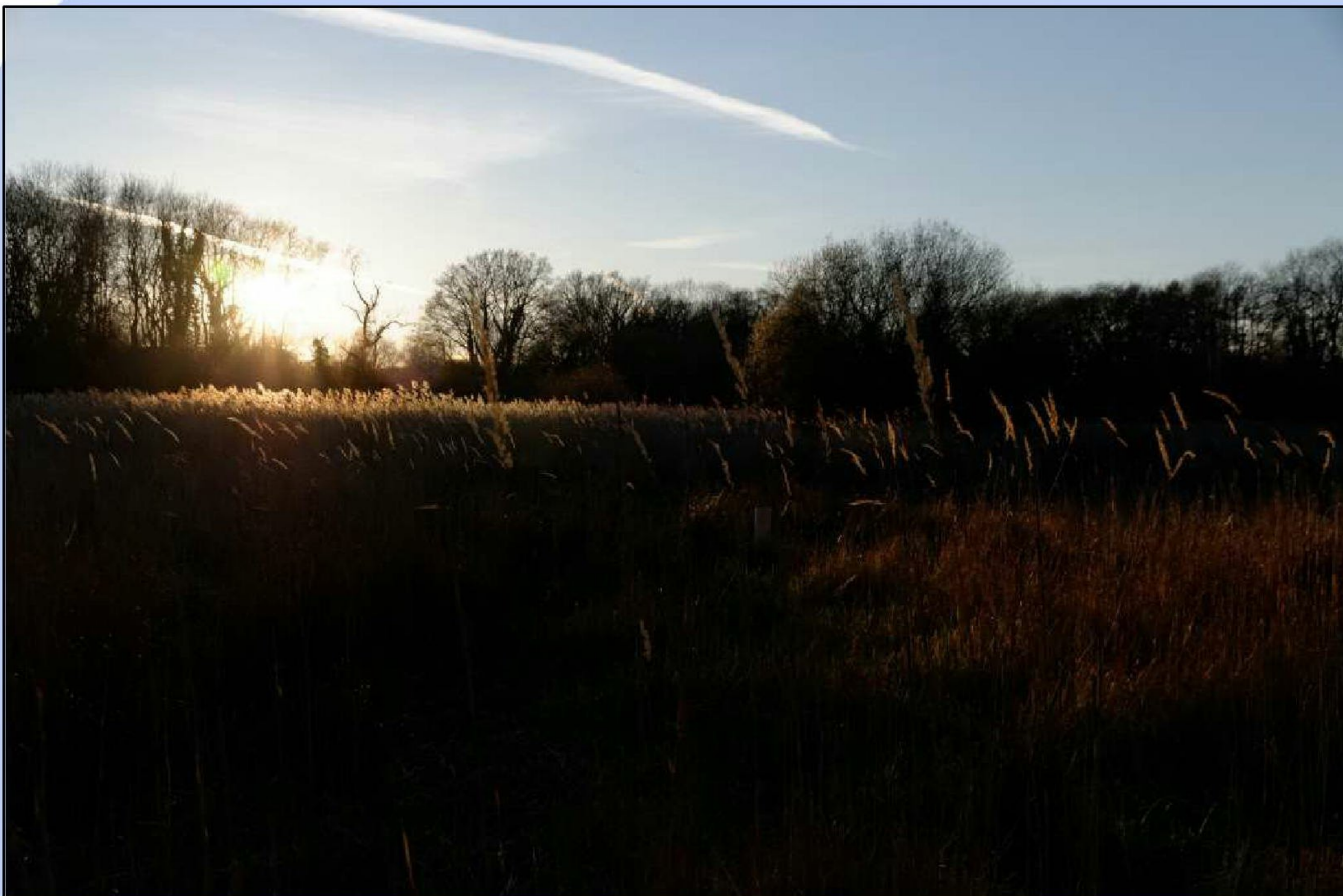




Devil's Kitchen – Q-park, Woodchester

Foul Water Drainage Technical Statement



May 2021



Report Details

Project Name: Devil's Kitchen Extension

Report Title: Foul Water Drainage Technical Statement

Project Number: 0916i

Client: Katherine Colby Hydrologists

Version: 3.0

Author: [REDACTED]

Signed off: [REDACTED]

Date: 21st May 2021

Status: Final, for issue



1 Project Background

- 1.1 Planning permission is being sought for the addition of a single storey extension at the site of Devil's Kitchen at Q-park, Bath Road, Woodchester, Stroud, Gloucestershire, GL5 5HT. The new area is to be used for food processing and is to be located over the existing concrete area at the north west of the site. The site is located at Ordnance Survey grid reference SO 84273 01950.
- 1.2 Milestone Environmental Ltd. has been appointed to prepare a drainage statement, for the disposal of **foul** water from the proposed development, incorporating the principles of Sustainable Drainage Systems (SuDS) and in accordance with Environment Agency guidance, The Building Regulations (Document H 2015) and The National Planning Policy Framework (NPPF).
- 1.3 The site is currently occupied by an existing industrial unit, an office building and areas of concrete hardstanding, tarmac, gravel and planting along much of the site boundaries.
- 1.4 The proposals consist of a single storey steel frame extension on a new large concrete pad measuring approximately 325 m².

2 Foul Water Drainage Strategy

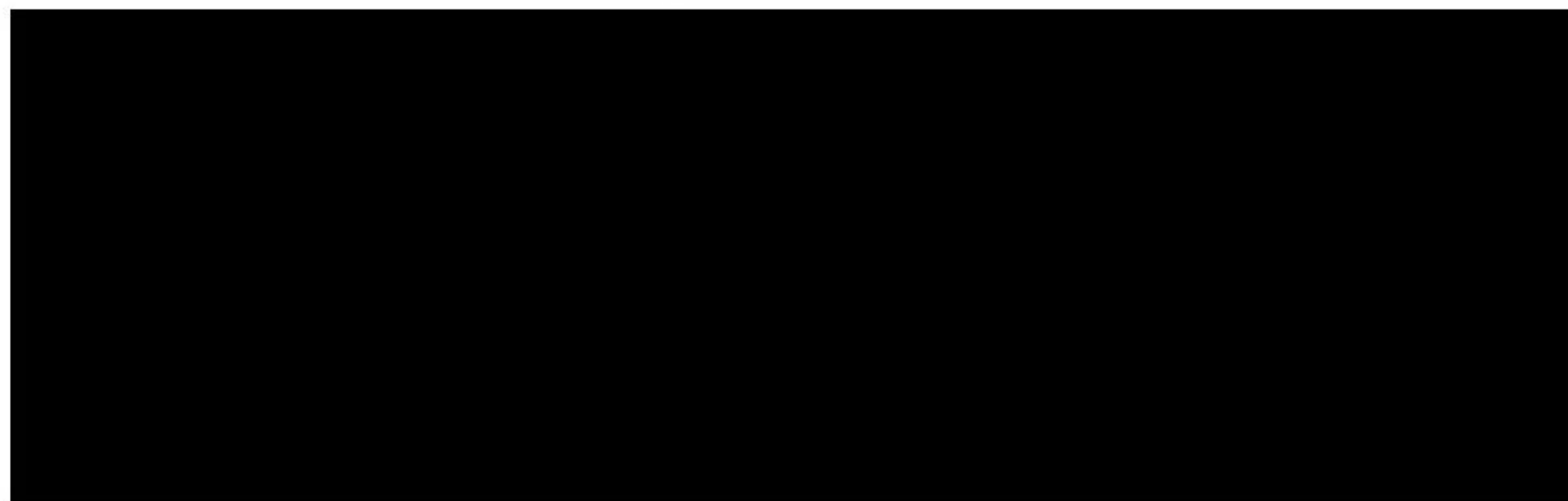
- 2.1 The foul water flows from the new unit will drain to the existing foul sewer network on site within the development boundary. There will be three internal industrial floor gullies to collect flows and carry them through the concrete pad and into the existing system. All flows will connect via gravity to the existing manhole before discharging to the Severn Trent foul sewer off site.
- 2.2 A foul water pumping station will not be required.
- 2.3 The foul flows from the extension are calculated below with reference to the following guidance:
 - *Homes & Communities Agency, 2015;*
 - *Employment Density Guide, 3rd Edition and the British Water. 2013; and*
 - *Flows and Loads – 4, Code of Practice.*
- 2.4 Employment Density
For the 'Light Industrial' category an employment density of 47 m² NIA is used. A single person per 47m² for the total 325 m² NIA of B1c 'Light Industry' use class, provides an occupancy figure of seven. However, it is anticipated that a maximum of 6 working staff will occupy this area on site.
- 2.5 Flows
For 'Full-time day staff' 90.0 l per person per day is used as a reference flow. Ultimately, with a peaking factor of 6, the total foul flows from the proposed full-time day staff is 0.04 l/s.

((6 people x 90 l/p/d x PF6) / 86400 = 0.04 l/s)
- 2.6 Taking into account the maximum flow rates from the tray washers on the premises, the predicted total peak foul sewer outflow discharge from the extension unit is circa **0.06 l/s**.
- 2.7 The foul network on-site will remain private and will not be offered for adoption under a Section 104 agreement of the Water Industry Act 1991.



- 2.8 An Section 106 agreement will be sort for the indirect connection to the Severn Trent Sewer.
- 2.9 Severn Trent Water are currently being consulted with to confirm capacity at the proposed point of connection to the existing network. If required, reinforcement of the existing local sewer network will be carried out by Severn Trent Water. This will ensure that the proposed development has a 'no detriment' impact on the foul sewer system within Stroud and does not create a flood risk.
- 2.10 All drainage will be constructed in accordance with Building Regulations (2015). A DN100 (100 mm) pipe will be required to connect the new extension unit to the existing drainage network.
- 2.11 Grease traps and interceptors, as well as food macerators will be used where necessary to avoid uncontrolled discharge of fats, oils and grease into the sewer network. This will avoid contravening Section 111 of the Water Industry Act 1991. The 'Food Service Industry Fats Oils and Grease Code of Practice' will be adhered during onsite food processing.
- 2.12 The proposed drainage strategy incorporates measures to comply with the Water Industry Act 1991 and offers a safe and robust solution to remove foul water flows from site.

Statement prepared by:



Associate (Flood Risk & Drainage Engineer)



References

Flows and Loads 4 Code of Practice – Sizing Criteria, Treatment Capacity for Sewage Treatment Systems. British Water (Revised 2013).

Food Service Industry Fats Oils and Grease Code of Practice – FOG Forum. British Water (Revised 2013).

Disposal of Fats, Oils, Grease and Food Waste – Best Management Practice for Catering Outlets. Water UK Homes & Communities Agency, (2015).

Employment Density Guide, 3rd Edition and the British Water (2013).

Document H (Drainage and Waste Disposal) Building Regulations (2015 Edition)

