

# Method Statement and Factory Control System for the Production of 6f2 from Demolition of Buildings

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## Section 1

### INTRODUCTION

GTB Demolition Co. Ltd has a crushing transfer station in Liverpool that operates a mobile crusher. Inert hard-core, stone and brick from demolition contracts are brought to the transfer station, which when crushed can be sold as a product.

Upon notification to the regulating council (Liverpool City Council) the crusher may be moved from the transfer station to demolition sites, where the local council must be notified of crushing activities and a T7 permit must be obtained for the area where the crushing is taking place

A quality control is required for the production of aggregates from inert materials, produced from demolition, in order to ensure customer satisfaction and help GTB Demolition Co. Ltd demonstrate that our waste has been fully recovered.

This quality control system helps us to comply with the WRAP Quality Protocol for the production of aggregates from inert waste.

## Section 2

### MANAGEMENT & OPERATIONAL STAFF

Brian Treble & George Treble	Managing Directors
Richard Fielding	Quality & Environmental Consultant
Steven Treble	Site Manager
John McCormack & Lee Treble	Supervisors, Plant & Crusher Operatives
Up to 10 Operatives	General Site Operatives

The management team have appointed Steven Treble responsibility for looking after the Quality System.

Managers & supervisors are to be supplied with a copy of the Method Statement of Production (**Section 4.1**) and talked through it until happy with what is expected of them. This information is then fed down the line to the site operatives who will be operating the system

## Section 3

### RESOURCES & PERMITTING

#### 3.1 Transfer Station

The transfer station is at 14 Grundy Street, Liverpool L5 9SG.

The site is Permitted (Permit No. EP/V/05/09) and the company has a waste carriers licence CBDU86047

<b>Suppliers</b>	<ul style="list-style-type: none"> <li>• GTB Demolition Co. Ltd Hard-core from Demolition Sites</li> <li>• Cemex over spill from Liverpool Plant</li> <li>• Licensed waste carriers hard-core that conforms with any waste codes from <b>Section 4.3</b></li> </ul>
<b>Plant &amp; Equipment</b>	<ul style="list-style-type: none"> <li>• 13ton 360° Hitachi Excavator</li> <li>• 22ton 360° Doosan Excavator</li> <li>• Sandvik QJ241 Mobile Crusher</li> <li>• Roll-On Roll-off skips</li> </ul>
<b>Storage Areas</b>	<ul style="list-style-type: none"> <li>• All plant is stored in railway arches adjacent to the transfer</li> <li>• All un-processed hard-core and crushed hard-core are clearly separated at the transfer station.</li> <li>• All staff are made aware of segregation areas prior to working at the transfer station and understand the type of materials that are allowed to be tipped</li> </ul>

#### 3.2 Demolition Sites

Various Sites across the UK

<b>Suppliers</b>	<ul style="list-style-type: none"> <li>• Hard-core from buildings that have been demolished by GTB Demolition Co. Ltd</li> <li>• Inert waste from site that conforms with any waste codes from <b>Section 4.3</b></li> </ul>
<b>Plant &amp; Equipment</b>	<ul style="list-style-type: none"> <li>• 13ton 360° Hitachi Excavator</li> <li>• 22ton 360° Doosan Excavator</li> <li>• Sandvik QJ241 Mobile Crusher</li> <li>• Roll-On Roll-off skips</li> <li>• Motofog Dust Suppression Unite</li> </ul>
<b>Storage Areas</b>	<ul style="list-style-type: none"> <li>• All plant is stored in designated areas</li> <li>• Crushing areas are segregated from demolition areas and all other site work areas</li> <li>• All un-processed hard-core and crushed hard-core are clearly segregated on site and operatives are made aware of these areas</li> <li>• All plant and general operatives are made aware of the segregation of crushing, demolition, general work areas prior to working on site</li> </ul>

All plant and equipment is serviced & tested by an eternal maintenance team on a pre-planned maintenance schedule.

## Section 4

### METHOD STATEMENT & QUALITY CONTROL

#### **4.1 Method**

- Crushing Plant & Work Area to be barriered off from all other work areas
- Crushing plant to be stood on firm level ground
- Dust Suppression unit to be in place at end of the production belt
- Hard-core to be stockpiled and any larger pieces to be broken up by breaker before being crushed
- Excavator operator to steadily load hard-core into the hopper of the crusher
- Crusher operator to monitor crusher whilst in use and be in visual contact with excavator operator at all times
- Build-up of crushed material to be cleared from end of the belt at regular intervals by excavator
- If there are any issues with the crusher, operator is to communicate with excavator operator before performing any maintenance on machine
- Build-up of metal from magnet belt to be cleared at regular intervals by excavator

#### **4.2 Quality Control**

All staff are made familiar with the products that can be used to produce 6f2, the process of making sure that the correct materials are crushed are as follows

##### **Demolition of Buildings**

- All buildings are stripped of all wood, plastics, carpets etc. prior to demolition.
- During demolition all demolished buildings are visually checked by operatives for non-conforming materials, which are removed.
- All the hard-core from demolition is then pulverised or broken up by excavators in order to reduce its size and remove as much metal as possible prior to crushing.
- Hard-core is then stockpiled in preparation for crushing and any further non-conforming are removed
- Once crushed the aggregate is visually inspected again for any nonconforming materials

##### **Deliveries**

- When arriving at the transfer station or site the details of the transfer note are checked by the site operative and the skip is visually inspected before tipping occurs.
- The skip is taken to a segregated area of site
- The skip is then tipped and the load is further inspected for compliance to the licence.
- A waste transfer note is produced for the load if acceptable.
- Unacceptable loads are removed from site by the supplier
- The hard-core is then stockpiled ready for crushing
- Once crushed the aggregate is visually inspected again for any nonconforming materials
- All waste transfer notes are kept for a minimum of 2 years.

#### 4.3 Materials

The materials segregated and used to produce a recycled aggregate can include the following waste types.

##### European Waste Catalogue Code

10 11 03	Waste glass based fibrous materials
15 01 07	Glass packaging
17 01 01	Concrete including solid dewatered concrete process waste
17 01 02	Bricks
17 01 03	Tiles and ceramics
17 01 07	Mixtures of concrete, bricks, tiles and ceramics
17 02 02	Glass
17 05 04	Soils and stones including gravel
17 05 08	Crushed rock, sand, clay, road base and planings, and track ballast
19 12 05	Glass
20 01 02	Glass
20 02 02	Soils and stones restricted to parks waste

#### 4.4 Testing

The test procedures are appropriate to the end use of the recycled aggregates. The 6f2 produced is for the construction market sector and generally used for bulk fill to build up levels, as a temporary hard standing, for firming up soft ground, temporary roadways or for use as a layer below Type 1.

##### Minimum Testing Requirements

End Use	Standard and Specifications	Test	BS Test Reference	Minimum test Frequency
All end uses	BS EN 13242 BS EN 12620	Particle size Distribution	EN 933-1	1 per week
		Particle density	EN 1097-6	1 per month
		Resistance to fragmentation (LA)	EN 1097-2	2 per year
		Classification of constituents	EN 933-11	1 per month
		Water soluble sulfate	EN 1744-1	1 per month

## Section 5

### FACTORY PRODUCTION CONTROL

The Factory Production Control is a system put in place to monitor the production and to ensure that the required product characteristics are achieved and maintained.

The recycled aggregate produced by GTB Demolition Co. Ltd is a Crush & Run, 6f2 product. It isn't sold as a graded or frost tested product just as a material used for temporary haul roads, site compounds, fill material and/or capping layers. The main concern for sale is that the material is inert and free from contamination such as wood, plastic, paper etc.

The material stockpiled has already been through a pre-sorting process as described in **Section 4** it is mainly uncrushed clean inert material. The material is loaded into the crusher using a 360 excavator. Any metals are removed with a magnet into a skip and any foreign objects are hand picked out of the heap. The heap is then moved to a further stockpile so as the material can be hand picked again. Once the final polishing of the aggregate is complete the material is ready for use as a WRAP Protocol approved material.

The finished product is visually inspected at least twice a day during production. If non- conforming items are found within the product then the material is spread and re-picked until visually clean again. If it is not possible to remove contaminants to a satisfactory level the material will be quarantined and removed from the production process.

All 6f2 sold as WRAP protocol approved aggregate is marked on the delivery/collection tickets. All delivery tickets are kept for a minimum of 2 years. For 6f2 produced on site from demolished buildings and left on site for end use GTB Demolition Co. Ltd will produce a declaration for the conformance of the Aggregate, incorporating test results.

