Our Ref: J-2938-02 JP

5th October 2010

Cornwall County Planning
C/O Mr. D Burley
Walker Developments
Scotland Road
Hendra Croft
Newquay
TR8 5QR

Dear Sirs,

Re: Proposed Re-Location of Hayle Rugby Club to Carwin Rise
Foul Drainage Statement

This foul water drainage statement is in support of the planning application for the proposed relocation of Hayle Rugby Club. A copy of the development layout including schematic layouts of the proposed foul and surface water drainage systems is enclosed for reference.

Predicted Foul Water Loadings

Due to the nature of the facilities it is likely that foul water loadings shall vary considerably during the week as well as seasonally. To account for this variation, the peak flow rates likely to be generated from the development shall be considered.

It is likely that peak foul water loadings would arise during a rugby fixture at the weekend. Below is a breakdown of the maximum number of users likely to use the facilities at such a time.

- 90 players and coaches and officials (4 teams, 2 home, 2 away)
- 10 staff
- 150 spectators

Total = 250 people

Reference to the British Water Code of Practice: Flows and Loads 3, loads table indicates that the following allowances should be made per user of the facility:

	Flow l/p/d	BOD g/p/d	Ammonia g/p/d
Local community sports club, e.g. squash, rugby & football	40	25	6

Based on the estimated usage of the facility this gives the following estimated peak daily figures:

- Volume of effluent = 10000 litres
- BOD = 6250 grams
- Ammonia = 1500 grams

Foul Water Disposal Options

The foul water disposal options for the development have been considered in line with the Building Regulations Part H1 hierarchy.

UVDB empowered by Achilles
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The nearest public sewers to the development site are located some 450m to the south and south west of the site. The sewers to the south of the site are located in the region of Marsh Lane, while the sewers to the south west are located in the region of the B 3301 and Loggans Moor. An extract from the South West Water Information Mapping (SWWIM) website showing the location of the nearest sewers is enclosed for reference.

A connection to either of the public sewers identified is likely to be highly problematic due to the distance of the sewers from the site, the topography of the area, the presence of several watercourses and highways, as well as land ownership issues. For these reasons it is not considered that a connection to the mains foul water drainage system is feasible in this instance.

A private sewage disposal system within the development site is therefore the next most favourable option for the development.

Proposed Foul Water Drainage System

A flood risk assessment for the development has been carried out by H2OK Systems Ltd. This indicates that the subsoil at the site is of varying permeability, with very poor percolation rates measured in the lower parts of the site. It has been proposed that surface water from the site shall be disposed of to the stream just beyond the south west boundary of the site, via a swale and a pipe which runs along the north-west boundary.

Considering the permeability of the subsoil it is unlikely that disposing of partially treated effluent to the ground would be a feasible option. It is therefore proposed that foul water from the development shall be biologically treated in a private treatment plant, and disposed of to the stream.

In consideration of the surface water drainage infrastructure being installed at the site, it appears that discharging treated effluent into the surface water discharge pipe would be the most economic option. As dilution within the pipe cannot be guaranteed, it is recommended that treatment to a high standard is achieved prior to discharge. The discharge from such a system would be regulated by the Environment Agency using their Environmental Permitting system. The EA would need to be consulted on the treatment standards that they would require for such a system. This should be carried out prior to the detailed design of the treatment system.

Drawing 3001A enclosed illustrates the foul and surface water drainage systems proposed for the development.

I trust that the information provided in this foul water drainage statement is sufficient to progress the planning application for the development described, however should any further information be required then do not hesitate to contact me.

Yours faithfully,
For and on behalf of H2Ok Systems Ltd

James Pettifer
Engineer

Enc. Drawing 3001A –Proposed Foul and Surface Water Drainage Schemes
SWWIM Extract