

8 EXISTING DRAINAGE / WATER MAINS

- 8.1 Thames Water plans of public sewers, included as Appendix D, indicates that the site is served by a surface water sewer and a foul sewer. A trunk surface water sewer of dimensions 1,830mm by 910mm is located within 5m from the eastern boundary of the site, and is indicated to be flowing in a southerly direction with the nearest manhole to the site located approximately 25m north, reference 9309. A foul sewer manhole is located approximately 5m south west to the entrance of the site on Berkeley Close, reference 9209, with a southerly flowing sewer extending from it. Manhole cover levels and invert levels are given in Table 3.

Table 3. Manhole level details

Manhole Reference	Type of Sewer	Manhole Cover Level (mAOD)	Manhole Invert Level (mAOD)	Invert Depth (m)
9309	SW	37.28	35.36	1.92
9209	FS	36.73	35.63	1.10

- 8.2 Potable water in the area is operated and distributed by Affinity Water and no details have been provided by Thames Water.

10 SURFACE WATER MANAGEMENT

Introduction

- 10.1 The proposed development comprises the erection of two new residential dwellings and will result in a significant reduction of impermeable area by approximately 100m², introducing soft landscaping into the site. Opportunities to increase this landscaping area should be maximised.
- 10.2 Policy DMEI 10 is noted stipulating that '*all new building developments are required to include a drainage assessment*'. The small size of the development significantly limits the range of SuDS measures that are appropriate or feasible at the site. Recommendations of surface water management measures have therefore been made considering the scale of the development.

Existing Surface Water Runoff Rates

Brownfield Runoff Rate

- 10.3 The site is located on a former parking area and is therefore considered brownfield land. The brownfield runoff rate has been estimated using the Rational Method:

$$Q \text{ (standardised flow)} \times \text{Existing impermeable area (ha)} \times \text{Average rainfall* (mm)}$$

**London Heathrow station data, Met Office, 2018 (1981 – 2018)*

$$2.78 \times 0.05 \times 50.50 = \mathbf{7.02 \text{ l/s}}$$

Consideration of Sustainable Drainage Systems

- 10.4 The potential for the use of Sustainable Drainage Systems (SuDS) to provide attenuation within the development has been considered as follows:

Infiltration SuDS Features

- 10.5 The site is very small and on the basis of recommendations made in Part H of the Building Regulations, stating that infiltration features should not be within 5m of a building, the use of traditional infiltration techniques such as soakaways is not considered feasible at the site.

Rainwater Harvesting

- 10.6 Given the provision of a private garden, domestic-scale rainwater harvesting systems such as water butts are recommended to be included at the development.

Green Roofs

- 10.7 As the proposed building incorporates a pitched roof design, a green roof is not considered feasible.

Permeable / Porous Paving

- 10.8 The area suitable to implement permeable paving is minimal at the site and therefore it has not been proposed.

Swales, Detention Basins and Ponds

- 10.9 Given the site's small size; open storage features such as swales, detention basins and ponds are not considered feasible.

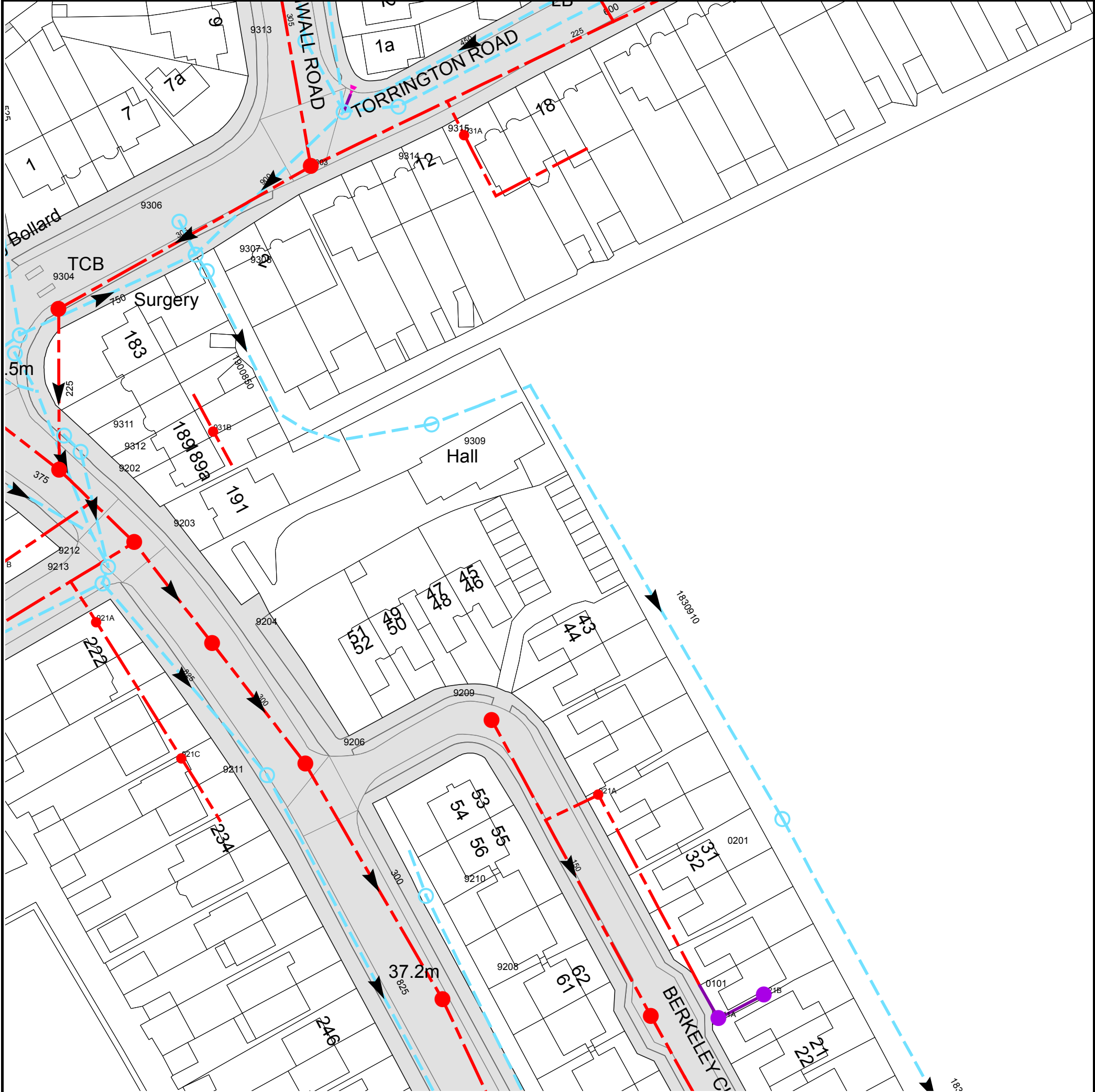
Modular Underground Attenuation Tanks

- 10.10 Underground attenuation is useful when surface space is limited at a site. In this case, although the site is small, aforementioned recommendations of maximising permeable surfaces and including water butts at the site are considered to negate the need for underground storage.

Conceptual Surface Water Drainage Strategy

- 10.11 The site's small size precludes the limited feasibility of many SuDS measures. SuDS measures that are appropriate to the size of the development have therefore been proposed. On this basis, the vegetated surface area is recommended to be maximised across the site and given the provision of private garden space, water butts are recommended to be installed. This will enable a reduction in the surface water runoff rate from the site. Runoff generated by the development is proposed to be discharged to the surface water sewer east of the site.

Asset Location Search Sewer Map - ALS/ALS Standard/2019_4059799	
---	--



The width of the displayed area is 200 m and the centre of the map is located at OS coordinates 510006,186284

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.