

Structural Engineers

184 Kellaway Ave
Bristol
BS6 7YL

Telephone : 0117 9421199
Email: info@tmventham.com
Web: www.tmventham.com

T M Ventham
practice

**WATER MANAGEMENT STRATEGY
AND SUDS DRAINAGE**

**Westbury Court Care Home
6 Station Road
Westbury,
BA13 3JH**

05/01/2026

**Ref: 12046
Rev: A**

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Introduction

This report is intended to address managing and reducing surface water runoff.

Update for construction

This document has been updated to facilitate the discharge of planning condition 4 planning reference PL/2025/03653.

Site investigation has been undertaken for the site by Ground investigation Ltd. They undertook infiltration test (see appendix BRE DIGEST 365 SOIL INFILTRATION TEST by Ground investigation). The location of the infiltration test pit TP1 is shown on the Site layout with trial pits plan.

The Soakaway Drainage report details the test and results.

The results of the test were poor so soakaways for roof catchment are not feasible.

This was expected as the existing building has a private surface water drainage system in place that discharges to a dedicated public surface water drainage system that serves the site and surrounding area.

This was anticipated and an attenuated SUDS solution proposed.

The area proposed for parking will replace an area of soft landscaping. There are no reports of any localised flooding issues within this area so this will be replaced with permeable paving with a minimum 400mm depth of stone under with 30% void to replicate the existing situation (with additional storage volume). The exceedance route is indicated on the drawing and is as existing and will not cause issue.

The scheme proposed will be taken forward for construction. See revised drawings for layout and details for construction.

The proposed SUDS solution does not increase the rate of discharge to the public sewer.

All connections are to private sewers within the site so no statutory permissions are required from Wessex water.

The appendix lists the updated documents referred to above.

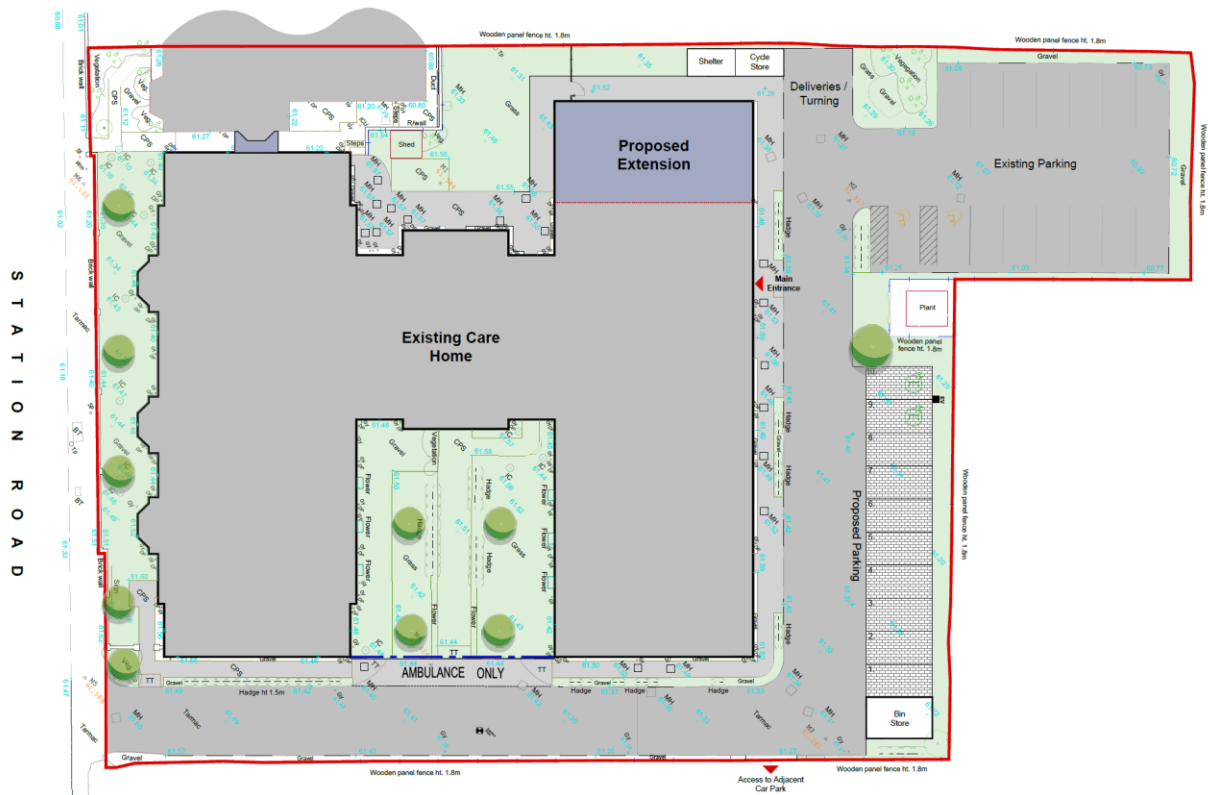
Climate change means that intense and/or prolonged rainfall and storms are more likely to occur, and this can result in existing drainage failing to cope with the resulting volume of surface water. All development need to incorporate measures to reduce surface water runoff in order to mitigate this risk, both to new and existing development.

This site is a brown field site.

This site is an existing 3 storey nursing home constructed in 2013 comprising circa 1200m² footprint of building subject to a planning application to add a small extension an additional footprint of 111m² primarily built over an area of existing tarmac driveway. There is a large

impermeable tarmac area (1150m²) around the building resulting in a total positively drained area of 2350m². We will be increasing this by 16m² so an increase of 0.7%.

There is also some additional car parking proposed for an area of existing soft landscaping.

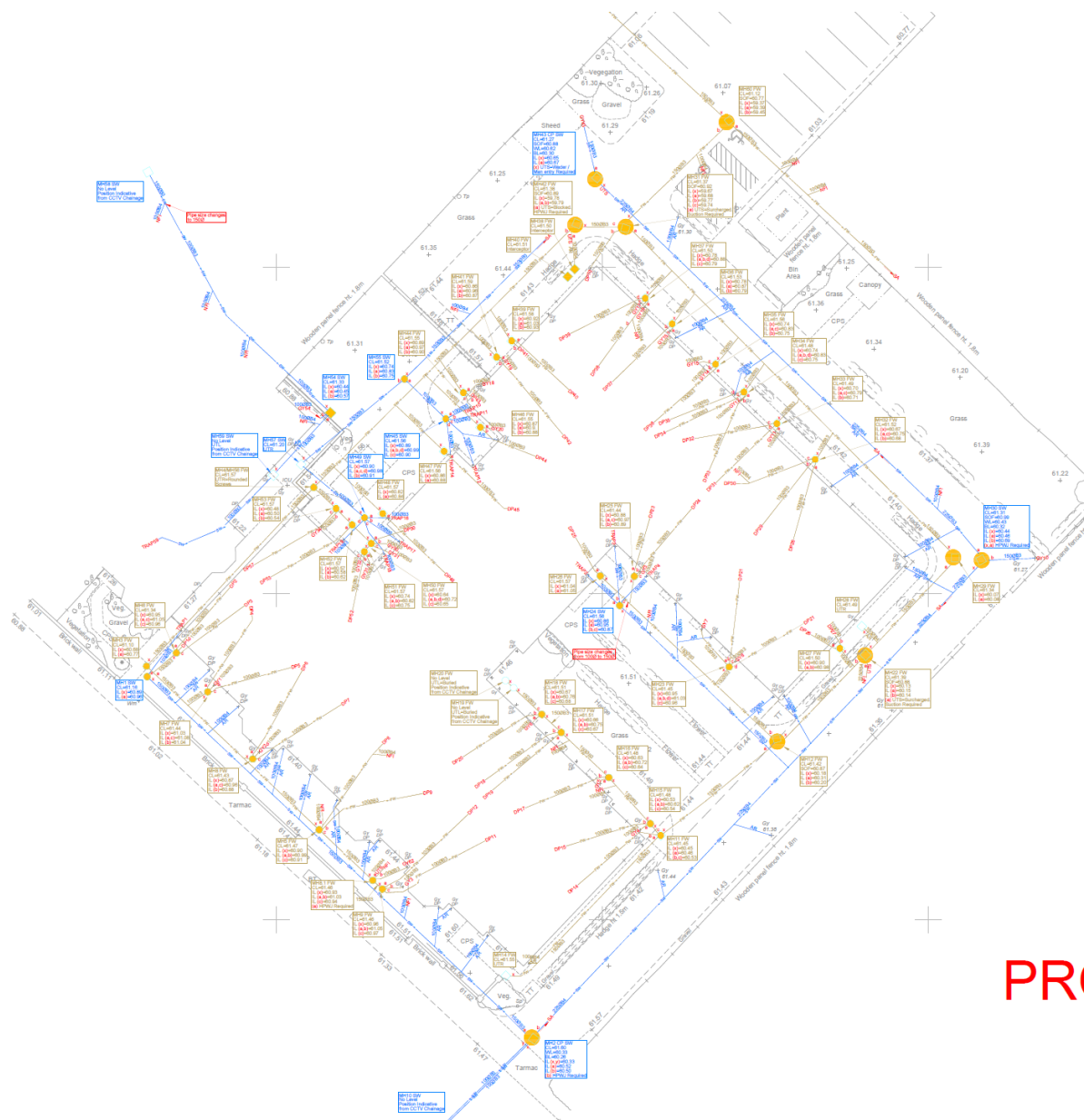


The existing site

The proposed extension is over an existing hard standing comprising block paved footpath and tarmac drive. This is positively drained to gullies in the drive.

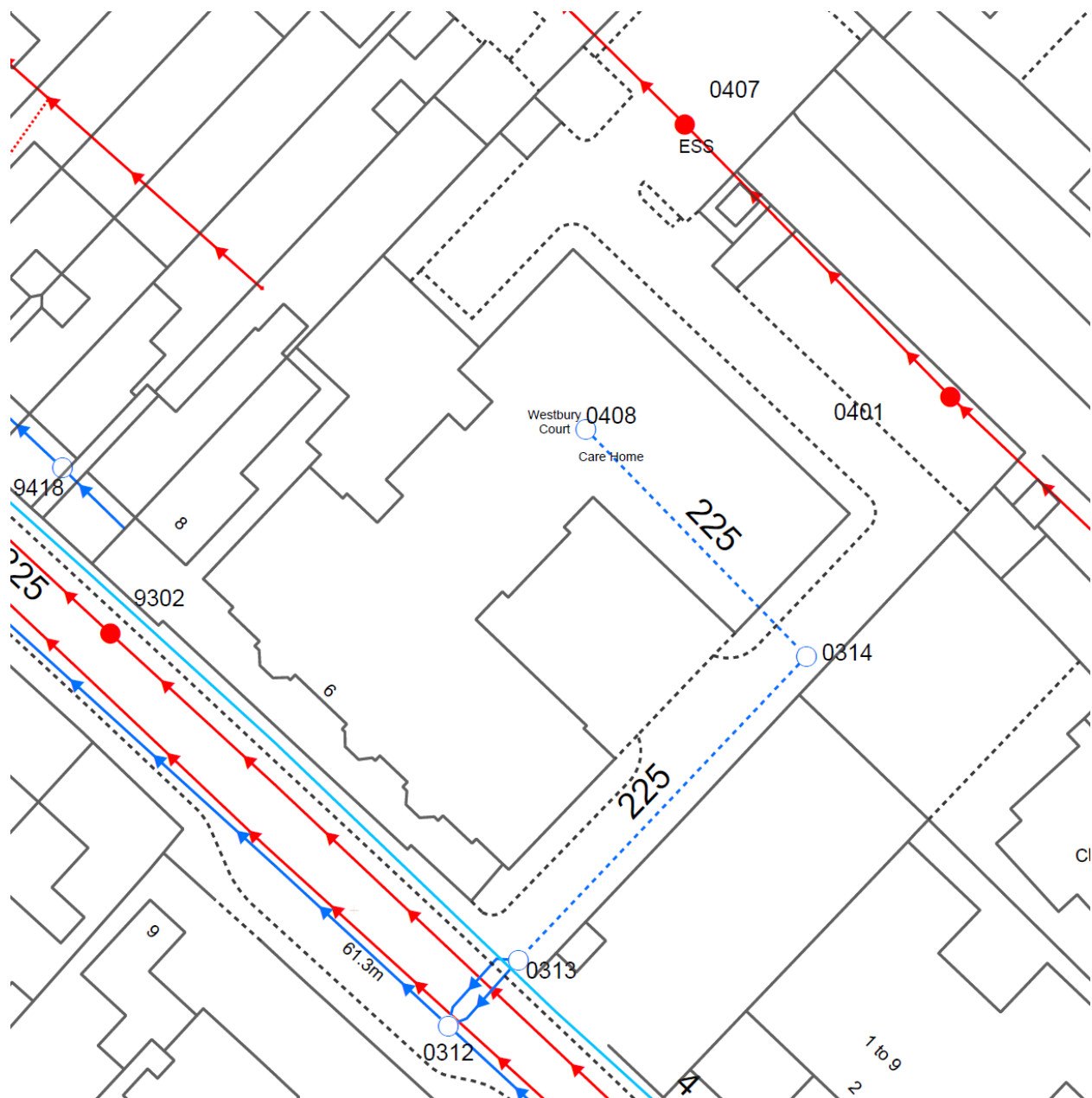
The new proposed car parking is proposed to be created on an area of existing soft landscaping.

A full drainage survey was undertaken (see drainage survey drawing ref 2083-Drainage survey) this traced the sewer pipes on site to discharge points off site.



No existing soakaways were discovered on site. There are some areas of hard landscaping (footpaths etc) that run off to soft landscaped areas.

Surface catchment from impermeable surfaces, (roof area to rainwater pipe and hard landscaped impermeable area to gullies) is all drained to the public surface water sewer sewers in the road. See Wessex water map in the appendix.



Publicly available local site investigation records show that the underlying ground is impermeable clay.

There is a network of public surface water sewers provided which is the case where infiltration drainage is not possible

Surface water catchment areas.

Refer to TMVentham Practice drawing 12046-000 for site areas.

The existing total site drive footpath and buildings area is 2350m² this is all positively drained to gullies and rainwater pipes to public sewer in the road.

The location of the new extension proposed is an area 114.5m² primarily over existing drive and footpath approx. 99m² with a small area of soft landscaping approx. 15.6m².

So out of the total positively drained area of (1200m² building footprint plus 1150m² hard landscaping) total 2350m² we will be increasing this by 16m² so an increase of 0.7%.

Proposed SUDS drainage system.

Using SUDS hierarchy.

The site underlying ground is clay soil and impermeable, so soakaways are not a viable option. There are areas of soft landscaping, and no flooding has been reported or noted. The use of permeable surfaces is suitable where appropriate for replacing areas of soft landscaping.

There are no watercourses in the vicinity of the site.

Following detailed investigation, the surface water from the site is found to discharge to the public surface water sewer.

Alterations are proposed to the existing drainage system and the addition of an attenuation tank is proposed to reduce peak flows from site for all roof catchment.

For the new car parking area permeable paving with a suitable designed depth of single sized stone with a minimum of 30% void is proposed. This will provide shallow depth infiltration and evaporation similar to the existing soft landscaped area.

Drawing 12046-001 shows the proposed development with proposed SUDS.

Considering the area covered by the new extension and including for a reduction in discharge from this area of 30% betterment. We have designed calculated

The attenuation tank designed is 8mx2mx0.35m deep. (see appendix for design calculations) This is sufficient attenuation for flows produced from a 100 year storm event including an allowance for climate change of 45%. The discharge from the tank shall be limited to 1.13 litres per second with the use of an orifice plate. This will reduce the existing peak discharge rate from this area by 30%.

The tank design is in the appendix.

Discharge to the public sewer.

The above designed attenuation tank will discharge into a 225mm diameter pipe of the private surface water drainage system on site .

This ultimately discharges to a 225mm dia public sewer in the public highway that is at the front of the site.

Summary

Using an attenuation tank, it is proposed to attenuate the surface water catchment for the new extension that will reduce the peak flows from the area of the proposed extension by 30%.

The proposed additional carparking will be constructed with a permeable surface that will not increase the site impermeable areas.

Appendix

(See additional pdf documents)

2083-Drainage Survey

12046-000 SUDS -Existing & Proposed Impermeable Areas

12046-001A SUDS -Proposed Drainage Layout

12046-01 SUDS Drainage Area Design 100yr + 45%

12046-02 SUDS Attenuation Tank Design 100yr + 45%

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