

PROPOSED SOAKAWAY DESIGN STATEMENT

Application Reference: PL/2026/01199

Site: Land South of Tudor Cottage, Park Lane, Cherhill

Prepared in Response to Drainage Consultation Comments

Introduction

This statement has been prepared in response to the comments of Wiltshire Council Drainage Team and sets out the proposed design principles, construction methodology, inspection arrangements and maintenance provisions for the proposed surface water soakaway serving the development.

The proposed development comprises a single detached dwelling, 2 car carport and associated access, hardstanding and landscaping works.

The site is located within Flood Zone 1 and is underlain by chalk geology. A hydrogeological assessment submitted with the application indicates favourable ground conditions for infiltration drainage.

Surface Water Drainage Strategy

Surface water generated from the dwelling & carport and associated hardstanding areas will be managed in accordance with the drainage hierarchy through:

- Rainwater harvesting system (5000 litre storage capacity)
- Collection of roof water via gutters and downpipes
- Collection of surface water from hardstanding areas through ACO drainage channels and associated pipework
- Controlled discharge of surplus water to an infiltration soakaway

The proposed rainwater harvesting system will collect and store roof water for reuse within the dwelling. Harvested rainwater will be used for non, potable purposes including WC flushing and external garden use. This approach reduces reliance on mains water and forms part of the overall sustainable water management strategy for the development.

Only surplus rainwater, once the harvesting system reaches capacity, will be directed to the proposed soakaway system.

The system is intended to retain and manage all surface water within the site boundary.

No discharge to public sewers, watercourses or neighbouring land is proposed.

Soakaway Location

The soakaway shall be located within the garden area of the site.

The location has been selected to ensure:

- A minimum separation distance of 10 metres from the proposed dwelling and foundations
- Adequate separation from structures and services
- Suitable access for future inspection and maintenance
- Compliance with drainage guidance relating to development on chalk geology

Proposed Construction

The soakaway shall comprise an infiltration structure constructed within excavated chalk strata.

Construction shall generally comprise:

- Excavation to dimensions determined by detailed design calculations and BRE365 testing
- Non-woven geotextile membrane lining to sides and base
- Clean washed angular drainage stone or approved modular soakaway crates
- Geotextile membrane wrapped over the completed soakaway
- Vertical inspection riser extending to finished ground level
- Sealed and lockable inspection cover at surface level

No impermeable materials shall be used within the soakaway structure.

The final dimensions and storage capacity shall be confirmed following BRE365 infiltration testing and detailed drainage calculations.

Inspection and Maintenance Provisions

The soakaway shall incorporate a vertical inspection riser terminating at ground level beneath a sealed access cover.

This arrangement will allow:

- Visual inspection of the soakaway
- Monitoring of water levels following rainfall events
- Assessment of long-term performance
- Access for maintenance if required

The soakaway will remain accessible throughout the lifetime of the development.

Long-Term Operation

Surface water from roofs and hardstanding areas will be collected through the site's drainage network.

Roof water will first enter the 5000 litre rainwater harvesting system where it will be stored and reused for WC flushing and external garden use.

Only surplus water, once the harvesting system reaches capacity, will discharge to the soakaway system.

Surface water from the driveway and hardstanding areas will be collected through ACO drainage channels and associated drainage pipework before entering the infiltration system.

Water entering the soakaway will be stored temporarily within the void space of the soakaway structure before infiltrating naturally into the surrounding chalk strata.

The hydrogeological report supplied show's that the conditions identified for the site indicate that infiltration drainage is an appropriate drainage solution.

The soakaway will therefore:

- Reduce surface water runoff
- Minimise flood risk
- Support sustainable drainage principles
- Promote water reuse
- Ensure surface water remains within the site boundary

Future Verification

BRE365 infiltration testing shall be undertaken to verify infiltration performance and to confirm the final soakaway dimensions and storage capacity.

Any detailed drainage calculations will be amended accordingly to reflect the measured infiltration rates.

Conclusion

The proposed soakaway has been designed in accordance with sustainable drainage principles and is considered appropriate for the geological conditions present at the site.

The revised location, provision of inspection access, rainwater harvesting system and proposed construction methodology address the matters raised within the Drainage Team consultation response and provide a robust basis for the management of surface water generated by the development.

The final soakaway dimensions shall be confirmed through BRE365 testing and associated drainage calculations.

