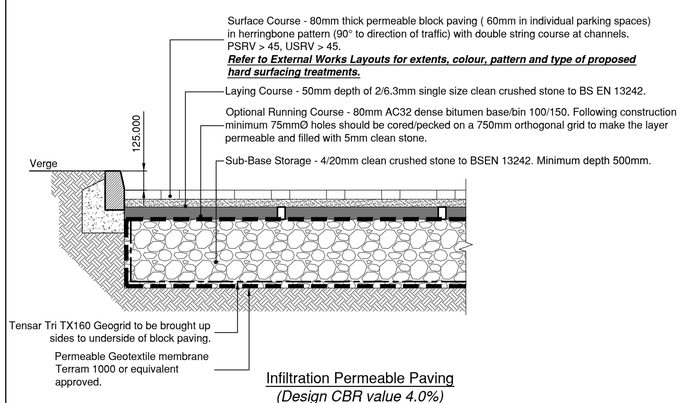
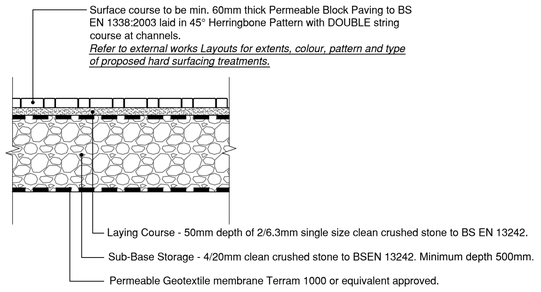
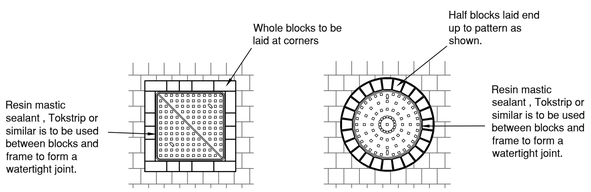


Infiltration Permeable Paving
(Design CBR value 4.0%)

Permeable Block Paving Construction - Roads

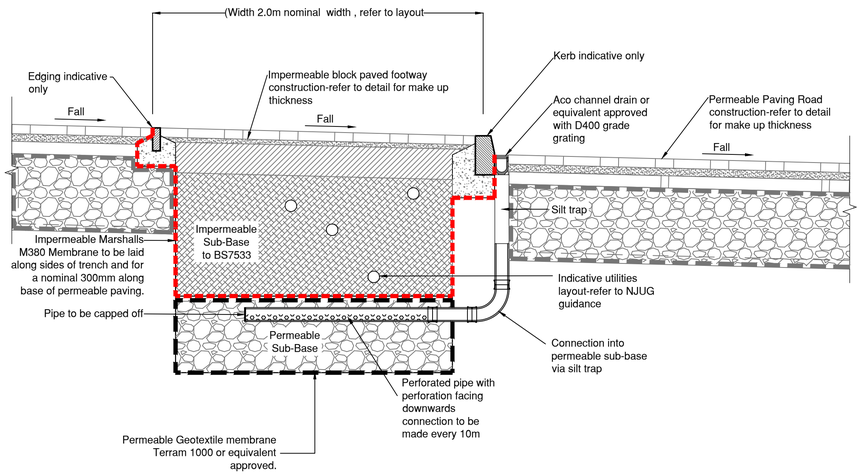


Permeable Block Paved Private Driveway/Footway Construction Detail



Typical Detail Around Manhole Covers in Permeable Block Paving

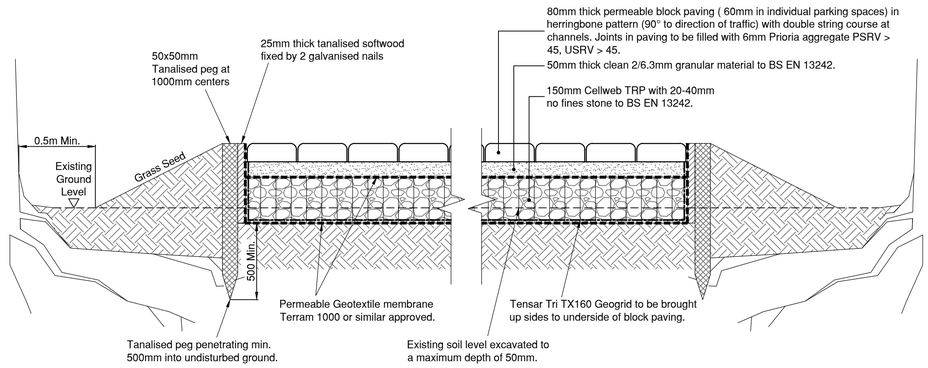
Allowance to be made for check dams with longitudinal gradients no steeper than 1 in 20. Allowance also to be made for regulating sub-base between minimum depth and formation level to ensure longitudinal gradients of formation are no steeper than 1 in 100.



Typical Section Through Service Trench Located in Impermeable Block Paving

Table 1

CBR VALUE (%)	Minimum sub-base thickness (mm) Consolidated in accordance with MCHW Volume 1 clause 801, Table 8/1	
	Without geotextile underneath	With geotextile underneath
less than 2	n/a	300
2 - 3	325	225
3 - 5	250	150
5 - 7	150	
7 - 20	100	



GENERAL SPECIFICATION NOTES

1. All works to be carried out by hand and in accordance with the British Standard: BS. 5837:1991.
2. Existing soil level to be excavated by hand to a maximum depth of 50mm, removing loose leaf litter layer, foundations for new surfaces to be constructed above this level without further excavations, ensuring that no damage is done to tree roots.
3. Geotextile membrane to be Terram 1000 (or similar approved) to be laid with no compaction of the existing soil.
4. 150mm Geoweb infilled with 20-40mm no fines stone to be laid on geotextile membrane.
5. Edging board to be surface mounted and fixed with timber pegs at 1m centres, avoiding tree roots, level change to be made up with topsoil over a minimum distance.
6. Paving surface to be concrete block pavers bedded into 50mm lightly consolidated sand (other permeable materials such as gravel or open textured tarmac could also be used).

All works within tree root protection areas must be in accordance with the arboricultural method statement and subject to approval by the arboriculturist.

Typical "No Dig" Permeable Block Paved Construction Detail

NOTE: Sub-base Construction depths indicated are based on an assumed design value of 4%. Actual CBR value to be confirmed and subject to CBR Testing to inform design depths noted in Table 1

AFTER BUILDING WORK IS COMPLETED

- Clean tarmac surface.
- Cut 75mm diameter holes at 750mm centres through tarmac surface into sub-base.
- Fill holes with 2/6.3mm single size clean crushed stone stone.
- Lay permeable membrane 5mm laying course and blocks.
- PERMEABLE PAVING TO BE INSTALLED IN ACCORDANCE WIITH MANUFACTURERS GUIDANCE AND RECOMMENDATIONS.

NOTES

1. This drawing is to be read in conjunction with other highways construction details
2. All dimensions are in millimetres unless stated otherwise.
3. Do not scale from this drawing. Only written dimensions are to be used.
4. A design CBR value of 4% has been assumed, this is subject to test results from geotechnical engineer.
5. Adoptable highways works to be constructed in accordance with West Sussex County Council standards and specifications and the Department of Transport "Specification for Highway Works".
6. Clause numbers refer to clauses in the Department of Transport's Specification for Highway Works 2005 and WSCC Model Contract Specification.
7. No works shall commence within the existing public highway until the Agreement is signed.
8. An approved weedkiller (harmless to humans, animals and insects) is to be applied (as per manufacturer's recommendations) to all prepared formation levels of new carriageway and footways and/or as directed by the Highways Inspector.
9. Any damage caused to the existing highway during the course of the works to be repaired as directed by the Highways Inspector and/or Area Engineer.
10. No private surface water runoff shall be permitted to discharge onto the adoptable highway, or vice versa. Cut-off drains, channels and/or gullies shall be used to intercept any conflicting water.
11. Any new trees within 3.0m of the proposed highway shall have their roots restrained by root barriers as directed by the Highways Inspector.
12. Contractor to provide suitable and effective wheel washing facilities to prevent mud from being conveyed onto the public highway and to provide the means to clean the highway to the satisfaction of the Highways Inspector, Area Engineer and/or Local Authority.
13. No concrete to be poured or laid in temperatures below 2 deg C on a falling max/min thermometer or before the temperature reaches 2 deg C on a rising max/min thermometer (to be provided by the Contractor and displayed in a position agreed by the Highways Inspector).
14. All bollards shall be approved by the highways inspector prior to their installation.
15. No private apparatus (gullies, rodding eyes, boxes, chambers, ect.) shall be allowed to be located within the adoptable highway.
16. All road signs and markings to comply with The Traffic Signs Regulations and General Directions 2016. Road Markings to be thermoplastic.
17. Contractor to comply with Chapter 8 of the Traffic Signs Manual 2009.
18. Tactile paving to comply with the Guidance on the use of Tactile Paving Surfaces 1998. Tactile Pedestrian Crossings to have a 6mm (maximum) upstand (not flush). Actual layout of tactile paving to be agreed on site with the Highways Inspector prior to laying slabs.
19. All street lighting to be installed per West Sussex County Council's lighting specification.
20. Supplies to street lighting columns are to be provided by the DNO.
21. Kerbs to be butt jointed. Where kerb alignments incur 'minor open joint tapers' between formed surfaces mortar jointing shall be used as directed by Highway Inspector.
22. All full length PCC kerbs are to be mechanically handled.
23. All precast Kerbs & Edgings shall be to BS EN 1340 & laid to BS 7533-6.
24. All setts of natural stone shall be to BS EN 1342 and laid to BS 7533-7.
25. All kerb and edging bed and backing to be concrete Class ST1 (C6/8) well compacted. Unless otherwise stated this shall be a minimum bed thickness of 150mm. Carriageway marking demarcation CS1 / concrete setts to be ST4 (C16/20).
26. The minimum length of any cut kerb shall be 450mm.
27. The correct radius kerbs shall be used for all radii of 12m or less. For radii between 12m and 20m, 600mm long straight units shall be used. Radius kerbs shall be used to form corners of laybys and tapers.
28. The appropriate 914mm long precast concrete transition kerb shall be installed at each change in kerb type, tie-ins to existing and at terminations.
29. All external angles on HB kerbs to be quadrants. Suitable quadrant kerbs shall be used to form corners of square areas and refuge islands.
30. Bituminous materials to comply with relevant Clause No. in BS4987 - 2001.
31. Grading of granular sub-base material to comply with BS1377 - 1975.
32. Where the Subgrade is shrinkable clay and trees have been removed or are to be planted/retained within 10m of the carriageway, geogrids shall be installed between the the capping & the sub-base layers, eg Tensar Triax TX160 or similar approved.
33. On heavy clay soils, or where new planting is to be undertaken adjacent the footway, the sub-base/capping layer beneath the footways shall be as for the adjacent carriageway and a geotextile will be required surrounding the sub-base/cappinglayer to limit problems with cracks arising from shrinkage or swelling.
34. Overall thickness should not be less than 450mm due to frost susceptibility.
35. Cut blocks to be no less then 1/3 block.
36. Block pavers to be specified in terms of minimum 'Polished Paver Value' (PPV) and results submitted to engineer. Min value of 55.
37. A water based biodegradable sealant from approved supplier shall be used to prevent loss of sand.
38. Kiln dried sand jointing to be used in accordance with BS7533
39. Refer to geotechnical report for sulphate resisting class and ACEC class.
40. Mortars shall be designation (ii) or (iii). Clause 2404 SHW.
41. Mortar pigments shall comply with BS EN 12878.
42. Bricks to be engineering Class B to BS EN 771-1 and Clause 2406 laid in Class 1 mortar to Clause 2404 in radial bond.
43. All gully grating and frames to be 'hinged' heavy duty ductile iron minimum grade D400 in accordance with BS EN 124: 1994 of section 508 of the Specification of Highways Works.
44. Gully pots used for carriageway gullies, shall be of precast concrete using sulphate resisting cement (SRC) in accordance with BS 5911, part 230, 2004.
45. All buried concrete to be Cii(A or B)-S or Ciii A or B to BS 8500-2, Table 1 and Annex A.
46. Unless specified on the layout drawing, where the outlet pipe is under the carriageway, or in the verge less than 2000 from the carriageway edge, it shall be given a min. 600mm cover and shall have a bed Type Z. Where the outlet pipe is under the verge and is greater than 2000 from the edge of carriageway it shall have a min. 450mm cover.
47. Concrete lintels are not to be used.
48. Total Carriageway construction depth must be greater than 450mm to negate susceptibility to frost penetration, irrespective of CBR value.

CDM NOTES

1. EXISTING SERVICES. Depth of existing services must be determined prior to works commencing. The contractor is responsible for establishing underground services in accordance with HSE Guidance note HS (G) 47. Any services which would be within the proposed construction layers must be lowered to below the sub-base.

Rev.	Date	Details	By	Chkd	Appd
A	21.08.20	No dig permeable paving detail added.	LD	PJ	TRS

Client:- dandara

Site:-
Fontwell
Eastergate
Arundel

Drawing Title:-
TYPICAL CONSTRUCTION DETAILS
Sheet 2 of 2

Date: January 2019 | Scales: 1:200 at A1
Drawn: LD | Checked: TRS | Approved: TRS

Drawing No.
DAN/E4736/010 A

FOR INFORMATION ONLY

Rogers Cory Partnership
Architectural and Civil Consultants
The Old School Old School Road
Hook Hampshire RG27 9NJ
T: 01256 769269 E: mail@rcpconsultants.co.uk W: rcpconsultants.co.uk