WASTE RECOVERY PLAN

for the

WASTE RECOVERY ENVIRONMENTAL PERMIT APPLICATION

at

BRYN QUARRY, GELLIARGWELLT FARM, GELLIGAER ROAD, GELLIGAER, CAERPHILLY

Prepared for: -

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1 INTRODUCTION

1.1 General

JPCE Limited is commissioned by Bryn Aggregates Ltd to prepare a Waste Recovery Plan (WRP) in support of an application for a bespoke recovery Environmental Permit for the deposit of waste material on land for the completion of the restoration of the existing quarry at Bryn Quarry, Gelligaer. The site location is shown on Drawing No. BAL-WRP-2019-001. This Waste Recovery Plan is prepared with reference to Article 3(15) of the Waste Framework Directive (2008/98/EC)[1] and the latest guidance on the deposition of waste on land as a recovery activity published on GOV.UK on 18 October 2016[2] and accessed through the NRW website (the recovery guidance).

The purpose of this WRP is to present justification that the activity comprises recovery not a waste disposal activity and that the use of waste material replaces any non-waste material that would be used to restore the quarry.

1.2 Site description

Bryn Quarry Site is set within land owned by Gelliargwellt Uchaf Farm and is centred on National Grid Reference (NGR) ST 12807 96263. To the west of the site there is an anaerobic digestion facility (AD), material recycling facility (MRF), and a farm complex comprising cattle sheds and milking parlours together with Gelliargwellt Farmhouse and Ty Ni Farmhouse.

The quarry is accessed off the B4254 and via an access road shared with the adjacent AD, MRF and farm. The site will share the weighbridge and wheel wash operated by the MRF.

The site the subject of this application comprises an existing sandstone quarry. The sandstone from the western portion of the quarry is fully excavated and this area is used as a mineral stockpile area. The eastern portion of the quarry comprises the current quarrying area and fields designated for the future quarrying activities. There are settlement and storage lagoons in the eastern extent of the site which discharges through a pipe next to the site entrance into further attenuation and settlement lagoons to the south. Drawing no. BAL-WRP-2019-002 shows the topographical survey of the site. The area of the proposed permit boundary is approximately 85,000m^2.

Ty-Ni Farmhouse is nearest to the limit of mineral extraction and landfilling and is approximately 200m from the landfill boundary. Gelliargwellt Farmhouse is located approximately 210m northwest of the site.

The quarry is underlain with Upper Coal Measures strata assigned to the Grovesend Beds. The Mynyddislwyn Seam underlies part of the quarry but the Gelligaer Fault courses through the quarry so that the Big Rider Seam underlies the south-western part of the quarry at relatively shallow depth. A thick sequence of sandstones with subordinate mudstone bands overlies the Mynyddislwyn Seam.

[1] https://www.legislation.gov.uk/eudr/2008/98/contents

[2] https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-recovery-plans-and-deposit-for-recovery-permits#waste-recovery-plan

1.3 Purpose of the work

The planning permissions require Bryn Aggregates to restore the existing quarry at Bryn Quarry to its former agricultural use. Prior to quarrying the field was used for the grazing of the dairy herd. The land surrounding the site is used for grazing and silage for and by the dairy herd. The approved restoration of the quarry not only restores the land to its former agricultural use but establishes an aftercare scheme following cessation of all extraction and restoration activities. This approach is consistent with the aftercare requirements described in ANNEX B section B6 of the Mineral Technical Advice Note (Wales) 1: Aggregates (MTAN1) dated 2004[3] where the aim of aftercare treatment is to bring the restored land into a condition which does not need to be treated differently from undisturbed land in the same use.

In accordance with good landfill design, to facilitate surface water runoff and reduce infiltration to the waste and to reduce the likelihood of soil erosion the site will be restored with gentle gradients approximately 1v:25h. This shallow gradient will ensure that the restored surface of the site will be stable. The north-western slope of the site is steeper at a gradient of 1v:2.5h. A Stability Risk Assessment (SRA) has been prepared for the north-western slope and is included in Appendix B. It is demonstrated in the risk assessment that a restoration profile at a gradient of 1 in 2.5 at the site will be stable.

The scheme provides a series of attenuation and treatment lagoons to mitigate the risk of flooding from restored landscape. The lagoons maintenance and operation of the lagoons are described in Current Water Management Statement dated December 2021 and is included in Appendix C. The management statement provides calculations demonstrating that the current size of the lagoons is appropriate for the existing quarry void during the working life of the quarry.

1.4 The quantities of material to be used to restore the quarry

Based on the anticipated fully worked out quarry level and the proposed restoration contours approved by the planning permission the anticipated void space is 705,900m^3. Based on an approximate density of 1.6tonnes per m^3, which is typical for a well compacted gravelly clay material, the total void space is approximately 1,129,440 tonnes. It will be necessary to import approximately 620,000m^3 (992,000 tonnes) of inert general fill waste material to achieve a formation layer below the approved restoration contours and it will be necessary to place approximately 85,900m^3 (137,440 tonnes) of 1m thick soils to achieve the approved restoration surface. The materials suitable for use as general fill and in the soil formation layer are discussed in Section 2.2. The handling of the imported materials is discussed in Section 2.7.

An Agricultural Benefit Statement (ABS) has been prepared to support the proposed use of imported waste materials for the restoration of the quarry is included in Appendix D The ABS describes that the original soil profile was approximately 0.5m thick over the bedrock prior to soil stripping and mineral excavation. The proposed restoration scheme includes new hedgerows and isolated blocks of trees or shrubs. To support the growth of larger plants it is proposed to increase the thickness of soil cover above the more compacted general fill from the natural thickness of 0.5m to 1m. In addition to the soils forming material selection

[3] https://gov.wales/sites/default/files/publications/2018-09/mtan1-aggregates.pdf

described in the ABS, the criteria for materials selected for topsoil as described in BS 3882:2015 Specification for topsoil shall be followed.

The current proposed restoration contours are shown on drawing no. BQE-2012-029-110, cross sections through the proposed scheme are shown on drawing nos. BQE-2012-029-111.

The quantities described above are based on the proposed extent of quarrying allowed under the proposed fully extracted quarry used in the preparation of the 2012 planning permission.

The screening bund is being constructed from a mixture of quarry overburden, dust generated by the quarry and recycled aggregate produced in accordance with the WRAP Quality Protocol by the MRF. The screening bund is not the subject of this Waste Recovery Plan.

The recovery guidance uses the definition of recovery provided in Article 3(15) of the Waste Framework Directive to describe waste recovery. The recovery guidance states that:

> *'Waste recovery is when your main aim is replacing a non-waste material you would have used in your operation with a waste material that performs the same function. That waste then serves a useful purpose as you're using fewer natural resources.'*

The recovery guidance specifies that there are three main ways that can be used to demonstrate waste recovery. One of the three ways identified in the recovery guidance is to:

> *'... provide evidence that you're obliged to carry out the work.'*

In accordance with the recovery guidance obligations can be 'specific' or 'general'. In respect of specific obligations it is stated in the recovery guidance that:

> *'Obligations may specify the work you have to carry out. If you have specific obligations to do the work proposed, your waste recovery plan must include:*
>
> - *evidence of the obligation*
> - *plans and cross sections that show your proposal matches the obligation on you*
> - *evidence that the waste is suitable for the intended purpose'*

A Waste Recovery Plan must show that if the operator could not use waste materials to create the landform then the site would be restored using non-waste materials. The October 2016 guidance states that:

> *"There are 3 main ways you can show evidence that you're using waste in place of non waste…*
>
> 1. *Financial gain by using non-waste materials: evidence*
> 2. *Funding to use non waste: evidence*
> 3. *Obligations to do work: evidence"*

The recovery guidance is clear that where there is a specific obligation to undertake the work it is unnecessary to present in a WRP the information referred to under the headings 'Purpose of the work', 'Quantity of waste used' and 'Meeting quality standards' in the recovery guidance.

We present below the information which must be included in a WRP prepared pursuant to a specific obligation.

1.1 Obligations to do work: evidence

As described in Section 1 the quarry at Gelliargwellt Uchaf Farm was first granted planning permission in May 1993 (reference 55/92/0698). Planning permissions for the continuation of quarrying were issued in July 1994 (reference 55/93/0661), October 1996 (reference P/96/0344), June 2001 (reference P0/01/0104), March 2009 (08/0055/FULL) and August 2013 (12/0570/FULL). The August 2013 planning permission included conditions relating to the importation of inert fill and restoration to agricultural land.

Condition 02 of the planning permission states that

> *"Extraction of minerals shall cease by 31 December 2022 and restoration shall be completed by 31 December 2030.*
> *REASON: The permission relates to temporary development and the ensure that the site is restored in a timely manner."*

Condition 18 of the planning permission states that

> *"The site shall be restored in accordance with the details set out in the application subject of this approval within 12 months of the completion of tipping operations to final contours or their earlier permanent cessation.*
> *REASON: To ensure the satisfactory restoration of the site."*

A copy of the current planning permission is presented at Appendix E

The planning application included a Planning Statement prepared by Barton Wilmore LLP dated July 2012 and a Landscape and Visual Assessment (LVA) prepared by Anthony Jellard Associates dated July 2012. The Landscape Strategy Plan for Quarry Extension reference AJA/10 included in the LVA shows the approved restoration scheme for the site.

The Planning Statement describes the proposed development and the proposed restoration of the quarry following extraction of the mineral. The Planning Statement summarises the findings of the LVA and describes the quarrying activities as "temporary in nature" and that the proposed restoration scheme will "add to the local landscape character, habitat diversity and richness of the area". Copies of the Planning Statement and Landscape and Visual Assessment documents can be found in Appendix F and Appendix G, respectively.

The site is located within the Gelligaer Common Special Landscape Area (SLA) defined by policy NH1.2 of Caerphilly County Borough Councils (CCBC) Local Development Plan. SLAs are a non-statutory designation applied by CCBC to define areas of high landscape importance. The SLA designation seeks to ensure that any development within this are does not have an unacceptable impact on the unique, exceptional, or distinctive landscape and to influence positive landscape planning.

Given that requirement of Condition 18 of the planning permission together with the site being within the Gelligaer Common SLA, Bryn Aggregates Ltd have an obligation to restore the quarry to the meet the restoration scheme approved the 2012 planning permission and the restoration works are a recovery operation as the waste will replace any non-waste materials what would otherwise be used to restore the quarry.

1.2 Evidence that the waste is suitable for the intended purpose

Using the codes given in Annex II of the Waste Framework Directive (2008/98/EC) the waste operation that will be carried out will be R10: Land treatment resulting in benefit to agriculture or ecological improvement.

A list of the waste types that will be accepted at Bryn Quarry for deposit as a recovery activity are consistent with the waste types specified in the "Check if your waste is suitable for deposit for recovery" guidance[4] dated April 2021 as being suitable for the restoration of mineral workings and are presented in Tables 1 & 2. Most of the waste is derived from small landscaping contractors and utility companies working within the local area together with suitable materials from the Materials Recycling Facility.

Table 1 lists the waste codes that will be used as general backfill as part of the restoration of the quarry. The maximum quantity of combined waste types in Table 1 to be imported to site is approximately 620,000m^3 (992,000 tonnes).

Table 1 Waste types that will be accepted at Bryn Quarry for deposit as a recovery activity – general backfill

Exclusions **Wastes having any of the following characteristics shall not be accepted:** **• Consisting solely or mainly of dusts, powders or loose fibres** **• Wastes that are in a form which is either sludge or liquid**		
Waste Code	**Description**	**Note**
01 Waste resulting from exploration, mining, quarrying and physical and chemical treatment of minerals		
01 01	**wastes from mineral excavation**	
01 01 02	wastes from non-metalliferous excavation	
01 04	**wastes from physical and chemical processing of non-metalliferous minerals**	
01 04 08	waste gravel and crushed rocks other than those containing dangerous substances	
01 04 09	waste sand and clays	
17 Construction and demolition wastes		
17 01	**concrete, bricks, tiles and ceramics**	

[4]https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/check-if-your-waste-is-suitable-for-deposit-for-recovery

Exclusions **Wastes having any of the following characteristics shall not be accepted:** **• Consisting solely or mainly of dusts, powders or loose fibres** **• Wastes that are in a form which is either sludge or liquid**		
Waste Code	**Description**	**Note**
17 01 01	concrete	1
17 01 02	bricks	1
17 01 03	tiles and ceramics	1
17 01 07	mixtures of concrete, bricks, tiles and ceramics	1
17 05	**soil (including excavated soil from contaminated sites) stones and dredging spoil**	
17 05 04	soil and stones	2
19 Wastes from waste management facilities		
19 12	**wastes from the mechanical treatment of waste (for example, sorting, crushing, compacting, pelletising) not otherwise specified**	
19 12 09	minerals (for example sand, stones)	3
20 Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fraction		
20 02	**Garden and park wastes (including cemetery waste)**	
20 02 02	soil and stones	4

Notes:
[1] Selected C&D waste can be accepted without testing: with low contents of other types of materials (like metals, plastic, soil, organics, wood, rubber, etc). The origin of the waste must be known. No C&D waste from constructions, polluted with inorganic or organic dangerous substances e.g. because of production processes in the construction, soil pollution, storage and use of pesticides or other dangerous substances etc. unless it is made clear that the demolished construction was not significantly polluted. No C&D waste from constructions, treated, covered or painted with materials, containing dangerous substances in significant amounts.
[2] Can be accepted without testing excluding topsoil, peat; excluding soil and stones from contaminated site. Soil and stones will not be accepted directly from contaminated sites. They will be sampled and a site-specific risk assessment will be carried out.
[3] Residual fines from mechanical treatment of mixed wastes at transfer stations will not be accepted at the site.
[4] Can be accepted without testing if only from garden and park waste; excluding top soil, peat.

Table 2 lists the waste codes that will be used in the top 1m soil formation layer as part of the restoration of the quarry. The maximum quantity of combined waste types in Table 2 to be imported to site is approximately 85,900m^3 (137,440 tonnes).

Table 2 Waste types that will be accepted at Bryn Quarry for deposit as a recovery activity – soil formation layer

Exclusions **Wastes having any of the following characteristics shall not be accepted:** **• Consisting solely or mainly of dusts, powders or loose fibres** **• Wastes that are in a form which is either sludge or liquid**		
Waste Code	**Description**	**Note**
01 Waste resulting from exploration, mining, quarrying and physical and chemical treatment of minerals		
01 01	**wastes from mineral excavation**	
01 01 02	wastes from non-metalliferous excavation	
17 Construction and demolition wastes		
17 05	**soil (including excavated soil from contaminated sites) stones and dredging spoil**	
17 05 04	soil and stones	[1]
19 Wastes from waste management facilities		
19 12	**wastes from the mechanical treatment of waste (for example, sorting, crushing, compacting, pelletising) not otherwise specified**	
19 12 09	minerals (for example sand, stones)	[2]
20 Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fraction		
20 02	**Garden and park wastes (including cemetery waste)**	
20 02 02	soil and stones	[3]

Notes:
[1] Can be accepted without testing excluding topsoil, peat; excluding soil and stones from contaminated site. Soil and stones will not be accepted directly from contaminated sites. They will be sampled and a site-specific risk assessment will be carried out.
[2] Residual fines from mechanical treatment of mixed wastes at transfer stations will not be accepted at the site.
[3] Can be accepted without testing if only from garden and park waste; excluding top soil, peat.

1.3 Meeting quality standards

Detailed waste acceptance procedures will be in place to minimise the risk that unacceptable waste materials are accepted at the site and procedures will be in place for the rejection of nonconforming loads. The waste acceptance procedures will include robust waste characterisation and testing procedures. No wastes will be accepted from contaminated sites. Only waste that is suitable for the intended purpose will be imported as to do otherwise would undermine the potential to develop the site as in accordance with the obligations of the planning permission. The detailed waste acceptance procedures are presented at Section 1.4.

1.4 Waste Acceptance Procedure

1.4.1 *Level 1 – Basic characterisation*

No waste will be accepted at the site unless it has been subjected to an appropriate basic characterisation procedure. The minimum information to be collected includes:

i) the full address where the waste was produced;
ii) the identity of the producer;
iii) all the reasonably identifiable previous uses of the producer site where the waste is excavation waste;
iv) the process giving rise to the waste;
v) the physical appearance of the waste including colour and texture;
vi) confirmation and evidence that the waste has been classified as non-hazardous;
vii) where a weighbridge isn't used a metric conversion factor for volume (cubic metres) to weight (tonnes) for each waste stream;
viii) the quantity of waste to be imported; and
ix) evidence of compliance with these procedures.

All waste producers are required to complete a Waste Questionnaire to ensure the materials suitability and quality. An example of the Waste Questionnaire is presented at Appendix H. All Waste Questionnaires will be reviewed by the Technically Competent Manager (or otherwise appointed representative) to ensure the suitability of the material prior to acceptance at the site.

A Hydrogeological Risk Assessment (HRA) dated July 2021 together with a subsequent Memorandum dated October 2022 has been produced for the site by Hydrogeo Ltd both of which are presented at Appendix I. The HRA describes the risk from imported waste materials on local receptors assuming that the site waste acceptance criteria screening values are not exceeded. The 2003/33/EC: Council Decision of 19 December 2002[5] (the Council Decision) describes in Section 2.1.1 of the Annex the limit values for waste acceptable at landfills for inert waste (WAC). The HRA highlights that there are determinants tested as part of the WAC test suite which have inert waste screening limits that are comparably higher than the relevant UK-DWS and/or EQS freshwater screening values. The HRA also concludes that as the site already operates a Water Quality and Quantity Monitoring Scheme & Contingency Plan as part of the quarry activities then the risk to local receptors from imported waste materials is low. A copy of the Water Quality and Quantity Monitoring Scheme & Contingency Plan is presented at Appendix J. Based in the conclusions of the HRA the compliance testing required to be carried out by waste producers prior to acceptance of material to the site is described in Table 3.

[5] https://www.legislation.gov.uk/eur/2003/33/annex#

Table 3 General fill waste acceptance testing suite and limits

Parameter	**Parameters determined on the waste – total concentration using BS EN 12457**	
Total organic carbon (%w/w)	3%	-
Loss on ignition (%w/w)	10%	-
BTEX (mg/kg)	6	-
PCBs (7 congeners) (mg/kg)	1	-
Mineral oil C10-C40 (mg/kg)	500	-
PAHs (mg/kg)	100	-
pH	>6	-
	Limit values (mg/kg) for compliance leaching test using BS EN 12457 at L/S 10 l/kg	**Equivalent leachability (mg/l)**
As	0.5	0.05
Ba	20	2
Cd	0.04	0.004
Cr total	0.5	0.05
Cu	2	0.2
Hg	0.01	0.001
Mo	0.5	0.05
Ni	0.4	0.04
Pb	0.5	0.05
Sb	0.06	0.006
Se	0.0	0.01
Zn	4	0.4
Chloride	800	80
Fluoride	10	1
Sulphate	1000	100
Phenol index	1	0.1
Dissolved Organic Carbon	500	50
Total Dissolved Solids	4000	400

All waste types listed in Table 4 are included in the recovery guidance as the types of waste a producer may not need to test. Consistent with the recovery guidance, where the waste is from a single waste stream (from only one source) and where there is no suspicion of contamination the waste will be accepted without testing.

Table 4 Waste types that may be accepted without testing

Waste Code	Description	Note
01 01 02	wastes from non-metalliferous excavation	
01 04 08	waste gravel and crushed rocks other than those containing dangerous substances	
01 04 09	waste sand and clays	
17 01 01	concrete	
17 01 02	bricks	
17 01 03	Tiles and ceramics	
17 01 07	mixtures of concrete, bricks, tiles and ceramics	
17 05 04	soil and stones	[1]
19 12 09	minerals (for example sand, stones)	
20 02 02	soil and stones	[1]

Notes:
[1] Soil and stones will not be accepted from contaminated sites.

1.5 Level 2 – Compliance Testing

Level 2 compliance testing comprises testing periodically to determine whether the waste complies with the results of the basic characterisation testing and the site-specific conditions of the Permit. Additional samples will be collected by the waste producer and analysed for the same parameters as shown on Table 3.

If the waste received at the site is from a regularly generated source, then the results of compliance testing carried out by the waste producer will be reviewed periodically. The period of review will vary with the type of waste with a minimum period of:

- once per year for homogenous waste generally contains the same or similar components, or
- three times per year for heterogenous waste containing a wide range of different components or new waste sources.

1.6 BS3882:2015 – Compliance Testing

As set out in Table 2 above, the list of acceptable waste codes for use as a topsoil is different to that for the waste to be used as general fill. It is therefore to be expected that this material will have slightly different testing requirements. The criteria for materials selected for topsoil as described in BS 3882:2015 Specification for topsoil shall be followed. This British Standard has two classifications of topsoil; multipurpose or specific purpose (acidic, calcareous, low fertility, low fertility acidic or low fertility calcareous). It states that multipurpose topsoil is the grade suited to most situations where topsoil is required and it is for this reason that this classification is chosen

as the most appropriate for this application. The parameters which shall be analysed for and their limit values are displayed in Table 5 below.

Table 5 Topsoil waste acceptance testing suite and limits

Parameter	Limit value	Method of test
Soil texture <2mm fraction (% m/m)	Dependent on soil textural class	BS ISO 11277
Maximum coarse fragment content (% m/m):		BS ISO 11277
>2mm	30	
>20mm	10	
>50mm	0	
Mass loss on ignition (%):		Annex D of BS 3882:2015
Clay 5% to 20%	3 – 20	
Clay 20% to 35%	5 - 20	
Soil pH (measured in water)	5.5 to 8.5	BS ISO 10390
Plant nutrient content:		BS 7755-3.7
Total nitrogen (% m/m)	>0.15	
Extractable phosphate (mg/L)	16 – 140	
Extractable potassium (mg/L)	121 – 1,500	
Extractable magnesium (mg/L)	51 - 600	
Carbon:nitrogen ratio	<20:1	Annex D of BS 3882:2015 and BS 7755-3.7
Electrical conductivity (uS/cm^{-1})	3,300	Annex H of BS ISO 3882:2015
Potentially toxic elements (by soil pH) (mg/kg dry solids):		BS ISO 16729
Zn (Nitric acid extractable)	<200 - <300	
Cu (Nitric acid extractable)	<100 - <200	
Ni (Nitric acid extractable)	<60 - <110	
Visible contaminants (% m/m) (air-dried solids)	<0.5	Annex J of BS 3882:2015
…..of which plastics	<0.25	
Sharps, number (air dried soil)	Zero in 1kg air-dried soil	Annex J of BS 3882:2015

If the waste received at the site is from a regularly generated source, then the results of compliance testing carried out by the waste producer will be reviewed periodically. The period of review will vary with the type of waste with a minimum period of:

- once per year for homogenous waste generally contains the same or similar components, or
- three times per year for heterogenous waste containing a wide range of different components or new waste sources.

1.7 Level 3 – On-site Verification

Verification testing will comprise a visual inspection of the incoming waste and verification of the accompanying documentation. The basic characterisation information will be available prior to the acceptance of the waste at the site.

All incoming waste loads to the site will be checked. On arrival of each load of waste at the site the Duty of Care (DoC) documentation will be reviewed by the site personnel to confirm that it conforms with the basic characterisation. Once it is determined that the waste is potentially suitable for acceptance at the site a visual inspection where possible of the waste will be carried out at the site reception area to confirm that the waste conforms with the description on the DoC documentation. If any waste does not conform with the description in the DoC documentation or if on the DoC documentation the waste described is unsuitable for acceptance for deposit at the site, the waste will be rejected.

The site personnel and plant operative will be trained to recognise the types of waste that may be accepted at the site and to identify the details which should be presented on the DoC documentation. A record will be kept of the date and time of waste deliveries, the quantities and the nature of waste deposited at the site, the name of the company, the name of the representative delivering each load of waste and the vehicle registration number. DoC documentation for the waste received will be kept on record for the statutory period which comprises 6 years.

Any waste which is identified at the site reception as unsuitable for deposit at the site will be rejected. The event will be recorded in the site diary.

In the unlikely event that waste items admixed with the waste are identified as unsuitable following deposit in the restoration area they will be isolated from the restoration area and removed for processing at a suitably permitted waste management facility. The event will be recorded in the site diary.

Additional samples will be collected by the site and analysed for the same parameters as shown on Table 3 at a minimum period of:

- once per year for homogenous waste generally contains the same or similar components,
- three times per year for heterogenous waste containing a wide range of different components or new waste sources,
- whenever there is a suspicion of contamination.

1.8 Physical suitability of the material

As described in Section 2.2 all wastes to be accepted at the site are described as being acceptable for "*landscaping associated with construction work, restoration of mineral workings and general fill material*" by the "Check if your waste is suitable for deposit for recovery" guidance.

The material imported to site via this process shall be deemed physically suitable for the works if it comprises material that has a generally soils and stone structure and physically capable of supporting the weight of the plant used to place and compact it.

Much of the material required to restore the quarry will be sourced from small landscaping contractors and utility companies working within the local area together with suitable materials from the Materials Recycling Facility. We would expect that the materials generated from these sources would typically have acceptable physical properties to support the weight of the plant used on site.

In addition to the waste acceptance restriction described in Section 2.4 the following definitions shall apply wherever reference is made to the defined material:

a) "Suitable fill material" shall comprise of all that material, which is deemed by the Operator to be suitable.

b) "Unsuitable material" shall mean material other than suitable material and shall include:

i) Peat, material from swamps, marshes, and bogs
ii) Logs, stumps, and perishable material
iii) Material in a frozen condition
iv) Material susceptible to spontaneous combustion
v) Materials having a moisture content greater than 25%

Materials of Class v) above, if otherwise suitable, shall be classified as suitable when wetted or dried sufficiently as appropriate. It is most likely that any materials that does not meet the physical criteria would be because it is too wet and in the form of a sludge and would be rejected.

1.8.1 *Placement Criteria and General Procedures – fill material*

The materials suitable for use as quarry backfill are described on Table 1

Materials shall be placed generally in a series of discrete (loose) horizontal layers not exceeding 300mm in thickness. After placement, the material should be repeatedly tracked-in using the available construction plant until there is no discernible compaction. Succeeding layers can then be placed and the tracking-in process repeated until works area at final level.

If material to be placed is in a condition (e.g., is too wet) such that it cannot be placed in compliance with the requirements, then the following course of action shall be undertaken:

- The affected material shall be rejected from site, a Reject Waste Form will be completed, and the incident will be recorded in the Site Diary.

1.8.2 *Placement Criteria and General Procedures – soil capping material*

There are no soil reserves available on the site to restore the finished quarry landform to agricultural use. The materials suitable for use in the top 1m thick soil capping layer are described on Table 2. The criteria for materials selected for topsoil as described in BS 3882:2015 Specification for topsoil shall be followed. An Agricultural Benefit Statement to support the proposed use of waste subsoils for the restoration of the quarry has been created by a FACTS qualified Agricultural Consultant. The ABS describes the soil parameters necessary for re-creating the agricultural landscape prior to quarrying. As no natural soils remain for use in restoration of the quarry imported waste materials will be fertilised with green waste compost and AD digestate to increase soil organic matter and reach target nutrient levels set out in the ABS. The green waste compost and AD digestate are both to PAS 100 and 110 standards respectively and available for the restoration. As both the compost and AD digestate are certified PAS products an environmental permit is not required for their use as soil improvers in this project.

The ABS describes the:

- procedure for the selection of suitable soil materials to be used in the final soil restoration layer
- the inspection and testing of the soils prior to use; and
- the post soil placement procedures.

These procedures will be followed during placement of the final soil capping layer to produce a less compacted layer of soils suitable for the growth of agricultural grasses, hedgerows and isolated blocks of shrub planting.

2 SUMMARY AND CONCLUSION

This Waste Recovery Plan has been produced to demonstrate that the proposed restoration of the existing Bryn Quarry using inert general fill waste, and soil waste is a recovery operation not a disposal activity.

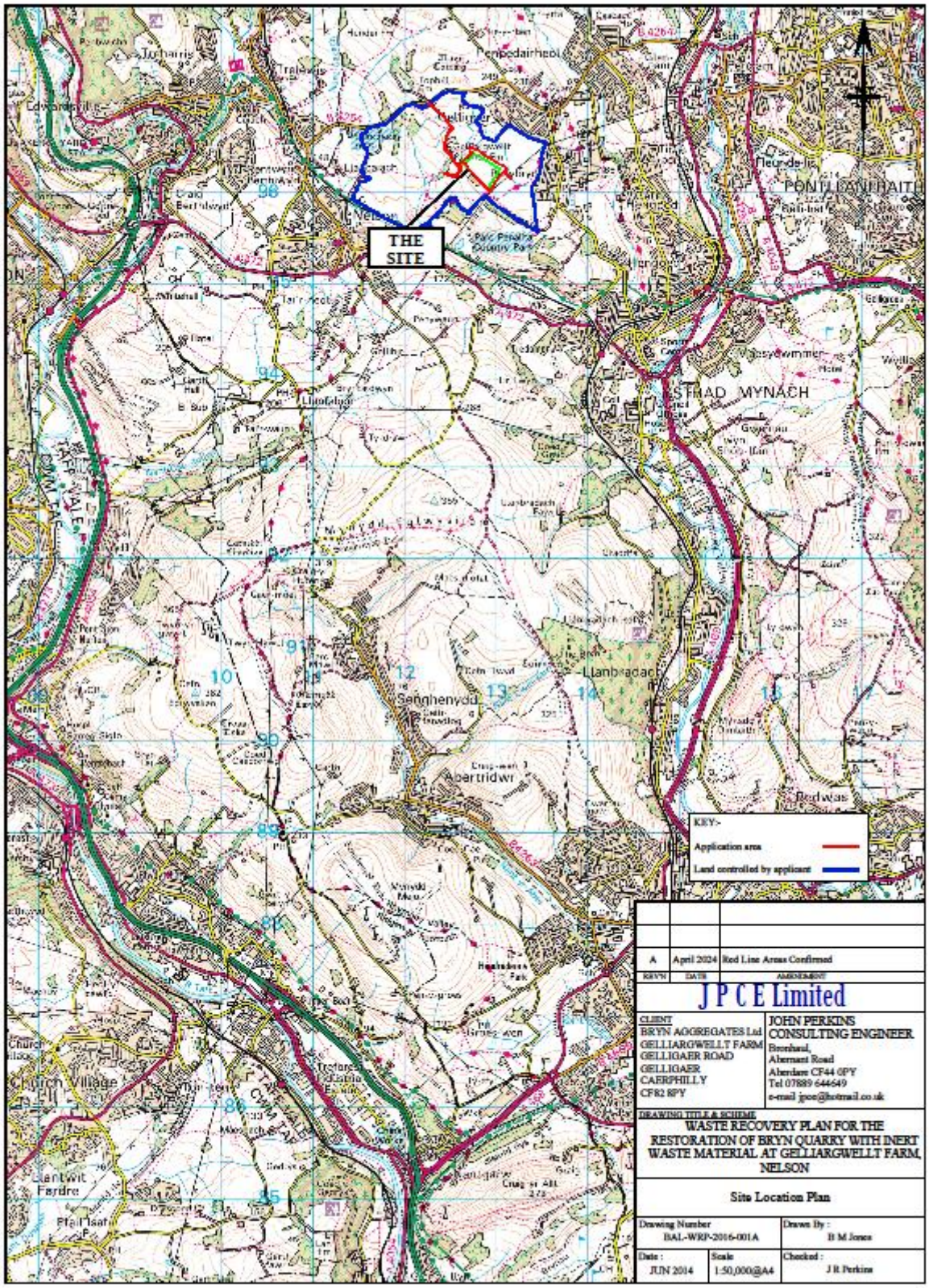
The evidence within this plan clearly demonstrates that the deposit of waste as a recovery activity will provide for the specific obligations in respect of restoring the land to its former agricultural use and brings that restored land into a condition which does not need to be treated differently from the surrounding undisturbed land in the same use.

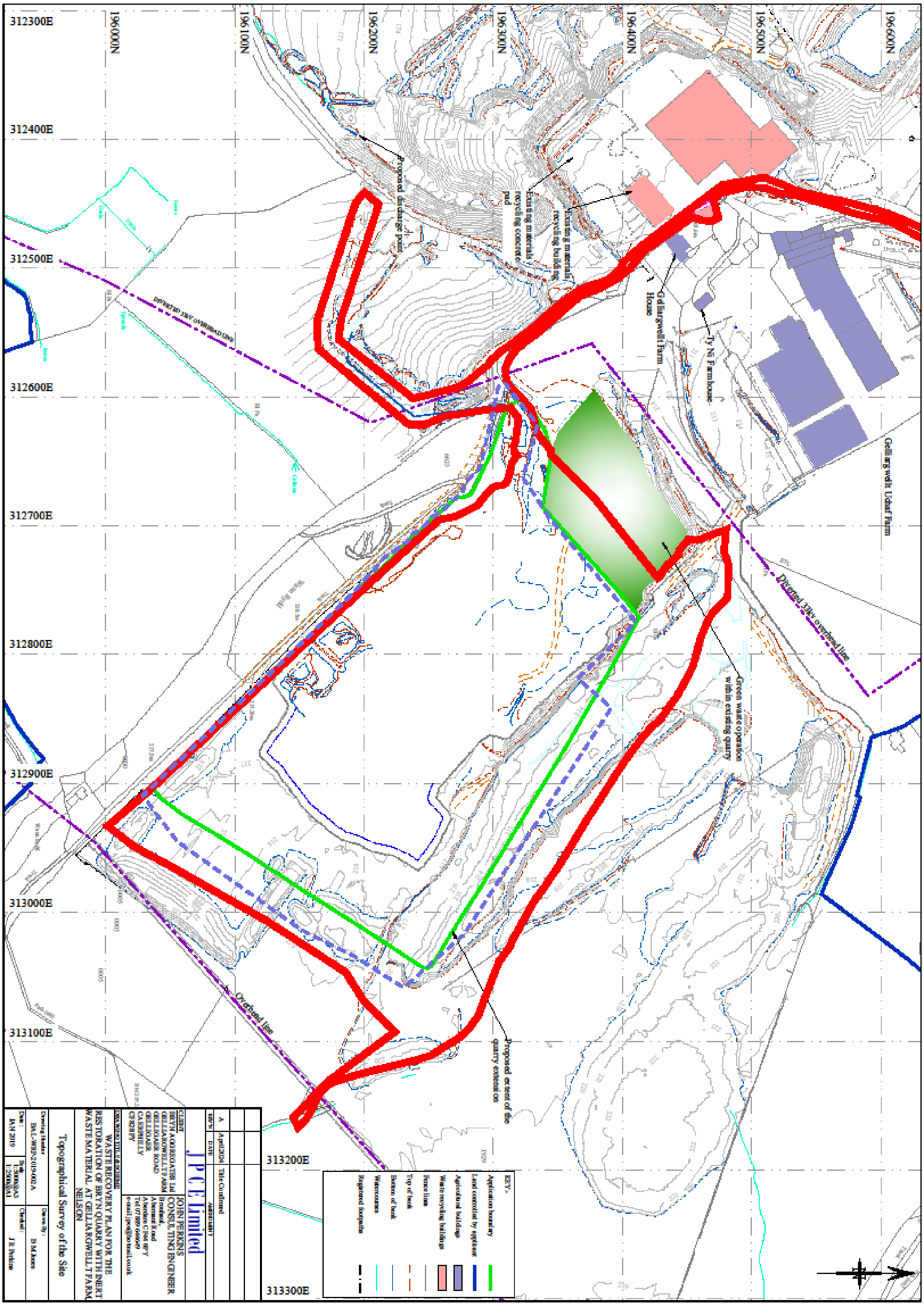
DRAWINGS

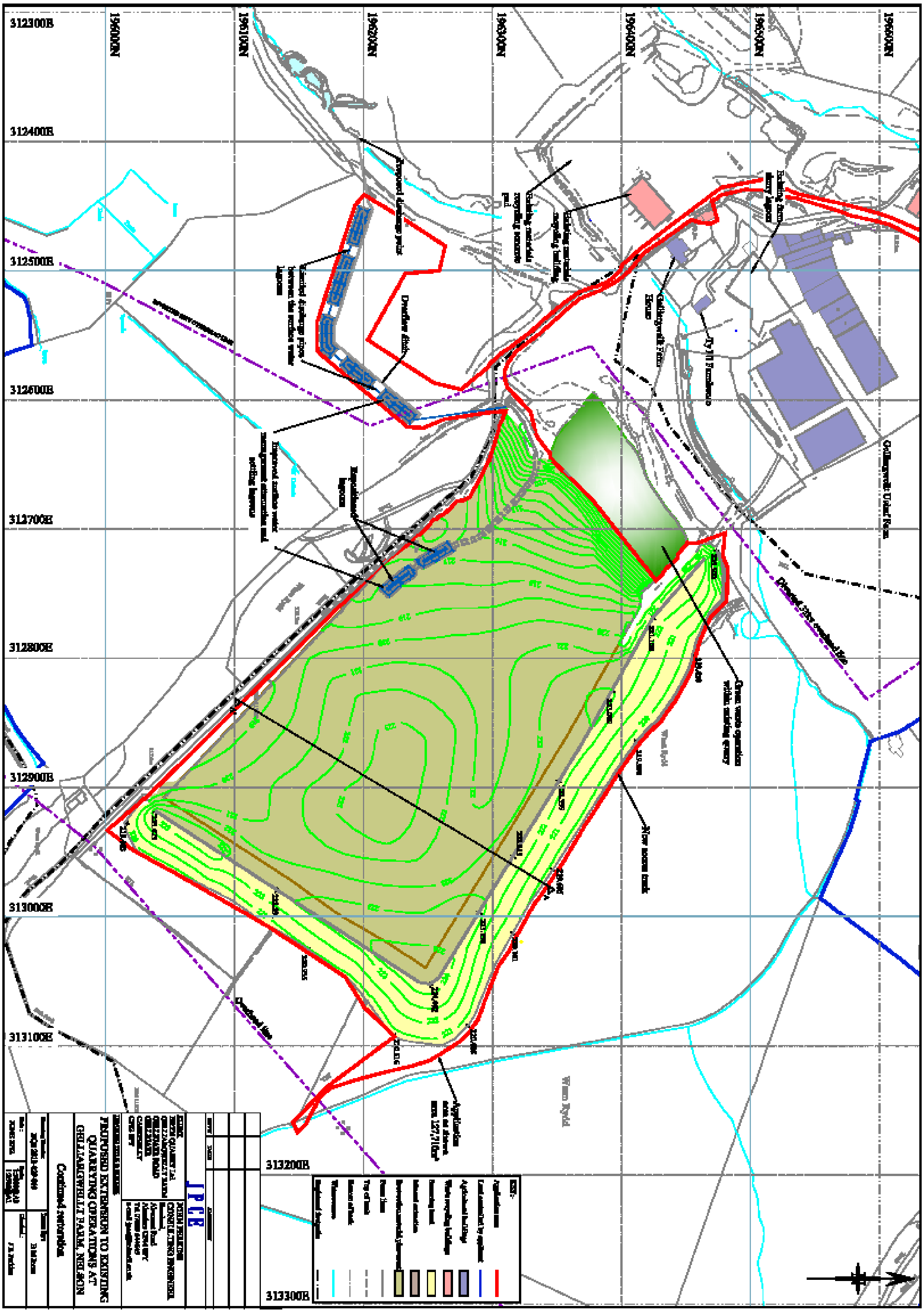
Drawing No.	Title
BAL-WRP-2019-001	Site Location Plan
BAL-WRP-2019-002	Latest topographical survey of the site
BQE-2012-029-110	Continued Restoration
BQE-2012-029-111	Proposed north-east – south west section

APPENDIX A

DRAWINGS


THE SITE
KEY-
Application area
Land controlled by applicant
A
April 2024
Red Line Areas Confirmed
REVN
DATE
AMENDMENT
J P C E Limited
CLIENT
BRYN AGGREGATES Ltd
GELLIARGWELLT FARM
GELLIGAER ROAD
GELLIGAER
CAERPHILLY
CF82 8PY
JOHN PERKINS
CONSULTING ENGINEER
Bronhaul,
Abernant Road
Aberdare CF44 0PY
Tel 07889 644649
e-mail jpce@hotmail.co.uk
DRAWING TITLE & SCHEME
WASTE RECOVERY PLAN FOR THE RESTORATION OF BRYN QUARRY WITH INERT WASTE MATERIAL AT GELLIARGWELLT FARM, NELSON
Site Location Plan
Drawing Number
BAL-WRP-2016-001A
Drawn By :
B M Jones
Date :
JUN 2014
Scale
1:50,000@A4
Checked :
J R Perkins


312300E
312400E
312500E
312600E
312700E
312800E
312900E
313000E
313100E
313200E
313300E
196000N
196100N
196200N
196300N
196400N
196500N
196600N
Proposed drainage path
Existing materials recycling concrete pad
Existing materials recycling building
Gellargwellt Farm House
Ty Ni Farmhouse
Gellargwellt Uchaf Farm
Diverted 33kV overhead line
DIVERTED 33kV OVERHEAD LINE
Green waste operation within existing quarry
Proposed extent of the quarry extension
Overhead line
KEY:-
Application boundary
Land controlled by applicant
Agricultural buildings
Waste recycling building
Fence lines
Top of bank
Bottom of bank
Watercourse
Registered footpaths
JPCE Limited
Topographical Survey of the Site
WASTE RECOVERY PLAN FOR THE RESTORATION OF BRYN QUARRY WITH INERT WASTE MATERIAL AT GELLIARGWELLT FARM NELSON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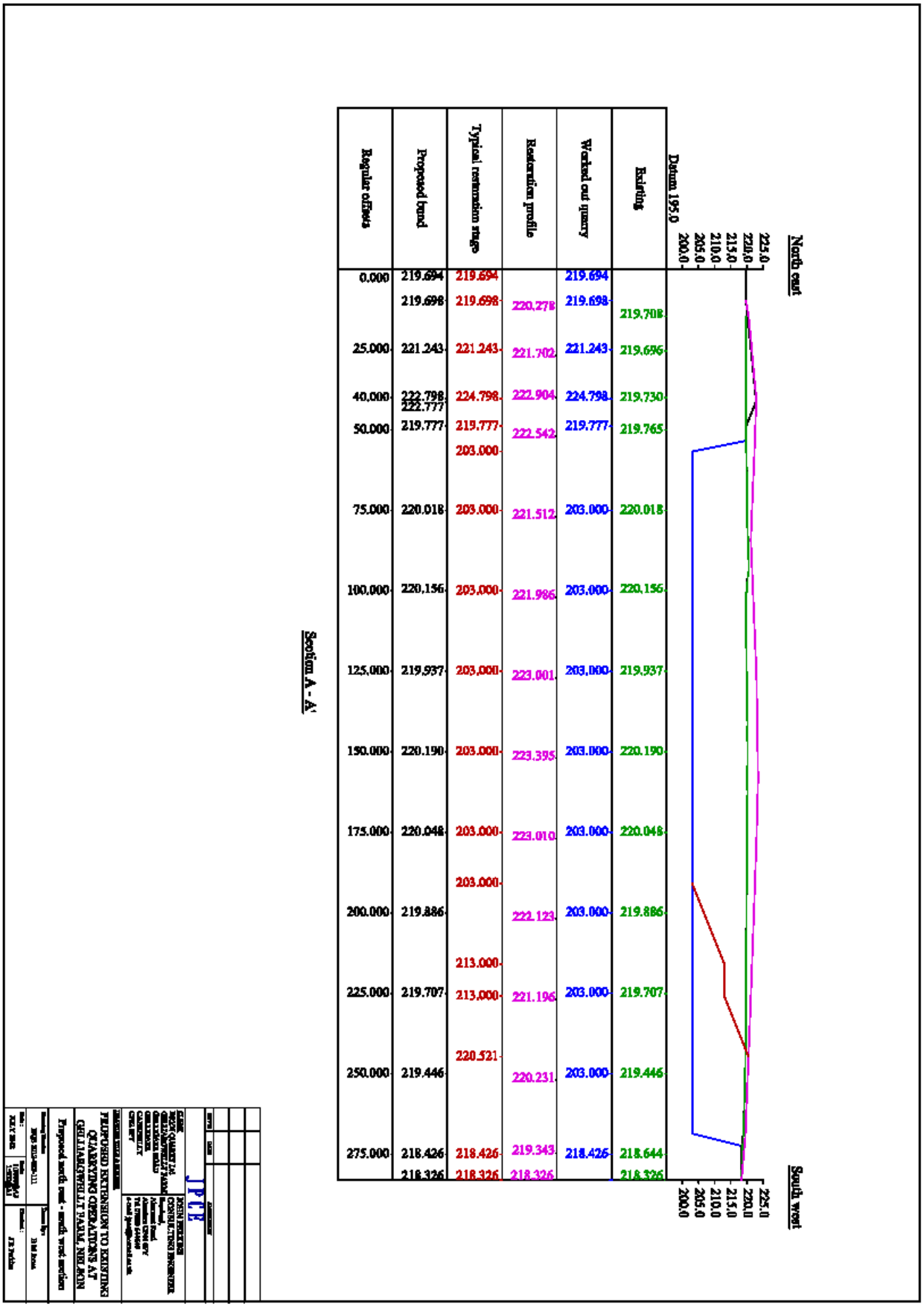
Section A - A'
North east
South west
Datum 195.0
225.0
220.0
215.0
210.0
205.0
200.0
Regular offsets
Proposed bund
Typical restoration stage
Restoration profile
Worked out quarry
Existing
0.000 219.694 219.694 219.694
219.698 219.698 220.278 219.698 219.708
25.000 221.243 221.243 221.702 221.243 219.696
40.000 222.798 224.798 222.904 224.798 219.730
222.777
50.000 219.777 219.777 222.542 219.777 219.765
203.000
75.000 220.018 203.000 221.512 203.000 220.018
100.000 220.156 203.000 221.986 203.000 220.156
125.000 219.937 203.000 223.001 203.000 219.937
150.000 220.190 203.000 223.395 203.000 220.190
175.000 220.048 203.000 223.010 203.000 220.048
203.000
200.000 219.886 222.123 203.000 219.886
213.000
225.000 219.707 213.000 221.196 203.000 219.707
220.521
250.000 219.446 220.231 203.000 219.446
275.000 218.426 218.426 219.343 218.426 218.644
218.326 218.326 218.326
PROPOSED EXTENSION TO EXISTING QUARRYING OPERATIONS AT GELLIARGWELLT FARM, NEILSTON
Proposed north road - south west section
JPCE

APPENDIX B

STABILITY RISK ASSESSMENT

APPENDIX C
CURRENT WATER MANAGEMENT STATEMENT

APPENDIX D

AGRICULTURAL BENEFIT STATEMENT

APPENDIX E
PLANNING PERMISSION REFERENCE 12/0570/FULL AND ASSOCIATED DRAWINGS

APPENDIX F

PLANNING STATEMENT FOR BRYN QUARRY LTD

DATED JULY 2012

APPENDIX G

LANDSCAPE AND VISUAL ASSESSMENT

DATED JULY 2012

APPENDIX H

WASTE QUESTIONNAIRE

Third Party Waste Acceptance Form

Customer Details							
Name							
Address							
Telephone							
Email							
Waste material details							
Site address							
Process from which the waste arises							
Waste description *(smell, colour, consistency, physical form)*							
Quantity							
Has a site investigation been carried out by the Customer?				Yes		No	
Are WAC testing results available?				Yes		No	
EWC Codes *(please tick)*							
01 01 02		01 04 08		01 04 09		17 01 01	
17 01 02		17 01 03		17 01 07		17 05 04	
17 05 06		17 05 08		19 12 09		19 12 12	
19 13 02		20 02 02					
EWC codes not requiring WAC testing *(only if no contamination is suspected)*							
17 01 01		17 01 02		17 01 03		17 01 07	
17 05 04		20 02 02					
Bryn Group ONLY accept **non-hazardous** waste. By signing you are confirming that you comply with the waste hierarchy							
Customer name				Date			
Signature							
To be completed by Bryn							
Received by:				Date			
Signature							

Waste types that can be accepted at Bryn Quarry (page 1 of 2)		
Exclusions **Wastes having any of the following characteristics shall not be accepted:** **• Consisting solely or mainly of dusts, powders or loose fibres** **• Wastes that are in a form which is either sludge or liquid**		
Waste Code	**Description**	**Note**
01 Waste resulting from exploration, mining, quarrying and physical and chemical treatment of minerals		
01 01	**wastes from mineral excavation**	
01 01 02	wastes from non-metalliferous excavation	
01 04	**wastes from physical and chemical processing of non-metalliferous minerals**	
01 04 08	waste gravel and crushed rocks other than those containing dangerous substances	
01 04 09	waste sand and clays	
17 Construction and demolition wastes		
17 01	**concrete, bricks, tiles and ceramics**	
17 01 01	concrete	
17 01 02	bricks	
17 01 03	tiles and ceramics	
17 01 07	mixtures of concrete, bricks, tiles and ceramics	
17 05	**soil (including excavated soil from contaminated sites) stones and dredging spoil**	
17 05 04	soil and stones	[1]
19 Wastes from waste management facilities		
19 12	**wastes from the mechanical treatment of waste (for example, sorting, crushing, compacting, pelletising) not otherwise specified**	
19 12 05	glass	
19 12 09	minerals (for example sand, stones)	[2]
Waste types that can be accepted at Bryn Quarry (page 2 of 2)		
Waste Code	**Description**	**Note**
20 Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fraction		
20 02	**Garden and park wastes (including cemetery waste)**	
20 02 02	soil and stones	

Notes:

[1] Soil and stones will not be accepted from contaminated sites.

[2] Residual fines from mechanical treatment of mixed wastes at transfer stations will not be accepted at the site.

APPENDIX I
HYDROGEOLOGICAL RISK ASSESSMENT

APPENDIX J

WATER QUALITY AND QUANTITY MONITORING SCHEME & CONTINGENCY PLAN