THORNCLIFFE BUILDING SUPPLIES LTD.

STANDARD OPERATING PROCEDURE

Recycled Aggregate Production Protocol: Thorncliffe Building Supplies Ltd

Title	Aggregate Production Protocol
Procedure Number	APP-01

Revision	Description of Change	Author	Effective Date
0	Initial Release	AGS	July 2016

1.0 PURPOSE

The purpose of this document is to confirm that Thorncliffe Building Supplies ltd support the quality protocol produced by Waste and Resources Action Programme (WRAP).

This document describes the steps to be taken regarding the acceptance of inert waste for treatment to produce soil and aggregate. The Quality Protocol sets out end of waste criteria for the production and use of aggregates from inert waste.

If the criteria set out are met, the resulting outputs can be regarded as having been fully recovered and to have ceased to be waste.

2.0 SCOPE

To ensure compliance with all the requirements of a BS EN aggregates standard, appropriate to the use for which the aggregate is destined for at the time it is produced, to comply with the Quality Protocol.

The Environmental Management System (EMS) for the site describes how the site will meet the requirements of the Environmental Permit and how waste is inspected and segregated. This current document covers all site operations at Rhuddlan Road, Abergele (EPR JP3894FM) and Ewloe Barns Alltami, Mold (EPR BP3797SZ).

This document relates to the production of aggregate from suitable inert wastes which are processed by crushing and screening on site.

3.0 RESPONSIBLE PERSONS

- Site manager
- Technically Competent Manager
- Weighbridge Clerk
- Site operators

4.0 PROCEDURE

AGGREGATE PRODUCTION PROTOCOL.

The procedure for accepting and utilising inert waste is as follows:

Waste Acceptance

- Only areas permitted or registered under the Environmental Permitting Regulations will accept inert waste.
- Incoming waste will be weighed and the transaction entered into the company electronic system. The weighbridge clerk shall weigh the vehicle and direct it to the aggregate recycling area
- All suitable waste will be delivered to the recycling area for storage and processing in accordance with the WRAP Factory Protocol (see below).
- Empty vehicles will be weighed and a conveyance note issued before leaving site.

This delivery documentation must include:

- date of supply;
- customer's name and contact details;
- product description to aggregates standard and customer specification;
- the name and contact details of the producer, including the address of the site of production;
- quantity supplied by weight/volume; and
- for export, a statement that the product was produced in compliance with this Quality Protocol

Waste Acceptance Criteria

- All waste shall have a relevant Waste Transfer Note (which can have been submitted to the office at an earlier date)
- Inert waste accepted at the site consists of construction and demolition industry wastes as outlined below in Table 1. Customers will identify the waste they import using a Waste Transfer Note with all sections completed.
- Trained staff must check the waste transfer notes for accuracy of European Waste Catalogue (EWC) code and that the delivered material complies.
- Trained staff who are competent in the evaluation and identification of materials shall have the authority to reject / quarantine the loads.
- Results of tests that are required to meet customer's specifications will be forwarded upon request.
- If further tests are required for assessment of suitability for a particular end use, then the results shall also be retained.
- Delivery documentation for exported aggregate shall state that the product was produced under a quality protocol conforming to the specifications in this document.
- Processing will be restricted to wastes which fall within the waste codes outlined in Appendix C of the WRAP quality protocol for aggregates from inert waste, presented below.

Table 1. Wastes able to be processed.

Type and Exclusions	Waste Code
Waste gravel and crushed rocks other than those mentioned in 01 04 07 May include excavation from mineral workings	01 04 08
Waste sand and clays Waste sand only. Must not include contaminated sand.	01 04 09
Waste glass based fibrous materials Allowed only if: Wastes without organic binders	10 11 03
Glass packaging	15 01 07
Concrete Must not include concrete slurry	17 01 01
Bricks	17 01 02
Tiles and Ceramics	17 01 03
Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	17 01 07
Glass Must not include fibreglass or glass fibre.	17 02 02
Bituminous mixtures other than those mentioned in 17 03 01 Allowed only if: bituminous mixtures from the repair and refurbishment of the asphalt layers of roads and other paved areas (excluding bituminous mixtures containing coal tar and classified as waste code 17 03 01) Must not include coal tar or tarred products Must not include freshly mixed bituminous mixtures	17 03 02

Method Statement for Production

The location of the operational processing and storage areas are shown on Drawing No. 012/TBS/2013 within the working plan.

Inspection of feed material:

- Competent staff must carry out all operations
- Operators must be competent in the evaluation and identification of and have authorisation to reject unsuitable material. Manufacturing plant maintenance logs (crushing and screening) must be kept.

Material processing:

- Incidental quantities of inert physical contaminants (such as soils, peat, clays, silts, wood, plastics, rubber, metal) may be present with the input material but must be removed during the processing of the waste to comply with the constituent requirements of relevant aggregates standards.
- Mixed inert materials are screened before crushing -20mm screened soil
- Material from the stockpile larger than 20mm is passed for crushed through a powerscreen jaw crusher
- The crushed material will be screened to produce aggregates to the required specifications as appropriate

- Oversize material will be recirculated through the crushing process
- Screen mesh conditions shall be monitored to ensure compliance to intended specifications
- Maintenance logs and training records must be kept
- Regular calibration of any metering equipment.
- The plant feed rate should be set to the method statement settings.
- The table below outlines the standards, specifications and quality controls for the use of aggregates in accordance with the approved industry standards:

Product and Use	Standard	Specification	Quality Controls
1 Unbound recycled aggregate: pipe bedding drainage	BS EN 13242: Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction	Highways Agency Specification for Highway Works (SHW): Series 500 Highway Authorities and Utilities Committee (HAUC): Specification for the reinstatement of openings in highways (SROH)	BS EN 13242: Level 4 Attestation Evaluation of Conformity to BS EN 16236* SHW: Quality Control procedures in accordance with the Quality Protocol for the production of aggregates from inert waste SROH: Comp
2 Unbound recycled aggregate: Granular fill General fill Capping	BS EN 13242: Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction	Highways Agency Specification for Highway Works: Series 600 HAUC: Specification for the reinstatement of openings in highways BS EN 13285: Unbound mixtures: Specifications	BS EN 13242: Level 4 Attestation Evaluation of Conformity to BS EN 16236* SHW: Quality Control procedures in accordance with the Quality Protocol for the production of aggregates from inert waste SROH: Compliance with SHW
3 Unbound recycled aggregate: sub base	BS EN 13242: Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction	Highways Agency Specification for Highway Works: Series 800 HAUC: Specification for the reinstatement of openings in highways BS EN 13285: Unbound mixtures: Specifications	BS EN 13242: Level 4 Attestation Evaluation of Conformity to BS EN 16236* SHW: Quality Control procedures in accordance with the Quality Protocol for the production of aggregates from inert waste SROH: Compliance with SHW

*BS EN 16236 Evaluation of conformity of aggregates – Initial Type Testing and Factory Production Control.

Quality Log:

- Material manufacture records must be kept; this includes maintenance and calibration records of the processing plant.
- Documentation should be kept for a period of 20 years and made available to customers on request.

Finished material stockpile control:

- Ensure materials are stored correctly, in dedicated areas.
- Recycled products shall be stocked separately, by production run, and quarantined from sale until conformity confirmed by testing.

Daily Production Record:

A record must be kept to cover the material production (production day), this is linked to the testing regime. These records should be made available to relevant parties as required.

Inspection, Testing and Frequency

- The sampling should be carried out by competent staff and testing must be carried out by an accredited laboratory.
- All material sampling must be carried out to the prescribed standard.
- Testing is carried out three monthly based on the long term experience of the process.

RECORDS

Historical records of test results must be kept and/or made available to demonstrate the product is in compliance with the relevant aggregate standards and specifications.

DELIVERY

Delivery documentation will state the aggregate was produced under a quality protocol as specified above.