

Drainage Strategy Statement

Report Number: **COLTINTDS001**

Project No. & Name: 19142 – Colt International

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1.0 Introduction

1.1 The purpose of this drainage statement is to respond to provide the necessary information for the discharge of condition 7 of planning permission APP/18/00244. The application refers to an outline planning permission which was granted on 30th January 2019 for a mixed-use development comprising up to 100 new homes, including up to 40% affordable, 2860sqm of employment floor space and improved access onto New Lane and Martin Road.

1.2 This report refers to the residential development only. The design of the employment area is to be undertaken by others.

1.3 This drainage statement covers:

- The Original Planning Drainage Strategy
- Changes from the Original Planning Drainage Strategy

2.0 Original Planning Drainage Strategy

2.1 The original planning drainage strategy submitted was produced by WYG in March 2018. This was submitted as part of the original outline planning application. This strategy proposed to use a restricted runoff rate set at greenfield values and attenuate the excess flows within underground attenuation tanks. The original planning drainage strategy considered the site, incorporating both the employment and residential areas.

2.2 The planning drainage strategy split the site into 3 areas, Area 1, Area 2, Area 3. Each area was assigned a discharge rate and accommodated its own excess flows within underground attenuation tanks. Each area was restricted to greenfield runoff rate.

2.3 All 3 areas discharged into the existing monsoon drain located within the site. This drain collected surface water from the previous buildings on the site and discharges into Lavant Stream. Lavant Stream is a water course that runs alongside the eastern boundary of the site.

2.4 The site is located within a groundwater source protection zone 1c. Due to this combined with the history of groundwater flooding within Havant, infiltration is not a feasible option of disposal for surface water. This was the justification used for using a water course as a means of disposal for the surface water.

3.0 Changes from the Original Planning Drainage Strategy

3.1 The drainage strategy proposed by WFBA refers only to the residential development. The employment development strategy is to be undertaken by others.

3.2 Due to the nature of the previous development, WFBA have proposed to use brownfield runoff rates as opposed to greenfield rates. This is due to the site having previously being developed as a factory site. Area 1 was previously 100% impermeable with a tarmac surface. Area 2 was 95% impermeable due to the factory and surrounding service roads. The previous discharge rates for areas 1 & 2 for a 1 in 1-year 60-minute storm were:

- Area 1 – 20.91l/s
- Area 2 – 71.90l/s

3.3 The Pitt Report recommends a 30% reduction is used on the 1 in 1 year 60-minute storm for brownfield developments. This would mean the required flow rates for areas 1 & 2 of:

- Area 1 – 14.64l/s
- Area 2 – 50.33l/s

- 3.4** These flow rates would be used for all storms up to and including the 1 in 100 year +40% climate change storm event. These flow rates would provide a betterment of 84% and 85% for areas 1 & 2 respectively over the 1 in 100 year + 40% climate change storm event.
- 3.5** The WFBA drainage strategy proposes to use tanked permeable paving as the main form of attenuation for the main access roads. Attenuation tanks would be used within gardens to slow the rate of flow of surface water. These would be kept on a separate system to the permeable paving. Permeable paving will provide water cleansing at the source for all surface water to remove Suspended Solids, Hydrocarbons and Heavy Metals without the need for petrol interceptors.
- 3.6** The discharge points for the two areas will remain the same, the monsoon drain will continue to be used to discharge water from the site into Lavant Stream. The permeable paving will be tanked to ensure water does not discharge into the aquifer below the site.
- 3.7** The increased flow rates proposed by the WFBA strategy will provide benefits to the ongoing maintenance of the monsoon drain over the WYG strategy. The flow rates proposed by WYG will not allow the monsoon drain to be self-cleansing due to how low the velocity and quantity of the water will be. This will increase the chances of blockages from silting up. An increased quantity and velocity of water will allow the monsoon drain to continue to be self cleansing.