

# RIDGE

PORTLAND STONE LTD  
BROADCROFT QUARRY  
PORTLAND  
WRAP PROTOCOL  
January 2019



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**PORTLAND STONE LTD - BROADCROFT QUARRY, PORTLAND  
WRAP PROTOCOL**

January 2019

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## 1. INTRODUCTION

This document details the acceptance procedure of inert waste materials coming into Portland Stone Ltd. Broadcroft Quarry Recycling Centre, Bumpers Lane, Portland, Dorset, DT5 1DJ and the protocol in place for turning waste into saleable products.

The Portland Stone inert waste facility forms part of a larger operation at Broadcroft Quarry, which also includes the receipt and recycling of general skip waste. These items are accepted into a large building for separation / processing / recycling.

Inert materials are recycled in accordance with Environment Agency Variation Notice Number EPR/UP3393FL/V003 to Permit Number EPR/UP3393FL dated 21/11/11 into saleable products in accordance with the Quality Protocol produced by WRAP with the addition of extra products. The Permit covers a large range of recycling operations of which the inert waste recycling forms part.

The term site within this document refers to the land at Broadcroft Quarry Recycling Centre shown on the plan included as Appendix A.

### 1.1. Land Ownership / Planning Permission

The land on which the facility operates is owned by Portland Stone Firms Ltd. and is leased to Portland Stone Ltd.

Planning Application Number 11/00825/WASTE was granted permission on 2/8/12 for 'Extension of existing waste transfer station to form covered yard and use of adjacent land for crushing and screening construction and demolition waste materials to form products for re-sale. Planning Application Number WP/15/00812/DCC was granted permission on 22 June 2016 for *The continued operation and extension of an inert waste landfill; the continued operation of an inert waste and waste electrical and electronic equipment (WEEE) transfer station; the continued operation of an inert waste recycling facility and the continued operation of a skip storage area. Phased restoration of the site.* The landfill shall be fully restored by 28 February 2029.

### 1.2. Contact Details

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## **2. ACCEPTANCE CRITERIA FOR INCOMING MATERIALS**

Waste acceptance criteria for the waste arriving at the site follows the strict licensing guidelines documented in the EA Permit and Portland Stone Ltd. Waste Acceptance Procedure document, copies of which are included in Appendix B.

The site waste acceptance procedure is as follows:

Incoming materials are in Portland Stone vehicles only, from sites that have been pre-approved. The vehicle carrying the waste arrives at the site. A visual assessment of the material is made by site staff. The driver will supply a ticket to site staff detailing the source of the material, product, description, Waste Carriers Reference, where applicable and EWC code. Details on the ticket will be compared with the material in the vehicle.

If the material is visually acceptable and the paperwork complete and in order, the material is accepted.

If the material is visually unacceptable or the paperwork not complete or not in order, the material is not accepted.

The vehicle is directed to tip the load in the appropriate stockpile / holding area. Listed as follows:

1. Quarantined material to be tested and either sent to landfill or processed if the test results are satisfactory.
2. Concrete /masonry / demolition materials to be processed
3. Bituminous materials

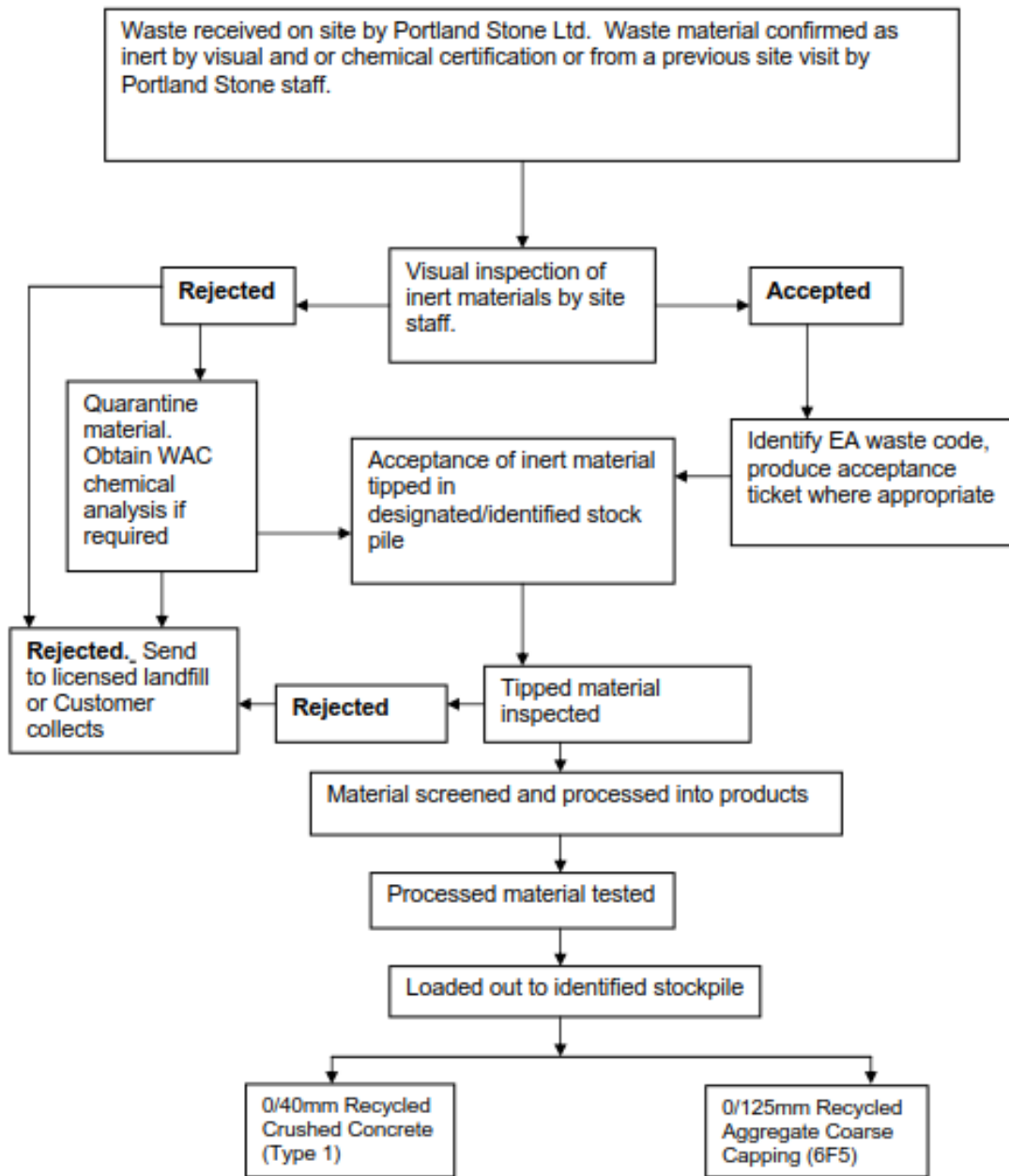
The wastes tipped on any of the “to be processed” stock piles are again inspected for contamination. Contaminated materials are moved to the quarantine area for testing / removal as necessary.

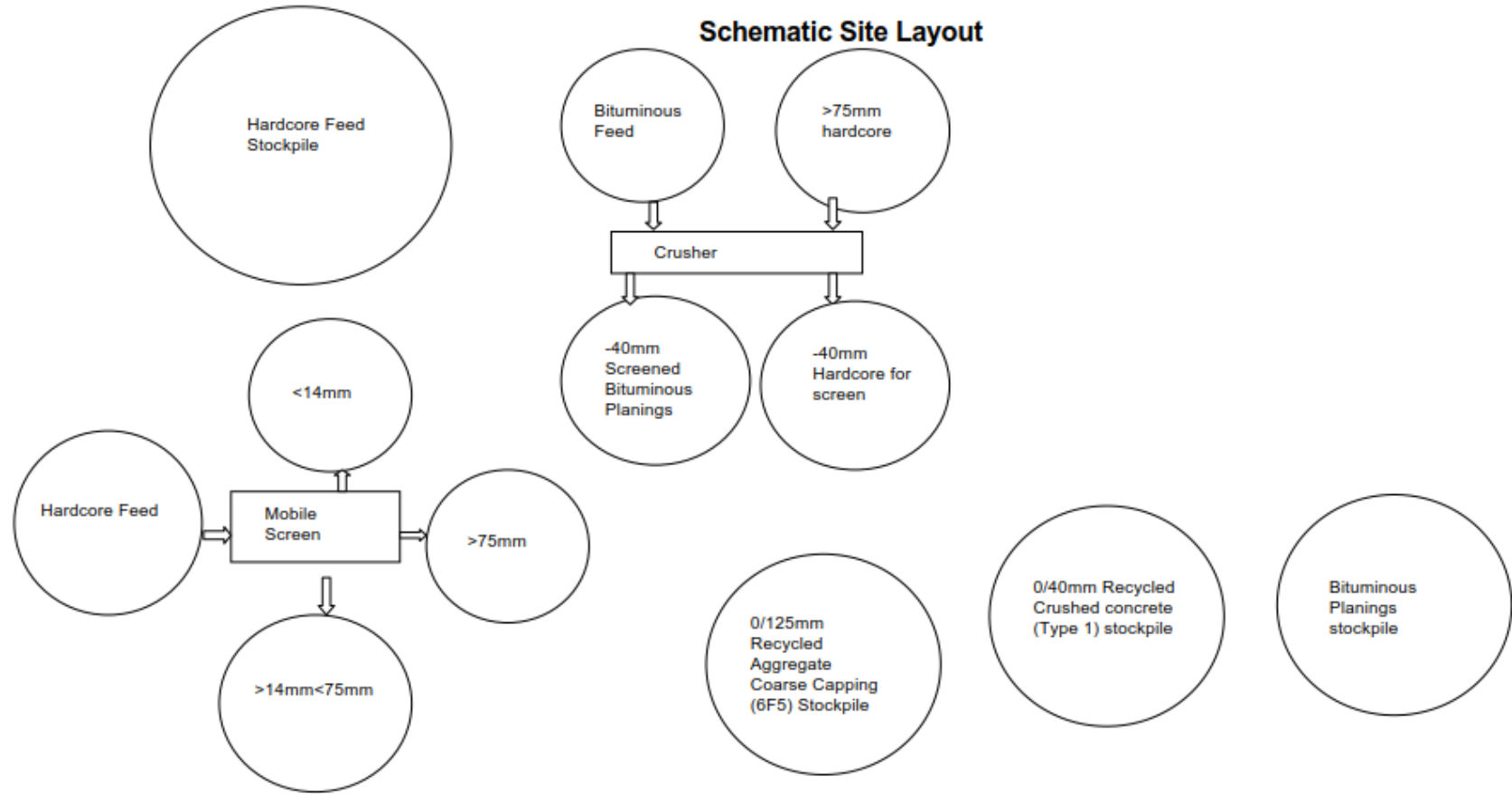
If the material is accepted, but when tipped is found to be unsuitable, then arrangements are made for the material to be returned to the originator, or placed in a skip / container (depending upon quantity), the recycling building, to prevent rainwater ingress / contaminant leaching. The Customer is then contacted and asked to either collect the waste or to provide instructions to allow correct disposal of the material.

Materials to be processed are also sourced from the oversize materials from the adjacent picking station within the Waste Transfer Building.

A flow chart showing the waste acceptance protocols is shown below, followed by a schematic site layout plan.

Waste acceptance criteria and process flow chart





The production procedures for turning the individual materials into saleable products are shown in Table 1, below:

<b>Product</b>	<b>Alternative Name</b>	<b>Specification</b>
6F5	0/125mm Recycled Aggregate Coarse Capping (6F5)	In accordance with SFHW volume 1 series 600 table
Recycled Type 1	0/40mm Recycled Crushed Concrete (Type 1)	In accordance with SFHW series 800 clause 803

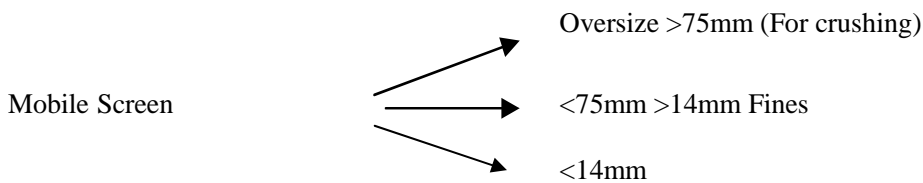
Table 1. Production Procedures.

Other materials are produced for which there is not a specification, for example products for haul road repair.

### 3. MATERIAL PROCESSING

Equipment used in the processing of the waste materials is described below. It should be acknowledged that the processing equipment is only on site periodically once stockpiles have been accumulated. Total throughput through the operation is circa 10,000 tonnes per annum.

#### *Hardcore Area*



A crusher is used on the screened oversize material together with material from the clean concrete stockpile to make Recycled Crushed Concrete Type 1.

A crusher is used to make 6F5 when a suitable quantity of material has been prepared.

#### *Macadam Planings*

Through crusher <40mm product produced (for haul road repair or blending)

Skips are used for unsuitable materials, steel, wood, plastic etc. which are subsequently taken to the recycling building.



Each individual product is processed separately in different parts of the site to avoid cross contamination.

- ▶ All materials entering the go through the Waste Acceptance Criteria.
- ▶ The material is tested as described
- ▶ The finished products are transported by Loading Shovel and placed in the appropriate stock pile.
- ▶ The finished processed products are sold direct to customers and transported off site.

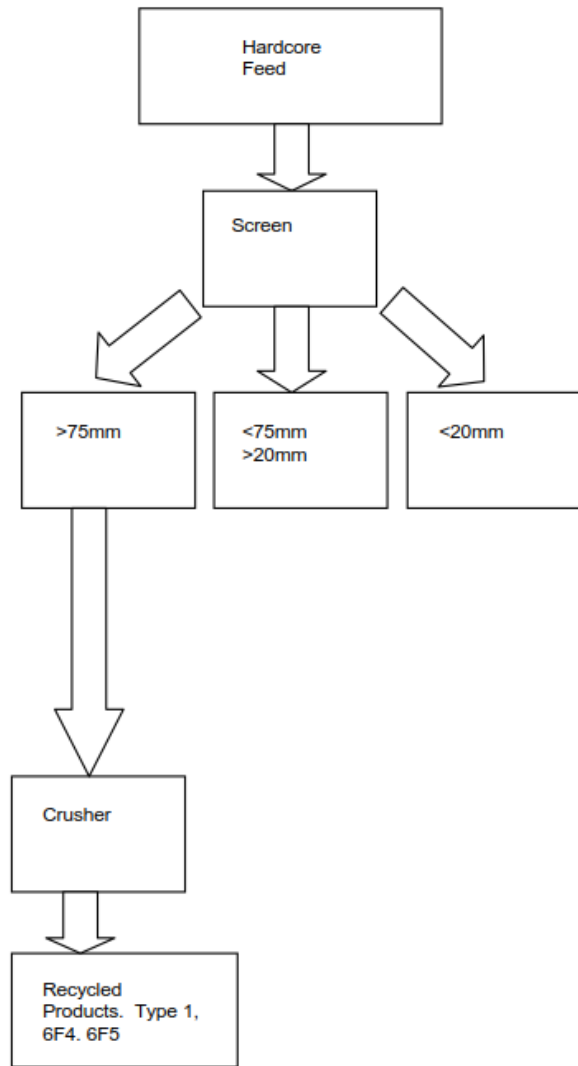
When requested by the purchaser, the producer shall provide.

- a) Test results
- b) Test procedures
- c) Outline details of the production control manual

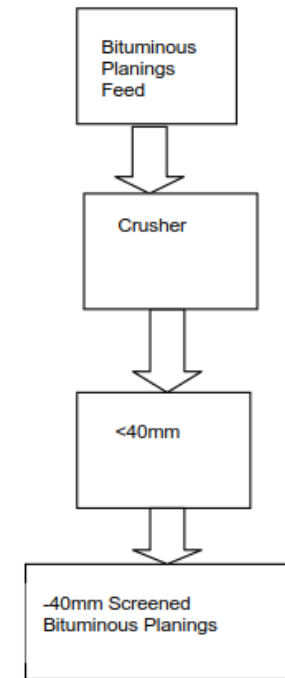
***Process Control***

All stockpiled waste materials are certified by visual inspection or analysis certification complying with site license/ permit prior to the production into saleable products. The processing procedure is shown in the flow-chart below.

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Quality control and testing schedules and frequencies relating to all individual products produced by Portland Stone Ltd. are shown in the tables below.

All on site sampling and physical laboratory analysis of the products will be carried out by ACS Testing Limited under UKAS Accreditation No. 0999.

Chemical and contamination tests will be carried out by ACS Environmental Testing Limited under UKAS Accreditation No 4150.

The results from the most recent round of testing relating to this Protocol are included as Appendix E.

#### **4. PRODUCT SALES**

The stockpiles are to be regularly tested by ACS Testing to ensure compliance with the appropriate specifications. Testing frequencies are shown in the Tables below.

##### ***Products delivered by Portland Stone Ltd.***

Products delivered to sites are loaded by site staff. A ticket is provided to the delivery address which notes the following information:

- ▶ Date
- ▶ Product Type
- ▶ Quantity
- ▶ Purchaser
- ▶ Vehicle Registration Number
- ▶ Delivery address
- ▶ Signature of acceptance from customer



**Product Description – 6F5**

<i>Physical Properties</i>	<i>Chemical Properties</i>	<i>Description Testing and Analysis</i>	<i>Specification Name/Clause</i>	<i>Location of Sampling</i>	<i>Frequency of Testing *</i>	<i>Laboratory</i>	<i>Certified Supplied</i>
Grading of Fines Content		PSD	BS EN 933-1 1997	Screening conveyor stockpile	Once a month	ACS Testing Ltd	Yes
Aggregate composition		Constituent materials. Asphalt (Class Ra)	SFHW Series 700 Clause 710	Screening conveyor stockpile	Once a month	ACS Testing Ltd	Yes
Particle strength resistance to fragmentation		Los Angeles co-efficient	BS EN 1097-2	Screening conveyor stockpile	Once per six months	ACS Testing Ltd.	Yes
Dry Density optimum moisture content		DD/OMC V H	BS EN 13285 Clause 5.3	Screening conveyor stockpile	Once a quarter	ACS Testing Ltd.	Yes
Moisture content		Water content	BS EN 1097-5	Screening conveyor stockpile	Once a month	ACS Testing Ltd.	Yes
Other properties		Bitumen Content. Only if Ra >20%.	BS EN 12697	Screening conveyor stockpile	If and when required	ACS Testing Ltd.	Yes
Other properties		Ashphalt content	SFHW 700 Clause 710	Screening conveyor stockpile	If and when required	ACS Testing Ltd.	Yes
Other properties		Sulphate content	TRRL report 477 BS EN 13285 Clause 5.3	Screening conveyor stockpile	Once a quarter	ACS Testing Ltd.	Yes
Other properties		pH value	BS 1377 Part 3	Screening conveyor stockpile	Once a quarter	ACS Testing Ltd.	Yes

\* Frequency of testing depends upon production rates (Frequencies stated are minimum)



**Product Description – Recycled Type 1**

<i>Physical Properties</i>	<i>Chemical Properties</i>	<i>Description Testing and Analysis</i>	<i>Specification Name/Clause</i>	<i>Location of Sampling</i>	<i>Frequency of Testing *</i>	<i>Laboratory</i>	<i>Certified Supplied</i>
Grading of Fines Content		PSD	BS EN 933-1 1997	Screening conveyor stockpile	Once per six months	ACS Testing Ltd	Yes
Aggregate composition		Constituent materials. Class Ra <50%, Glass <25%, Others <1%	SFWH Series 700 Clause 710	Screening conveyor stockpile	Once per six months	ACS Testing Ltd	Yes
Particle strength resistance to fragmentation		Los Angeles co-efficient	BS EN 1097-2	Screening conveyor stockpile	Once per six months	ACS Testing Ltd.	Yes
Dry Density optimum moisture content		DD/OMC V H	BS EN 13285 Clause 5.3	Screening conveyor stockpile	Annually	ACS Testing Ltd.	Yes
Moisture content		Water content	BS EN 1097-5	Screening conveyor stockpile	Once per six months	ACS Testing Ltd.	Yes
Other properties		Sulphate content	TRRL report 477 BS EN 13285 Clause 5.3	Screening conveyor stockpile	Once per six months	ACS Testing Ltd.	Yes
Other properties		Frost Heave	BS 812: Part 124:2009 Annex B + SHW C1 801.8.	Screening conveyor stockpile	Annually	ACS Testing Ltd.	Yes
Other properties		pH value	BS 1377 Part 3	Screening conveyor stockpile	Once per six months	ACS Testing Ltd.	Yes

\* Frequency of testing depends upon production rates (Frequencies stated are minimum)



**Product Description – Recycled Type 1**  
Contd

<i>Physical Properties</i>	<i>Chemical Properties</i>	<i>Description Testing and Analysis</i>	<i>Specification Name/Clause</i>	<i>Location of Sampling</i>	<i>Frequency of Testing *</i>	<i>Laboratory</i>	<i>Certified Supplied</i>
Resistance to freezing and thawing		Magnesium sulfate soundness	EN1367-2	Screening conveyor stockpile	Annually	ACS Testing Ltd.	Yes
Resistance to wear		Micro-Deval test	EN 1097-1	Screening conveyor stockpile	Once per six months	ACS Testing Ltd.	Yes
Other properties		Water absorption	EN 1097-6	Screening conveyor stockpile	Once per six months	ACS Testing Ltd.	Yes
Other properties		Plastic Limit	BS 1377 Part 3	Screening conveyor stockpile	Once per month	ACS Testing Ltd.	Yes

## **5. PLANT AND MACHINE LISTING**

Plant at the site as of January 2019 is as follows:

- ▶ Pegson XA400 Crusher
- ▶ Chiefton 1400 Powerscreen
- ▶ Volvo 220 Excavator
- ▶ Volvo 180 Loading Shovel

All plant is maintained and serviced in accordance with the manufacturers' recommendations.

## **6. SITE MANAGEMENT**

A monthly review of materials received and sold is carried out by site staff.

All fuel on site is kept within bunded areas.

Dust suppression is carried out by damping down where necessary, monitored by site staff, taking into account wind direction.

A road sweeper is used when necessary as monitored by site staff and reported to Company Management.

Site security is checked weekly and damage / vandalism is immediately reported to Company Management.

## **7. RECORDS**

Records of all material movements will be kept in line with the site licence. Quarterly returns are sent to the EA. Material inspections results will be kept on site and filed accordingly. All test results will be kept at Portland Stone Ltd. office. The appropriate changes to the records requirements will be made when the EA permitting status has been determined and the WRAP Protocol will be amended where appropriate.

## **8. QUALITY STATEMENT & OTHER DOCUMENTS**

Documents listed below included as Appendix D.

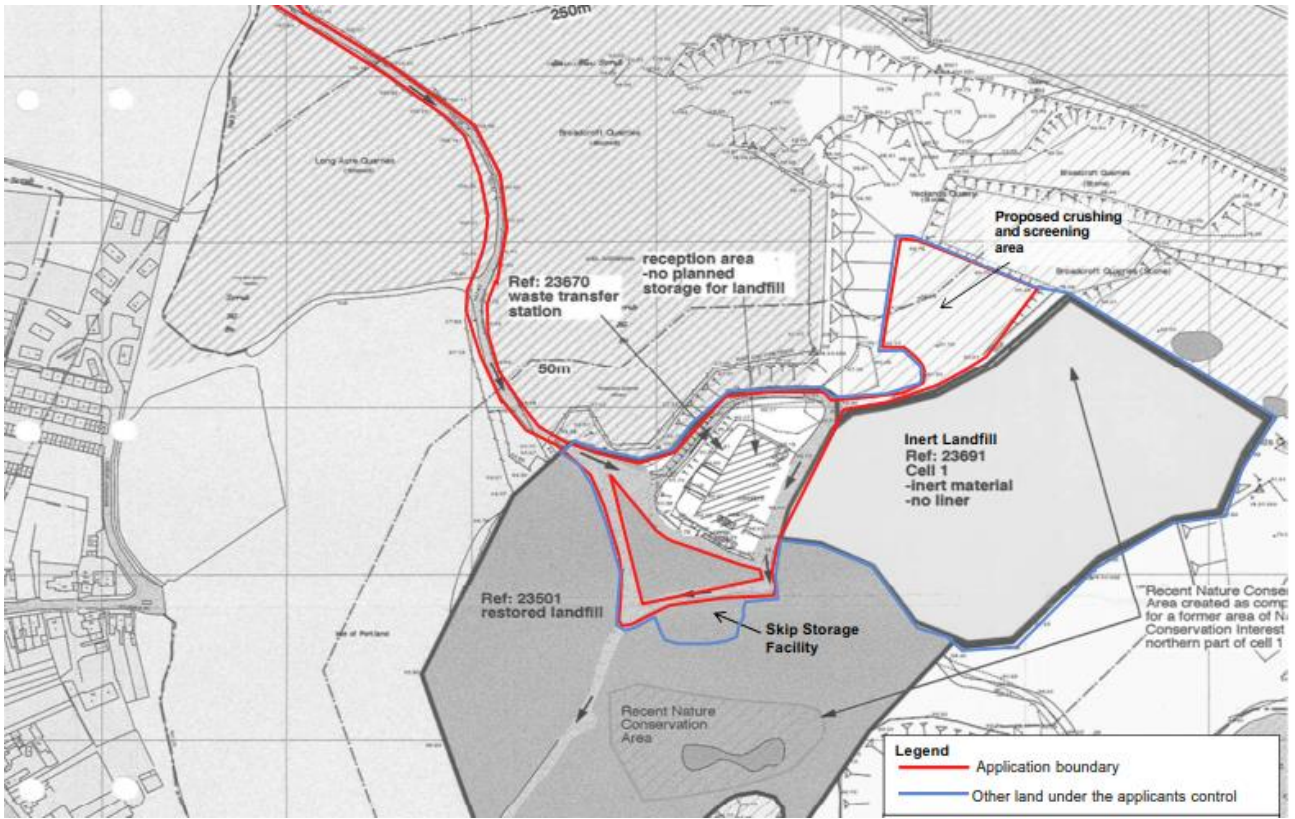
- ▶ Environment Agency Variation Notice Number EPR/UP3393FL/V003 to Permit Number EPR/UP3393FL dated 21/11/11

- ▶ Grant of planning – Application No. 11/00825/WASTE
- ▶ Grant of planning – Application No. WP/15/00812/DCC





**APPENDIX A – SITE LOCATION PLAN**





**APPENDIX B – PORTLAND STONE LTD – WASTE ACCEPTANCE PROCEDURE**

**PORTLAND STONE LTD.****BROADCROFT QUARRY – PROPOSED RECYCLING CENTRE****VARIATION OF PERMIT WML/23670****WASTE ACCEPTANCE PROCEDURE**

Inert granular materials that are suitable for crushing and screening that are currently being landfilled in the adjacent Broadcroft Quarry Landfill Site will be diverted to the Recycling Centre and stockpiled. When sufficient material has been stockpiled a Contract Crusher will be brought to site and in combination with a Power Screen owned by Portland Stone will be used to prepare products, mostly Type 1, 6F4 and 6F5.

In addition whole loads of bituminous macadam (non tar based) will be accepted at the site for processing and for haul road repairs.

Mixed loads will not be accepted. The facility will operate under a WRAP Protocol, which will be prepared within six months of the opening of the facility, when quantities, material types, stockpile locations and operational procedures have been refined, so that the Protocol can accurately document the site operations.

1 Two categories of material will be accepted at the site:

1. Inert material that does not need testing
2. Inert material that requires testing to confirm compliance

Each category is described below.

2 Inert material types that can be accepted at the site without environmental testing, in accordance with the Landfill Directive are shown in Table 1, below. The list of acceptable wastes is in accordance with Appendix 2 of RGN No. EPR13 and Council Decision 2003/33/EC on waste acceptance.



Table 1. Category 1 Materials – No WAC Testing Required

<b>EWC Code</b>	<b>Description</b>
10 11 03	Waste glass-based fibrous materials (only without organic binders)
15 01 07	Glass packaging
17 01 01	Concrete*
17 01 02	Bricks*
17 01 03	Tiles and ceramics*
17 01 07	Mixtures of the above*
17 05 04	Soil & stones (not including topsoil or soil from potentially contaminated sources)
17 02 02	Glass
19 12 05	Glass
20 01 02	Glass (Separately collected glass only)
20 02 02	Soil & stones (only from garden and parks waste; excluding topsoil & peat
17 03 02	bituminous mixtures other than those mentioned in 17 03 01

\* - Selected construction & demolition waste – 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 construction & demolition waste from constructions polluted with inorganic or organic dangerous substances, e.g. because of production processes in the construction, soil pollution, storage and usage of pesticides or other dangerous substances, etc., unless it is made clear that the demolished construction was not significantly polluted.

No construction & demolition waste from constructions, treated, covered or painted with materials containing dangerous substances in significant amounts.

Other waste types (not shown in Table 1) that it is proposed can be accepted at the site, subject to the results of contamination testing are shown in Table 2, below, subject to the notes shown below.

Table 2. Category 2 Materials – Acceptable subject to results of WAC testing proving inert

<b>EWC Code</b>	<b>Description</b>
01 01 02	wastes from mineral non-metalliferous excavation
01 04 08	wastes from physical and chemical processing of non-metalliferous minerals
01 04 09	waste sand and clays
01 04 13	wastes from stone cutting and sawing other than those mentioned in 01 04 07
01 04 99	wastes not otherwise specified
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 13 14	waste concrete and concrete sludge
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19 03 05	stabilised wastes other than those mentioned in 19 03 04
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 08 02	waste from de-sanding
19 12 09	waste from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01

It is envisaged that 90% of the materials accepted to the Recycling Centre will be as listed in Table 1. The addition of materials shown in Table 2 is to ensure that the Centre is equipped to accommodate such materials from Clients should the need arise.



**APPENDIX C - PHOTOGRAPHIC RECORD PLATES 1-4**



**Plate 1: Crushing and Screening operation**



**Plate 2: Hardcore feed stockpile**





**Plate 3: Type 1/6F5 Stockpile**



**Plate 4: Hardcore feed at end of picking line conveyor**

**APPENDIX D – ENVIRONMENT AGENCY PERMIT**

ENVIRONMENT AGENCY VARIATION NOTICE NUMBER  
EPR/UP3393FL/V003 PERMIT NUMBER EPR/UP3393FL

DORSET COUNTY COUNCIL – GRANT OF PLANNING – 11/00825/WASTE

DORSET COUNTY COUNCIL – GRANT OF PLANNING – WP/15/00812/DCC



**APPENDIX E – LABORATORY TEST RESULTS CERTIFICATES**



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