

Notice of variation with introductory note

Environmental Permitting (England & Wales) Regulations 2010

SI Green UK Limited

Cwmrhydyceirw Quarry Landfill
Vicarage Road
Cwmrhydyceirw
Morriston
Swansea
SA6 6DR

Variation application number
EPR/TP3835LV/V003

Permit number
EPR/TP3835LV

Cwmrhydyceirw Quarry Landfill

Permit number EPR/TP3835LV

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 is to add an additional point source emission to water and update the surface water management plan.

The base of Cwmrhydyceirw Quarry is below the resting groundwater level, groundwater is currently controlled by pumping to a sump in the eastern area of the quarry. This water is currently discharged to sewer along with surface water run off collected in the sump and leachate pumped from a leachate collection sump located in the north east of the historic landfill area and listed as a Directly Associated Activity to the landfill.

The new point source emission to water will enable groundwater and surface water to be discharged directly to Cwmrhydyceirw Stream. Table S4.3 of the permit has been updated to reflect this change. Leachate will continue to be discharged to sewer.

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 TP3835LV (EP ref EA/EPR/TP3835LV/A001)	Duly made 15/02/2006	
Response to requests for information	16/08/2006	Response 29/09/2006
	16/11/2006	Response 14/12/2006
	18/12/2006	Response 19/01/2007 & 26/01/2007
	13/02/2007	Response 28/03/2007
	09/03/2007	Response 23/04/2007
	18/07/2007	Response 24/08/2007
	17/12/2007	Response 22/02/2008
	09/04/2008	Response 18/04/2008
Permit TP3835LV determined	Date of Issue 09/12/2008	
Variation application EPR/TP3835LV/V002	Duly made 27/10/2010	

Request for further information	10/11/2010	01/12/2010
Variation determined EPR/TP3835LV/V002	24/12/2010	Varied permit issued.
Variation application EPR/TP3835LV/V003	Duly made 28/08/2014	Variation application to add a discharge to surface water
Additional information received	17/12/2014	Schedule 5 Notice response providing additional information required for modelling potential impact upon the Cwmrhydyceirw Stream.
Variation determined EPR/TP3835LV/V003	30/04/2015	Varied permit issued.

End of introductory note

Notice of variation

Environmental Permitting (England and Wales) Regulations 2010

The Natural Resources Body for Wales ("Natural Resources Wales") in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies

Permit number
EPR/TP3835LV

issued to:
SI Green UK Limited ("the operator")

whose registered office is

**c/o Harris Bassett
5 Llys Felin Newydd
Phoenix Way Enterprise Park
Swansea
West Glamorgan
SA7 9FG**

company registration number **02777304**

to operate a regulated facility at


**Cwmrhydyceirw Quarry Landfill
Cwmrhydyceirw Quarry
Vicarage Road
Cwmrhydyceirw
Morriston
Swansea
SA6 6DR**

to the extent set out in the schedules.

The notice shall take effect from 30/04/2015

Name

Date

	30 April 2015
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Eirian Macdonald
Authorised on behalf of Natural Resources Wales

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 which is referred to in condition 2.1.1 has been amended to remove the discharge of contaminated waters from the landfill from Directly Associated Activity (DAA) - Discharges to foul sewer (A3) in its place it adds the discharge of groundwater to the DAA - Discharges to controlled waters (A5).

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	Section 5.2 Part A(1)(a), the disposal of waste in a landfill.	Landfill for non-hazardous waste (D5 –Specially engineered landfill)	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.8, as an integral part of landfilling.
Directly Associated Activity			
A2	Leachate management	Storage and transfer of leachate	Leachate arising from the landfill.
A3	Discharges to foul sewers	Discharge of leachate and contaminated water from the landfill	Leachate and contaminated water arising from the landfill.
A4	Landfill gas flaring	Flaring of landfill gas for disposal in an appliance with a capacity up to 1,000 m ³ .hr ⁻¹ .	From the collection of the gas from the waste mass through to the release of combustion products
A5	Discharges to controlled waters	Discharges of site drainage and groundwater from the landfill.	From surface water management system to point of entry to controlled waters.
A6	Fuel storage	Storage of fuel for operation of plant and equipment	Fuel storage tank

Table S4.3 which is referred to in condition 3.1.1 is amended as follows:

Table S4.3 Point source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Surface water attenuation pond discharge point referenced CWMSO4 on drawing number ESID 7 drawing reference SIG/CW/08-05/12371rev C dated 11/12/06	Suspended Solids	Surface water	40 mg/litre	Spot Sample	monthly	Unless otherwise agreed in writing with Natural Resources Wales, monitoring methods used shall be in accordance with guidance document 'Guidance on monitoring of landfill leachate, groundwater and surface water (LFTGN02).
	pH	Surface water	>6 and <9 pH units	Spot Sample	monthly	
	Ammoniacal Nitrogen	Surface water	1 mg/litre	Spot sample	Monthly	
	Chloride	Surface water	100 mg/litre	Spot sample	Monthly	
	Cadmium	Surface water	0.0001 mg/litre	Spot sample	Three Monthly	
	Nickel	Surface water	0.05 mg/litre	Spot sample	Three Monthly	
	Napthalene	Surface water	0.001 mg/litre	Spot sample	Three Monthly	
Cwmrhydyceirw Stream discharge point CWMSO2	Pentachlorophenol	Surface water	0.001 mg/litre	Spot sample	Three Monthly	
	Suspended Solids	Groundwater/surface water	40 mg/litre	Spot Sample	Monthly	
	pH	Groundwater/surface water	>6 and <9 pH units	Spot Sample	Monthly	
	Ammoniacal Nitrogen	Groundwater/surface water	1.2 mg/litre	Spot sample	Monthly	
	Chloride	Groundwater/surface water	221 mg/litre	Spot sample	Monthly	
	Cadmium	Groundwater/surface water	0.0004 mg/litre	Spot sample	Monthly	
	Nickel	Groundwater/surface water	0.044 mg/litre	Spot sample	Monthly	
	Napthalene	Groundwater/surface water	0.001 mg/litre	Spot sample	Monthly	
	Pentachlorophenol	Groundwater/surface water	0.001 mg/litre	Spot sample	Monthly	

The following conditions are amended as detailed, following an NRW initiated variation Table S1.4 of schedule 1 of the permit specified in condition 2.6.1 shall be amended to delete pre- operational conditions E1, E2, E3, E4 and E6. Following the deletions above for clarity the amended Table S1.4 is amended and replaced in its entirety as follows:

Table S1.4 Pre-operational measures for future development

Reference	Operation	Pre-operational Measures
Section D – Review as necessary of the management plans		
D3	The commencement of the construction of the new landfill	<p>Leachate management plan</p> <p>A leachate management plan with respect to the operation of the landfill shall be submitted to the Natural Resources Wales. The leachate management plan shall include procedures for the extraction, collection, storage and transfer of leachate and shall demonstrate that the system will have sufficient capacity to handle the maximum predicted volumes of leachate generation hence minimise the risk of leachate heads at the base of the landfill exceeding those detailed within permit condition 2.9.1 and Schedule 4, Table S4.1. The results of the review of the hydrogeological risk assessment carried out under pre-operational condition C1 of the original permit reference TP3835LV issued on 9 December 2008, shall be used as necessary in the preparation of the leachate management plan.</p> <p>The proposals shall take account of the guidance provided in Natural Resources Wales documents:</p> <ul style="list-style-type: none"> • Sector Guidance Note S5.02 Guidance for the Landfill Sector • Technical requirements of the Landfill Directive and Integrated Pollution Prevention and Control (IPPC); • Guidance on the monitoring of landfill leachate, groundwater and surface water (LFTGN02); and • Technical Guidance Note – monitoring of discharges to sewer (M18)
D4	The commencement of the construction of the new landfill	<p>Landfill gas management plan</p> <p>The landfill gas management plan with respect to the operation of the landfill shall be revised and submitted to the Natural Resources Wales. The revised landfill gas management plan shall include procedures for the extraction and management of landfill gas to minimise the risk of unacceptable releases of landfill gas from the landfill. The revised landfill gas management plan shall give consideration to both permanent and temporary management systems. The results of the review of the landfill gas risk assessment carried out under pre-operational condition C2 of the original permit reference TP3835LV issued on 9 December 2008, shall be used as necessary in the preparation of the landfill gas management plan.</p> <p>The proposals shall take account of the guidance provided in Natural Resources Wales documents:</p> <ul style="list-style-type: none"> • Sector Guidance Note S5.02 Guidance for the Landfill Sector • Technical requirements of the Landfill Directive and Integrated Pollution Prevention and Control (IPPC); and • Guidance on the management of landfill gas (LFTGN03).

Table S1.4 Pre-operational measures for future development

Reference	Operation	Pre-operational Measures
D5	The commencement of the construction of the new landfill	<p>Surface water management plan</p> <p>A surface water management plan with respect to the operation of the landfill shall be submitted to the Natural Resources Wales. The surface water management plan shall include procedures for the control, storage and discharge of surface water from the landfill and shall demonstrate that the system will have sufficient capacity to handle the maximum predicted volumes of surface water and if necessary extracted ground water from the base of the quarry. The meteorological monitoring data collected under pre- operational condition B1 of the original permit reference TP3835LV issued on 9 December 2008, shall be used in the preparation of the surface water management plan.</p> <p>The proposals shall take account of the guidance provided in Natural Resources Wales documents:</p> <ul style="list-style-type: none"> • Sector Guidance Note S5.02 Guidance for the Landfill Sector <p>Technical requirements of the Landfill Directive and Integrated Pollution Prevention and Control (PPC)</p>
<p>Notes: The excavation of the existing waste at the site shall not commence until the management plans in respect of the excavation and relocation of the existing waste (pre-operational condition D1) and noise (pre-operational condition D2) of the original permit reference TP3835LV issued on 9 December 2008, have been approved by the Natural Resources Wales.</p> <p>The commencement of construction of the new landfill shall not commence until the management plans the subject of pre-operational conditions D3 to D10 of the original permit reference TP3835LV issued on 9 December 2008, inclusive have been approved by the Natural Resources Wales.</p>		
Section H – Other issues		
H2	The recirculation of leachate	<p>The operator shall submit to the Natural Resources Wales a scheme for the recirculation of leachate. The scheme shall include but not be limited to:</p> <p>Details of the methods of recirculation and system design;</p> <p>An assessment of odour and fugitive emission control including any revisions to site design and/or monitoring plans; and</p> <p>An assessment of the effects of recirculation on stability of the waste and the lining system.</p> <p>No leachate will be recirculated without the approval of the Natural Resources Wales.</p>
Section I – Pre-operational conditions from variation EPR/TP3835LV/V002		
I1	The commencement of the construction of the northern side slope lining system	<p>The operator shall submit to the Environment Natural Resources Wales an analysis of the integrity of the new design of the lining system that assesses the strains and deformations in each of the components of the lining system and between the interfaces. Realistic waste properties and the effects of groundwater rebound should be included in the modelling.</p> <p>The justifications for modelling method and range of input parameter values, system.and commentary on the acceptability of the results, shall be provided</p>

Schedule 3 – conditions to be added

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

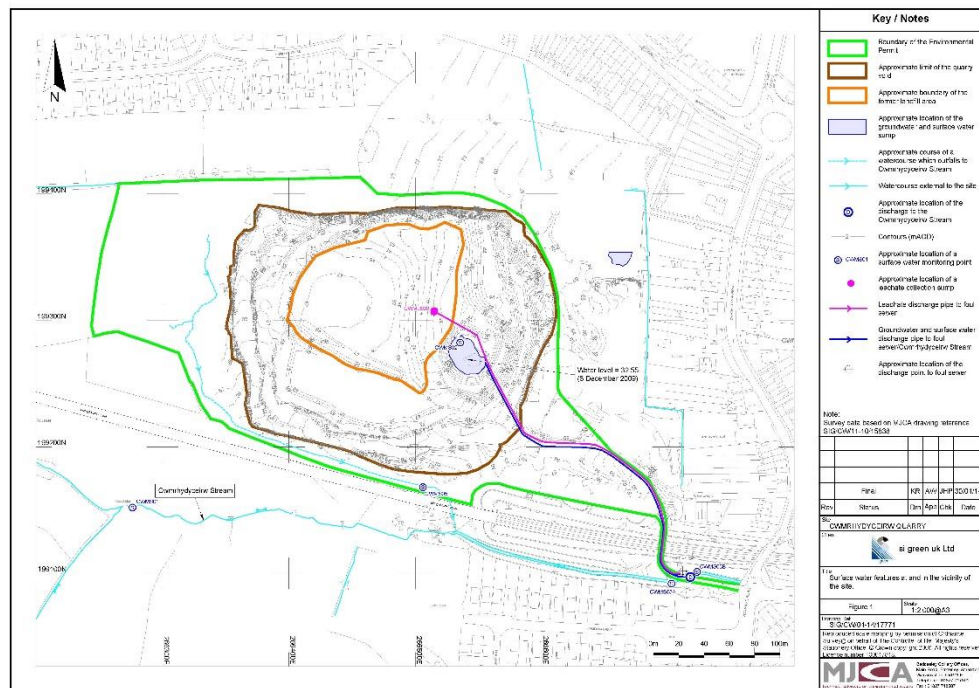
Table S1.3 which relates to condition 2.5.1 has been amended to add additional improvement conditions.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
4	The operator shall undertake an assessment of the impact on the water environment from current emissions of effluent to sewer. The operator shall use the methodology prescribed in the Natural Resources Wales's guidance 'Environmental Assessment and Appraisal of Best Available Techniques' (Ref. IPPC H1) in making this assessment. The Operator shall identify substances present in the effluent that are considered significant (as defined within H1), and submit proposed emission limit values for these substances in the form of a report. Flow rate must also be considered as part of this assessment. The report shall also include an effluent monitoring plan for any key substances identified and an action plan to reduce releases of those substances that are considered significant as part of the H1 Assessment. The operator shall implement any improvements or measures as agreed in writing with the Natural Resources Wales.	Completed
2	The Operator shall submit to the Natural Resources Wales in writing written procedures which demonstrate proposals for compliance with Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of wastes at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC	Completed
3a	<p>The operator shall submit written proposals to the Natural Resources Wales for approval for the monitoring of actual dust deposition rates and PM10 particulate concentrations in the vicinity of the site. The proposals shall include but not be limited to:</p> <ul style="list-style-type: none"> • The establishment of appropriate and fixed monitoring locations in the vicinity of the site; • A detailed options appraisal of applicable monitoring techniques for use in emissions assessment specifying the selected monitoring technique to be used at the installation; • Set monitoring frequencies including appropriate justification to cover a minimum twelve month period once the site is operational. <p>The proposals shall be prepared in accordance with the relevant standards contained within Natural Resources Wales guidance documents:</p> <ul style="list-style-type: none"> • Sector Guidance Note S5.02 Guidance for the Landfill Sector Technical requirements of the Landfill Directive and Integrated Pollution Prevention and Control (IPPC) • Monitoring of particulate matter in ambient air around waste facilities Technical Guidance Document (Monitoring) M17 	Completed
3b	<p>On completion of the monitoring required in 3a above, the operator shall submit a revised Dust Assessment to the Natural Resources Wales for approval. This shall include but not be limited to:</p> <ul style="list-style-type: none"> • Quantification of emissions from the site; • A dispersion model based on actual emissions from the site; • An assessment of the effectiveness of control measures including a detailed appraisal of alternative control measures; • Recommendations, and timetable for implementation, for the establishment of alternative control measures and ongoing monitoring of dust and particulates emissions at the installation where necessary 	Within 3 months of completion of monitoring

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
3c	On approval in writing from the Natural Resources Wales on the Dust Assessment required in 3b above, the operator shall revise the Dust and Particulates Management Plan for the site to include recommendations made in the assessment together with any additional measures notified by the Natural Resources Wales and this shall be incorporated into the normal operating procedures for the installation	Within one week of written approval from the Natural Resources Wales
4	The operator shall review background groundwater monitoring data and submit to the Natural Resources Wales for approval proposed control and trigger levels for key determinants for groundwater quality on an individual monitoring point basis. Derivation of control and trigger levels shall be undertaken in accordance with Natural Resources Wales publication "Hydrogeological Risk Assessments for Landfills and the derivation of groundwater control and trigger levels" (LFTGN01) and good statistical practice and shall include assessment for and removal of outliers in the data sets and the use of graphical time / concentration charts	Within 6 months of completion of the excavation and redeposit of waste (that existed in the landfill prior to permit issue)
5	The operator shall review background landfill gas monitoring data and submit to the Natural Resources Wales for approval proposed emission limits for methane and carbon dioxide on an individual monitoring point basis. Derivation of emission limits shall be undertaken in accordance with Natural Resources Wales publication "Guidance on the management of Landfill Gas (LFTGN03). Any compliance levels above 1% methane and 1.5% Carbon Dioxide must be fully justified and agreed in writing by the	Within 6 months of completion of the excavation and redeposit of waste (that existed in the landfill prior to permit issue)
6	The operator shall provide proposals for how the discharge to surface water will be managed if permitted limits are breached. Proposals shall include but not be limited to how the discharge shall be monitored , how the operator will be notified of any breaches and how the discharge will be switched back to sewer if necessary.	Within 2 months of the issue of this variation.

Amended plan attached



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