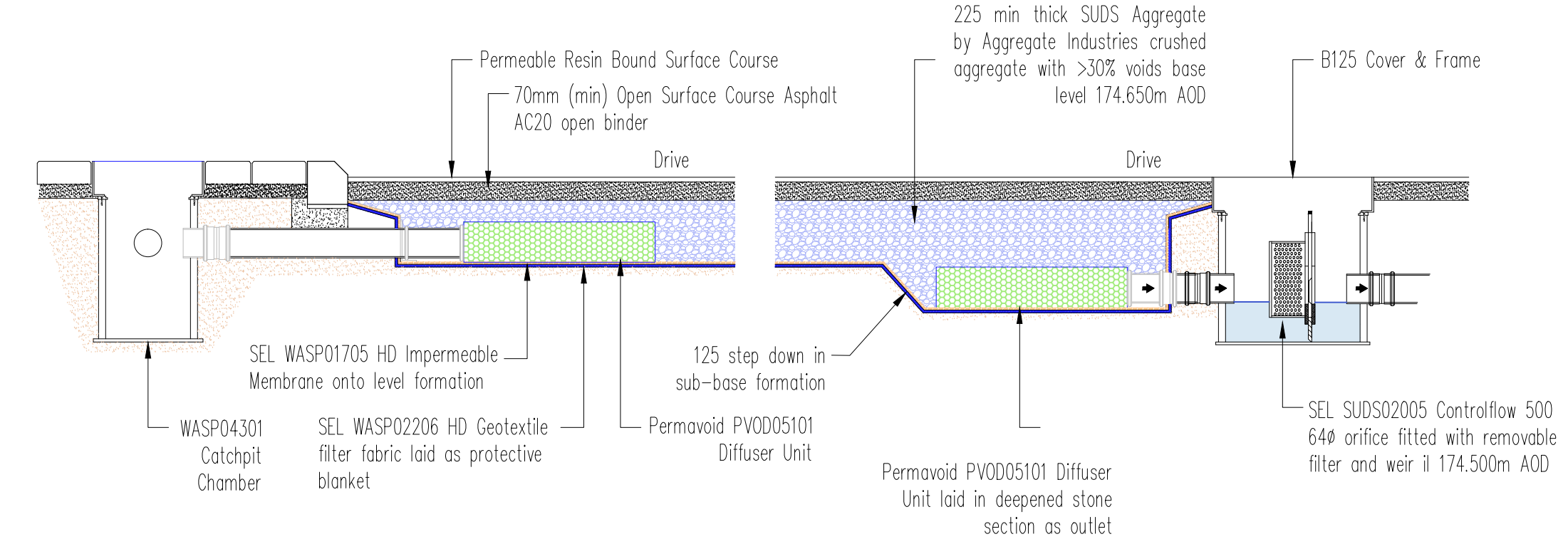




PLAN
Scale: 1:100



TYPICAL SECTION THROUGH PERMEABLE SURFACING SUB-BASE
CATCHPIT, ATTENUATION STORAGE & CONTROL CHAMBER
Scale: 1:20

Notes

- All dimensions are in millimetres unless stated otherwise.
- Levels are in metres related to Ordnance Datum.
- The locations and depths of all existing drains to be used for new connections are to be accurately determined by the Developer prior to the commencement of all drainage works on the site and the information conveyed to CFA Civils.
- All private drainage works are to be built generally in accordance with the recommendations of Building Regulations: Approved Document H 2015.
- Unless stated otherwise, all private drains are to be 100 nominal diameter drainage pipes at minimum gradient of 1:80 for foul & 1:100 for surface water, bedded and backfilled to manufacturers' specification.
- All SuDS fittings and protection membranes referenced are manufactured and supplied by SEL Environmental Ltd., Canal House, Bonsall Street, Blackburn, BB2 4DD.

DRAINAGE STRATEGY

The site is to be drained on a separate system with foul water draining to the existing combined drain at the rear of 99 Bury New Road sewer and surface water draining in the most sustainable way. Planning Practice Guidance and the Building Regulations Approved Document H3 outline the hierarchy to be investigated when considering a surface water drainage strategy, in the following order of priority:

- Into the ground (infiltration);
- To a surface water body;
- To a surface water sewer, highway drain, or other drainage system;
- To a combined sewer.

Infiltration: Soil mapping from "Soilscopes" web-site by Cranfield Soil & Agrifood Institute, indicates the soil type in the area of the site as "Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils". This is confirmed by recent excavations on the site. Furthermore, formal soakways should be located at least 5m from any dwelling and 2.5m from site boundaries, and due to the limited room available and the general topography of the site, it is considered that infiltration would be inappropriate and this level of the hierarchy is passed.

Surface water body: There are no surface water culverts or open watercourses crossing the site, however an existing surface water culvert has been identified within the footway outside the site, and surface water run-off from the front elevations of the neighbouring properties to the west of the site discharge into this pipe. Therefore, it is proposed to discharge surface water from the new dwelling into this existing system, thus complying with the drainage hierarchy.

Design

The site forms part of the original side garden to 99 Bury New Road with a red-edged area of approximately 375m², and as such should be considered as Greenfield for the purposes of determining allowable peak run-off rates. However, the predicted Greenfield rates for such a small site are very low, with Q_{avg} estimated as less than 0.5 l/sec and the 1% AEP rate as approximately 1 l/sec. Therefore, the generally accepted minimum figure of 5 l/sec has been selected. This will be achieved by providing a surface water attenuation design limiting the peak run-off during the critical in 100-yr storm event plus 40% climate change allowance through a sub-base attenuation method beneath the permeable parking area with a orifice plate control chamber installed downstream discharging into the surface water drain at the front of the existing property.

Attenuation storage sizing has been calculated with Micro Drainage Source Control software to include the new roof, drive and hardstanding areas at the front of the proposed dwelling. These will drain through appropriate trapped gullies and a catchpit chamber to prevent sediment and debris from passing into the attenuation system.

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rev	description	date	by
Project			
Mr S Mort – Land at 99 Bury New Road, Ramsbottom, BLO 0BZ			
Drawing Title			
Proposed New Dwelling Drainage Strategy Layout & SuDS Details			
Date	Scale	Drawn by	Checked by
July 2024	1:100 1:20	TMC	—
Job No.	Drawing No.	Revision	
CFC 24034	001	A1	—

CFA

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