



Material Specification and Methodology for In-Fill
Engineering Works
Westgate Phase 2, Western Approach

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1.0 INTRODUCTION

The engineering works may only be undertaken using suitable material (discussed below). This material will be sourced from off-site suppliers.

2.0 GENERAL DESCRIPTION OF WORKS

The Westgate development has been divided into phases, with the initial development 'Phase One', completed under bespoke Permit ref EPR/BB3206HB, which consisted of 2 plots. Phase 2 of the development consists of 8 plots, varying in size from 14,709m² to 127,169m² with internal estate roads, transport yards, parking and landscaping. Phase 3 will cover the remaining 8 plots.

The original ground levels are shown on the Existing Levels Survey, drawing ref 2928/772/03. The profiles are shown in the cross-section plan drawing No. 2928/772/05. Due to the existing ground conditions and the high-water table an acceptable agreed level of 7.1 AOD has been used for the design of the construction platform beneath the buildings. Approximately 668,919m³ of material is required to construct the site. The finished level beneath the Commercial units is 7.1 AOD.

3.0 OUTLINE SPECIFICATION

All works should be implemented in general accordance with BS 6031:2009 'Code of Practice for Earthworks'

Suitable Materials, Placement and Compaction Suitable materials must meet the requirements of the following fill materials classified in the Specification for Highway Works (2005):

- General Granular Fill (Class 1a – 1c);
- General Cohesive Fill (Class 2a – 2e);
- Landscape Fill (Class 4);
- Selected Granular Fill (Class 6F2, 6F5, 6H).

These classes cover a full grading range. Oversize material (max 250mm diameter) will be permitted within the fill so long as they do not comprise more than 20% of the total by weight.

Fills must be placed at a suitable moisture content, in layers of maximum 500mm thickness and each layer compacted with a minimum 4-passes of a 12-tonne tracked excavator, or suitable vibratory roller, before the next layer is placed.

This material should be compacted to a minimum of 90% maximum dry density, with a minimum undrained strength of remoulded material 50kN/m².

No frozen fill is to be placed.

4.0 METHODOLOGY

4.1 Waste Reception and Handling Procedures

Guidance will be given by the site operator to all employees, sub-contractors, other waste

carriers and customers regarding the waste types which are acceptable, i.e. clays, subsoil's and hardcore.

For the protection of the operator and site supervisor any loads containing soil from development near an industrial site/area must be accompanied by written documentation to demonstrate that the soil is not contaminated, i.e.

- A site investigation report, including borehole logs (if available).
- Waste analyses (if available), including leachability tests.
- Name and address of the site from which the waste was excavated/produced.
- Detailed waste description, including EWC code and transfer note.

The operator reserves the right to refuse such loads and contact the Environment Agency where necessary (prior to acceptance of the loads) to ensure that the load is acceptable. All incoming vehicles are required to report to the operator's representative upon arrival at the site. The details of the load will be recorded and the duty of care note/company documentation will be further checked by the operator to ensure that the load is acceptable at the site, including a visual check prior to the vehicle proceeding to the tipping area. Any deviation from the procedures or problems with any loads will result in tipping facilities being suspended for the offending company. Loads which are not acceptable within the above terms will be rejected. If the load is acceptable the driver will be instructed to deposit it in the current working area. If the load is unacceptable after visual inspection it will be rejected and dismissed from the site.

4.2 Material Testing

4.2.1 Chemical analysis

All permitted waste will be accompanied by waste analysis including leachability results where available prior to deposit on site.

4.2.2 Classification testing

Classification testing will be carried out for each source of material in accordance with BS1377. This will enable the engineer to refer to the Highways 600 Compaction Requirements table 6/1 (11/05) for the given material class.

4.2.3 CBR testing (California Bearing Ratio of soil for road design)

CBR testing will be conducted by the client's engineer. The number and frequency will be at the Engineers direction.

All testing results will be collated and available in the Project file.

4.3 Record keeping

The following details will be recorded for every load deposited at the site:

- The date and time of delivery.
- The name and address of the waste producer.
- The type and quantity of waste (in tonnes or cubic meters).
- The carrier's name/driver name

- Vehicle registration No.
- Signature of person inspecting the waste

A summary of the quantity of waste deposited at the site will be retained for inspection by the LPA and EA as required and for submission of the quarterly environmental returns.