



CONSULTING ENGINEERS

**CIVIL • STRUCTURAL
GEOTECHNICAL • ENVIRONMENTAL**

DRAINAGE MANAGEMENT AND MAINTENANCE PLAN

PROJECT

**BROWNHILL LEARNING COMMUNITY
SUTHERLAND ROAD, HEYWOOD**

CLIENT

ROCHDALE BOROUGH COUNCIL

PROJECT NO.

23062

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ROBERT E FRY & ASSOCIATES LTD.

**45, Bridgeman Terrace
Wigan, WN1 1TT**

Telephone: 01942 826020

Fax: 01942 230816

Email: mail@refa.co.uk

Company Registration No. 2436911



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Appendix 1

Drawing No. 23062/100/1 - Proposed Surface Water Drainage Design

Brownhill Learning Community, Sutherland Road, Heywood

Drainage Management & Maintenance Plan

1.0 Introduction

We are instructed by Rochdale Borough Council to prepare a management and maintenance plan for the proposed extension works at Brownhill Learning Community, Sutherland Road, Heywood OL12 0PZ.

The purpose of this management and maintenance plan is to demonstrate how the sustainable drainage system will be managed and maintained during the lifetime of the proposed works.

2.0 Site Details

The proposed works are to the north and south of the existing site and are located to the east of Heights Lane. The site extends to an area of approximately 1.3 hectares and the center of the site is situated at National Grid Reference SD 89334 14190.

The proposals consist of two separate extensions of approximately 0.385 hectares & 0.098 hectares and additional hard standing areas to the north and south.

The existing topography of the site slopes from north to south at an average gradient of 1 in 14.

The closest existing drainage networks are a 150mm diameter combined sewer which is a United Utilities asset located east to southeast of the site.

3.0 Overview of Proposed Drainage

The development is drained by a separate drainage system for the foul and surface water drainage. The drainage proposals are attached (Appendix 1).

The drainage design has been developed to avoid significant changes to the existing drainage system. The cellular storage to be installed is to replace the existing along with a new hydrobrake manhole prior to the run to the existing combined water manhole 029 as indicated on the drainage proposal plan.

Discharge rate utilised (15l/s) is that currently shown on the existing / historic drainage drawing **2004956 T-04**

The network consists of the following five elements existing and proposed:

- Private drainage
- Main gravity pipe network
- Cellular Storage
- Surface water flow control

The additional private drainage is designed in accordance with current Building Regulations and the responsibility for the management and maintenance of this component will be down to Rochdale Borough Council.

4.0 Maintenance Regime

The proposed drainage system serving the development has both private and public drainage elements. Rochdale Borough Council will be responsible for the piped network and associated manholes including the control manholes and outfall pipework.

Following construction there will be a 12-month defects/maintenance period during which the principal contractor will retain responsibility.

The flow control device is designed to be virtually maintenance free and should not require additional maintenance activity. The flow control unit is fitted with a bypass door that will allow drain down should the control become blocked.

5.0 Provision for Ongoing Maintenance

The underground drainage network serving Brownhills Learning Community will be maintained by Rochdale Borough Council following the 12-month post construction maintenance period.

6.0 Conclusion

The detailed drainage design adopted by REFA is based upon the existing drainage network at the site and all information received relevant to that network.

Where possible REFA have replicated the current drainage scenario and utilised existing discharge rates. The additional surface area added to the existing drainage network makes no changes to the existing 15l/s discharge rate and the cellular storage caters for all events up to and including 1 in 100 plus 45% climate change.

It is REFA's understanding that all of the above will be maintained by Rochdale Borough Council.

APPENDIX 1

