



J.H. Jenkins & Sons

Pencefnarda Quarry

Environmental Permit

**Operating Techniques and Management
System**

December 2010

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Anwaar, please find attached EPR/GP3597SN operating techniques ammended, Regards Richard Jenkins.



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Contents Page

1.0	Introduction.....	1
2.0	Operating Techniques	3
3.0	Site Infrastructure	6
4.0	Accidents.....	6
5.0	Site Management.....	7
6.0	Procedures	8
7.0	Maintenance	8
8.0	Incidents and Non-Conformances	8
9.0	Competence and Training.....	9
10.0	Management of Documentation and Records	9

Drawings

PFQ/A065656/EP/01 – Site Layout

Appendix Contents

Appendix 1 – Planning Permission 2007/1236

Appendix 2 - Waste Testing Limit Values

Appendix 3 - Accident Management Plan

Appendix 4 - Procedures

Appendix 5 – Environmental Policy



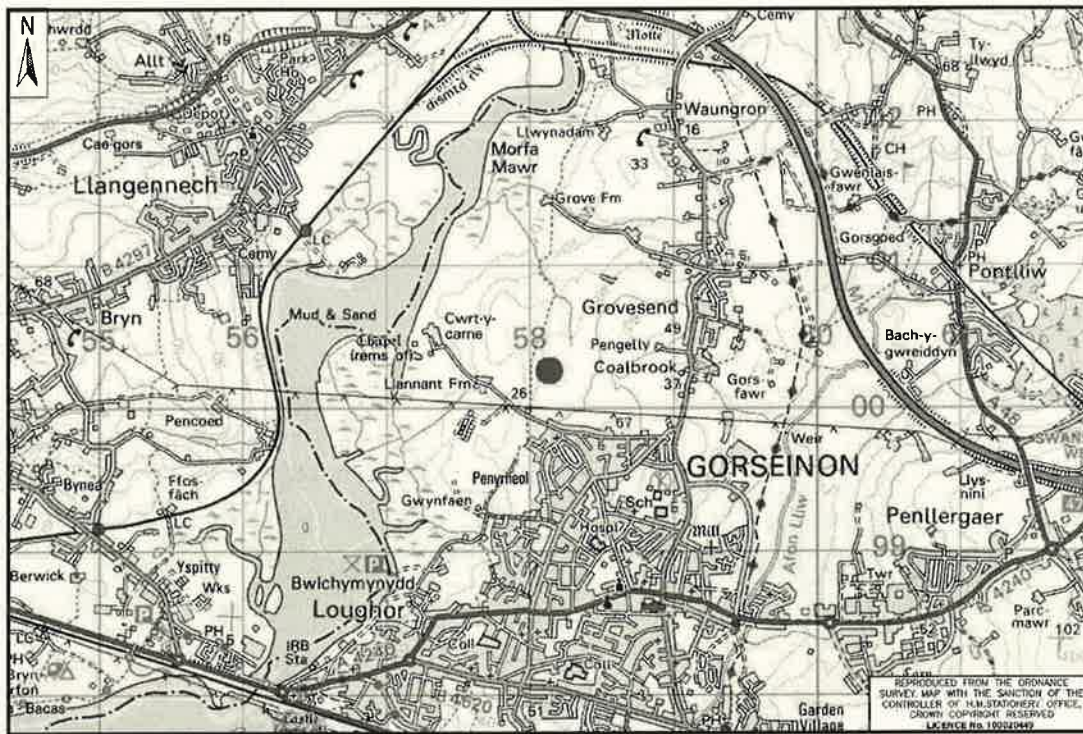
1.0 Introduction

Report Context

- 1.1 This section of the Environmental Permit application corresponds to Section 5 of Part B of the application form, specifically detailing the operating techniques and management systems in place at the site.
- 1.2 This Environmental Permit application has been prepared by WYG on behalf of the operator, J H Jenkins & Sons.

The Site

- 1.3 The site is a former quarry that has already been partially filled with inert material. Planning permission for infilling the remaining void with inert materials to the level of the adjoining land was granted by the City and County of Swansea Council in August 2007. The planning permission requires infilling operations to cease by 28 September 2012 and limits the tipping material to inert waste only.
- 1.4 The former quarry on Pencefnarda Uchaf Farm is located approximately 100 metres north of the Llannatt Road just outside Penyrheol in the village of Gorseinon at the northern edge of the Gower Peninsula, approximately 3 miles northwest of Swansea. The former quarry is located at the approximate National Grid Reference (NGR) SN 580 000.
- 1.5 The site is accessed from the Llannatt Road which runs along the north of the village of Gorseinon to the B4296 Pontadulais Road which runs south to join the A4240 and north to join the A48.
- 1.6 The site lies within open countryside and has a history of infilling of the former quarry workings. The most recent phase of filling in this quarry was carried out under a planning permission granted by the former Lliw Valley Council in 1993.
- 1.7 The site lies approximately 1.5 miles to the east of the Carmarthen Bay and Estuaries SAC and the Burry Inlet and Loughor Estuary SSSI.



1.8 J H Jenkins & Sons will operate the waste recovery operation in accordance with the site's extant planning permission. This document has been prepared to comply with the requirements of the Environmental Permitting Regulations 2007, to describe the management system which operates at the site and to ensure that effective operational and preventative maintenance procedures are in place to prevent any impact on the environment. For this to succeed, the site has documented procedures for:

- Operations;
- Maintenance;
- Incidents and non-conformances;
- Competence and training; and



- Managing documentation and records.

2.0 Operating Techniques

2.1 The site is classified as a waste recovery operation. Pencefnarda Quarry will operate in accordance with extant planning permission 2007/1236, dated 11th October 2007. In accordance with the planning permission, no tipping or vehicle movements will be undertaken outside the hours of 0900 to 1700 hours on Mondays to Fridays. No operations will be undertaken on Saturdays, Sundays or Bank Holidays.

2.2 A copy of the planning permission is provided at Appendix 1.

2.3

Waste Types and Quantities

2.4 The site only accepts inert waste and soils. Inert waste is defined in Article 2 of the Landfill Directive 1999/31/EC as follows:

'Inert waste' means waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm to human health. The total leachability and pollutant content and the ecotoxicity of its leachate are insignificant and, in particular, do not endanger the quality of any surface water and/or groundwater.

2.5 Waste is only accepted at the site if it is listed in Table 1 below, is on the list of wastes that can be accepted without testing provided in the Council Decision 2003/33/EC, or it satisfies the above definition as demonstrated by the waste acceptance procedures detailed below.



Code	Description
01 01 02	Wastes from non metalliferous excavation
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	Waste sand and clays
02 04 01	Soil from cleaning and washing beet
10 12 08	Waste ceramics, bricks, tiles and construction products (after thermal processing)
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles and ceramics
17 01 07	Mixtures of concrete, bricks, tiles + ceramics other than those mentioned in 17 01 06
17 05 04	Soil and stones other than those mentioned in 17 05 03
19 12 09	Minerals (for example sand, stones)
20 02 02	Soil and stones

2.6 The site will accept a total maximum of 7,500m³ (5,000m³ already imported and 2,500m³ yet to be imported) in accordance with the waste acceptance criteria detailed below.

G) Have insignificant total leachability and pollutant content; and

H) Produce a leachate with an eco-toxicity that is insignificant (if they produce a leachate)

2.12 The permitted wastes detailed in Table 1 will be accepted at the site without testing. The information above will be provided, together with confirmation that the wastes are single stream materials from known and reliable sources. Different wastes contained in the list will be accepted together provided they are from the same source. These wastes are considered to meet the criteria A – H provided in Paragraph 2.7. *MISSING*

2.16 All vehicles delivering waste will be registered waste carriers and each delivery must be accompanied by a relevant Waste Transfer Note, consistent with fulfilling the company's responsibilities under the provisions of the Duty of Care.

2.17 The following details will be recorded by the on-site checker:- Richard Jenkins.



- Time, date and place of transfer;
- Description of the waste;
- Quantity of waste;
- Type of containment;

- 2.18 At this stage, the load is visually inspected, if necessary, in accordance with the on site verification procedures. If the load is in accordance with the basic characterisation details, the driver will proceed to the active face.
- 2.19 In the event of the information supplied being inconsistent with the basic characterisation, or if there is uncertainty as to whether the waste is permitted, the vehicle will not be allowed to proceed to the active area until further information is supplied. The site management will be informed of such incidents. Once the site management is satisfied that the waste is permitted at the site, by way of compliance testing, the waste will be allowed to be deposited at the site.
- 2.20 If the site management decides that the waste cannot be accepted at the site, the driver will be asked to leave the site and the incident will be reported in the Site Diary and to the Environment Agency. A note of the vehicle registration number will be recorded.
- 2.21 As waste is discharged at the active face, the dozer driver will visually inspect the waste. If any wastes are considered abnormal or suspect, the machine operator will contact the on site checker for clarification of the description of the waste. Any such wastes will be moved to a designated area for further investigation. The Environment Agency will be informed of these actions.

Unauthorised and Rejected wastes

- 2.22 Any loads or part loads identified as unacceptable upon discharge of the load shall be reloaded into the container and isolated whilst the Environment Agency are contacted by telephone. The most appropriate course of action shall then be agreed with the EA.
- 2.23 Any load or part load identified as unacceptable upon discharge of the load when the haulier has exited the site shall be isolated or quarantined on the site. The Environment Agency shall be kept informed of the subsequent course of action.



2.24 The following details of the rejected waste will be kept on site:-

- * Time and date of incident;
- * Haulier and vehicle registration number;
- * Customer;
- * Waste type; and
- * Reason for rejection.

2.25 For small quantities of paper, plastic, wood and metal, a skip or similar container will be located near the operational area for the operator to dispose of such materials. The skip will be removed from site once full, and taken to a suitably permitted facility for disposal or recovery where appropriate.

3.0 Site Infrastructure

3.6 A sign will be located at the site entrance detailing the name, address, and telephone numbers of the permit holder, emergency contact numbers, site operating hours and the contact details of the Environment Agency. The sign will be located so that it does not encourage fly tipping and will be maintained in a satisfactory condition at all times. Any permanent changes to these details will be updated within 30 days. Signs will be erected on peripheral fences giving warnings of operations at the site.

3.8 The site will be secured from the public highway and site access road by lockable gates at the site entrance and all reasonable precautions will be taken to prevent the unauthorised entry of the general public and the unauthorised depositing of wastes.

4.0 Accidents

4.1 It is essential that all necessary measures are taken to prevent accidents, which may have environmental consequences, and to have procedures in place to limit those consequences should they occur.



4.2 The inert nature of the material accepted at the site will minimise the risks associated with landfill gas and leachate. The main risk associated with the site will be the unauthorised acceptance of non-compliant waste. The implementation of the waste acceptance criteria and the procedures described in Section 2 will control all waste deposited at the site, thereby minimising the risk.

4.3 An Accident Management Plan is provided at Appendix 3.

Spillage Procedure

4.6 Material accepted at the site will be inert waste and the main likely source for spillages will be associated with plant and machinery.

4.8 In the event of a spillage of fuel from site machinery or vehicles, the following procedure will be implemented:-

- Clear the area straight away;
- Lay absorbent granules over the spill to soak up the spillage;
- Use PPE provided on site if required;
- Once the liquid has all been absorbed use a shovel to clear up the waste, put it in a plastic sack and then place it in the container for non-compliant waste for disposal at a permitted facility; and
- A record of the spill incident and remedial action will be recorded in the site diary.

5.0 Site Management

Company Management Structure

5.1 J H Jenkins & Sons is owned by Richard Jenkins. The Pencefnarda Quarry waste recovery operation is managed by Richard Jenkins.

5.2 General daily site management is the responsibility of Richard Jenkins.



- 5.3 All staff are appropriately trained in health, safety and environmental issues, including the correct procedures to follow in the event of an accident or emergency. All training, experience and qualifications gained by the staff will be noted and kept up to date within the site records.

6.0 Procedures

- 6.1 Procedures are in place to cover all aspects of operations that may have an adverse impact upon the environment. Documented procedures for responding to external complaints are provided in Appendix 4. Other in-house procedures will be stored in this section as hard copies.
- 6.2 The operational procedures are reviewed and may be amended under the following scenarios:
1. Periodic review identifies an improved method of operation. The revised procedure will have a reduced or unchanged risk of impact upon safety, health and environment.
 2. A need to amend procedures is identified following a near miss investigation.
 3. A need to amend procedures is identified following an incident investigation.
 4. Legislative requirements change resulting in a need to alter procedures.

7.0 Maintenance

- 7.1 J H Jenkins & Sons undertake a programme of planned preventative maintenance which seeks to minimise the risk to safety, health and the environment by ensuring that all appropriate items and elements within the site are serviced and inspected on a regular basis. The manufacturer's inspection and maintenance schedules are followed where available.
- 7.2 All inspection and maintenance of operational plant is recorded in the Site Diary and will be undertaken by an appropriately trained or qualified person. The servicing records of all plant and machinery will be kept on file at the farm office and be available for inspection upon request.

8.0 Incidents and Non-Conformances

- 8.1 J H Jenkins & Sons has procedures for investigating incidents and non-conformances as well as taking corrective action.



- 8.2 Incidents which require investigation include any malfunction, breakdown or failure of plant, equipment and techniques, any near misses and any complaints from external parties.
- 8.3 Staff are trained in detecting abnormal operations (see competence and training below). In the short term, procedures are followed to ensure normal operation is resumed. In the long term, steps are taken to prevent the problem happening again. There are documented procedures for investigating and reporting complaints.
- 8.4 In accordance with the Accident Management Plan (see Appendix 4), all near misses, minor accidents or incidents are recorded, reported and investigated. All staff are trained in ensuring that they follow the correct reporting procedures and all paperwork is kept on file at the site office. The outcome of any investigations are reported back to staff. The Accident Management Plan forms part of the Management System.

9.0 Competence and Training

- 9.1 J H Jenkins & Sons is committed to training of persons undertaking operations on behalf of the company where they impact on the environment. Employees are only permitted to perform procedures that they have been trained for.
- 9.2 Training is vital to ensure all personnel are fully aware of the requirements of the Environmental Permit, and conditions of the planning permission. Training ensures that the various and relevant procedures and where applicable, site specific environmental requirements, are understood.
- 9.3 Training on environmental matters is undertaken by Richard Jenkins, or other suitably qualified person(s) to inform, refresh and update. Records of all training undertaken shall be held in the site office.
- 9.4 Only one member of staff (Mr Richard Jenkins) will provide technically competent management.

10.0 Management of Documentation and Records

Place of Keeping

- 10.1 A record of all waste deposited at the site will be maintained. A site diary is kept in the farm office and updated daily. This diary is used to record any incidents on site involving accidents, spillages,



vandalism, complaints etc. This will provide an ongoing record and allow for investigative and corrective action.

- 10.2 A record of the types, quantities and dates of wastes deposited at the site will be maintained and a summary of the types and quantities of wastes deposited at the site will be provided, in the format specified in the Environmental Permit, to the Environment Agency at three-monthly intervals, within one month of the end of each period. A record of the basic waste characterisation, any compliance testing and on-site verification checks will be maintained in the Site Office.

Maintenance of Records

- 10.5 J H Jenkins & Sons will review and audit its management procedures and associated documents annually in order to achieve continual improvement.



Drawings - PFQ/A065656/EP/01



Appendices



Appendix 1 – Planning Permission 2007/1236



Appendix 2 - Waste Testing Limit Values



Waste Testing Limit Values

Parameter	Inert Waste Landfill
Parameters Determined on the waste	
Total organic carbon (mg/kg ⁻¹)	30,000
BTEX (mg kg ⁻¹)	6
PCBs (7 congeners) (mg kg ⁻¹)	1
Mineral Oil C ₁₀ -C ₄₀ (mg kg ⁻¹)	500
PAHs	To be set
Limit Values (mg kg⁻¹)	
As (Arsenic)	0.5
Ba (Barium)	20
Cd (Cadmium)	0.04
Cr (Chromium [total])	0.5
Cu (Copper)	2
Hg (Mercury)	0.01
Mo (Molybdenum)	0.5
Ni (Nickel)	0.4
Pb (Lead)	0.5
Sb (Antimony)	0.06
Se (Selenium)	0.1
Zn (Zinc)	4
Cl (Chloride)	800
F (Fluoride)	10
SO ₄ (Sulphate) *	1,000
Total Dissolved Solids (TDS) **	4,000
Phenol Index	1
Dissolved Organic Carbon at own pH or pH 7.5 – 8.0 ***	500

Notes * If an inert waste does not meet the SO₄ L/S10 limit, alternative limit values of 1500 mg l⁻¹ SO₄ at CO (initial eluate from percolation test (prEN 14405) and 6000 mg kg⁻¹ SO₄ at L/S10 (either from the percolation test or batch test) BS EN can be used to demonstrate compliance with the acceptance criteria for inert wastes.

** The values for TDS can be used instead of the values for Cl and SO₄.

*** DOC at pH 7.5-8.0 and L/S10 can be determined on eluate derived from a modified version of the pH dependence to prEN 14429, if the limit value at own pH (EN 12457 eluate) is not met.



Appendix 3 - Accident Management Plan

Accident Management Plan

Event	Likelihood of Occurrence	Consequence of Occurrence	Actions taken or proposed to minimise the chances of it happening	Actions planned if the event does occur
Flooding on site	Unlikely - Site is not within EA floodplain. Nearest surface water course approx 900m from site	Minor on-site flooding	On site materials can be used to create temporary bunds to divert potential floodwaters	Temporarily close site and postpone site operations. Hire pump to dewater site. Inform EA
Fires	Unlikely due short time for filling i) Minor fires in equipment and machinery are reasonably common ii) Major fires uncommon and unlikely	i) Damage or injury from minor fires would be minimal with long-term effects unlikely. Severity category minor (nuisance on site only, no outside complaint) ii) Could be significant. Severity – severe and maintained nuisance, public complaints and major breach of emissions limits.	i) Careful working practices in accordance with company procedures ii) Working practice and operational procedures in place to minimise potential for such event	i) Appropriate fire extinguishers available on site with trained personnel capable of undertaking fire fighting techniques. ii) Response as set out in Fire Control, Section 4.0 iii) Inform EA
Fires within incoming waste streams	Unlikely - due to inert nature and waste acceptance procedures.	Localised nuisance, on site only	Waste acceptance and operational procedures	See Fire Control, Section 4.0. Inform EA
Fires on site surface or in-situ wastes	Unlikely - due to inert nature and waste acceptance procedures.	On site nuisance. Potential for off-site nuisance.	Implementation of Waste Acceptance Procedures.	See Fire Control, Section 4.0. Inform EA.
Explosions	Very unlikely - one every 100 –	Although unlikely, should	Implementation of Waste	Treated as an emergency.

Pencefnarda Uchaf Farm - Operating Techniques & Management System



Event	Likelihood of Occurrence	Consequence of Occurrence	Actions taken or proposed to minimise the chances of it happening	Actions planned if the event does occur
	10,000 years. Explosions most likely to be associated with landfill gas or difficult waste types. Inert nature will minimise potential risk.	an explosion arise the severity could range from minor to major.	Acceptance Procedures.	Fire Service, EA and other emergency services informed, as appropriate.
Vandalism	Unlikely - due to security measures.	Minimal - damage to machinery, site office, signage etc.	Lockable gates and site procedures for in and out of hours.	Replacement machinery brought to site if required. Follow spillage procedure if required. Inform EA.
Fires caused by arson and/or vandalism.	Low – unlikely due to site location and inert nature of wastes.	Low - Damage or injury from minor fires would be minimal with long term effect unlikely.	Site security measures prevent unauthorised access during daytime. Remote access to site.	Implement Fire Action Plan.
Unauthorised Access	Unlikely - due to security measures.	Medium - possible personal injury on machinery or exposed slopes.	Site fencing, site gates, and site procedures for in and out of hours.	Alteration of procedures to ensure no repetition. Inform EA.
Fuel Tank Bund Containment Failure due to Vehicle Collision	Unlikely	Medium - Contamination of Surface and/or Groundwater by fuel oil.	Careful working practices in accordance with company procedures.	Follow spillage procedure in Section 4 if required. Remove spillage and contaminated soil to correctly permitted facility. Emplace barrier to protect fuel tank. Inform EA.
Minor spillage caused by machinery and fuel/oil leaks.	Low – unlikely and infrequent as fuel not stored in large quantities on site and vehicle maintenance undertaken off-site.	Low – Localised spillage would pose minimal risk to groundwater / surface water with long term effect	Spill kit to be stored on site. Vehicle and machinery manoeuvring is carefully	Implement Spillage Action Plan.

Pencefnarda Uchaf Farm - Operating Techniques & Management System



Event	Likelihood of Occurrence	Consequence of Occurrence	Actions taken or proposed to minimise the chances of it happening	Actions planned if the event does occur
Major spillage caused by machinery and fuel/oil leaks.	Low – unlikely and infrequent as fuel not stored in large quantities on site and vehicle maintenance undertaken off-site.	unlikely. Medium – Large scale spillage has potential to infiltrate the permeable areas of the site.	controlled. Spill kit to be stored on site. Vehicle and machinery manoeuvring is carefully controlled.	Implement Spillage Action Plan.
Vehicle Collisions	Unlikely - due to management procedures put in place by Operator.	Medium - Accidental spillage of engine oil leading to surface and/or groundwater contamination.	Careful working practices in accordance with company procedures.	Follow spillage procedure in Section 4 if required. Remove spillage and contaminated soil to correctly permitted facility. Keep a log of near misses or incidents. Amend procedure to ensure no repetition. Inform EA.



Appendix 4 - Procedures



Complaints Procedure

In the event of a complaint being received from an external party, which relates to the waste management operation, the following procedure will be followed:

1. Details of the complaint will be recorded in the site diary, including name/address of the complainant, the nature of the complaint, the date and time of the complaint.
2. The source of the complaint will be investigated and where appropriate, photographs will be taken as a record.
3. Site management will be contacted and a proposed approach will be agreed.
4. Measures will be taken to rectify the situation, recording any action taken in the site diary.
5. Where appropriate, procedures should be implemented or amended to ensure that the situation does not reoccur.
6. The complainant will be contacted to advise them of the action taken.
7. All remedial action taken will be detailed in the site diary.
8. For complaints of a serious nature, or where the situation cannot be rectified, the Environment Agency will be contacted and their advice sought.



Fire Action Procedures

Fire fighting equipment will be located in the site office, in accordance with fire regulations.

The site will enforce a "no smoking policy" and prohibit any other sources of ignition. No waste will be burnt within the curtilage of the site.

Any fire on site will be treated as an emergency and will be extinguished at the earliest opportunity. If necessary the fire brigade will be summoned.

Site operatives will be trained in the fire procedure and the use of fire-fighting equipment.

In the event of a fire at the site, the following procedure will be implemented:

- i) Raise the alarm;
- ii) Cordon off the area, clearing employees to a safe area and prevent any further access to the site;
- iii) Attempt to control the fire using the appropriate appliances on site. If the fire is small use a loading shovel and attempt to separate the burning material from other waste. Contact the fire brigade on 999;
- iv) Evacuate all personnel and prevent any further access;
- v) Report the situation to the fire brigade on their arrival;
- vi) Once the fire has been extinguished, seek the advice of the fire brigade on future precautionary action; and
- VII) Inform the environment agency of the incident and record all details in the site diary.

Any incidents of fire will result in the accumulation of fire residues. It will be the responsibility of the site manager to arrange for the disposal of the fire residues. A shovel will be used to collect the residues for placement in a plastic sack. This will then be placed in the container for non conforming waste for disposal at an appropriately permitted facility.



Accident Report Form

Accident Details – To be completed by the Site Manager	
Date of Accident:	Site/Office Address:
Time of Accident:	
Location of Accident: (Include Plan if required)	
Details of Accident	
Event	
Severity (any personal injury please refer to on site Health & Safety reporting procedures)	
Action Taken	
Reporting Notes Name/Date/Time	
Recommendations from relevant Authority	
Update Accident Plan? YES / NO	If YES, Date review completed:
Report Prepared by – To be completed by the Site Manager	
Name:	Signature:
Date:	



Spillage Procedures

The potential source of any leak or spillage will be fuel from items of plant and machinery used in conjunction with the facility. In the event of a spillage of fuel from site machinery or vehicles, the following procedure will be implemented:-

- i) Clear the area;
- ii) Lay absorbent material (i.e. sand, granules) over the spill to soak up the spillage and if any drains are near by, place absorbent material around the drain to stop any liquid entering;
- iii) Use PPE provided on site if required;
- iv) Once the liquid has been absorbed, use a shovel to clear up the waste, place in a plastic sack and then into a container for non-conforming wastes for disposal at an appropriately permitted facility; and
- v) Record the incident in the site diary and the remedial action.

Any vehicle maintenance will be undertaken off site and therefore there will be no activities involving oil changes or other such mechanical repairs on site.

Spillage kits will be maintained on site in order to respond to any spill incident. The spill kits should always include:-

- Absorbent granules
- Sand;
- Sand bags;
- Protective overalls;
- Chemical/oil resistant gloves;
- Chemical/oil resistant goggles; and
- A broom and shovel.



Non-Conformance Procedure

Non-conformances shall include, but not be limited to, any deliveries of non-compliant waste or an observed failure to meet a condition of the Environmental Permit. In the event of a non-conformance being identified during an internal audit, or inspection, the following procedure shall be followed:

- a. In the event that a non-conformance is identified (for example, during an internal audit or inspection) a written record will be made in the site diary.
- b. Site staff will undertake an investigation into the cause of the non-conformance.
- c. The issue will be raised with the Site Manager and an action plan will be prepared which will determine the necessary corrective action required to prevent a re-occurrence.
- d. The Site Manager shall be responsible for undertaking a follow up audit on the corrective actions taken to ensure the non-conformance does not re-occur and the preventative procedure is effective.
- e. Full details of the non-conformance, corrective action and any further follow-up work shall be recorded in the site diary.
- f. The Site Manager shall be responsible for keeping Senior Management fully informed of all actions taken with respect to the non-conformance. Where appropriate, the Site Manager shall inform site staff of the outcome of any corrective action taken, so that lessons can be learnt for the future.



Preventative Maintenance Procedure

- a. A register shall be maintained of all equipment and plant for which a preventative maintenance regime is required. This register shall include, but not be limited to, any on-site mobile plant, pumps, monitoring equipment, generators etc.
- b. The register shall provide details of:
 - i. the item of equipment or plant;
 - ii. the manufacturer's recommendation for servicing (e.g. every 12 months);
 - iii. the next due date for servicing;
 - iv. confirmation (e.g. a dated signature) that the equipment or plant has been serviced.
- c. The register shall be reviewed at least every month to ensure that all equipment and plant requiring servicing or maintenance are identified.
- d. The register shall be updated regularly.



Appendix 5 – Environmental Policy

Pencefnarda Uchaf Farm - Operating Techniques & Management System



Environmental Policy

J. H. Jenkins & Sons is a family-owned company which operates at Pencefnarda Quarry.

J. H. Jenkins & Sons recognises that our site operations and activities have the potential to impact on the environment. The Company understands and acknowledges our responsibility to safeguard and positively contribute to the environment and the communities within which we operate.

J. H. Jenkins & Sons seeks to minimise the impact of our operations by promoting the philosophy of the waste hierarchy and sustainable waste management practices. As far as is practicable, we shall:

- Meet or exceed our legal requirements, to prevent pollution and comply with approved Codes of Practice;
- Regularly monitor, audit and review our environmental performance in order to ensure continuous improvement;
- Ensure that our employees are involved in environmental protection and raise their awareness of their responsibilities, both in terms of legislation and Company policies;
- Ensure that we promote a sustainable approach to our business;
- Minimise any environmental nuisance associated with our company activities and operations;
- Minimise our usage of energy, water and raw materials; and
- Make our Environmental Policy available to the public.

I have ultimate responsibility for environmental management. However all members of staff are responsible for ensuring that environmental issues are given the highest priority at all times and that the aims of this Policy are achieved.

R Jenkins

8th December 2010

WYG Environment

part of the WYG group



J.H. Jenkins & Sons

Pencefnarda Uchaf Farm

Waste Recovery Plan

November 2010

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Contents Page

1.0	Introduction.....	1
2.0	Site Description.....	3
3.0	Proposed Development.....	4
4.0	Justification for Waste Recovery	6
5.0	Summary and Conclusions.....	11

Appendix Contents

Appendix A – Planning Permission 2007/1236, Dated 11th October 2007

Appendix B – EA letter dated 26.10.10

Appendix C – Site Survey and Updated Sections

Appendix D – Excerpt of 1958 OS plan of site



1.0 Introduction

- 1.1 WYG has been commissioned to prepare and submit a Waste Recovery Plan on behalf of local farmers, J H Jenkins & Sons, for the former quarry on Pencefnarda Uchaf Farm, Gorseinon, near Swansea.
- 1.2 The site is a former quarry that has already been partially filled with inert material and quarry spoil. It has been out of agricultural production for over 100 years. Planning permission for infilling the remaining void with inert materials to the level of the adjoining land was granted by the City and County of Swansea Council in August 2007. The planning permission requires infilling operations to cease by 28 September 2012 and limits the tipping material to inert waste only (See Appendix A).
- 1.3 In early 2010, J H Jenkins & Sons were in discussions with the Environment Agency (EA) about a proposed application for the permanent deposit of waste on land as a recovery activity. The Environment Agency's response to the information submitted suggested that they required more detailed information on the proposed works in order to make a decision on whether or not this is actually a recovery activity. An initial waste recovery plan was submitted to the EA in September 2010. The EA panel rejected the view that the activity was recovery and stated:-

"The Environment Agency have taken the view that the operation carried out at the quarry should be considered as a whole including the infilling carried out by the operator in the past.

We have considered whether the activity of infilling the quarry with 12000 m³ of material to the level and use agreed by the planning permission constitutes a recovery operation.

Taking into account the total quantity of waste to be used and the end profile of the proposal we do not think the amount of waste is proportionate for the agricultural benefit. We therefore take the view that the infilling of the quarry should be considered a disposal activity." See Appendix B.

- 1.4 J H Jenkins & Sons believes that the EA made this decision without all the facts regarding the historical state of the site and therefore have supplied further historical background. J H Jenkins have also taken into account the EA's comments regarding the final levels of the site for this resubmission and reduced the quantity of materials to be imported to the bare minimum.

Pencefnarda Uchaf Farm - Waste Recovery Plan



- 1.5 The regulatory guidance (RGN EPR 13) sets out the Environment Agency's approach to determining whether an activity involving the permanent deposit of waste on land is waste recovery or waste disposal.
- 1.6 This document therefore constitutes a Waste Recovery Plan for the purpose of satisfying the requirements of the Environment Agency guidance relating to applications for 'deposit for recovery purposes'.



2.0 Site Description

- 2.1 The former quarry on Pencefnarda Uchaf Farm is located approximately 100 metres north of the Llannatt Road just outside Penyrheol in the village of Gorseinon at the northern edge of the Gower Peninsula, approximately 3 miles northwest of Swansea. The former quarry is located at the approximate National Grid Reference (NGR) SN 580 000. The quarry is over 100 years and therefore the land has been out of agricultural production for a considerable period of time.
- 2.2 The site is accessed from the Llannatt Road which runs along the north of the village of Gorseinon to the B4296 Pontadulais Road which runs south to join the A4240 and north to join the A48.
- 2.3 The site lies within open countryside and has a history of infilling of the former quarry workings. The most recent phase of filling in this quarry was carried out under a planning permission granted by the former Lliw Valley Council in 1993.
- 2.4 The quarry has planning permission for infilling from City and County of Swansea Council, Permission number 2007/1236, dated 11th October 2007. This planning permission is given in Appendix A. The Planning Authority stated that this site "*is of no more than local significance.*"
- 2.5 The site lies approximately 1.5 miles to the east of the Carmarthen Bay and Estuaries SAC and the Burry Inlet and Loughor Estuary SSSI.



3.0 Proposed Development

- 3.1 The proposed development comprises the continuation of infilling of the quarry to return it to near its original state so that is suitable for use as valuable agricultural grassland. The infilling will also minimise the safety risk of a large vertical cliff face being present on the site. This is a risk not only to the livestock on site but also to local pedestrians and farm machinery. The development will only occupy an area of 4,000m².
- 3.2 The following drawings are submitted with this Waste Recovery Plan to show how the infilling of the quarry will be completed (shown in Appendix C). The slope gradients used in the sections, shown in Drawing number A.01.5, take into account most recent DEFRA best practice guidelines for slope gradients for livestock grazing land (11° to 18°). The new levels shown do not restore the site to original ground levels but are the minimum quantity of infilling needed to make the site useable for grazing and reduce the safety issues, whilst taking into account the EA's comments about reducing the quantity of materials to be imported.

Drawing Number	Drawing Title
A.01.1	Survey Plan (Scale 1:500)
A.01.2	Sections S-01 to S-04 (Scale 1:500)
A.01.3	Sections S-05 to S-08 (Scale 1:500)
A.01.4	Sections S-09 to S-10 (Scale 1:500)
A.01.5 (New Version)	Sections S-11 to S-16 (Scale 1:500)

- 3.3 Based on the information shown in the above drawings and sections, it is calculated that approximately 2500m³ of fill will be required to achieve the final levels in the quarry (See Drawing A.01.5). It is estimated that up to this point, upto 5000m³ of inert material has been deposited within this area of the site under previous planning permissions (See Drawings A.01.2 to A.01.4). This estimate of 5000m³ of material includes a quantity of quarry spoil left on site when the quarry closed early in the 1900's. An excerpt of the 1958 Ordnance Survey plan of the site shown in Appendix D shows the amount of spoil left in the site.
- 3.4 Therefore the total amount of waste materials on site following completion of works is likely to be approximately 5000 to 6000m³, which is half the estimated previous amount. The maximum depth of waste and spoil materials will now be 3m. J H Jenkins believes that the amount of inert material

Pencefnarda Uchaf Farm - Waste Recovery Plan



imported is proportionate to the recovery of good quality agricultural land after over 100 years of dereliction.

3.5 The materials to be used for the infilling will be:-

Code	Description
01 01 02	Wastes from non metalliferous excavation
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	Waste sand and clays
02 04 01	Soil from cleaning and washing beet
10 12 08	Waste ceramics, bricks, tiles and construction products (after thermal processing)
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles and ceramics
17 01 07	Mixtures of concrete, bricks, tiles + ceramics other than those mentioned in 17 01 06
17 05 04	Soil and stones other than those mentioned in 17 05 03
19 12 09	Minerals (for example sand, stones)
20 02 02	Soil and stones



4.0 Justification for Waste Recovery

Introduction

- 4.1 The Environment Agency Regulatory Guidance Series document EPR 13, 'Defining Waste Recovery: Permanent Deposit of Waste on Land', sets out the EA's approach to determining whether an activity involving the permanent deposit of waste on land is waste recovery or waste disposal.

- 4.2 The guidance document describes waste recovery as follows:

'Waste recovery is about using waste to replace other non-waste materials to achieve a beneficial outcome in an environmentally sound manner.'

The clearest indicator of waste recovery is when it can be shown that the waste used is a suitable replacement for non-waste materials that would otherwise have to be used to achieve the end benefit.

The European Court has said that "the essential characteristic of a waste recovery operation is that its principal objective is that the waste serves a useful purpose in replacing other materials which would have had to be used for that purpose, thereby conserving natural resources."

In other words, a material that would otherwise be disposed of is put to a beneficial use, which saves the use of non-waste materials.'

- 4.3 The EA's position is based upon a legal test derived from the Waste Framework Directive and European case law. This test is carried out by answering a series of questions set out in the Environment Agency guidance. The questions are as follows:-

1. Is there a clear benefit from the activity?
2. Is the recovered waste material suitable for its intended use?
3. Is the minimum amount of waste being used to achieve the intended benefit?
4. Is the waste being used as a substitute for a non-waste material?
5. Will the proposal be completed to an appropriate standard?

These questions will be answered below to allow consideration of this Waste Recovery Plan.



- 4.4 The guidance document EPR 13 includes some examples of typical activities involving the permanent deposit of material to land which the EA consider may qualify as recovery activities. Item 2 of Appendix 1 is 'Landscaping and recreational facilities such as golf courses.' In summary, Item 2 states that in order to justify the activity as a recovery operation, 'genuine benefit' must be demonstrated and that no more material used than genuinely needed to achieve the intended purpose. It must also be shown that consideration has been given to using on-site materials for landscaping in preference to importing suitable fill materials.
- 4.5 It also states that it will strongly indicate recovery if it can be shown that the scheme, or parts of the scheme, would have been carried out anyway to an appropriate standard through the importation of non-waste materials. It must also be demonstrated that the works will be carried out effectively and will give lasting benefit. Stability issues must also be considered.

Is there a clear benefit from the activity?

- 4.6 There are a number of long lasting benefits arising from the proposed development. The proposed minimal further importation of material will enable a local farmer to infill a former quarry on his land to bring it back into useful agricultural use after 100 years of dereliction. In the present economic climate, it is not viable for small scale local farmers to lose land under their ownership when it could be used as valuable grazing land. The alternative of having to rent land is, in the medium to long term, unsustainable.
- 4.7 Another key benefit arises from the use of waste materials in lieu of primary aggregates and natural soils. The natural topography around the quarry comprises a gently rolling landscape and in terms of land-use, it is predominantly farmland. In order to create agricultural land suitable for grazing cattle, slope gradients of 11° to 18° are necessary (according to the DEFRA best practice guidelines).
- 4.8 If J H Jenkins and Sons were to try to create suitable grazing land, without the importation of waste materials, this would require the purchase and importation of approximately 2500m³ of primary aggregates and soils. Not only are such materials a non-renewable resource and it is vitally important that they are conserved for end uses where the importation of secondary aggregates and waste materials is unviable or inappropriate but also the cost of these materials would also be uneconomic in the current financial climate.



- 4.9 Finally the minimal importation of materials to part fill the quarry and cover the majority of the vertical cliff face will reduce the dangers to cattle, local people and machinery. Whilst there is a fence in place at the top of the cliff face at the moment in line with current best practice, this is unlikely to prevent a fall down the 5m high vertical cliff face.

Is the recovered waste material suitable for its intended use?

- 4.10 The proposed waste materials are inert in nature and typically comprise concrete, bricks, tiles, ceramics, soils and stones. All of the waste types which will be accepted at the site are listed within Appendix 2 of EPR13 and are therefore considered appropriate for the purpose of waste recovery to land. Many of the proposed waste types are identical to the likely primary aggregate non-waste materials which would otherwise be used, e.g. soils, sand, stone, gravel, etc and can therefore be considered direct replacements.
- 4.11 These types of materials have been used to fill parts of the quarry previously and are proven to be suitable for the proposed end use. These materials have supplemented the quarry spoil that was left on the site when it was closed in the early 1900's. They are inert in nature and composition and will not therefore pose a risk to human health or to the environment. They are capable of being sufficiently compacted so that they can form a stable landform for the medium and long term. The very small volumes of inert material needed, will also minimise any risks to human health or the environment.
- 4.12 Strict waste acceptance procedures, including careful screening of materials entering the site, ensures that no prohibited materials will be accepted at the quarry. There is no evidence of pollution arising from old quarry infilling areas. It is therefore considered that the proposed wastes are suitable for use in creating the proposed landform.

Is the minimum amount of waste being used to achieve the intended benefit?

- 4.13 The proposed minimal landform has been carefully designed by a Landscape Architect. The proposed final design takes into account the physical and technical requirements for the grazing cattle (e.g. land stability, drainage, etc) using the latest DEFRA design principles.
- 4.14 The primary objective for the Landscape Architect was to create grazing land to fulfil any relevant DEFRA criteria and allow for suitable land drainage. The proposed final levels in the application area



have also been redesigned to accord with levels across the established areas of the site and are designed to minimise the quantities of material deposited following the EA's previous comments.

- 4.15 The City and County of Swansea Council stated that *"the proposed development is not considered to have a significant effect on the particular location given the limited scale of operations..."* The required minimal quantity of material will be imported to the quarry in order to achieve the proposed final contours. The site will be surveyed to ensure that the levels do not exceed those which have been agreed with the Local Planning Authority and therefore only the required and agreed quantities of material will be imported to the site.

Is the waste being used as a substitute for a non-waste material?

- 4.16 If the EA decides that this activity is not recovery, it is possible that the proposed inert waste materials would be substituted by non-waste materials. As stated previously the farmer can not afford to leave an area of land they own in a state that is not suitable for cattle grazing. The alternative is renting other grazing land which is untenable on the medium to long term, particularly in the current financial climate.
- 4.17 The importation of waste materials will remove the need to source and utilise approximately 2500m³ of primary aggregate, crushed rock, sand and soils, etc, to be used in the creation of the grazing land. The quantities of rock, aggregate and soils required to achieve the final contours would lead to the consumption of a non renewable resource for a low grade use, whereas such materials could be used in more high-grade uses, for example the construction of buildings, public facilities or infrastructure.
- 4.18 As the proposed infilling has the benefit of planning permission, the operator could import material in order to fill the quarry. The project could therefore be completed, even if primary (non-waste) materials have to be used for the construction and landscaping. However, the use of waste as a substitute for non-waste materials gives rise to significant benefits in terms of the sustainable use of resources, the management of wastes and cost savings.

Will the proposal be completed to an appropriate standard?

- 4.19 With respect to the standards of construction, all the imported materials will be suitably compacted to make sure that they can form a stable landform for the medium and long term and ensure that the stability and drainage of the land will be adequate for cattle grazing.



- 4.20 As stated previously, the proposed minimal landform has been carefully designed by a Landscape Architect and takes into account the physical and technical requirements for the grazing cattle (e.g. land stability, drainage, etc) using the latest DEFRA design principles.



5.0 Summary and Conclusions

- 5.1 The proposal is for the partial completion of infilling of a 100 year old historic quarry. The local farmer will import 2500m³ of inert materials to transform an un-useable and unsafe quarry into valuable agricultural land suitable for grazing pedigree Holstein milking cows.
- 5.2 The importation of inert wastes will remove the need to source and utilise significant quantities of non-waste materials which might otherwise be used, to ensure that this land is not wasted and to minimise the renting of other grazing land not in the farmer's ownership.
- 5.3 Many of the proposed waste types are identical to the likely primary aggregate non-waste materials which would otherwise be used, e.g. soils, sand, stone, gravel, etc and can therefore be considered a direct replacement.
- 5.4 No further waste will then be imported to the site.
- 5.5 All the imported materials will be suitably compacted to make sure that they can form a stable landform for the medium and long term and ensure that the stability, drainage and slope gradients of the land will be adequate for cattle grazing as set out in DEFRA guidelines.
- 5.6 It is therefore considered that the proposed development (the permanent deposit of waste on land) is classified as a recovery operation.



Appendices



**Appendix A – Planning Permission 2007/1236,
Dated 11th October 2007**



Appendix B – EA letter dated 26.10.10



Appendix C – Site Survey and Updated Sections



Appendix D – Excerpt of 1958 OS plan of site

