

3 Drainage Field Design

3.1 Drainage Field Sizing

Based on guidance in the British Water Code of Practice document *Flows and Loads – 4 Sizing Criteria, Treatment Capacity for Sewage Treatment Systems* (2013) and the guidance document BS 6297:2007+A1:2008 - *Code of practice for the design and installation of drainage fields for use in wastewater treatment* (2008) a layout design has been formulated for a drainage field for the proposed development.

Expected water use at the development has been calculated using the Flows and Loads 4 guidance. Each development falls under the 'Residential Care Homes' category, as 'Residential old people/nursing'. The guidance states that the flow from such developments would be 350l/day per person.

The provision of loading from staff and visitors at a care home is not included for this category of development in Flows and Loads 4, however provision is made for other categories. A figure of 90l/day for full time staff and 45l/day for part-time staff is indicated for an industrial setting, and a figure of 90l/day is indicated for day staff at a school.

Based on all of the above the number of persons at the proposed care home for the purposes of the treated effluent drainage design has summarised in Table 3-1.

Table 3-1 Daily loading

Person type	Number	Number per full-day	Loading (l/person/day)	Total loading (m ³ /day)
Resident	40	40	350	14.00
Staff (full-time)	15	5	90	1.35
Staff (part-time)	10	2.5*	45	0.45
Visitor	n/a	1.5*	n/a	0.20**
Total				16.00

*Reduction applied to take into account time spent at care home per day for the purposes of the BS 6297:2007+A1:2008 effluent drainage field calculations

**Total allowance per day made for visitors