Notice of variation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Singleton Birch Limited

Melton Ross Lime Works
Melton Ross Quarries
Barnetby
North Lincolnshire
DN38 6AE

Variation application number

EPR/BL8805IZ/V007

Permit number

EPR/BL8805IZ

Melton Ross Lime Works
Permit number EPR/BL8805IZ

Introductory note

This introductory note does not form a part of the notice

The following notice gives notice of the variation of an environmental permit.

This variation authorises the following changes to the Permit:

- A sixth combined heat and power (CHP) combustion unit is added for the use of resultant biogas from the anaerobic digestion (AD) plant, new emission point A14.
- A digestate drier is added to dry AD digestate into a higher value fertiliser. The capacity of the drying plant is approximately 6,000m^3 of liquid per year. The thermal input to the plant will be 900kWT, supplied from waste heat from the six CHP engines. The drier has four emission points to air A20-A23. The resulting exhaust gases will pass through a wet sulphuric acid scrubber to reduce odour and dust emissions.
- The addition of a bunded 60m^3 heated glycerol tank
- The addition of a bunded 60m^3 slurry tank, fitted with a carbon filter to minimise odour.
- Purpose grown crops are added to the raw materials table S2.1 for use in the anaerobic digestion plant.

The schedules specify the changes made to the original permit.

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

Status log of the permit		
Description	**Date**	**Comments**
Application BL8805 (EPR/BL8805IZ/A001)	Duly made 31/08/2001	
Permit determined BL8805 (EPR/BL8805IZ)	22/08/2002	
Variation application BV0015 (EPR/BL8805IZ/V002)	22/05/2003	
Variation determined BV0015 (EPR/BL8805IZ/V002)	05/08/2003	
Variation application EPR/BL8805IZ/V003	17/12/2009	
Variation determined EPR/BL8805IZ/V003	21/01/2010	
Cement and Lime Sector Review Variation determined EPR/BL8805IZ/V004	18/08/2010	Variation and consolidation
Variation application EPR/BL8805IZ/V005	Duly made 04/10/2011	
Variation issued EPR/BL8805IZ/V005	31/10/2011	
Application EPR/BL8805IZ/V006 (variation)	Duly made 21/03/14	Addition of an anaerobic digestion facility and five combined heat and power (CHP) combustion units for the use of resultant biogas.
Variation determined EPR/BL8805IZ/V006	12/05/14	Varied permit issued.

Status log of the permit		
Description	**Date**	**Comments**
Application EPR/BL8805IZ/V007 (variation)	Duly made 18/08/14	Addition of a sixth CHP unit, digestate drier, slurry tank, glycol tank and purpose grown crops as a new raw material.
Response to request for information	09/10/14	Revised H1 emissions to air risk assessment, updated odour management plan, email detailing responses to questions and updated emissions to air plan 'EA Layout'.
Variation determined EPR/BL8805IZ/V007 PAS/Billing Ref: LP3039WF	31/10/14	Varied permit issued.

End of introductory note

Notice of variation

Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies

Permit number

EPR/BL8805IZ

Issued to

Singleton Birch Limited ("the operator")

whose registered office is

Melton Ross Quarries
Barnetby
North Lincolnshire
DN38 6AE

company registration number 00009433

to operate a regulated facility at

Melton Ross Lime Works
Melton Ross Quarries
Barnetby
North Lincolnshire
DN38 6AE

to the extent set out in the schedules.

The notice shall take effect from 31/10/2014

Name	Date
M Bischer	**31/10/2014**

Authorised on behalf of the Environment Agency

Schedule 1 – conditions to be deleted

None

Schedule 2 – conditions to be amended

The following conditions are amended as a result of the application made by the operator

Table S1.1 as referred to in conditions 2.1.1 and 4.2.2 of the Permit is amended as follows.

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
A1	S3.1 A1 (b) (i)	The operation of four parallel flow regenerative lime kilns with a production capacity of more than 50 tonnes per day.	The receipt of raw materials at the kilns to the transfer of lime to the crushing plant.
	Directly Associated Activity		
A2	Raw materials preparation conveying and storage	Crushing and screening of chalk and its storage in hoppers and in emergency stockpile.	Crushing and screening of chalk and its storage in hoppers and in emergency stockpile.
A3	Production of slaked lime	The hydration of lime	The hydration of lime in two hydrators
A4	Production of microlime	The milling of lime and dolomet	The operation of two roller pendulum milling systems
A5	Production of graded lime	The milling, screening and blending of lime (including blending with paper sludge ash)	The operation of a hammer mill, rolls crusher and multi-deck screens
A6	Production of aqualime	Mixing of hydrated lime with water. Mixing of hydrated lime with landfill leachate	Mixing of hydrated lime with water. Mixing of hydrated lime with landfill leachate
A7	Product handling	Hydrate bagging and burnt lime bagging	Hydrate bagging and burnt lime bagging
A8	Product storage and despatch	Storage of product in silos and subsequent loading into mobile tankers	Storage of product in silos and subsequent loading into mobile tankers
	Description of activities for waste operations	**Limits of activities**	
A9	A mining waste operation for non-hazardous non-inert wastes	Permitted waste types shall conform to the description in the approved waste management plan.	
A10	Anaerobic digestion including the use of resultant biogas R13: Storage of wastes pending the operations	Digestion of purpose grown crops Digestion of wastes including pasteurisation and chemical addition. Gas cleaning and upgrading to bio-methane.	

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
	numbered R1, R3 and D10 R3: Recycling or reclamation of organic substances that are not used as solvents R1: Use principally as a fuel or other means to generate energy.	Gas storage and drying. Treatment of digestate including screening to remove plastic residues, centrifuge or pressing, addition of thickening agents (polymers) and drying. Composting and maturation of digestate. The maximum throughput of animal wastes shall be no more than 10 tonnes per day [excluding manures and slurries]. The total quantity of waste or a combination of waste and non-waste including solids and liquids accepted at the site shall not exceed 100 tonnes in any one day. Burning of biogas in gas engines, gas turbines, boilers and use in fuel cells. Use of an auxiliary flare required only for short periods of breakdown or maintenance of facility. Use of pressure release valves to protect the integrity of the plant. Such systems should not be used routinely to vent unburned biogas.	

Table S1.2 as referred to in condition 2.3.1 of the Permit is amended as follows.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	The response to questions B2.3 given in section B2.3 of the application document	31/08/2001
Letter dated 22/08/2002	The addition of milling dolomet (magnesium oxide) in the Microlime plant	22/08/2002
Application for a Standard variation	Document Reference Number LFP 1 of the Application.	22/05/2003
Application for Variation EPR/BL8805IZ/V003	All sections relating to operating techniques for the alcinations of dolomitic limestone	17/12/2009
Application for Variation EPR/BL8805IZ/V005	The response to question 3a of application form C3; Non technical summary; Document detailing the process using paper sludge ash; Waste Management Plan; Response to questions 4c and 4d of application form part C5.	04/10/2011
Application for Variation EPR/BL8805IZ/V006	Parts C2 and C3 of the application forms and all associated documents. Response to not duly made letter: Thermal capacity for the CHP units, revised H1 assessment, site drain plan, technical information on the anaerobic digestion facility.	21/03/2014
Application for Variation EPR/BL8805IZ/V006	Email from operator responding to request for further information regarding the odour management plan and technical information on the AD process.	09/04/2014
Application for Variation EPR/BL8805IZ/V006	Email received from operator confirming compliance with requirements of standard rules SR2012 No12 other than the	11/04/2014

	storage of the waste.	
Application for Variation EPR/BL8805IZ/V006	Revised plan showing air emission points reference 'EA 01'	14/04/2014
Application for Variation EPR/BL8805IZ/V007	Parts C2 and C3 of the application documents and all associated documents.	18/08/2014
Application for Variation Response to request for information EPR/BL8805IZ/V007	Revised H1 emissions to air risk assessment, updated odour management plan, email detailing responses to questions, updated emissions to air plan 'EA Layout'.	09/10/2014

Table S2.1 as referred to in condition 2.3.2 of the Permit is amended as follows.

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Natural Gas	-
Fly Ash	-
Dolomitic Limestone	-
Paper Sludge Ash	Meets the requirements of the Paper Sludge Ash Quality Protocol
Vegetable matter	Substantially free of non-vegetable matter
Maize silage	Substantially free of non-vegetable matter
Purpose grown crops	Substantially free of non-vegetable matter

Table S3.2 as referred to in conditions 3.1.1, 3.5.1 and 3.5.4 of the Permit is amended as follows.

Table S3.2 Non-kiln point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
A1 Kiln 1 A2 Kiln 2 A3 Kiln 3 on site plan in Schedule 7]	Particulate matter	Kiln Stack	100 mg/m3	Averaged over the sampling period of at least half an hour.	6 monthly	BS EN 13284-1
A4 Kiln 4 on site plan in Schedule 7]	Particulate matter	Kiln Stack	50 mg/m3	Averaged over the sampling period of at least half an hour.	6 monthly	BS EN 13284-1
A1, A2, A3 and A4	Sulphur dioxide	Kiln Stack	50 mg/m3	Averaged over the sampling period of at least half an hour.	6 monthly	BS EN 15267-3
A1, A2, A3 and	Carbon	Kiln Stack	50 mg/m3	Averaged	6 monthly	BS EN

Table S3.2 Non-kiln point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
A4	monoxide			over the sampling period of at least half an hour.		15267-3
A1, A2, A3 and A4	Oxides of Nitrogen (NO and NO2 expressed as NO2)	Kiln Stack	200 mg/m3	Averaged over the sampling period of at least half an hour.	6 monthly	BS EN 14792
A5 Hydrator 2, Hydrated lime plant on site plan in schedule 7	Particulate matter	Hydrated lime plant	30mg/m3	Averaged over the sampling period of at least half an hour.	6 monthly	BS EN 13284-1
A6 Hydrator 3, Hydrated lime plant on site plan in schedule 7	Particulate matter	Hydrated lime plant	30 mg/m3	Averaged over the sampling period of at least half an hour.	6 monthly	BS EN 13284-1
A7 & A8 Microlime Plant on site plan in schedule 7	Particulate matter	Microlime plant	50 mg/m3	Averaged over the sampling period of at least half an hour.	6 monthly	BS EN 13284-1
A9-14 Stacks on CHP engines 1-6 on site plan 'EA Layout' submitted 09/10/14	Oxides of Nitrogen	Stacks on CHP biogas combustion engines	500 mg/m3	Averaged over the sampling period of at least half an hour.	Annual	MCERTS
	Carbon monoxide		1,400 mg/m3	Averaged over the sampling period of at least half an hour.	Annual	MCERTS
	Sulphur dioxide		350 mg/m3	Averaged over the sampling period of at least half an hour.	Annual	MCERTS
	Total volatile organic compounds including methane		1,000 mg/m3	Averaged over the sampling period of at least half an hour.	Annual	MCERTS

Table S3.2 Non-kiln point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
A15 Auxiliary Flare on site plan 'EA Layout' submitted 09/10/14	Oxides of Nitrogen	Auxiliary flare	No limit set	--	--	Record of operating hours.
A16-A19 Gas store on site plan 'EA Layout' submitted 09/10/14	Biogas	Pressure relief valves	No limit set	--	--	Weekly visual or remote monitoring to ensure valves are correctly seated.
A20-A23 Digestate Drier on site plan 'EA Layout' submitted 09/10/14	Particulate Matter	Digestate Drier	No limit set	--	--	--
A20-A23 Digestate Drier on site plan 'EA Layout' submitted 09/10/14	Ammonia	Digestate Drier	No limit set	--	--	--
A24 Glycerine Tank on site plan 'EA Layout' submitted 09/10/14	No parameters	Glycerine Tank Vent	No limit set	--	--	--
A25 Slurry Tank on site plan 'EA Layout' submitted 09/10/14	No parameters	Slurry Tank Vent	No limit set	--	--	--

Table S4.1 as referred to in condition 4.2.3 of the Permit is amended as follows.

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Emissions to air Parameters as required by condition 3.5.1.	A1, A2, A3, A4, A5, A6, A7 and A8	Every 6 months	1 January 1 July
Emissions to air	A9-A14	Annually	1 January

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Parameters as required by condition 3.5.1.			

Table S4.2 as referred to in condition 4.2.3 of the Permit is amended as follows.

Table S4.2 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Air	Form Air 1 or other form as agreed in writing by the Environment Agency	31/10/14

Schedule 3 – conditions to be added

None