advant ENGINEERS

YEW TREE ROAD
BIRCHENCLIFFE
HUDDERSFIELD
HD2 2FY

CONSTRUCTION PHASE TEMPORARY DRAINAGE PLAN

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Issue Sheet.

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The report is based on the information that has been acquired and / or made available to Advant Engineers via the various searches and consultations undertaken as part of the Drainage Strategy. In some cases, anecdotal information has been relied upon, where documented evidence has been lacking.

The conclusions drawn in the above report are considered correct although any subsequent additional information may allow refinement of the conclusions.

All work carried out in preparing this report has utilised and is based upon Advant Engineers current professional knowledge and understanding of current UK standards and codes, technology and legislation. Changes in this legislation and guidance may occur at any time in the future and cause any conclusions to become inappropriate or incorrect.

This report has been prepared using information contained in maps and documents prepared by others. Advant Engineers can accept no responsibility for the accuracy of such information.

Table of Contents

1. Introduction

1.1. Advant Engineers Ltd has been commissioned by North Park Homes to undertake the drainage design at the scheme off Yew Tree Road in Birchencliffe.

1.2. This report is to outline the temporary drainage scheme for the site and how surface water runoff can be controlled, treated and managed until such a point that the permanent drainage has been installed and the outfall connected to the public sewer.

1.3. This report should be read in conjunction with drawing 22046-112 and 22046-113 and associated architectural and engineering drawings.

2. Existing Site

2.1. The site currently is a greenfield piece of land with no existing development and located on the junction of Yew Tree Road and Burn Road with access from Yew Tree Road, the overall site area is 9,425m² (0.942ha). (See Appendix for Impermeable area plan).

2.2. This site can be located at the following co-ordinates 411990E, 419000N and the nearest postcode is HD2 2FY and can be seen on the below extract.

2.3. Based on the soakaway tests within the site investigation the ground is not permeable and therefore we expect very little in the terms of infiltration of the surface water.

3. Construction Phase Temporary Drainage

3.1. Once the site has been stripped then the exposed ground material will allow surface water to run over the exposed surface.

3.2. We have assessed the topographical survey of the site to determine the flow paths of the surface water runoff, this is shown on drawing 22046-112. As demonstrated on this drawing all surface water flows will migrate from the north-west to the south-east of the site where the natural low point occurs, the site gradient is of a fairly steady and consistent nature with no intermediate high or low points that would capture or impeded the flow.

3.3. A series of measures are therefore required to manage, treat and store this surface water in rainfall events, we have therefore proposed a series of silt fences across the site, these should be erected across the full area of the site and removed as development progresses. The site fences will slow down the flows as they water passes through each one as well as remove any silt and debris caught up in the flows, these fences must be cleaned out after every rainfall event.

3.4. In addition to the site fences we need to be above to capture and store the 1 in 1 year 6 hour rainfall event on site, and prevent it flowing offsite, this has been achieved by creating 2 bunded areas that will capture the flows and prevent them leaving site, this is as shown on drawing 224046-112. Once every rainfall event has passed the ponds should be pumped to the water course, I sump should dug in the centre of the pond that a submersible pump can be dropped into as and when it is needed.

3.5. Once the permanent drainage has been installed then the road gullies will pick up the rainfall from the road surface, however prior to the completion of the site then construction traffic will still utilise the roads in and out of the site, therefore management and maintenance of the gullies and attenuation tank should be routinely maintained throughout the construction phase, this should include the vacuuming of the sumps with in the gullies and jet vacuuming the pipes to keep them clear of sediment and silt.

4. Temporary Drainage Management Plan

4.1. Therefore, a schedule of inspections and maintenance needs to be undertaken until the development has been completed and all construction work has ceased, we have scheduled the tasks in the table below.

DRAINAGE ELEMENT	TASK	FREQUENCY
SILT FENCE	Clean out all debris and silt	After every rainfall event
SILT FENCE	Inspect posts on fence to ensure structural stability	Once a week
SILT FENCE	Inspect posts on fence to ensure structural stability	After every rainfall event
BUNDS	Pump out water	After every rainfall event
ROAD GULLIES	Vacuuming clean the sumps in each gully to prevent silt entering the public sewer	Once a week

5. Temporary Drainage Exceedance Management Plan

5.1. Consideration also has to be given to rainfall exceedance events, this is the eventuality that the bunds fill up and water will over top, in this instance the it will flow down Burn Road and enter the watercourse, for these instance we have included a silt fence along the boundary to as to minimise the amount of silt that might make its way into the watercourse.

5.2. The water will follow the fall of Burn Road using it as a channel before flowing into the watercourse, there are no properties along this path that would be at risk of flooding, and this of course is only during the construction phase of the scheme.

APPENDIX

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