

Health, safety & the environment

In accordance with the Construction (Design and Management) Regulations 2015, the designs and details on this drawing have been the subject of a Designers Risk Assessment, to identify risks in the construction, use, or demolition of the scheme.

It is not considered necessary for Designers to highlight obvious and/or common risks (such as deep excavations, manual handling and working around heavy plant) which Contractors should be familiar with, and be able to control by good management and site practice.

So far as is reasonably practicable, the risks inherent in the design have been eliminated. Where it has been considered that elimination of a risk (or part of a risk) is not reasonably practicable, it has been reduced.

General Notes

1. All dimensions are in metres unless otherwise stated.
2. All levels are in metres.
3. This drawing is to be read in conjunction with all relevant Engineers and Architect's drawings, Specifications, Reports and Engineering Details.
4. Do not scale from this drawing.

General Drainage/Private Drainage Notes

1. All pipe lengths and gradients are based on centre of manhole to centre of manhole.
2. The exact position, level, size and use of existing sewers to be confirmed on site and reported to the Engineer prior to the commencement of works.
3. All pipes are to be laid with level soffit's or as indicated.
4. All private drainage works to accord with the requirements of Building Regulations 2015, Part H (drainage and waste disposal).
5. All pipes to be bedded and backfilled in accordance with Part H, diagram 10. Shallow pipes shall be protected in accordance with Part H, diagram 11.
6. Unless otherwise stated, all private drainage to be 100mm diameter. Gradients have been shown where there are pipe capacity issues, however minimum gradients are as below:
Surface water 100mm diameter pipes shall not be laid flatter than 1 in 100
Surface water 150mm diameter pipes shall not be laid flatter than 1 in 150
Foul water 100mm diameter pipes shall not be laid flatter than 1 in 40 unless there is a WC connected upstream at which it can be laid at 1 in 80
Foul water 150mm diameter pipes shall not be laid flatter than 1 in 150 providing there are minimum of 5 WC's connected.
7. Foul water sewers serving more than 10 dwellings shall have a minimum diameter of 150mm
8. Pipes which run adjacent to buildings shall be installed in strict accordance with Part H, clauses 2.23 to 2.25 and diagram 8.
9. All private manholes and inspection chambers situated in areas subject to light vehicular loading to have Class B125 covers and frames and those not subject to vehicular loading to have class A15 covers and frames all to BS EN 124
10. All drains near existing or proposed trees shall be constructed in accordance with the requirements of NHBC's practice note 3 'building near trees'.
11. Excavation of drain trenches must not be lower than the foundation of any nearby buildings. If the trench is within 1m of foundations, the trench needs to be filled with concrete up to the lowest level of the foundation. If the trench is further than 1m away from the foundations, the trench needs to be filled with concrete to a level below the lowest level for the building, equal to the distance from the building, less than 150mm.
12. Adequate surface water drainage systems shall be provided to prevent unregulated discharge of water from a private drive onto the highway. These measures shall be implemented before the development in brought into use.
13. Perforated pipework to be used for distributor runs within permeable block paved areas.
14. Trapped road gullies to be used for all gullies designed in shared parking areas.
15. All concrete and concrete products shall satisfy sulphate classification DS-1 & ACEC Class AC-1 to BRE Special Digest 1. All concrete grades must be capable of resisting the above sulphate classification'

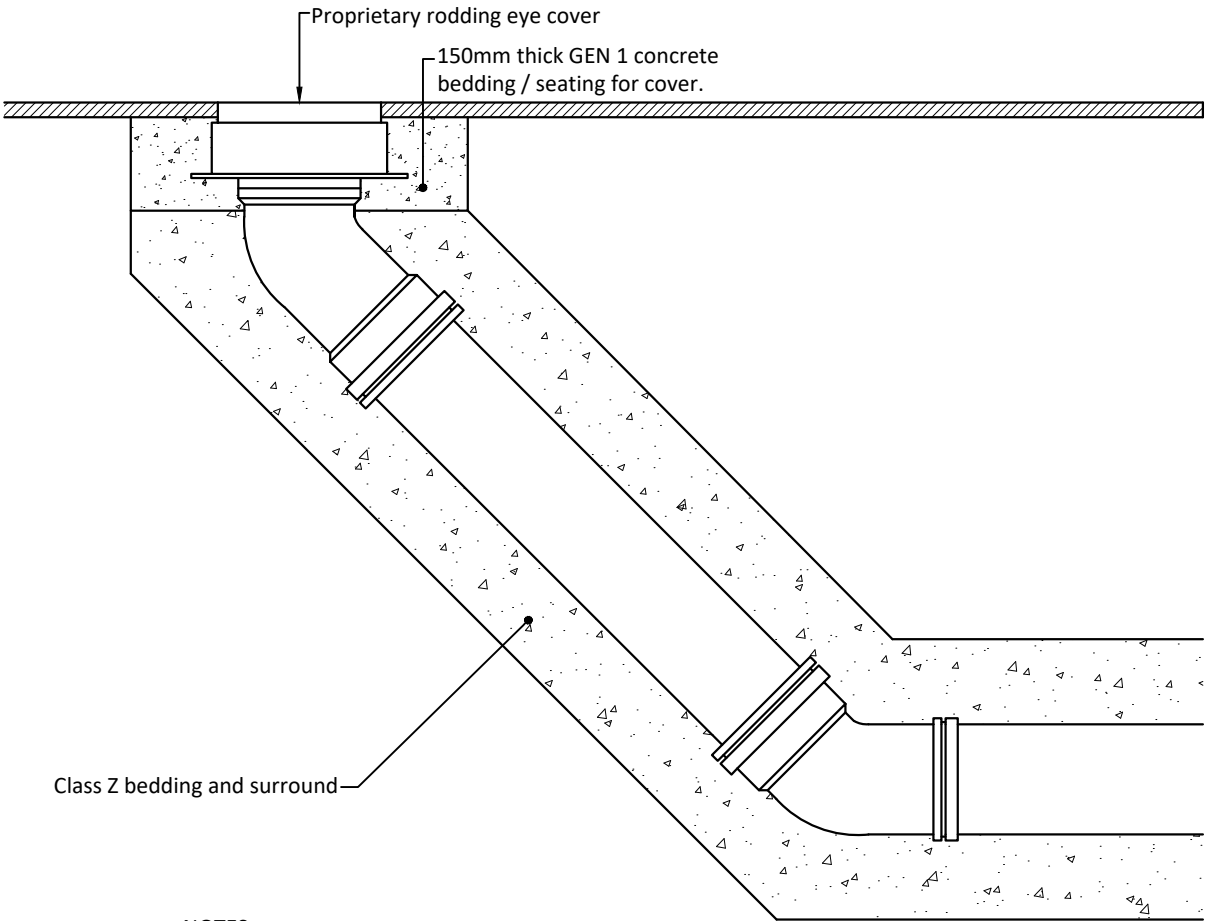
Permeable paving maintenance schedule

(to be read in conjunction with surfacing supplier maintenance schedule)

Maintenance schedule	Required action	Recommended frequency
Regular maintenance	Brushing (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations - pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment.
	Stabilise and mow contributing and adjacent areas	As required
Occasional maintenance	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying	As required - once per year on less frequently used pavements
	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving	As required
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for 3 months after installation
	Inspect for evidence of poor operation and/or weed growth - if required, take remedial action	3-monthly, 48 hours after large storms in first 6 months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Pipe and manholes maintenance schedule

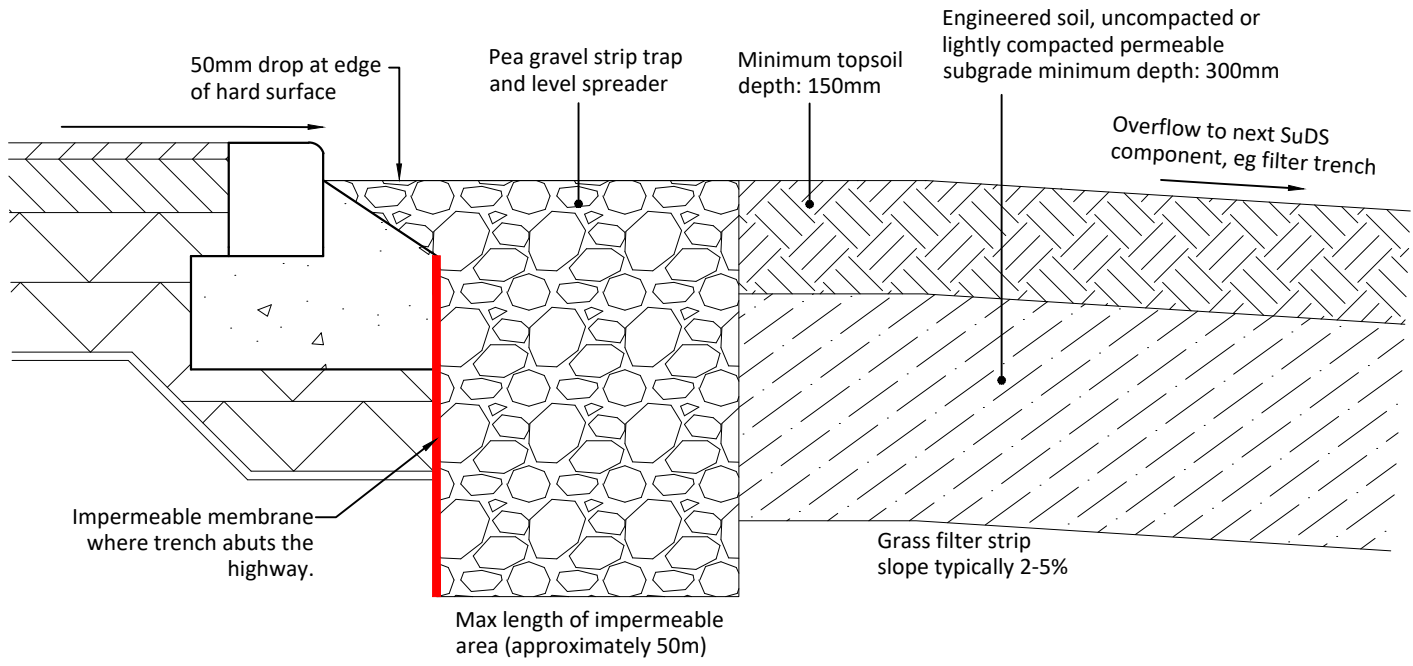
Maintenance schedule	Required action	Recommended frequency
Regular maintenance	Inspect and identify areas that are not operating correctly. If required take remedial action.	Monthly for the first 3 months then six monthly
	Debris removal from catchment surface (where may cause risks to performance)	Monthly
	Remove sediment from inspection chamber	Annually or as required
	Cleaning/jetting of annually, or as required, pipes, rodding eyes and manholes	As required



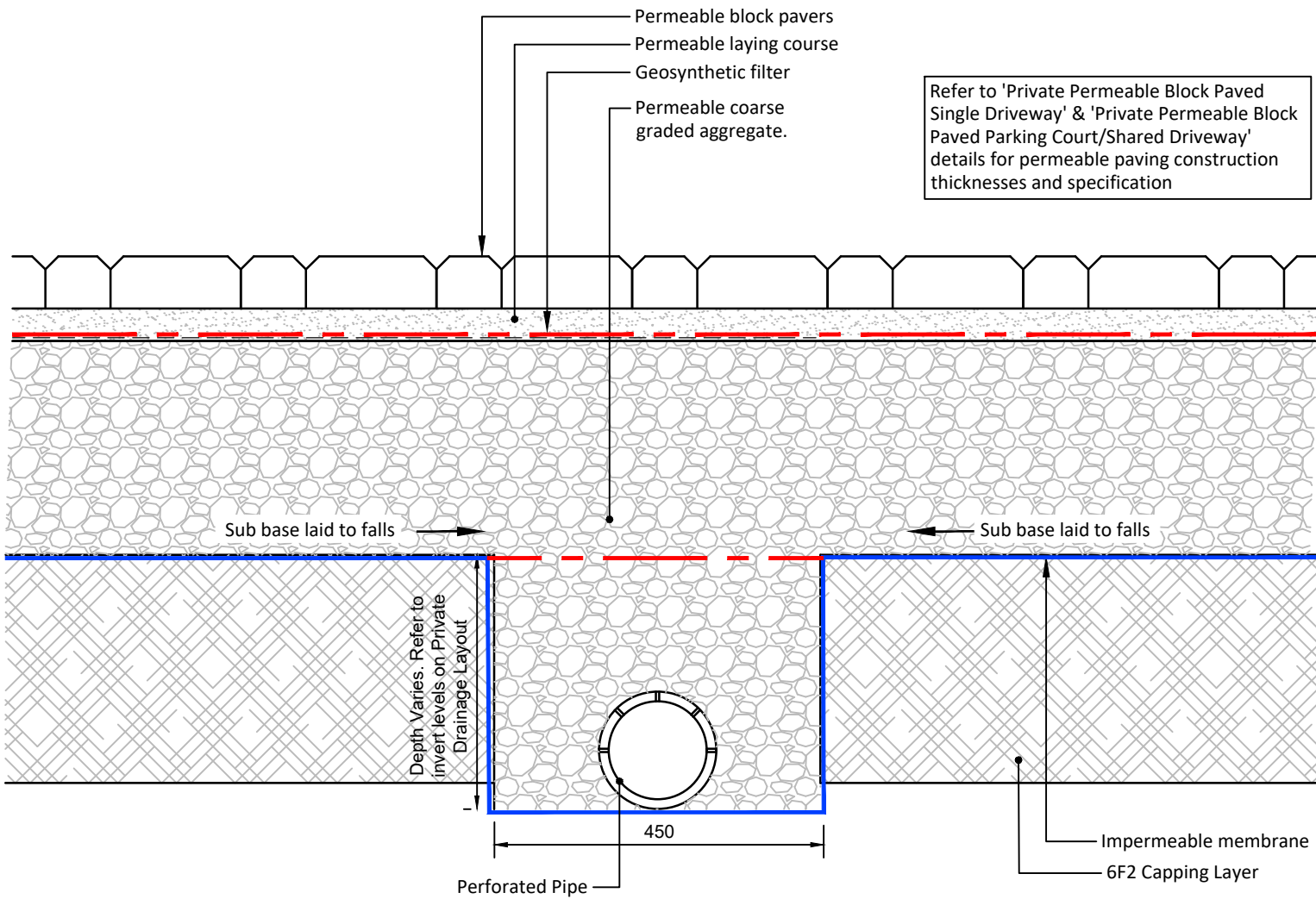
NOTES.

1. For use in privately owned drainage systems at the head of a run where roddable access is required
2. Detail based on Wavin database.

Rodding Eye



Typical Section Through Filter Strip



Filter Drain Below Permeable Block Paving (Driveways)

- ☐ Northampton
4 Ironstone Way, Brinxworth,
Northampton, NN6 9UD
T: 01604 781811
- ☐ Warwick
Unit 12A, Warwick Innovation Centre,
Warwick Technology Park, Galows Hill, Warwick, CV34 6UW
T:02476 100530
- ☒ Milton Keynes
Suite B2A, Denbigh Business Park, 23 First Avenue,
Denbigh, Milton Keynes, MK1 1DN
T: 01908 889433
- ☐ Poole
Suite 8, Branksome Park House, Branksome Business Park,
Bourne Valley Road, Poole, Dorset, BH12 1ED
T: 01202 540888

E: mail@jppuk.net
W: jppuk.net

- Infrastructure Design
 - Structural Engineering
 - Development Planning
- Geotechnical & Environmental
 - Surveying
 - Professional Advice

Rev A Maintenance schedules added		By AD Checked LC 13.04.2023	
Drawn By:	AD	Client	Burmor Construction
Chkd By:	LC		
Scale @ A1:	NTS		Project Land East of Surfleet Road Pinchbeck
Date:	February 2023	Title	Private Drainage Construction Details (Sheet 2)
Status:	FOR TECHNICAL APPROVAL		
Project No.:	26043	Drawing No:	116 (2)
		Rev:	A

