Form LFG1 or other form as agreed in writing by the Agency	from date of issue of permit
Waste return	Waste Return Form or other form as agreed in writing by the Agency	from date of issue of permit

Schedule 6 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

** authorised to sign on behalf of Jayflex (Aggregates) Limited*

Schedule 7 - Interpretation

"*accident*" means an accident that may result in pollution.

"*annually*" means once every year.

"*application*" means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

"*authorised officer*" means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

"*Background concentration*" means such concentration of that substance as is present in:

- For emissions to surface water, the surface water quality up-gradient of the site; or
- For emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

"*Construction Proposals*";

- for new cells or phases, means written information at a level of detail appropriate to the complexity and pollution risk, on stability assessment (where relevant) and the construction quality assurance (CQA) programme in relation to the new cell or phase.
- for landfill infrastructure, means the design, specifications of materials selected, stability assessment (where relevant) and the construction quality assurance (CQA) programme in relation to the landfill infrastructure.

"*CQA Validation Report*" means the final "as built" construction and engineering details of the new cell or of the Landfill Infrastructure. It must provide a comprehensive record of the construction and must include, where relevant:

- The results of all testing required by the CQA programme - this must include the records of any failed tests with a written explanation, details of the remedial action taken, referenced to the appropriate secondary testing;
- Plans showing the location of all tests;
- "As-built" plans and sections of the works;
- Copies of the site engineer's daily records;
- Records of any problems or non-compliance and the solution applied;
- Any other site specific information considered relevant to proving the integrity of the new cell or phase or Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the construction proposals.
-

"*emissions to land*", includes emissions to groundwater.

"*EP Regulations*" means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"*fugitive emission*" means an emission to air, water or land from the activities which is not controlled by an emission or background concentration limit.

"*groundwater*" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"*Groundwater Regulations*" means the Groundwater Regulations SI 1998 No. 2746, and words and expressions used in this permit which are also used in the Regulations shall have the same meanings as in those Regulations.

"*Landfill Infrastructure*" means any specified element of the:

- surface water drainage systems;
- groundwater monitoring boreholes;

- landfill gas monitoring boreholes;
within the Site.

“*Liquids*” means any liquid other than leachate within the landfill.

“*List 1 substances screen*” means the List 1 parameters as defined in the “Groundwater Regulations”

“*MCERTS*” means the Environment Agency’s Monitoring Certification Scheme.

“*Metrological Data*” means any determinant stated by section 2 of annex III of the Council Directive 1999/31/EC

“*New Cell*” means any new cell, part of a cell or other similar new area of the Site where waste deposit is to commence after issue of this permit and can comprise:

- groundwater under-drainage system;
- sub-grade;
- artificially established geological barriers;
- cell or area surface water drainage system;
- side wall subgrade and containment systems;

for the new cell.

“*New phase*” means any new phase, part of a phase or other similar new area of the Site where waste deposit is to commence after issue of this permit and can comprise:

- groundwater under-drainage system;
- sub-grade;
- artificially established geological barriers;
- cell or area surface water drainage system;
- side wall subgrade and containment systems;

for the new phase.

“*No impact*” means that the change made to the construction process will not alter the agreed design criteria, specification or performance in a way that has a negative effect.

“*pollution*” means emissions as a result of human activity which may –

- (a) be harmful to human health or the quality of the environment;
- (b) cause offence to a human sense;
- (c) result in damage to material property; or
- (d) impair or interfere with amenities and other legitimate uses of the environment.

“*quarter*” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

Waste code means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

“*year*” means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than the limit.

END OF PERMIT

Permit Number: EPR/AP3093VW Operator: Jayflex (Aggregates) Limited

Facility: Horton Brook Quarry

Form Number: Water1 / DD/MM/YY

Reporting of emissions to water (other than to sewer) and land for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Emission		Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
	Substance / Parameter	Limit Value					

The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. gas chromatography. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed Date.....
 (Authorised to sign as representative of Operator)

Permit Number: EPR/AP3093VW Operator: Jayflex (Aggregates) Limited

Facility: Horton Brook Quarry

Form Number: Groundwater1 / DD/MM/YY

Reporting of groundwater monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

Monitoring Point	Substance / Parameter	Trigger level	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]

The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. gas chromatography. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed Date.....

Authorised to sign as representative of Operator)

Permit Number: EPR/AP3093VW Operator: Jayflex (Aggregates) Limited
 Facility: Horton Brook Quarry

Form Number: LFG1 / DD/MM/YY

Reporting of landfill gas monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

Monitoring Point	Substance / Parameter	Compliance limit	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]

The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. gas chromatography. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed Date.....
 (Authorised to sign as representative of Operator)