

Drainage Assessment

Aberdeen Football Stadium
Kingsford,
Aberdeenshire




February 2017

Issue 05



FAIRHURST

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This document has been prepared in accordance with procedure OP/P02 of the *Fairhurst Quality and Environmental Management System*

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Drainage Assessment

This drainage assessment is prepared in accordance with the guidance given in the following documents:-

- Drainage Assessment – A guide for Scotland, produced by SEPA on behalf of the Sustainable Urban Drainage Scottish Working Party (SUDSWP), May 2005.
- Planning Advice Note (PAN) 61: Planning and Sustainable Urban Drainage Systems, issued by the Scottish Executive Development Department, July 2001.
- The SUDS Manual – (CIRIA C753).
- SEPA's Regulatory Method (WAT-RM-08) Sustainable Urban Drainage Systems.
- SUDS for Roads.
- Sewers for Scotland, Third Edition, Published April 2015.

The Development Proposal

The client, Aberdeen Football Club, proposes to develop a new football stadium with associated training facilities and parking.

The 25.21 Ha site is located at OS Ref NJ 8449806486, and is bounded to the north, east & west by existing Greenfield farmland and to the south by the existing A944 dual Carriageway. The Brodaich Burn flows from north to south along the west boundary of the site.

The Development will be constructed in two phases as follows:

Phase 1:

- Sports Pavilion building
- Groundsman's Compound building
- Uncovered synthetic pitches x5
- Misc. training areas.
- Car Parks No. 3 & 4

Phase 2:

- Main Stadium (20,000 person Capacity)
- Coach Parking
- Car Parks 1 & 2

For Details of the Conceptual Drainage Layout and Site Location Plan, refer to Appendix A - Drawing No's. 111644/2000E & 9500C.

Existing Drainage

Rainfall currently falls on the site and percolates into the ground.

There is no existing formal drainage within the site. Any existing field drains etc. are to be removed as part of the development.

There is a ditch along the north boundary of the site, which flows west to the Brodaich Burn. The Brodaich Burn flows north to south along the west boundary of the site.

There are public foul sewers in the land to the west of the site. These drain to a Scottish Water waste water pumping station. (Westhill No. 1) The Scottish Water pumping station pumps via a rising main to the North of the site.

Foul Drainage

Ph. 1 Works

A pumping station will be located adjacent to the groundsman's compound; this will pump effluent from the compound and sports pavilion to a new gravity foul sewer to the west of the Brodaich burn. The new sewer will be designed in accordance with Sewers for Scotland 3rd Edition, and will discharge to the existing Scottish Water sewer at an agreed point.

Ph. 2 Works

The rising main downstream of the sports pavilion will be removed. The rising main will terminate at a break pressure chamber adjacent to the sports pavilion. This will feed into a new gravity system, which will discharge to a new pumping station, dealing with flows from the whole site. The pumping station will be located at the West edge of the site, and will pump flows to the gravity sewer west of the Brodaich burn.

Foul effluent from the stadium will discharge to gravity drains around the building. These drains will tie into the run from the pavilion to the existing sewer.

For details of the Conceptual Drainage, Refer to Appendix A – Drawing No. 111644/2000E