

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Gallagher Aggregates Limited
Hermitage Quarry Waste Treatment Facility
Hermitage Lane
Maidstone
Kent
ME16 9NT

Permit number

EPR/LP3134YU

Hermitage Quarry Waste Treatment Facility

Permit number EPR/LP3134YU

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

Gallagher Aggregates produces 350,000 tonnes of quarry fines (Hassock fines) per annum at the Hermitage Quarry Waste Treatment Facility site. This permit allows the use of Advanced Hydration Technology in the recycling of the Hassock fines by mixing them with Air Pollution Control Residues (APCr) and Paper Sludge Ash (PSA). The Operator also proposes to use alternative wastes such as Cement Kiln Dust (CKD), Cement By-pass Dust (CBPD) and Spent Fluid Catalytic Cracking Catalyst (Spent ECat), to supplement PSA when there is low availability of the PSA. The proposed treatment and storage activities fall under Sections S5.3 Part A(1)(vi), Sections S5.4 Part A(b)(iii) and S5.6 Part A(1)(a)(i) of the Environmental Permitting Regulations 2016.

The Advanced Hydration Technology is a treatment process that converts the lime and alumina based compounds commonly found in the waste constituents of APCr and PSA into a cementitious compound when mixed with quarry fines; whilst at the same time, locking up and stabilising the heavy metals present in the APCr and PSA in the crystal formation Ettringite.

The operations are designed to take place in two parts, with the first part producing a material requiring further treatment in the second part to produce a hydraulically bound aggregate. The first part of the process involves blending of the Hassock/quarry fines with the PSA in a rapid continuous mixer. The mixture is left to react and to semi-dry the hassock fines. After 12 to 24 hours, the blended mixture is passed through vibrating screens to separate the mixture into <2mm (Hydraulic Bound Mixture) and >2mm (Limestone Aggregate) fractions. The intention of the Operator is to seek end of waste status for the Limestone Aggregate and to subject the Hydraulic Bound Mixture to further treatment. The second part of the treatment process involves mixing the Hydraulic Bound Mixture with APCr, Portland cement and water to produce a Hydraulically Bound Aggregate (HBA) that is subsequently granulated and pelletised. The Operator also intends to seek end of waste status for the HBA.

The process steps for the first and second parts of the treatment operations are outlined below:

- Step 1: PSA, APCr and Portland cement are delivered to site by powder tanker and stored in dedicated silos where they are maintained in an enclosed system until they are mixed with other materials. Hassock/quarry fines are placed in a bay on a bunded hardstanding area for approximately 24 hours to drain.
- Step 2: The PSA from silo 1 is fed via an enclosed system to a rapid continuous mixer. The hassock fines are fed to the same rapid continuous mixer by a conveyor from a storage hopper. The two materials are blended together within the rapid continuous mixer.
- Step 3: The hassock/PSA blend is emptied from the hopper into a tipper and transferred to dedicated bays on the bunded hardstanding area for 12-24 hours during which time an exothermic reaction with the PSA leads to semi-drying of the blend.
- Step 4: The hassock/PSA blend is transferred from the bay using a front-end loader to 2 consecutive vibrating screens to separate the material into two screen sizes; >2mm (Limestone Aggregate) and <2mm (Hydraulic Bound Mixture).
- Step 5: The Limestone Aggregate is transferred back to a dedicated bay on the bunded hardstanding area for storage and samples are taken for quality analysis. The Hydraulic Bound Mixture is transferred to a storage hopper in preparation for subsequent use in the production of the Hydraulically Bound Aggregate. Samples of the Hydraulic Bound Mixture are taken for quality analysis.
- Step 6: The Hydraulic Bound Mixture is transferred from the storage hopper to a granulation plant by conveyor and is mixed with water, the APCr and Portland cement. The APCr and Portland cement are transferred to the granulation plant via enclosed systems from the silos.

- Step 7: The resulting granulated material is the Hydraulically Bound Aggregate which is transferred back to a dedicated bay on the bunded hardstanding area and left to cure for approximately 12 hours.
- Step 8: Samples of the Hydraulically Bound Aggregate are taken for quality analysis
- Step 9: Some of the Hydraulically Bound Aggregate is transferred by front-end loader to a pelletiser to produce pellets for use in markets such as precast blocks. The pellets are transferred back from the pelletiser by front-end loader to a dedicated bay on the bunded hardstanding area.

The maximum expected addition rates of PSA to the Hassock fines is 15%, while the maximum addition rate of APCr to the Hydraulic Bound Mixture is 30%.

The authorised activities in this permit will be commissioned in a staged manner as detailed in Sections 2.3, 2.4 and 2.5.3 of the document titled 'Supporting Document for Permit Application EPR-LP3134YU-A001 AMENDED 071217 & 120118'. The Stage 1 operations cover initial trials using a limited quantity of waste to determine exact addition rates for PSA and APCr to the process to meet the technical specifications of the intermediary and final products. The quantity of the waste input is also limited during the Stage 2 operations – the annual throughput of Hassock fines is limited to 200,000 tonnes. The Stage 3 operations involve full commissioning of the plant. The operator is authorised to take up to the maximum annual throughput of Hassock fines (350,000 tonnes) authorised in the permit during the Stage 3 operations. Additions of plant are to be made to the production area at each Stage. In Stage 2 additional silos will be added for APCr and in Stage 3 further silos and a screening line will be added.

The site is within the location criteria of the Oaken Wood SSSI Site, and North Downs Woodlands and Peter's Pit (SAC) Sites. The application site is about 1.8km from the Oaken Wood SSSI Site, 5.4km from the North Downs Woodlands and 6.5km from the Peter's Pit (SAC) Sites. There are no pollutant pathways between the application site and the SSSI and SAC Sites.

The main risks associated with the proposed operations include noise emissions, potential release of particulates to air, release of contamination water to surface and ground water. There are control measures in place to mitigate these risks.

Prior to arrangements being put in place to accept a waste, the waste is passed through a screening stage to determine the suitability of the waste for the activity. Part of the screening is the review of analysis derived from representative samples to verify the EWC code of the waste, confirm the composition and hazards associated with the waste and identify verification parameters that can be used to test the waste when it arrives at site. When waste arrives at the site, initial sampling will be carried out at the reception point. A sample of approximately 500g will be taken from the delivery vehicle prior to unloading. The sample will then be taken to the onsite laboratory for initial analysis, further portions of the sample will be sent to the identified support laboratories for further analysis. The technical appraisal of the sampling and analysis will be overseen by a suitably qualified and experienced member of staff who understands the capabilities of the site, who has a minimum qualification of a degree in chemistry (or equivalent).

The whole operation will be carried out on an impermeable, hard-surfaced area with a 300mm perimeter upstand bund. All dust prone operations (storage, treatment and transfer of powdery materials) will be undertaken within enclosed systems (silos, hopper, and enclosed conveyors). Procedures will be in place to continually check the integrity of the seals of these systems. The screening, granulating and pelletising plant will be housed in a building to reduce noise emissions. All wastewater collected at the site will be recovered and re-introduced into the treatment processes. Any contaminated run-off water that contains materials that are used in the treatment process will be contained in a sealed tank within the bunded area and reused in the treatment operations or disposed offsite (if required). There are wheel-wash and vehicle washing facilities at the site to control release of mud on public road. There are also spill management procedures to ensure that accidental release of raw materials, products and waste materials is minimised. We have agreed with the applicant's assessment that the overall risk to surface and groundwater from the proposed operations is not significant given the management procedures and measures proposed.

As part of this permit determination and issuing of the permit for the permitted waste recovery activities the Environment Agency has not assessed end of waste status for any waste derived material.

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application EPR/LP3134YU/A001	Duly made 06/10/17	Application for the treatment and recovery of Air Pollution Control Residues, Paper Sludge Ash and quarry fines.
Response to Schedule 5 Notice dated 08/11/17	27/11/17	Response to question 11 of the Schedule 5 Notice providing information on baseline soil and groundwater monitoring.
	28/11/17	
Response to Schedule 5 Notice dated 08/11/17	29/11/17	Document titled 'Response to Schedule 5 Notice for Permit Application' providing additional information in response to question 1 to 10 of the Schedule 5 Notice – additional details on the site layout plan; weighing facility; effluent management; underground storage tank; building and hardstanding designs; dust control; compliance testing and rejection procedures for the in-coming wastes.
Response to Schedule 5 Notice dated 08/11/17	08/12/17	Amended version of the document titled 'Response to Schedule 5 Notice for Permit Application' providing additional information in response to questions 1, 2, 3, 4 and 9 of the Schedule 5 Notice - additional information on the site layout plan, weighing facility, effluent management, mass balance, mixing ratios and reaction chemistry. Document titled 'Amended Supporting Document for Permit Application'.
Additional information	09/01/18	Email and additional information that provide justification for the use of PSA substitutes in the treatment process.
Additional information	10/01/18	Email containing amended mass balance calculations.
Additional information	12/01/18	Email containing the documents 'Response to Questions Raised on 04/01/2018', 'Sampling Plan for Waste Classification and End of Waste Assessment', 'Waste Sampling Protocol', Process Flow Diagrams, Safety Data Sheet for the ECAT etc.
Additional information	17/01/18	Email containing the documents titled 'Supporting Document for Permit Application EPR-LP3134YU-A001 Amended 071217 & 120118', 'Additional Supporting Information for Permit Application EPR-LP3134YU-A001', and 'Further Information that has been incorporated into Supporting Documents for Permit Application EPR-LP3134YU-A001'.
Additional information	05/02/18	Email containing Stage 1, 2 and 3 site layout plans showing emission points on the silos.
Additional information	23/02/18	Email containing Stage 2 and 3 site layout plans showing an added emission point for the PSA substitutes' silo and a request for change of site name.
Permit determined EPR/LP3134YU (PAS Billing ref. LP3134YU)	27/02/18	Permit issued to Gallagher Aggregates Limited.

End of introductory note.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/LP3134YU

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Gallagher Aggregates Limited (“the operator”),

whose registered office is

171-173 Gray's Inn Road

London

WC1X 8UE

company registration number 02231689

to operate an installation at

Hermitage Quarry Waste Treatment Facility

Hermitage Lane

Maidstone

Kent

ME16 9NT

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

Name	Date
Rebecca Warren	27/02/2018

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 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.

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).
- 2.1.2 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

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 7 to this permit.

2.3 Operating techniques

- 2.3.1 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 Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan , and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 Waste shall only be accepted if:
 - (a) it is of a type and quantity listed in schedule 2 tables S2.1, S2.2, S2.3, and S2.4; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
 - (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

Hazardous waste storage and treatment

- 2.3.6 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.

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 Environment Agency.

- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment 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.
- 2.5.2 The operations specified in schedule 1 table S1.5 shall not commence until the measures specified in that table have been completed.

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 3 tables S3.1.
- 3.1.2 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved 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 Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, 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.

3.3 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 Environment 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 Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment 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 pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, 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 Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
 - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1;
 - (b) process monitoring specified in table S3.2.
- 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.

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 Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment 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 the permit including an interpretive review of that data;
 - (b) the annual production /treatment data set out in schedule 4 table S4.1; and
 - (c) the performance parameters set out in schedule 4 table S4.2 using the forms specified in table S4.3 of that schedule.
- 4.2.3 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six 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.
- 4.2.4 Within 1 month of the end of each quarter, the operator shall submit to the Environment 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.

4.3 Notifications

- 4.3.1 In the event:
- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
 - (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
 - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 [(a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit,] shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment 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 Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment 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; and

- (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 Environment 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.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 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 "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	S5.3 Part A(1)(vi) - Disposal or recovery of hazardous waste with capacity exceeding 10 tonnes per day, involving recycling or reclamation of inorganic materials other than metals or metal compounds	Treatment of inorganic waste and quarry fines to produce Hydraulic Bound Mixture and Limestone Aggregate. R5: Recycling/reclamation of other inorganic compounds	Treatment operations shall be limited to mixing/blending Paper Sludge Ash (PSA) and PSA substitutes (Bypass Dust, Cement Kiln Dust, Spent Fluid Catalytic Cracking Catalyst) with quarry fines (Hassock fines). Blending/mixing operations to be undertaken in sealed vessels. Treatment operations shall take place (only) on an impermeable surface with sealed drainage system. In combination with Activity A3, the daily throughput of Hassock fines shall not exceed 1500 tonnes. In combination with Activity A3, the daily throughput of PSA (and its substitutes) shall not exceed 250 tonnes. Waste types as specified in Table S2.1.
A2		Treatment of inorganic wastes to produce a Hydraulically Bound Aggregate. R5: Recycling/reclamation of other inorganic compounds	Treatment operations shall be limited to mixing/blending of APCr, cement and water with the Hydraulic Bound Mixture produced by Activities A1 and A3. Blending/mixing operations to be undertaken in sealed vessels. Treatment operations shall take place (only) on an impermeable surface with sealed drainage system. The daily throughput of APCr shall not exceed 400 tonnes. Waste types as specified in Table S2.2.
A3		Treatment of inorganic waste and quarry fines to produce Hydraulic Bound Mixture and Limestone Aggregate material. R5: Recycling/reclamation of other inorganic compounds	Treatment operations shall be limited to mixing/blending of non-hazardous PSA substitutes (Bypass Dust, Cement Kiln Dust, and/or Spent Fluid Catalytic Cracking Catalyst) with quarry fines (Hassock fines). Blending/mixing operations to be undertaken in sealed vessels. Treatment operations shall take place (only) on an impermeable surface with sealed drainage system. In combination with Activity A1, the daily throughput of Hassock fines shall not exceed 1500 tonnes. In combination with Activity A1, the daily throughput of PSA (and/or its substitutes) shall not exceed 250 tonnes. Waste types as specified in Table S2.3.

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A4	S5.6 Part A(1)(a)(i) – Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	From receipt of wastes APCr and PSA to the point of use in the treatment processes. Storage shall be in sealed silos. No more than 400 tonnes of APCr shall be stored at any one time. No more than 400 tonnes of PSA (and its substitutes) shall be stored at any one time. Storage shall be on an impermeable surface with sealed drainage system. Waste types as specified in Table S2.4.
Directly Associated Activity			
A5	Storage of non-hazardous waste	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	From receipt of waste to the point of use in the treatment operations. Storage shall be on an impermeable surface with sealed drainage system. No more than 1,500 tonnes of the quarry aggregates (Hassock) shall be stored at any one time. Non-hazardous waste types specified in Table S2.3.
A6	Storage of Hydraulic Bound Mixture	N/A	From the point of generation to the point of use in the treatment operations. Storage shall be on an impermeable surface with sealed drainage system. No more than 4,500 tonnes of Hydraulic Bound Mixture shall be stored at any one time.
A7	Management of the finished products – Limestone Aggregate and Hydraulically Bound Aggregate	Handling and storage of screened and treated materials produced by activities A1, A2 and A3.	Handling and storage of processed materials shall only be undertaken on areas with an impermeable surface and sealed drainage system.
A8	Contaminated effluent water collection and storage	Collection and storage of contaminated effluent water from the operation areas of the site	From the collection to disposal/recovery of the contaminated water used in the treatment processes. Storage within an underground tank with secondary containment, waterproof concrete surround.
A9	Raw Material Handling	Delivery and storage of raw materials	From receipt to the point of use in the treatment operations. Raw materials to be stored in a sealed vessels and used in a contained manner

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The application documents provided in response to section 3a – technical standards, Part B3 of the application form including, <ul style="list-style-type: none"> ▪ Waste Pre-Acceptance Procedure ▪ Waste Acceptance Procedure ▪ Pre-Acceptance and Acceptance of Hazardous Waste Policy 	Duly Made 06/10/17
Response to Schedule 5 Notice dated 08/11/17	Response to question 1 to 10 of the Schedule 5 Notice detailed in the document titled 'Response to Schedule 5 Notice for Permit Application EPR-LP3134YU-A001 (Amended 07/12/17)' including the associated appendices that provide updated/further information on the: <ul style="list-style-type: none"> ▪ Site layout plans, ▪ Weighing facility ▪ Effluent management procedure ▪ Design specifications for underground storage tank ▪ Design specifications the building and impermeable surface ▪ Amended list of wastes ▪ Dust control measures for the vibrating screens ▪ Compliance testing and waste sampling procedure ▪ Non-conformance and waste rejection procedure. 	08/12/17
Additional information	<ul style="list-style-type: none"> ▪ All parts of the document titled 'Response to Questions Raised on 04/01/2018' ▪ All parts of the document titled 'Sampling Plan for Waste Classification and End of Waste Assessment' 	12/01/18
Additional information	<ul style="list-style-type: none"> ▪ Sections 2.5.2, 2.5.3, 4.2, 7.1, 7.2, 7.2.2, 7.2.3, 7.4.2, 7.4, 7.9 7.11.1 and 7.11.2 of the document titled 'Supporting Document for Permit Application EPR-LP3134YU-A001 AMENDED 071217 & 120118' and the associated appendices. ▪ Sections 2, 4, 5, 8, 9, 10 and 11 of the document titled 'Additional Supporting Information for Permit Application' and the associated appendices. ▪ All parts of the document titled 'Further Information that has been incorporated into Supporting Documents for Permit Application EPR-LP3134YU-A001'. 	17/01/18
Additional information	<ul style="list-style-type: none"> ▪ Stage 1, 2 and 3 site layout plans showing emission points on the silos. 	05/02/2018
Additional information	<ul style="list-style-type: none"> ▪ Amended Stage 2 and 3 site layout plans showing an added emission point for the PSA substitutes' silo. 	23/02/2018

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	<p>The operator shall submit a written report of the commissioning operations, including;</p> <ul style="list-style-type: none"> ▪ a summary of the environmental performance of the plant as installed against the design parameters set out in the application; ▪ details of any modifications made during commissioning that change the details included within the application; and ▪ a review of the performance of the facility against compliance with the conditions of this permit, detailing where standards and limits are not being met. 	3 months following the commissioning of the Stage 2 operations

Table S1.4 Pre-operational measures	
Reference	Pre-operational measures
PO1	The operator shall notify the Environment Agency 1 month prior to undertaking Stage 1 operations as defined in the document titled 'Supporting Document for Permit Application EPR-LP3134YU-A001 AMENDED 071217 & 120118'.
PO2	Prior to the commencement of operations, the operator shall submit a Commissioning Plan for the Stage 1 and Stage 2 Operations. The plan shall include specific timescales for commissioning activities and detail where deviations from the permit conditions may be necessary during commissioning, including the disposal of waste that does not meet standards for hydraulically bound mixture, limestone aggregate and hydraulically bound aggregate.
PO3	<p>At least 2 months before the commencement of the Stage 2 operations as defined in the document titled 'Supporting Document for Permit Application EPR-LP3134YU-A001 AMENDED 071217 & 120118', the operator shall submit a report detailing the completed Stage 1 operations.</p> <p>The report shall include:</p> <ul style="list-style-type: none"> ▪ Information on the chemical composition of the wastes ▪ Mixing ratios ▪ Waste acceptance criteria/limits ▪ Criteria/specification for the treated materials ▪ Results of the leaching tests carried out on the products (limestone aggregates and hydraulically Bound Aggregates) ▪ Revised sampling and testing procedures for incoming wastes and treated waste output materials (hydraulically bound aggregate, limestone aggregate) ▪ Updated/finalised procedures for waste pre-acceptance and acceptance. <p>The operator shall not commence operation of the Stage 2 activities until a written approval is received from the Environment Agency.</p>
PO4	At least 2 months prior to accepting Paper Sludge Substitutes, the operator shall undertake an assessment to demonstrate that the PSA substitutes are similar in composition and properties as the hazardous PSA and can react in the same form (with the Hassock fines) as the hazardous PSA and are compatible and can be stored in silos. A report on the assessment shall be submitted to the Environment Agency for approval.
PO5	<p>Prior to the commencement of the activities authorised in this permit, the operator shall submit a report on the baseline conditions of soil and groundwater at the installation for approval.</p> <p>The report shall contain the information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definitive cessation of activities provided for in Article 22(3) of the IED. The report shall contain information, supplementary to that already provided in application Site Condition Report, needed to meet the information requirements of Article 22(2) of the IED.</p>

Table S1.5 Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
POM1	Wastes from other sites other than those included in the permit application documents	The operator shall notify the Environment Agency 1 month prior to the acceptance of wastes from a new source (other than those included in the permit application supporting documents).
POM2	Prior to Stage 3 operations as defined in the document titled 'Supporting Document for Permit Application EPR-LP3134YU-A001 AMENDED 071217 & 120118'	<p>The operator shall provide a construction and commissioning plan for buildings and associated plant and infrastructure required for the Stage 3 operations following the completion of Stage 2 operations.</p> <p>The operator shall not commence full operation of the Stage 3 activities until a written agreement is received from the Environment Agency.</p>

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Permitted waste types and quantities for treatment under Activity A1 of Table S1.1	
Maximum quantity	The total quantity of waste accepted for treatment at the site under Activities A1, A2 and A3 of Table S1.1 shall not exceed 483,000 tonnes per year - 112,000 tonnes of hazardous waste and 371,000 tonnes of non-hazardous waste.
Hazard properties	HP4: Irritant - waste which on application can cause skin irritation or damage to the eye.
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
10	Wastes from thermal processes
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 12*	solid wastes from gas treatment containing hazardous substances
10 13 13	solid wastes from gas treatment other than those mentioned in 10 13 12
16	Wastes not otherwise specified in the list
16 08	spent catalysts
16 08 04	spent fluid catalytic cracking catalysts (except 16 08 07)
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 01	wastes from incineration or pyrolysis of waste
19 01 13*	fly ash containing hazardous substances (paper sludge ash)

Table S2.2 Permitted waste types and quantities for treatment under Activity A2 of Table S1.1	
Maximum quantity	The total quantity of hazardous waste accepted for treatment at the site under Activities A1 and A2 of Table S1.1 shall not exceed 112,000 tonnes per year.
Hazard properties	HP4: Irritant - waste which on application can cause skin irritation or damage to the eye. HP14: Ecotoxic - waste which presents or may present immediate or delayed risks for one or more sectors of the environment.
Waste code	Description
10	Wastes from thermal processes
10 01	wastes from power stations and other combustion plants (except 19)
10 01 16*	fly ash from co-incineration containing hazardous substances
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 01	wastes from incineration or pyrolysis of waste
19 01 07*	solid wastes from gas treatment

Table S2.3 Permitted waste types and quantities for treatment/storage under Activities A1, A3 and A5 of Table S1.1	
Maximum quantity	The total quantity of non-hazardous waste accepted for storage/treatment at the site under Activities A1, A3 and A5 of Table S1.1 shall not exceed 371,000 tonnes per year.
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
10	Wastes from thermal processes
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 13	solid wastes from gas treatment other than those mentioned in 10 13 12
16	Wastes not otherwise specified in the list
16 08	spent catalysts
16 08 04	spent fluid catalytic cracking catalysts (except 16 08 07)

Table S2.4 Permitted waste types for storage under Activity A4 of Table S1.1	
Maximum quantity	The total quantity of hazardous waste accepted for storage at the site under Activity A4 of Table S1.1 shall not exceed 112,000 per year.
Hazard properties	HP4: Irritant - waste which on application can cause skin irritation or damage to the eye. HP14: Ecotoxic - waste which presents or may present immediate or delayed risks for one or more sectors of the environment.
Waste code	Description
10	Wastes from thermal processes
10 01	wastes from power stations and other combustion plants (except 19)
10 01 16*	fly ash from co-incineration containing hazardous substances
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 12*	solid wastes from gas treatment containing hazardous substances
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 01	wastes from incineration or pyrolysis of waste
19 01 07*	solid wastes from gas treatment
19 01 13*	fly ash containing hazardous substances

Schedule 3 – Emissions and monitoring

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
Point A to F - Inlet and outlet vent points of the silos shown on the Stage 1 layout plan received on the 05/02/2018, and amended Stage 2 and 3 site layout plans received on the 23/02/2018	Silo storage	Particulate matter	No visible dust emissions	-	Daily	Visual observation or as agreed in writing with the Environment Agency.

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
PSA/Hassock mixing vessel	Temperature	Per batch - prior to, during and after mixing	Not applicable	
	Moisture			
APCr/HBM/Cement/Water mixing vessel	Moisture	Per batch - prior to, during and after mixing		
	Addition rate of the input materials	Per batch		

Schedule 4 – Reporting

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

Table S4.1 Annual production/treatment	
Parameter	Units
Limestone Aggregate	tonnes
Hydraulically Bound Aggregate	tonnes
Other wastes taken off site (treated materials that fail to meet End of Waste criteria)	tonnes

Table S4.2 Performance parameters		
Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes

Table S4.3 Reporting forms		
Media/parameter	Reporting format	Date of form
Air emission	Form air 1 or other form as agreed in writing by the Environment Agency	27/02/18
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	27/02/18
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	27/02/18
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	27/02/18

Schedule 5 – 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 emission of a substance not controlled by an emission limit 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	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
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 the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“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 Environment 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.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are 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.

“Hazardous property” has the meaning in Annex III of the Waste Framework Directive.

“Hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

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

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste

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 that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

“year” means calendar year ending 31 December.

When the following terms appear in the waste code list in Schedule 2, table S2.2, S2.3 and S2.4, for those tables, they have the meaning given below:

'hazardous substance' means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008

'heavy metal' means any compound of antimony, arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, selenium, tellurium, thallium and tin, as well as these materials in metallic form, as far as these are classified as hazardous substances

'PCBs' means

- polychlorinated biphenyls
- polychlorinated terphenyls
- monomethyl-tetrachlorodiphenyl methane, Monomethyl-dichloro-diphenyl methane, Monomethyldibromo-diphenyl methane
- any mixture containing any of the above mentioned substances in a total of more than 0,005 %by weight

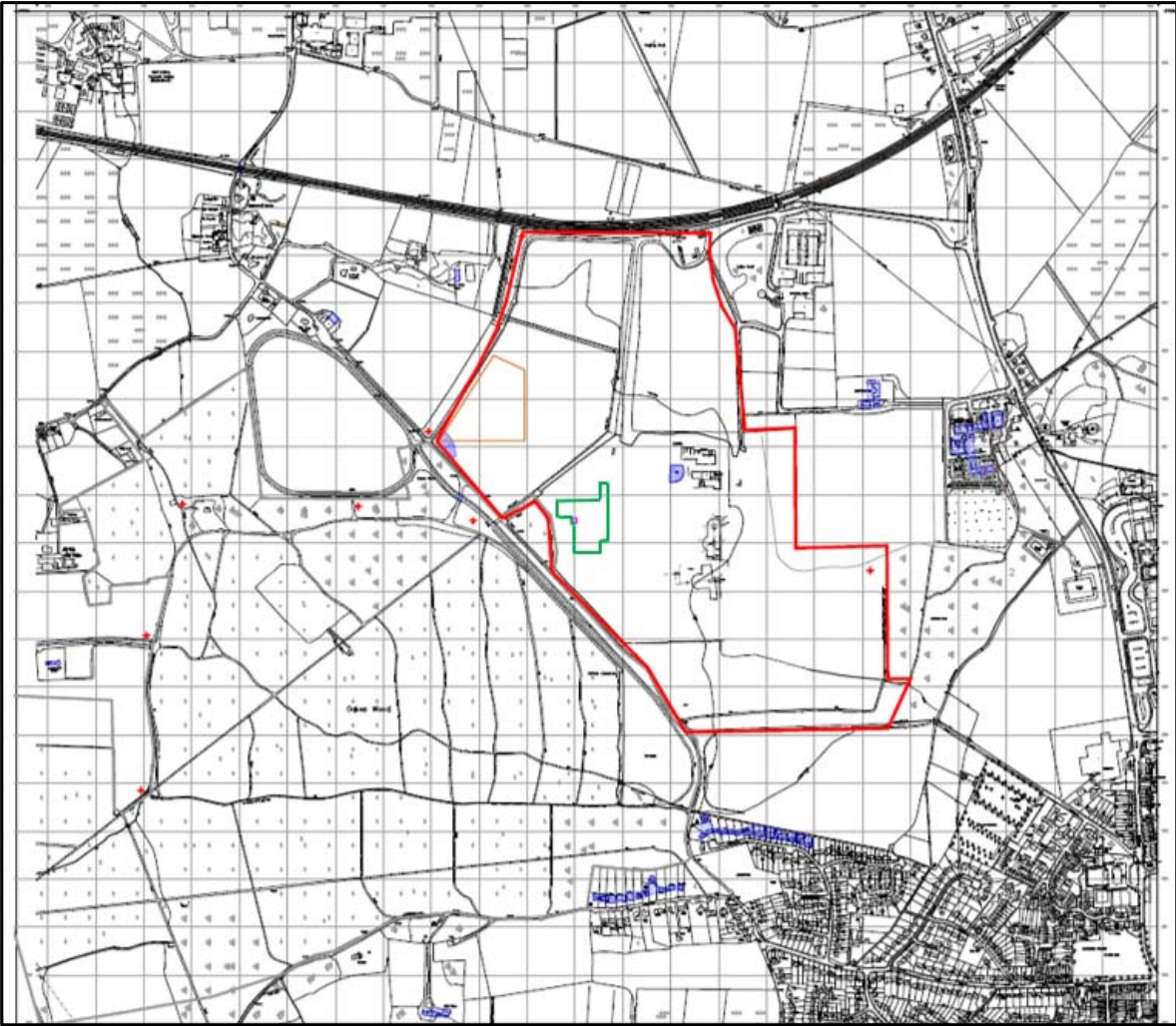
'transition metals' means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified as hazardous substances

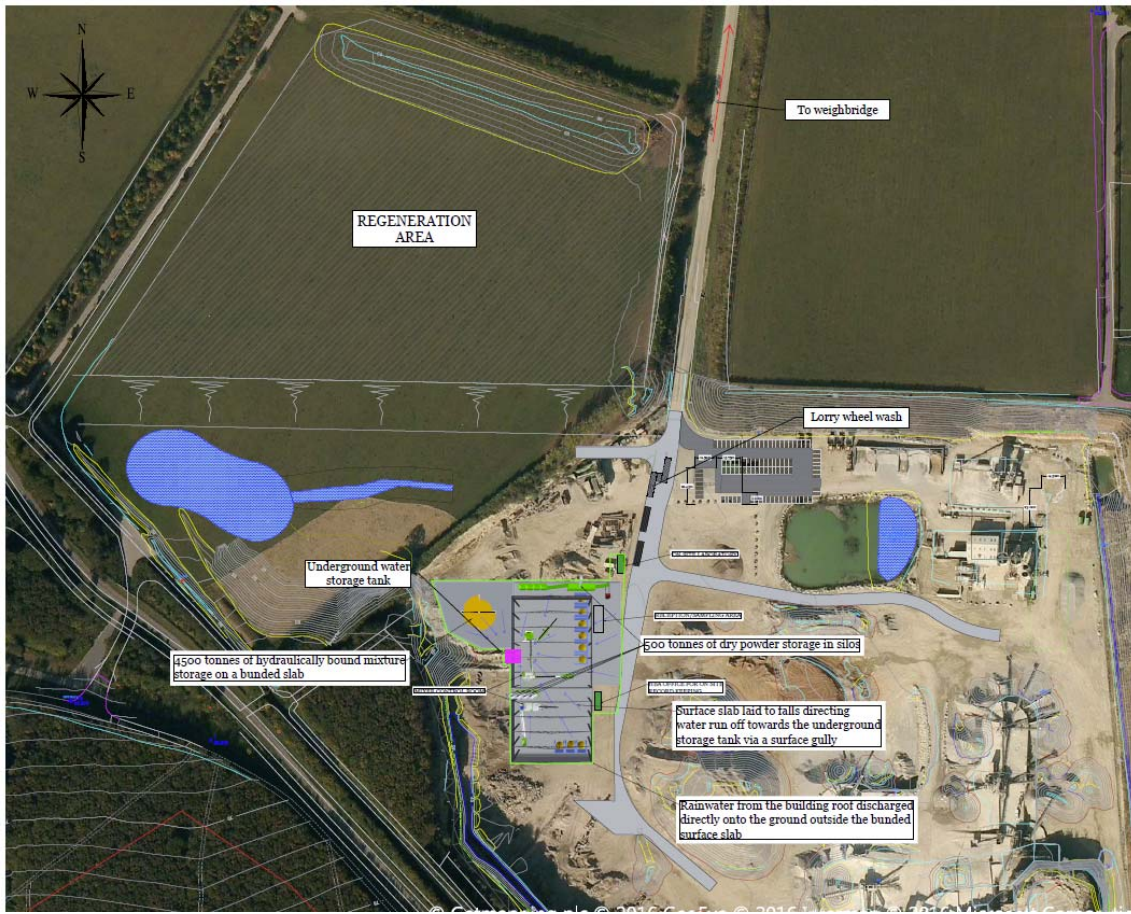
'stabilisation' means processes which change the hazardousness of the constituents in the waste and transform hazardous waste into non-hazardous waste

'solidification' means processes which only change the physical state of the waste by using additives without changing the chemical properties of the waste

'partly stabilised wastes' means wastes containing, after the stabilisation process, hazardous constituents which have not been changed completely into non-hazardous constituents and could be released into the environment in the short, middle or long term

Schedule 7 – Site plan





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END OF PERMIT

Permit Number: EPR/LP3134YU

Operator: Gallagher Aggregates Limited

Facility: Hermitage Quarry Waste Treatment Facility

Form Number: Water usage 1 / 27/02/18

Reporting of Water Usage for the year XXXX

Water Source	Usage (m3/year)	Specific Usage (m3/unit output)
Mains water		
TOTAL WATER USAGE		

Operator's comments:

Signed

Date.....

(authorised to sign as representative of Operator)

Permit Number: **EPR/LP3134YU**

Operator: **Gallagher Aggregates Limited**

Facility: **Hermitage Quarry Waste Treatment Facility**

Form Number: **Energy 1 / 27/02/18**

Reporting of Energy Usage for the year XXXX

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity *	MWh		
Diesel	tonnes		
TOTAL	-		

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments:

Signed

Date.....

(Authorised to sign as representative of Operator)

