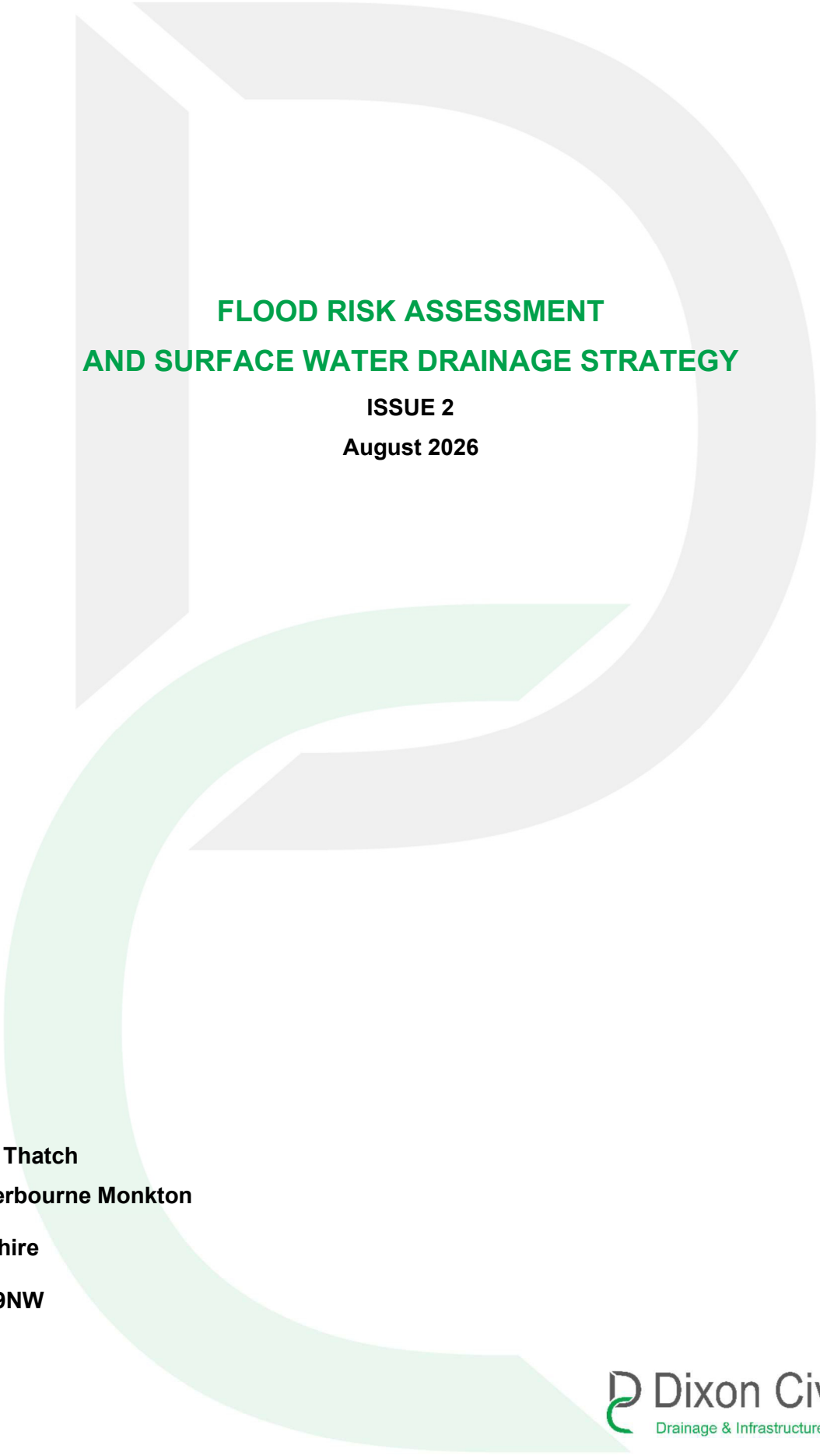




FLOOD RISK ASSESSMENT AND SURFACE WATER DRAINAGE STRATEGY

ISSUE 2
August 2026

Little Thatch
Winterbourne Monkton
Wiltshire
SN4 9NW

Document Control

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APPENDIX	TITLE	PRODUCED BY
Appendix A – Drawings by DC	Surface Water Drainage Strategy	Dixon Civils
Appendix B – Drawings by others	Location Plan	DRA Architects
	Proposed Site Plan	DRA Architects
Appendix C – Infodrainage Calculations		

1.0 Introduction

This Flood Risk Assessment has been prepared on behalf of Peter Jackson in support of a planning application for a proposed detached workshop and garage at Little Thatch, Winterbourne Monkton.

The report assesses flood risk to and from the proposed development and sets out a sustainable surface water drainage strategy. It demonstrates that the development can be constructed and operated without increasing flood risk elsewhere or being placed at unacceptable risk of flooding, in accordance with relevant national guidance.

The proposal comprises the construction of a detached workshop and garage accessed from the existing driveway serving Little Thatch. The development will create approximately 57 m² of additional impermeable area. The Proposed Site Plan (drawing 2607 PL-001), prepared by DRA Architects, is included in Appendix B.

2.0 Referenced Policies

Information sources used within this report are noted below along with the date they were referred to.

- Flood Map for Planning – Environment Agency (EA, accessed August 2026);
- Flood Map for Surface Water – Environment Agency (EA, accessed August 2026);
- Geological Map - British Geological Survey (BGS, Accessed August 2026);
- Groundwater Source Protection Zones Map - Environment Agency (EA, accessed August 2026);
- Wessex Water Sewer Records (August 2026); and
- Wiltshire Council Core Policy 67: Flood Risk
- Wiltshire Council Strategic Flood Risk Data Explorer.
<https://wiltscouncil.maps.arcgis.com/apps/webappviewer/index.html?id=28c00215d87b468a9a0cd79c63d3d270>
- Building Regulations 2015 – Approved Document H (Drainage and Waste Disposal);
- C753 The SuDS Manual (CIRIA, November 2015);
- National Planning Policy Framework (NPPF) (July 2024);
- Planning Practice Guidance (PPG) (March 2014);
- Sewerage Sector Guidance (SSG), Version 1.0 (Water UK, October 2019).

3.0 The Existing Site

The application site extends to approximately 184 m² (0.0184 ha) and comprises part of the existing driveway and adjoining grassed paddock. The Location Plan (drawing 2607 L-000), prepared by DRA Architects, is included in Appendix B.

The site is centred at Ordnance Survey grid reference SU 09862 72493 (E 409862, N 172493) and has the postcode SN4 9NW. Existing vehicular access is provided from Mill Lane to the south.

The wider Little Thatch property extends across Flood Zones 1, 2 and 3. It is bounded by open fields to the north, residential properties to the east, an unnamed watercourse to the west and Mill Lane to the south. The surrounding area is predominantly agricultural and residential in character.

Ground levels across the application site fall gently from east to west.

3.1 Existing ground conditions

British Geological Survey (BGS) mapping indicates that the site is underlain by Zig Zag Chalk Formation– Chalk.

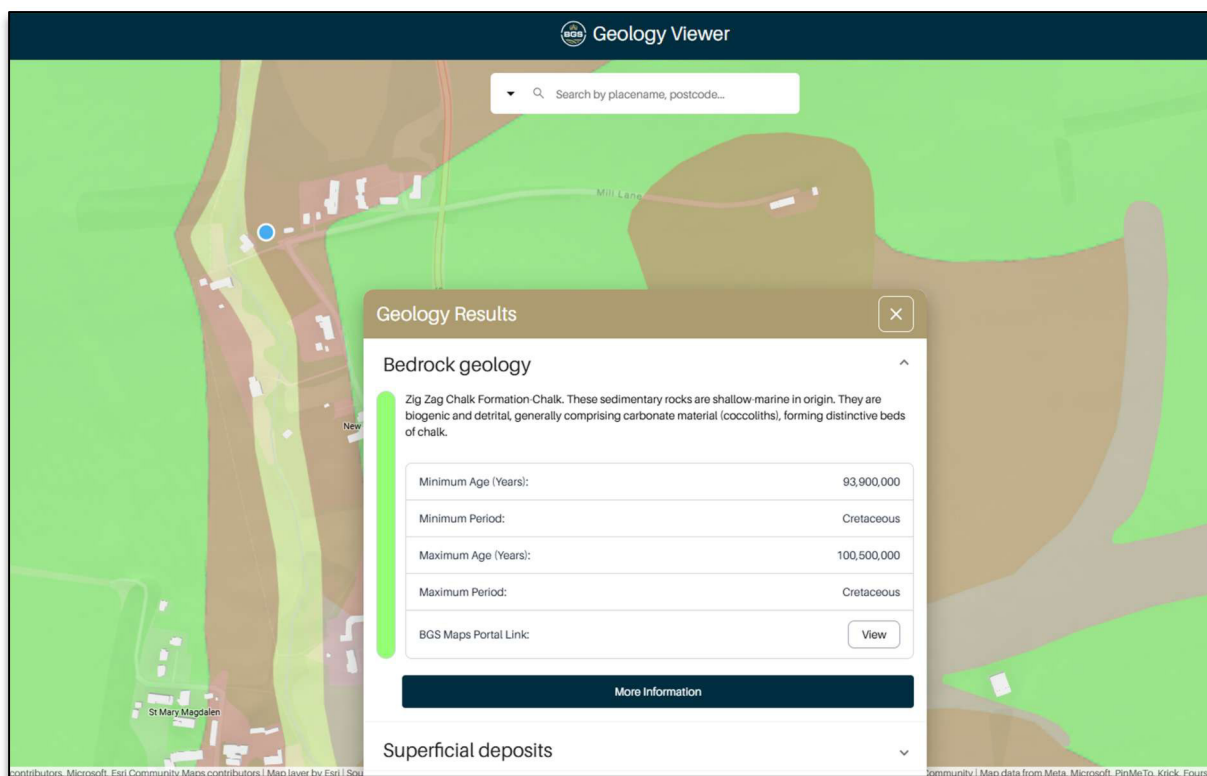


Figure 1: Bedrock Geology - Extract from British Geological Survey Geology of Britain Viewer
Source: <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer>

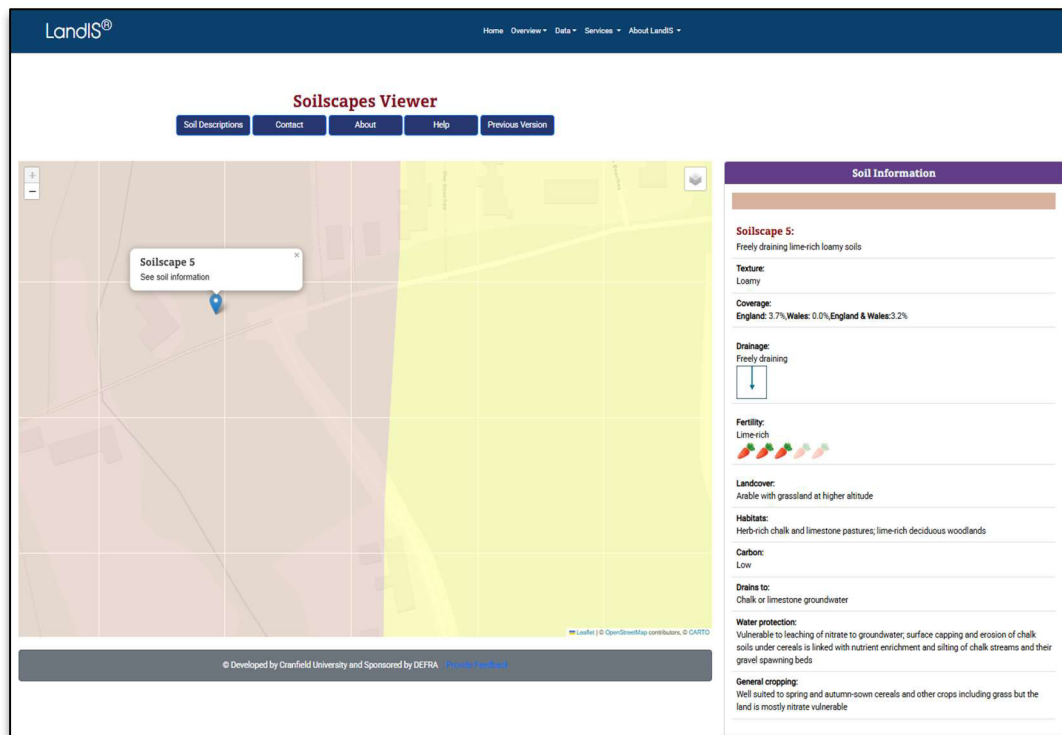


Figure 2: Soil Information - Extract from LandIS Soilscape Viewer
Source: <https://www.landis.org.uk/soilsapes/>

Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) mapping identifies the underlying bedrock as a Secondary A aquifer. However, the site is not located within a designated Groundwater Source Protection Zone.

Wiltshire Council's Strategic Flood Risk Assessment Groundwater Emergence Map shows that the site extends across areas of differing groundwater-flooding susceptibility. The western part of the site, closest to the adjacent watercourse, is identified as having a potential risk of groundwater emergence, while most of the proposed garage development area lies within a zone where the risk is considered negligible.

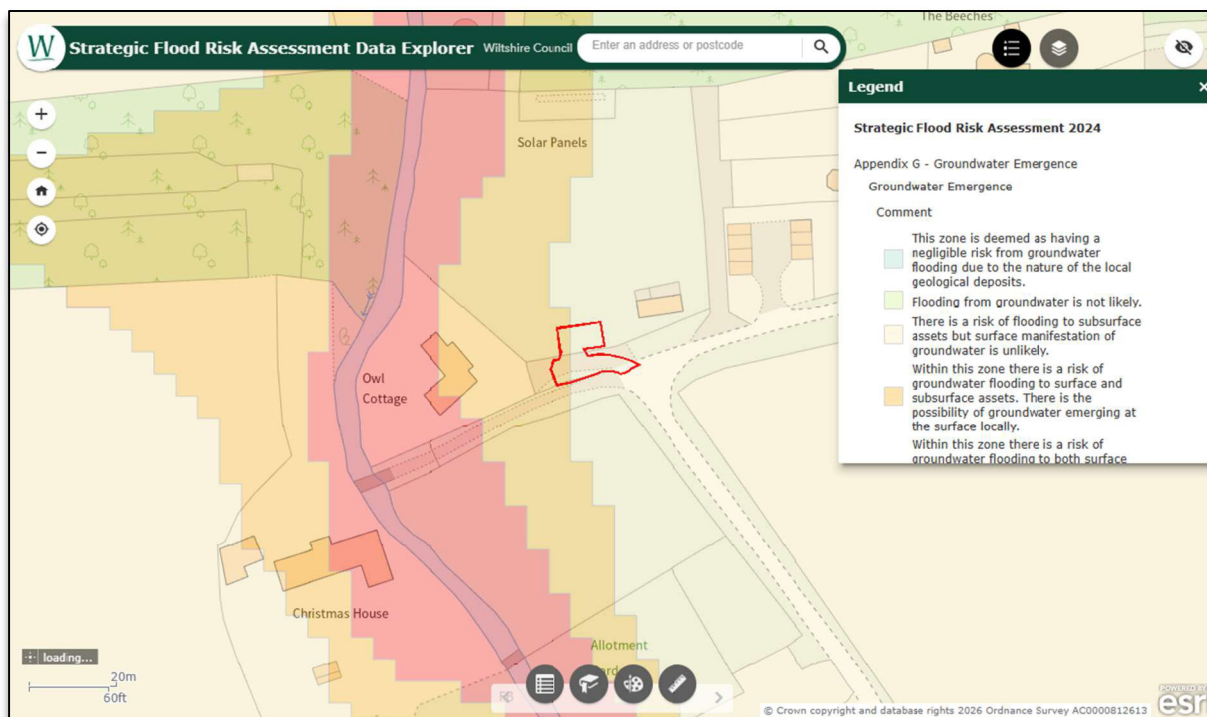


Figure 3: Groundwater Emergence - Extract from Wiltshire Council's SFRA Data Explorer
Source: <https://wiltscouncil.maps.arcgis.com/apps/webappviewer>

3.2 Existing Watercourses and Drainage Features

The nearest watercourse runs along the western boundary of the property, approximately 50 m west of the proposed garage. Approximately 2.5 km downstream of the site, the watercourse joins the River Kennet.

Asset records obtained from Wessex Water indicate that there are no public sewers within the vicinity of the site.

3.3 Existing surface water drainage arrangement

Surface water runoff from the roof of the existing thatched property discharges onto the surrounding land, where it infiltrates into the ground. Runoff from the gravel access driveway is also managed through natural infiltration.

4.0 Evaluation of Flood Risk

This section assesses the potential sources of flood risk to the proposed development and identifies any mitigation measures considered necessary. A summary of the identified flood risks and associated mitigation measures is provided in Table 4.7.

4.1 Historic Flooding Events

Wiltshire Council's Strategic Flood Risk Data Explorer does not identify any recorded historic flooding events within the vicinity of the site.

4.2 Fluvial Flood Risk

The Environment Agency's Flood Map for Planning, reproduced in Figure 3, shows that the wider Little Thatch property extends across Flood Zones 1, 2 and 3. However, the proposed garage is located wholly outside the mapped floodplain, within Flood Zone 1.

The proposed development is therefore considered to be at low risk of fluvial flooding, and no specific mitigation measures are required.

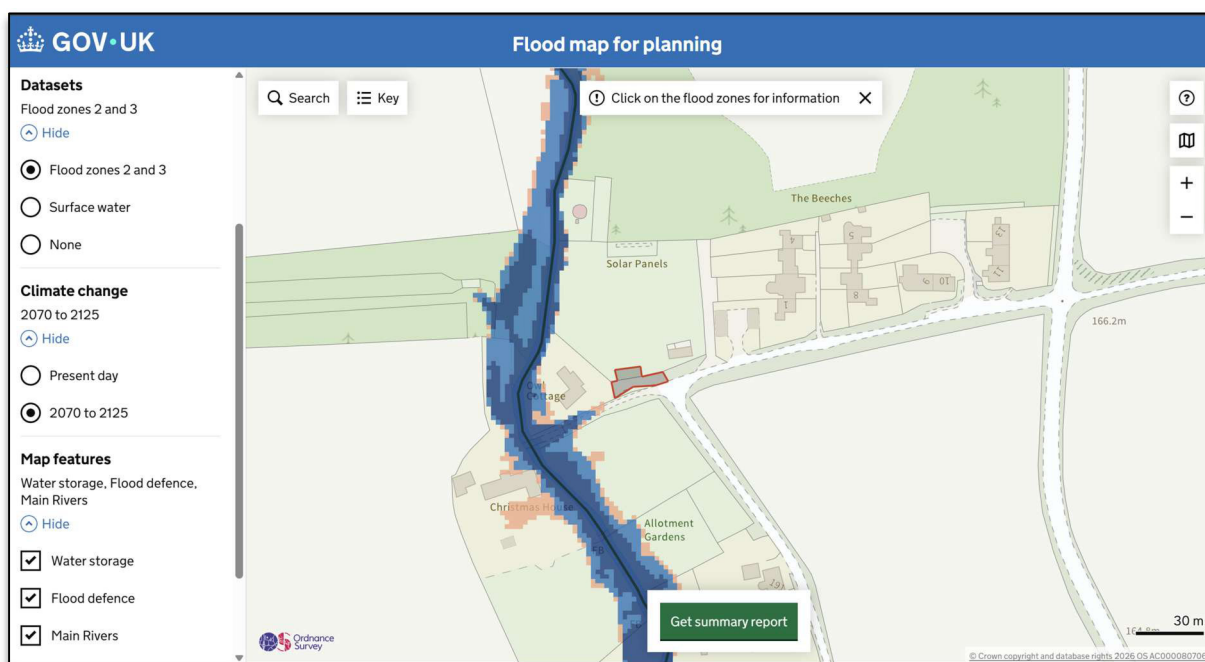


Figure 4: Extract from Central Government's 'Flood Map for Planning' Mapping Portal

Source: <https://flood-map-for-planning.service.gov.uk/>

4.3 Surface Water Flooding

The Environment Agency's surface water flood mapping identifies areas within Mill Lane, to the south of the site, as being at risk during an event with a 0.1% annual probability of occurrence. However, the mapping does not indicate surface water flooding within the proposed development site.

The proposed development is therefore considered to be at low risk of surface water flooding, and no specific mitigation measures are required.

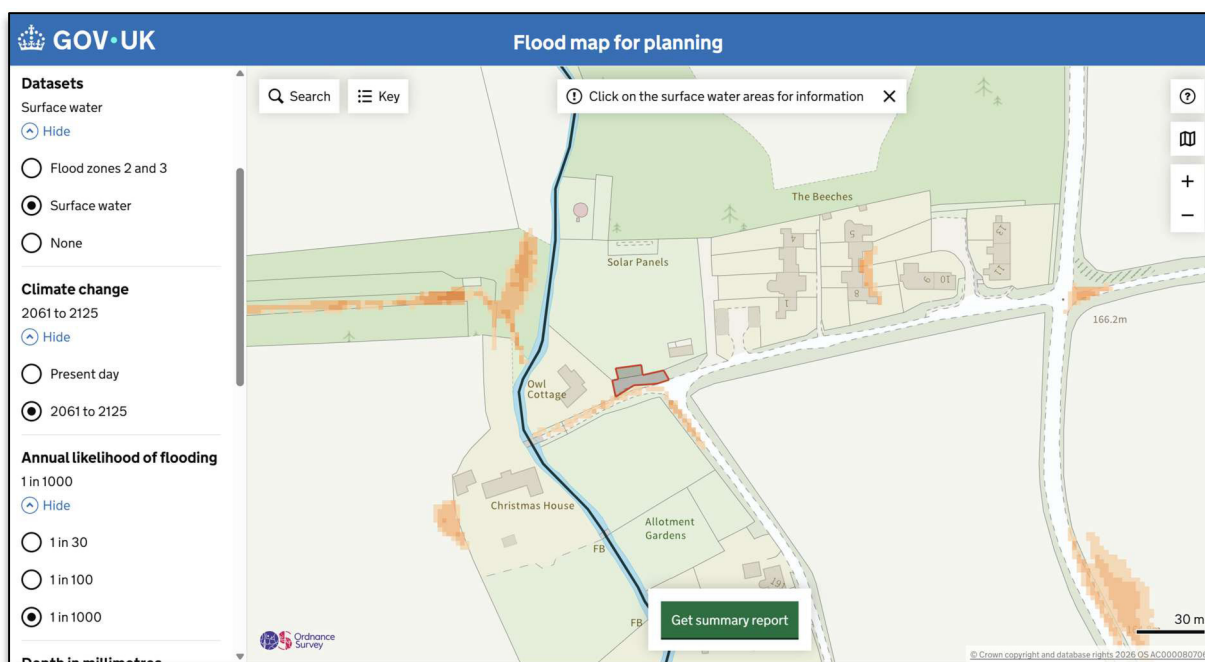


Figure 5: Extract from Central Government's 'Flood Map for Planning' Mapping Portal

Source: <https://flood-map-for-planning.service.gov.uk/>

4.4 Sewer Flooding

Asset records obtained from Wessex Water indicate that there are no public sewers within the vicinity of the site. The risk of sewer flooding affecting the proposed development is therefore considered low.

4.5 Groundwater

As discussed in Section 3.1, Wiltshire Council's SFRA Groundwater Emergence Map shows that part of the wider property lies within an area potentially susceptible to groundwater emergence. The proposed development straddles the edge of this area, although most of the garage footprint lies within a zone where the risk of groundwater flooding is considered negligible.

The risk of groundwater flooding affecting the proposed garage is therefore considered low.

4.6 Flooding from reservoirs or other artificial sources

The Environment Agency's reservoir flood-risk mapping indicates that the site is not within an area predicted to be affected by flooding resulting from a reservoir failure. The risk of flooding from reservoirs and other artificial sources is therefore considered low.

4.7 Summary of Flood Risk

Source of Potential Flooding to the Development Site	Flood Risk	Mitigation/Comments
Fluvial	Low	The proposed garage building is located within Flood Zone 1.
Public Sewers / Drains	Low	Wessex Water records indicate no sewers in the vicinity of the site.
Overland Flow	Low	EA mapping indicates the site is at Low risk of flooding from this source.
Groundwater	Low/Medium	Site spans zones where ground water manifestation is likely and unlikely.
Artificial Sources	Low	EA Mapping confirms that the site is not located within an area at risk of flooding from this source.

4.8 Section 19 Records

Wiltshire Council publishes reports of significant flooding incidents under Section 19 of the Flood and Water Management Act 2010. The available reports have been reviewed, and none identifies the application site or its immediate vicinity as having experienced a recorded flooding incident.

4.9 Flood Risk Mitigation

The proposed garage is a minor development situated within an area of low flood risk. On the basis of the assessment presented in this report, the development is not expected to increase flood risk either on or off the site. No specific flood-risk mitigation measures are therefore considered necessary.

5.0 Surface Water Drainage Proposals

The proposed surface water drainage arrangements are shown on Dixon Civils drawing 1277-01-01, Surface Water Drainage Strategy, included in Appendix A.

This section sets out how surface water runoff generated by the proposed development will be managed through sustainable drainage measures. The strategy is intended to ensure that flood risk is not increased either within the site or elsewhere and that surface water is managed appropriately throughout the lifetime of the development.

5.1 Drainage Hierarchy

The surface water drainage strategy for the site has been prepared in accordance with the drainage discharge hierarchy from CIRIA C753 The SuDS Manual, where the first available option will be utilised as follows.

Technique		Summary
1	Infiltration to the maximum extent that is practical	Proposed solution – Chalk soils allow use of infiltration.
2	To surface water body	Not required.
3	To a surface water sewer, highway drain or another drainage system	Not required. No surface water drains available.
4	To a combined sewer	Not required

5.2 Infiltration Design

The underlying chalk is expected to provide suitable infiltration characteristics, allowing surface water runoff from the proposed development to be managed using a soakaway.

Given the limited scale of the development and the established use of infiltration drainage at the existing property and neighbouring properties, full infiltration testing in accordance with BRE Digest 365 is not considered proportionate. For design purposes, a conservative infiltration rate of 1×10^{-6} m/s has therefore been adopted.

The drainage calculations indicate that approximately 1.67 m³ of storage is required to accommodate runoff from the proposed roof for rainfall events up to and including the 1-in-10-year event. The proposed cellular soakaway provides approximately 1.71 m³ of storage.

The supporting drainage calculations are included in Appendix C.

5.3 Design Exceedance

Should the drainage system become overwhelmed or its capacity be reduced by a blockage, exceedance flows will follow the natural topography towards the south and west. Flows will be directed towards the gravel driveway and the adjacent watercourse, broadly following the existing drainage pattern.

The proposed exceedance routes are shown on Dixon Civils drawing 1277-01-01, Surface Water Drainage Strategy, included in Appendix A.

5.4 Water Quality

The proposed impermeable catchment comprises roof surfaces only, from which runoff is expected to contain a negligible pollutant load. Leaves and other debris will be intercepted by the guttering and upstream catchpits, while the geotextile surrounding the cellular soakaway will provide additional filtration of suspended sediment before runoff infiltrates into the ground.

5.5 Adoption

The onsite drainage components will remain private and be the maintenance responsibility of the property owners.

5.6 Maintenance

Regular inspection and maintenance are important for the effective operation of the SuDS systems as designed. The regular maintenance of SuDS should be carried out in line with C753 The SUDS Manual (CIRIA, November 2015) or as per manufacturer's specification.

Pipework and Catchpits

It is not envisaged that silt build up within the pipework systems will require rigorous maintenance. Notwithstanding this, a suitable maintenance regime for the systems will comprise of routine inspection (every six months) and silt removal as necessary.

Cellular Soakaway

The design of soakaways should include monitoring points where the water level in the system can be observed or measured. This can either be via an inspection well or upstream catch pit

The useful life and effective operation of an infiltration component is related to the frequency of maintenance and the risk of sediment being introduced into the system.

It is not envisaged that silt build up within the cellular crate systems will require a rigorous maintenance regime so long as silt is removed from upstream catch pits and inspection chambers on a regular basis. Camera access can be gained via inspection chambers and inlet pipework to the soakaway. Silt removal can be achieved by jetting the inspection tunnels, where a standard jet head with rear facing nozzles should be used. The head should be fed to the far end of the crate tunnel via the nearest inspection chamber, activated and retracted. As the nozzle is removed, debris will be swept back into the inspection chamber where it can then be removed with the use of a standard gully sucker.

6.0 Conclusions

The wider Little Thatch property extends across Flood Zones 1, 2 and 3. However, the proposed garage and workshop is located wholly within Flood Zone 1 and is therefore considered to be at low risk of fluvial flooding.

The development will create approximately 57 m² of additional impermeable roof area. Surface water runoff from the proposed building will be directed to a new cellular soakaway, from which it will infiltrate into the underlying chalk strata. The soakaway provides approximately 1.71 m³ of storage and has been designed to accommodate runoff from the 1-in-10-year rainfall event.

The proposed soakaway and associated surface water drainage components will remain private and will be maintained by the owners of the property.

This assessment has been prepared in accordance with the principles of the National Planning Policy Framework and relevant Environment Agency guidance. It concludes that the proposed development can be accommodated without increasing flood risk either within the site or elsewhere, subject to the drainage measures described in this report.

Dixon Civils Ltd

Issue 2 - August 2026

APPENDIX A

Drawings By Dixon Civils

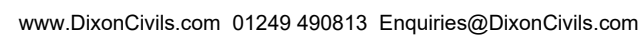
Drawing ref. 1277-01-01

Surface Water Drainage Strategy

1. DO NOT SCALE FROM THIS DRAWING. WORK ONLY FROM STATED DIMENSIONS OR SETTING OUT COORDINATES.
2. ALL DIMENSIONS AND LEVELS ARE IN METRES AND RELATE TO AN ASSUMED LOCAL DATUM.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT SCHEME DRAWINGS AND SPECIFICATIONS.
4. ANY WORKS CONSTRUCTED PRIOR TO THE ISSUE OF LOCAL AUTHORITY APPROVAL IS ENTIRELY AT THE RISK OF THE CONTRACTOR/CLIENT.
5. THIS DRAWING IS FOR PLANNING APPROVAL PURPOSES ONLY.

	Proposed Private Surface Water Drain & Catch Pit
	RWP
	Flood Flow Route (Over 1:10 storm event)
	5m Offset Line From Buildings
	Impermeable Catchment Area
	Site Boundary

A horizontal number line with tick marks at 0, 1, 2, and 3. A green arrow starts at the tick mark for 3 and points to the right, with the number 15 written above its tip.

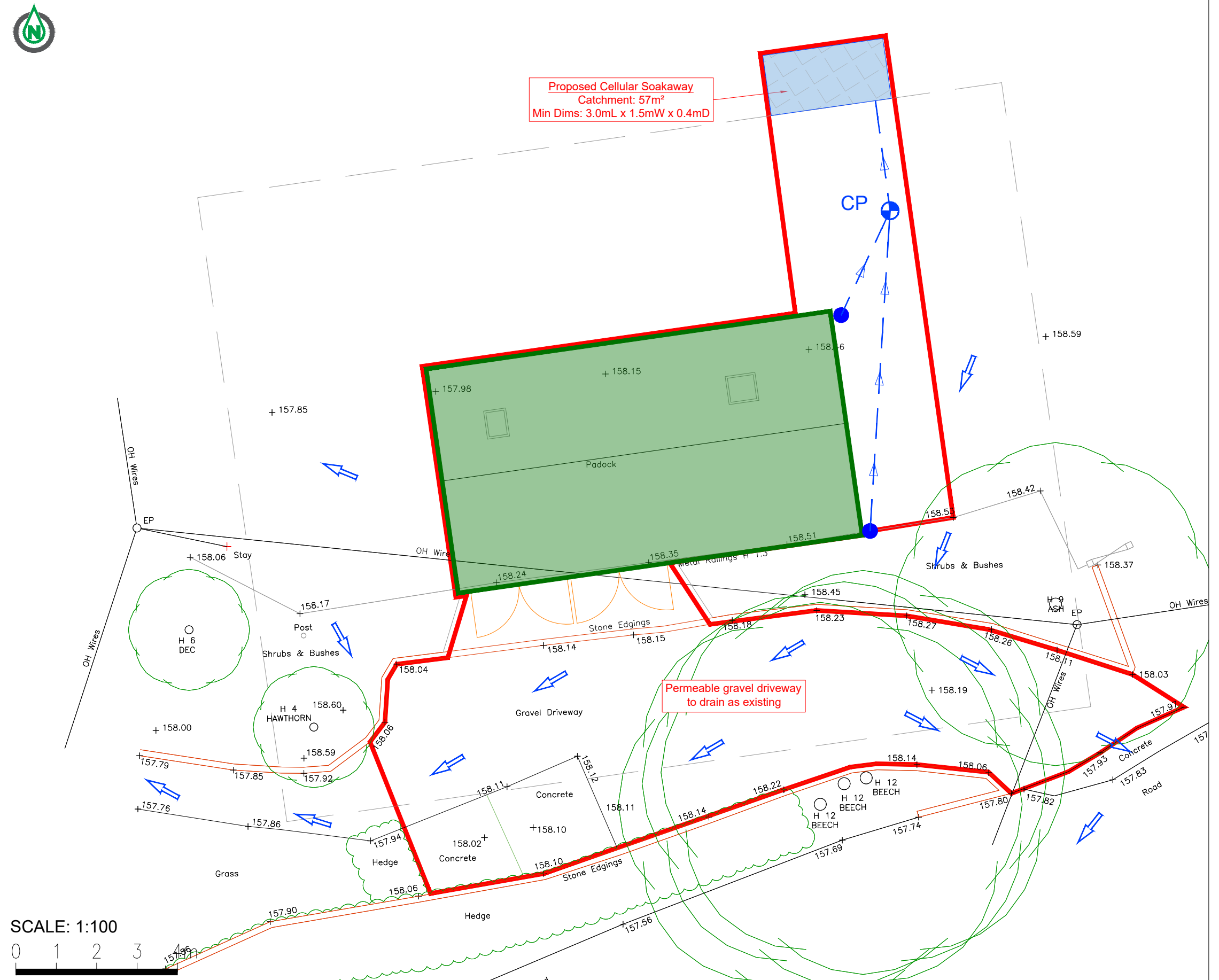


Proposed Garage
Little Thatch
Winterbourne Monkton

Surface Water Drainage Strategy

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APPENDIX B

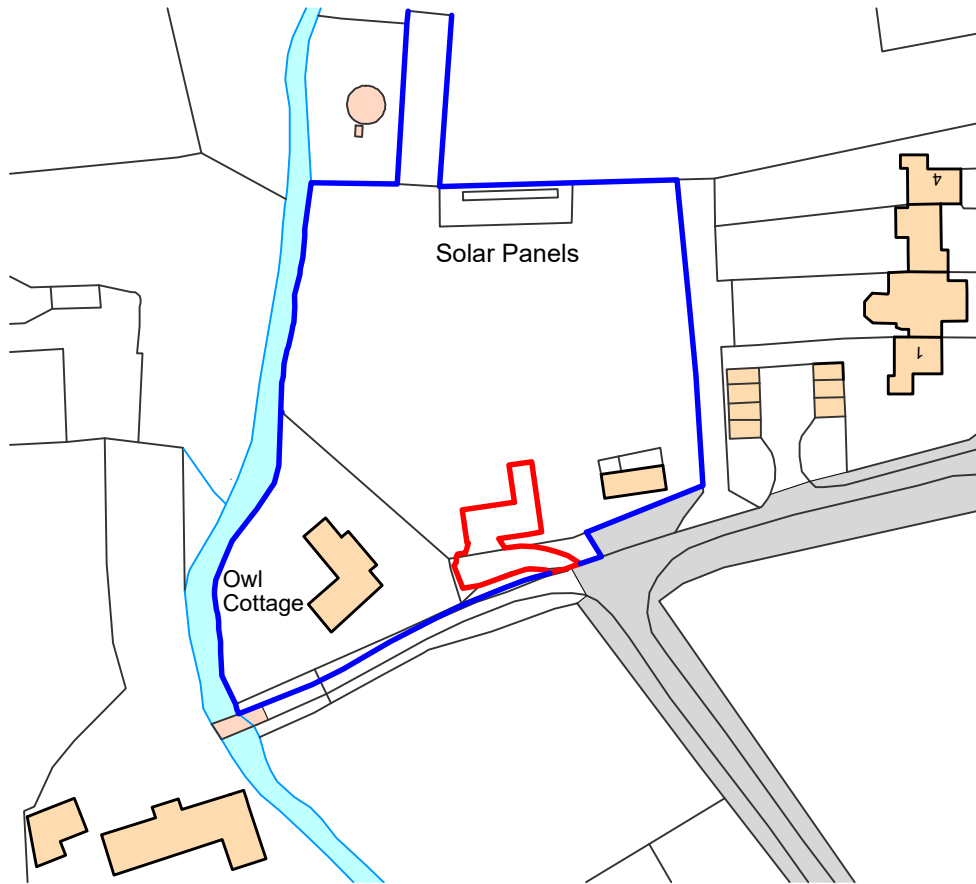
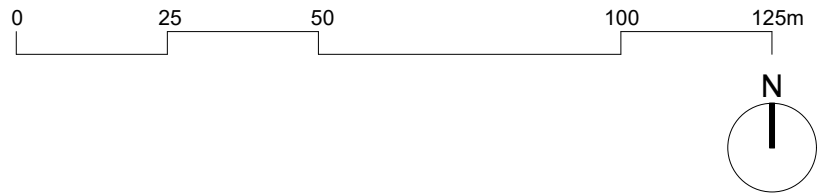
Drawings By Others

Drawing ref. 2607 L-000

Location Plan (DRA Architects)

Drawing ref. 2607 PL-001

Proposed Site Plan (DRA Architects)



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Contractors must check all dimensions on site.
Only figured dimensions are to be worked from.
Discrepancies must be reported to the Architect before proceeding.
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Client -
Mr P Jackson

Project -
Proposed Works at Owl Cottage / Little Thatch,
192 Winterbourne Monkton, Swindon, SN49NW

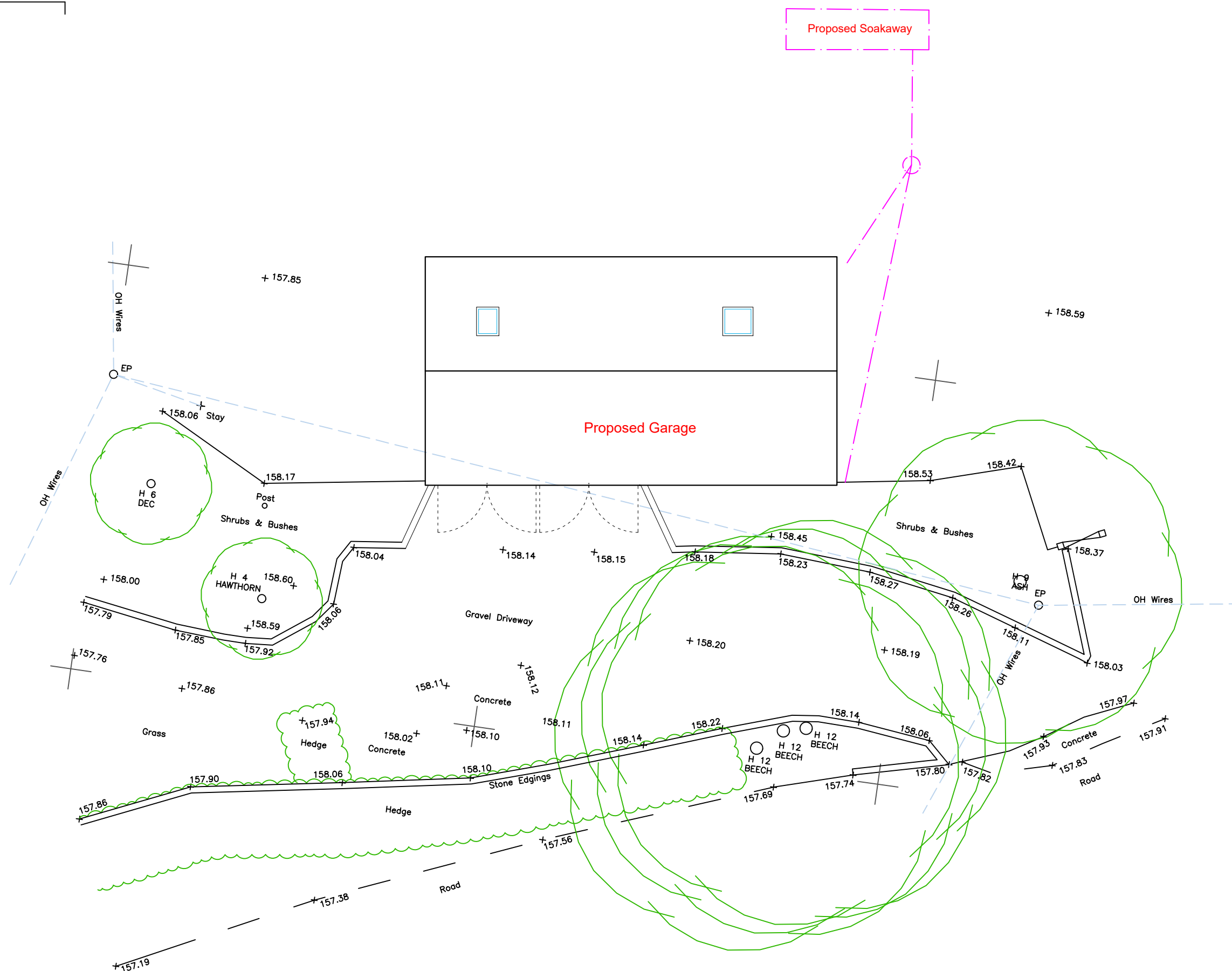
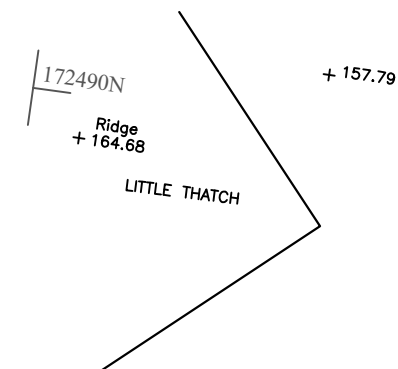
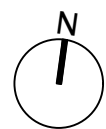
Drawing -

Location Plan

Date -	By -	Scale -	REV -
16.07.2026	NK	1:1250 @A4	A
Job No -	CHKD -	Drawing No -	
2607	CL	L-000	

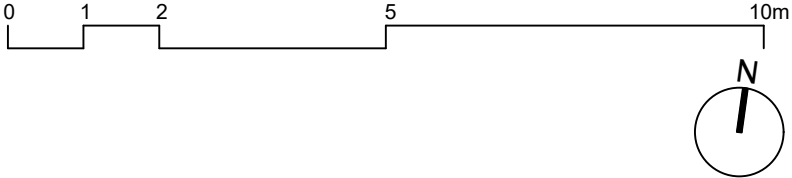
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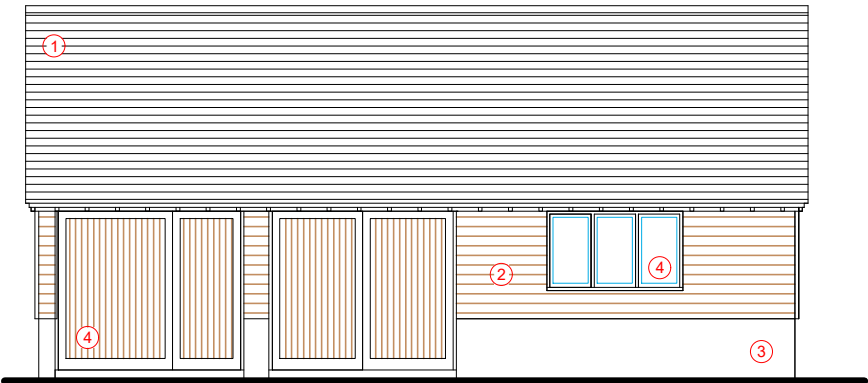


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Mr P Jackson						
Project -	Date -	By -	Scale -	REV -		
Proposed Works at Owl Cottage / Little Thatch, 192 Winterbourne Monkton, Swindon, SN49NW	17.07.2026	NK	1:100 @A3	A		
Drawing -	Job No -	CHKD -	Drawing No -			
Proposed Site Plan	2607	CL	PL-001			

- LEGEND
- 1. Plain tiles
 - 2. Timber cladding
 - 3. Brick plinth
 - 4. Timber doors and windows
 - 5. Conservation pattern rooflights



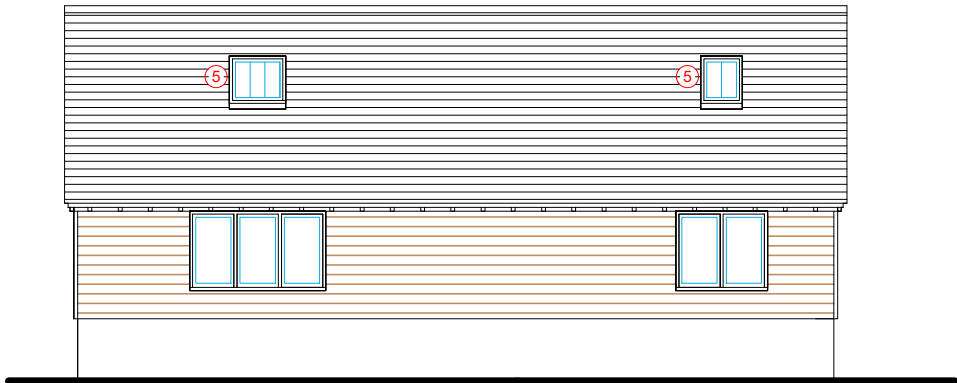
Proposed West Elevation



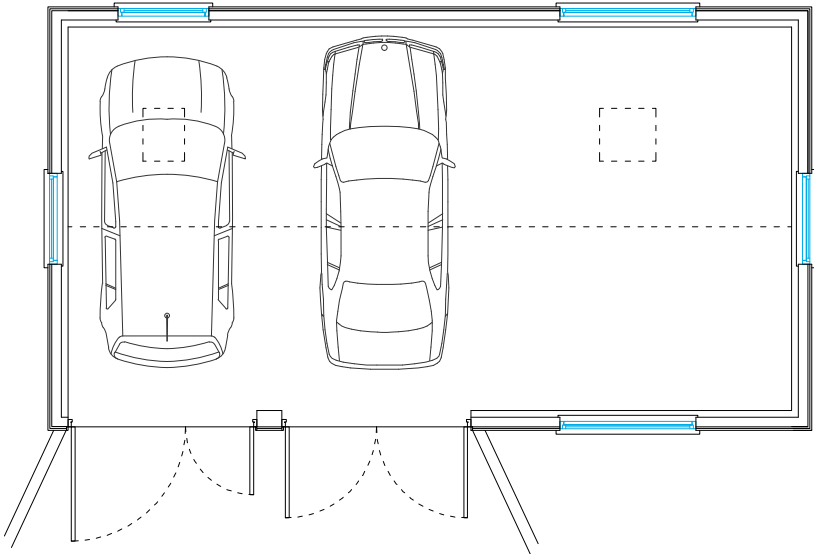
Proposed South Elevation



Proposed East Elevation



Proposed North Elevation



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Client -
Mr P Jackson

Project -
**Proposed Works at Owl Cottage / Little Thatch,
192 Winterbourne Monkton, Swindon, SN49NW**

Drawing -

Proposed Garage Details

Date -	By -	Scale -	REV -
17.07.2026	NK	1:100 @A3	--
Job No -	CHKD -	Drawing No -	
2607	CL	PL-101	

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mob:07733 885 770
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APPENDIX C

Infodrainage Calculations

Project: Little Thatch Winterbourne Monkton	Date: 07/08/2026			
	Designed by: AD	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Phase	Design: SW Infiltration Design			



Garage Catchment Area

Type : Catchment Area

Area (ha)	0.006
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff Coefficient	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Little Thatch Winterbourne Monkton	Date: 07/08/2026			
	Designed by: AD	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Phase	Design: SW Infiltration Design			



Cellular Storage

Type : Cellular Storage

Dimensions

Exceedance Level (m)	158.000
Depth (m)	0.400
Base Level (m)	157.000
Number of Crates Long	3
Number of Crates Wide	3
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	2.310

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Garage Catchment Area
Bypass Destination	(None)
Capacity Type	No Restriction

Advanced

Base Infiltration Rate (m/hr)	0.0036
Side Infiltration Rate (m/hr)	0.0036
Safety Factor	1.5

Project: Little Thatch Winterbourne Monkton	Date: 07/08/2026			
	Designed by: AD	Checked by:	Approved By:	
Report Title: Rainfall Analysis Criteria	Design: SW Infiltration Design			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall		
FSR	Type: FSR	

Region	England And Wales
M5-60 (mm)	19.0
Ratio R	0.470
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
10.0	0.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

Project: Little Thatch Winterbourne Monkton	Date: 07/08/2026		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Design: SW Infiltration Design		





Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Cellular Storage	FSR: 10 years: +0 %: 1440 mins: Winter	157.391	157.391	0.391	0.391	0.1	1.672	0.000	0.789	0.0	0.000	27.616	OK



FOR MORE INFORMATION CONTACT US AT:

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01249 490813

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