Flood Risk Assessment and Drainage Strategy Report

5032745-RDG-XX-XX-T-C-300500

Southern Policing Hub
Mitre Way, Old Sarum

POLICE AND CRIME COMMISSIONER FOR WILTSHIRE

August 2026

SOUTHERN POLICING HUB

POLICE AND CRIME COMMISSIONER FOR WILTSHIRE

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1. INTRODUCTION

1.1. Scope and Objectives

The Police and Crime Commissioner for Wiltshire has instructed Ridge & Partners LLP to undertake a Flood Risk Assessment and Drainage Strategy in support of a new Policing Hub at Mitre Way, Old Sarum, Wiltshire. The development comprises a new Policing Hub, car parking and site access road.

This Flood Risk Assessment and Drainage Strategy report has been prepared in support of Outline Planning Application for the Land at Mitre Way, SP4 6GW. At this stage, all matters relating to design are reserved, apart from means of access. All design elements shown are indicative of a potential design approach that may be taken by the PCC and will be developed at the Reserved Matters stage.

All areas of the proposed development of built form fall entirely within Flood Zone 1. The purpose of this report is to assess the feasibility of the proposed development in relation to current levels of flood risk, to position the development in context of the National Planning Policy Framework (NPPF) and its associated technical guidance. In preparing this report a number of authorities have been consulted, namely:

- Environment Agency
- Wiltshire County Council in their capacity as Lead Local Flood Authority (LLFA)
- Leep Networks Ltd in their capacity as statutory undertaker.

The proposed outline drainage strategy has been shared with Wiltshire Council acting as LLFA through the pre-application consultation process. The feedback received to date confirms that the LLFA generally consent with the proposed foul and surface water strategies, although exact details are to be developed at the Reserved Matters stage.
For details on pre-application correspondence, please refer to Appendix F.

In accordance with the technical guidance to the NPPF, flood risk can be divided into zones as described in Table 1, below.

Table 1 - Flood zone descriptions

FLOOD ZONE	DESCRIPTION
Zone 1	Areas deemed to be in flood zone 1 have been shown to be at less than 0.1% chance of flooding in any year, this is sometimes known as having a 1 in 1000-year probability.
Zone 2	Areas deemed to be in flood zone 2 have been shown to have between 0.1% – 1% chance of flooding from rivers in any year (between 1 in 1000 and 1 in 100- year probability) or between 0.1% – 0.5% chance of flooding from the sea in any year (between 1 in 1000 and 1 in 200-year probability).
Zone 3a	Flood zone 3 is split into 2 separate zones; 3a and 3b by the local planning authorities. (The EA do not split the zone and as such their maps only identify a general flood zone 3). Areas within flood zone 3 have been shown to be at a 1% or greater probability of flooding from rivers or 0.5% or greater probability of flooding from the sea.
Zone 3b	Flood zone 3b is classified as 'functional flood plain' and are deemed to be the most at-risk land of flooding from rivers or the sea. Local planning authorities have classified areas at significant risk of flooding to be within flood zone 3b. This classification is usually classified as land which has a 5% probability of flooding (1 in 20-year probability).

2. THE SITE

2.1. Site Location

The proposed site is located in Old Sarum, Wiltshire and is shown in red on Figure 1 and yellow on Figure 2 below.

The site is located approximately 3.2 miles (5 km) north of Salisbury city centre, within Wiltshire in the Southwest of England. The site lies to the east of the A345, which provides direct vehicular access and connections to the A36 and wider strategic road network.

The immediate surroundings comprise of a series of residential developments. The wider surroundings comprise of heritage assets, notably the Scheduled Monument of Old Sarum hillfort to the west. Salisbury historic city centre lies to the south.
Overall, the site is within the built form of the Old Sarum part of the Wiltshire Local Plans mixed-use development area, with close functional links to Salisbury.

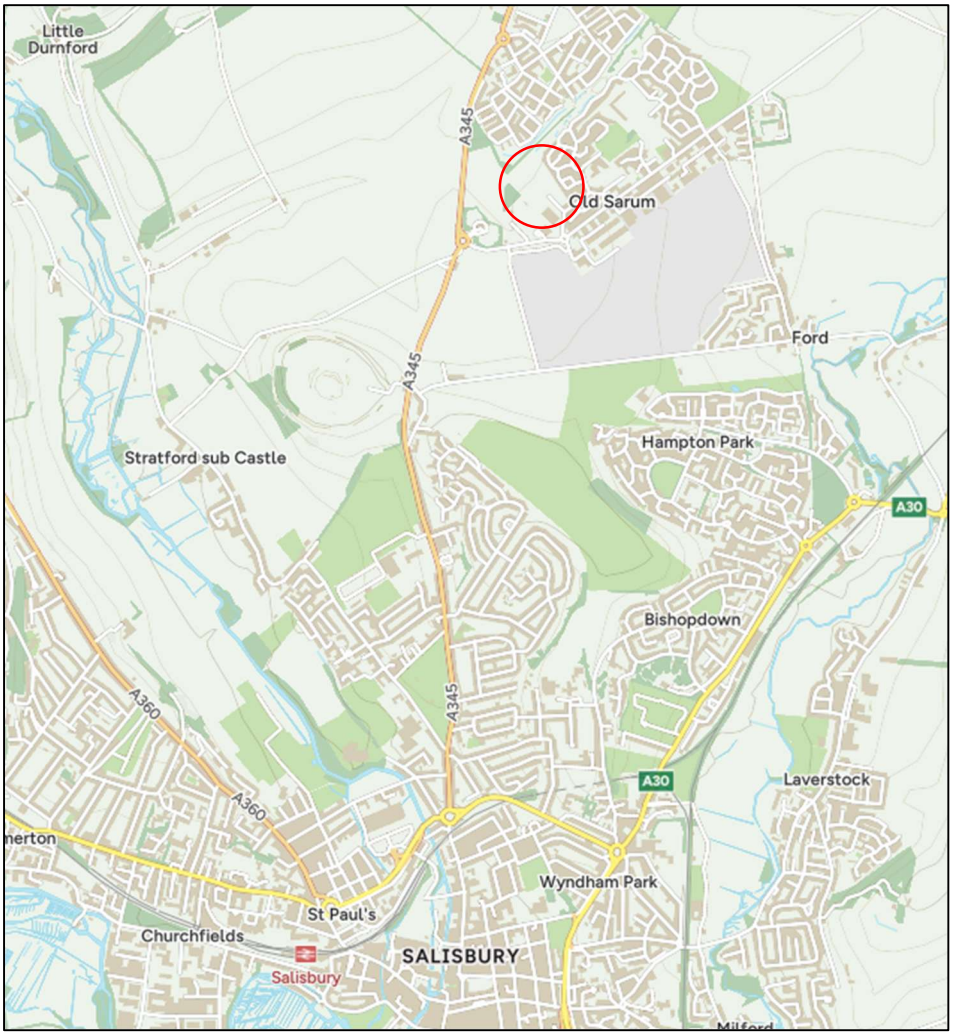


Figure 1 - Site location (large scale)
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Figure 2 - Site location plan

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The site is bordered by Mitre Way, Castle Well Road, Avonbourne Care Centre, private dwellings and fields. The site area is approximately 26,900m^2 (2.69ha). The approximate ground levels surrounding the site are shown in Table 2 below.

Table 2 - Site boundary levels

LOCATION	GROUND LEVEL (MAOD)
North	69.48
East	71.78
South	72.33
West	70.05

The low point of the development is the northwest boundary.

2.2. Geological Setting

British Geological Survey (BGS) mapping indicates that the majority of the site may be underlain by Seaford Chalk Formation. This is sedimentary bedrock formed between 89.8 and 83.6 million years ago. The southern section of the site is underlain by Newhaven Chalk Formation, sedimentary bedrock formed between 86.3 and 72.1 million years ago. Towards the north of the site, there appears to be a band of Stonebridge Rock Member Limestone, this is sedimentary bedrock, formed between 86.3 and 83.6 million years ago.

2.3. Hydrogeological Setting

Environment Agency mapping shows the site over a principal aquifer. Principal aquifers are layers of rock or which provides high levels of water storage capacity and permeability. This is considered as a strategically important rock unit.

2.4. Hydrological Setting

The site is located 43km from the sea. Environment Agency flood mapping shows that the site sits entirely within Flood Zone 1.
Refer to Table 1 for definitions of all Flood Zones.

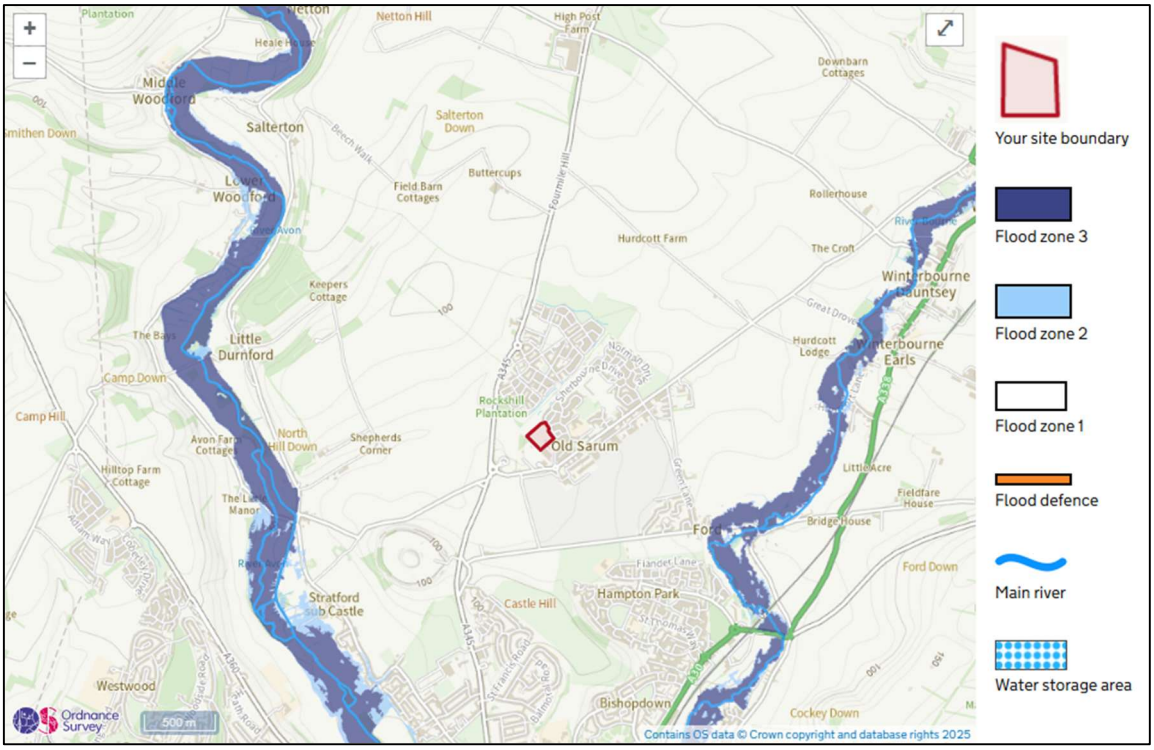


Figure 3 – EA flood zone map

2.5. Groundwater Source Protection Zone

DEFRA Source Protection Zone mapping shows that the site sits within the Inner Protection Zone (SPZ1) for Source protection. This means the area is immediately close to an abstraction point for either domestic supply or for food production purposes. Groundwater within SPZ1 is at a greater risk of pollution and source control measures should be included to minimise the chance of groundwater pollution.

2.6. Existing Drainage Regime On-Site

As the site is greenfield, it is considered permeable. The existing layout suggests that Surface water permeates through the ground and flows north, following the natural topography of the site.
Due to the site being underlain by chalk, it is assumed that surface water is discharged via infiltration.

Greenfield runoff rates for the site for different return periods have been calculated using the IH124 method and are displayed in Section 5.3.

3. QUANTIFYING FLOOD RISK

3.1. Fluvial Flooding

Fluvial flooding occurs when excessive rainfall over an extended period causes a river to exceed its capacity. It can also be caused by heavy snow melt and ice. As can be seen in Figure 4, the development is shown as having a very low to no risk of fluvial flooding. This means that the annual flood risk of the site is less than 0.1%.

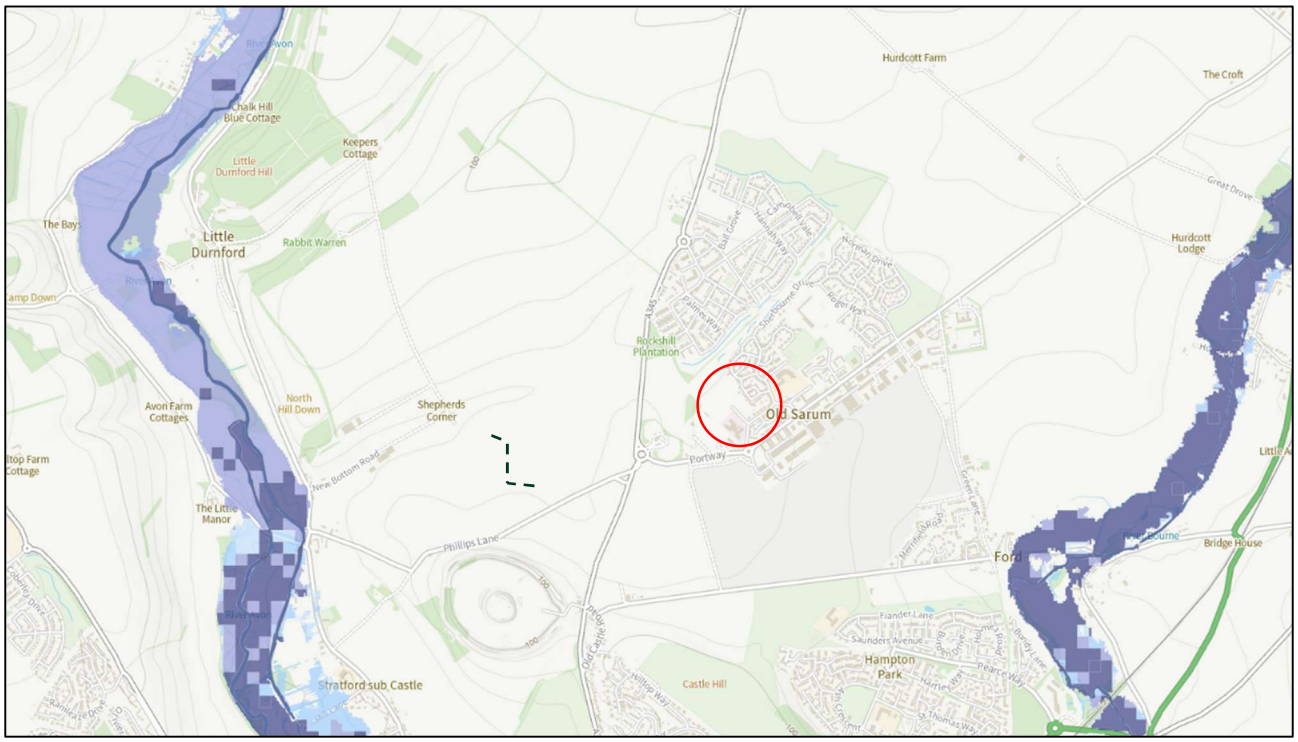


Figure 4 - Flood risk from fluvial flooding

Summary: Very low risk of fluvial flooding.

3.2. Pluvial Flooding

Pluvial (surface water) flooding or flash flooding occurs when a drainage system cannot handle an extremely heavy rainfall event. When the excess water cannot be absorbed, the drainage system surcharges and leads to local flooding. As can be seen in Figure 5, the site is shown as having a very low risk of pluvial flooding. This means that the annual chance of flooding due to surface water is lower than 0.1%.

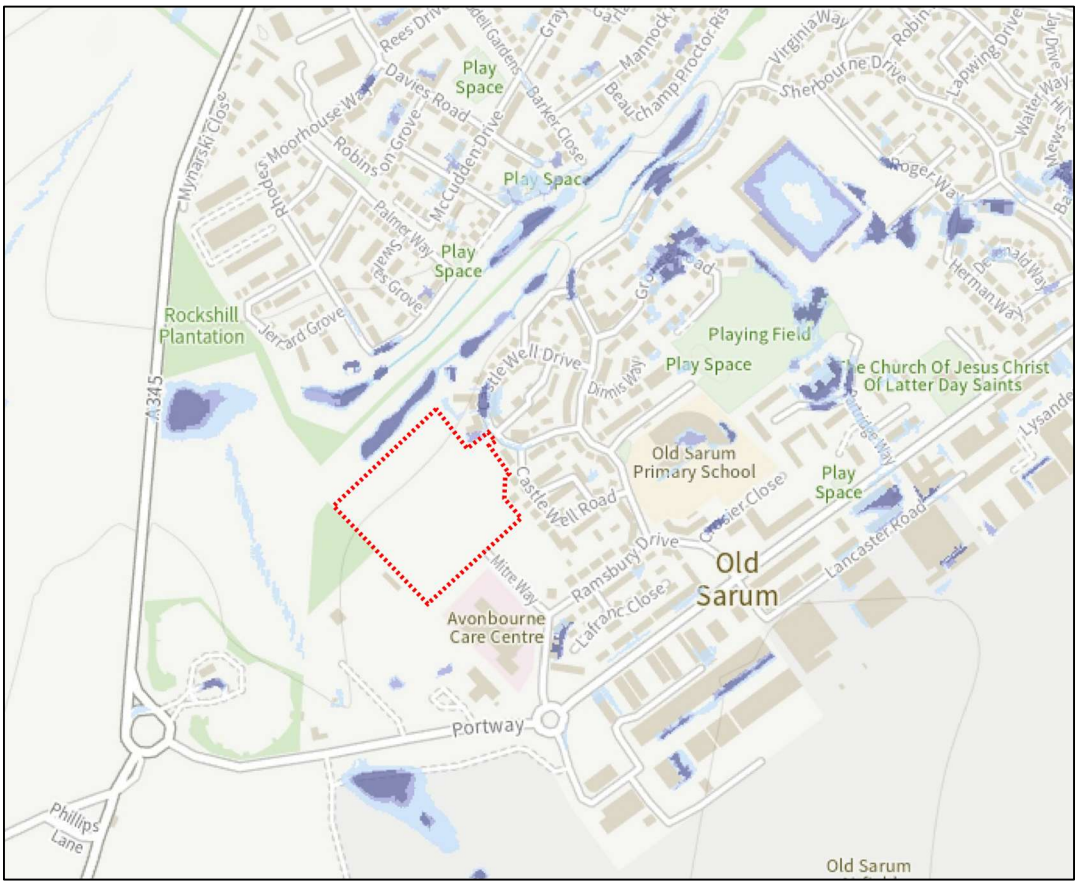


Figure 5 - Flood risk from surface water – EA Surface Water Flooding Map (29/01/2025)

Summary: The site has a very low risk of pluvial flooding.

3.3. Tidal Flooding

The site is approximately 43km from the coast and therefore there is a very low to no risk of tidal flooding.

Summary: Very low risk of tidal flooding.

3.4. Flooding from Artificial Sources

As shown in Figure 6, the site is not located close any artificial sources.

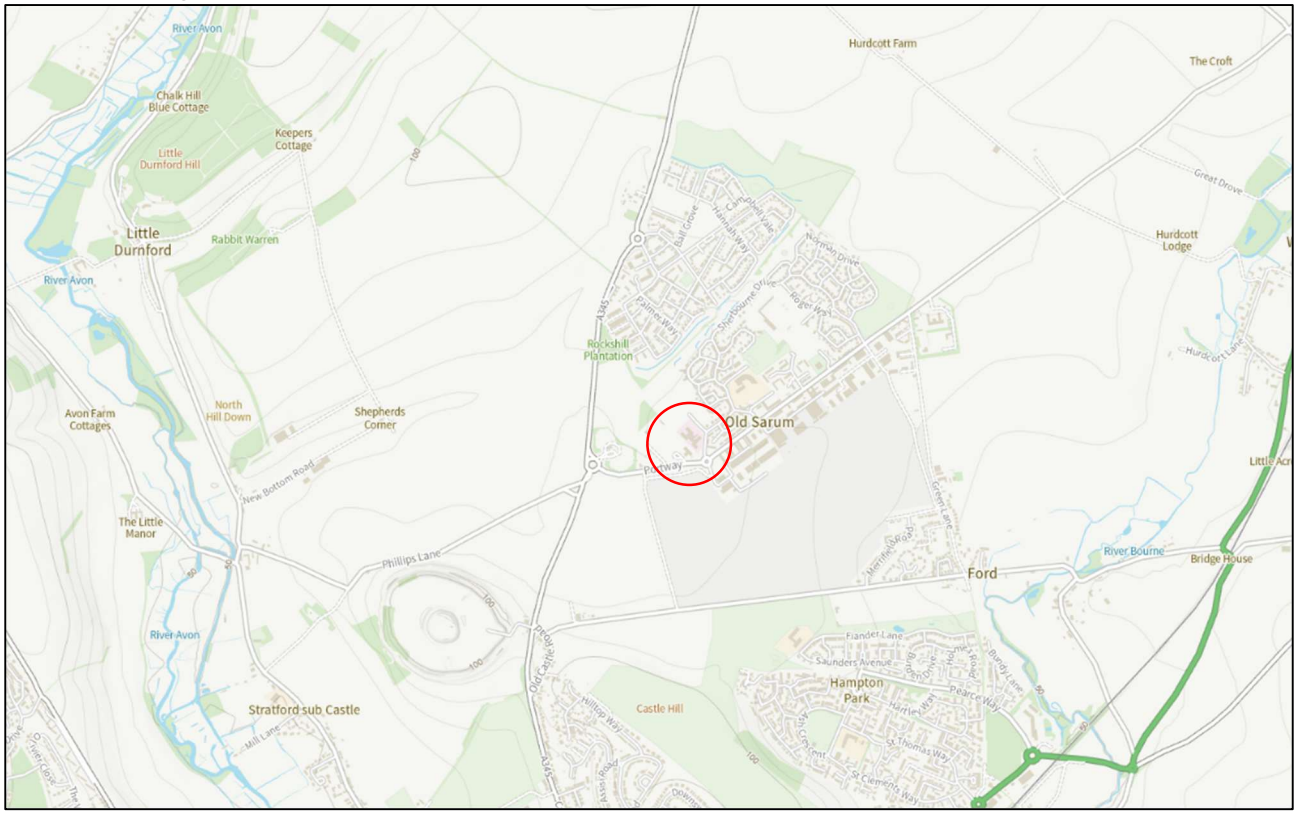


Figure 6 - Flood risk from artificial sources

Summary: Very low risk of flooding from artificial sources.

3.5. Groundwater Flooding

Groundwater flooding occurs due to water rising from underlying permeable rock formations or from water flowing from abnormal springs. This tends to occur after much longer periods of sustained high rainfall. Groundwater tends to flow from areas where the ground level is high, to areas where the ground level is low.

As discussed above, the development site is located over a primary aquifer. Therefore, there is a risk of flooding when groundwater levels are high.

Summary: Low risk of flooding from groundwater

3.6. Flooding Summary

Table 3 summarises the flood risk of the development site.

Table 3 - Flood risk summary

FLOOD	RISK
Fluvial Flooding	Very low
Pluvial Flooding	Very low
Tidal Flooding	Very Low
Flooding from Artificial Sources	Very Low
Groundwater Flooding	Low

3.7. Sequential Testing

The National Planning Policy Framework's (NPPF) Sequential Test requires that a sequential approach is followed to steer new development to areas with the lowest probability of flooding (i.e., Flood Zone 1, then 2, then 3). A Sequential Test is required if:

- The site is in Flood Zone 2 or 3.
- in flood zone 1 and the LPA's SFRA shows it will be at increased risk of flooding during its lifetime.
- it is subject to sources of flooding other than rivers or sea.

Table 4 shows the flood risk vulnerability for different types of infrastructure for each flood zone.

Table 4 - Flood risk vulnerability and flood zone compatibility

FLOOD ZONE	ESSENTIAL INFRASTRUCTURE	WATER COMPATIBLE	HIGHLY VULNERABLE	MORE VULNERABLE	LESS VULNERABLE
Flood Zone 1	✓	✓	✓	✓	✓
Flood Zone 2	✓	✓	Exception Test Required	✓	✓
Flood Zone 3a	Exception Test Required	✓	×	Exception Test Required	✓
Flood Zone 3b	Exception Test Required	✓	×	×	×

✓ Development considered acceptable × Development considered unacceptable

The proposed development site will comprise a policing hub. As such, the development is classed as 'highly vulnerable' with respect to flood risk. Highly vulnerable development is considered appropriate in Flood Zone 1. Additionally, the proposed surface water drainage strategy described in Section 5 ensures that the proposals reduce the risk of pluvial and groundwater flooding and as such, the proposals meet the requirements of the Sequential Test.

4. DEVELOPMENT PROPOSALS

4.1. Description of Development Proposals

The site comprises an area of approximately 2.69ha. It is proposed that the development will include the construction of a policing hub, car park, access road, secure service yard and landscaped areas. Figure 7 shows the proposed development. A full illustrative site plan can be found in Appendix A.

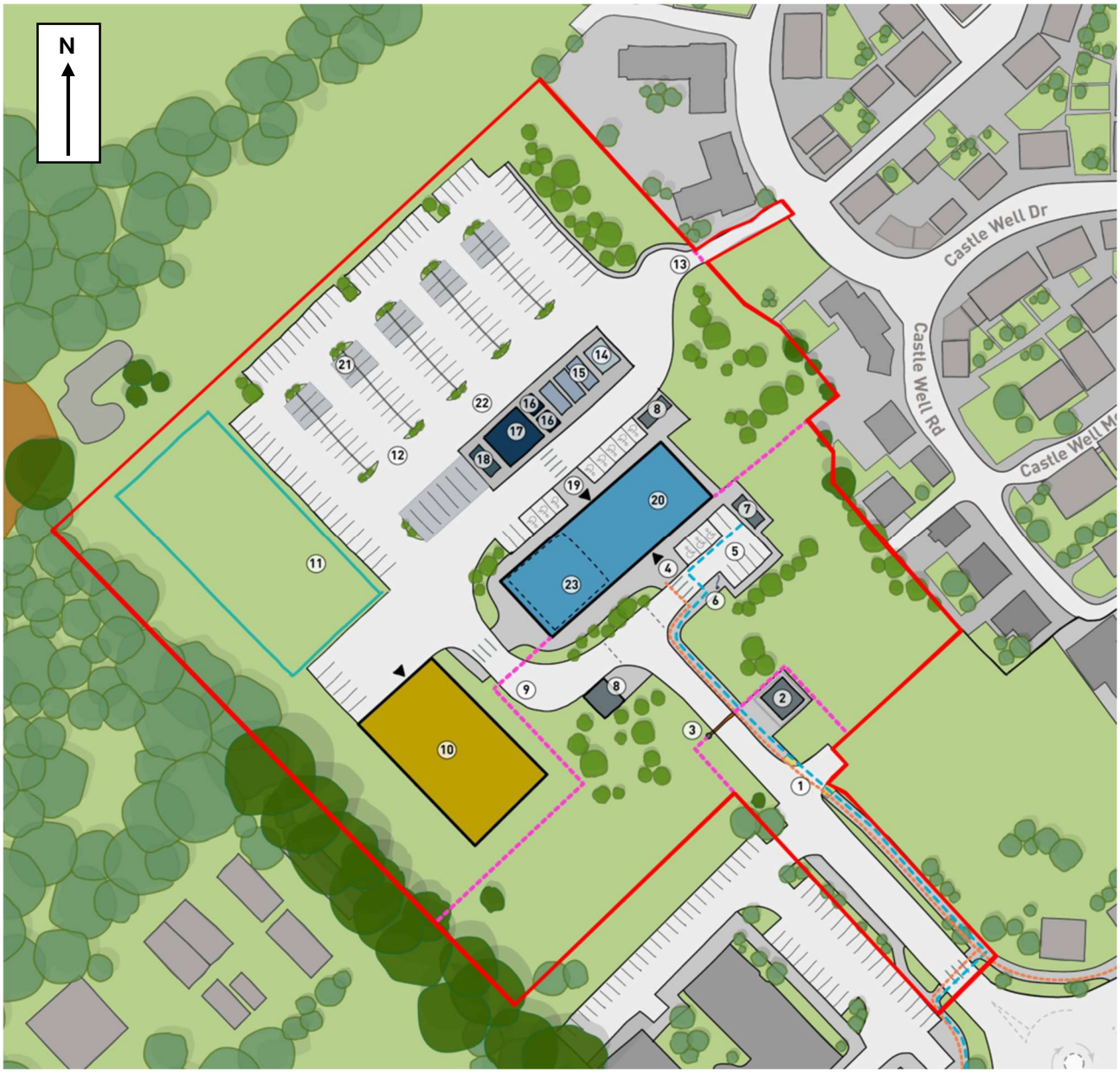


Figure 7 – Illustrative Site Plan

The drainage strategy section of this document details the approach to be taken to manage both surface water runoff and foul water.

5. SURFACE WATER DRAINAGE STRATEGY

5.1. Relevant design guidance

The following documents have been used to formulate the proposed surface water drainage strategy for the site.

- *Wiltshire Council Adoptable Highway Drainage Guidance, July 2020,*
- *CIRIA The SuDS Manual (753), November 2015.*
- *Wiltshire Council's Developer's Guidance Note: Surface Water Soakaways, December 2018,*
- *Wiltshire Council Drainage and Betterment Strategy, June 2024,*
- *Design and Construction Guidance (DCG) for foul and surface water sewers offered for adoption, May 2021.*
- *Flood risk assessments: climate change allowances', Environment Agency, May 2022*
- *The Environment Agency's approach to groundwater protection, February 2018*

5.2. Drainage Hierarchy

Wiltshire Council's Drainage and Betterment Strategy establishes a hierarchy for the management of surface water runoff, should be followed. The hierarchy is as follows:

1. Rainwater re-use
2. Discharge to the ground via infiltration
3. Discharge via a hybrid solution of infiltration and discharging to a surface water body
4. Discharge to a surface water body
5. Discharge to surface water sewer, or highway drain
6. Discharge to combined sewer

The development makes use of the first and second tiers of the drainage hierarchy. As previously mentioned, the ground is conducive to infiltration as the underlying geology is chalk. It is assumed the design will include rainwater harvesting means, this has not been accounted for within the attenuation calculations. It can be shown that the first and second tier of the desired surface water management hierarchy has been met.

5.3. Rainfall Data

The design makes use of FEH flood data. The drainage system has been sized to account for critical storms for both sets of data. This includes the 1, 30 and 100+40% storm events.

5.4. Greenfield Runoff Rate

Table 5, below, states the Greenfield runoff rates for the site. These values have been calculated using the IH124 Method. The site area is considered in hectares (ha), the SAAR and soil index values have been determined using the site location and climate change has been ignored to produce a 'current day' value.

Table 5 - Greenfield Runoff Rates

RETURN PERIOD	QBAR	1-YEAR	30-YEAR	100-YEAR
Greenfield Runoff Rate (l/s)	2.884	2.450	5.448	7.150

5.5. Post-Development Runoff Rate

The existing site currently has an area of approximately 25,800m^2. Post-development, approximately 16,779m^2 (65%) will become impermeable - this includes roof areas.
Table 6 below states the Post Development Runoff rates for the site. Detailed calculations can be found in Appendix D.

Table 6 – Post Development Runoff Rates

RETURN PERIOD	1-YEAR	30-YEAR	100-YEAR	100-YEAR (+40% CC)
Post-Development Runoff Rate (l/s)	233.6	549.3	694.6	1007

5.6. Proposed Strategy

Runoff from the proposed access roads, car parking, maintenance areas and service yards will be collected using a traditional pipe and gully system.
Roof runoff will be captured for re-use, once the rainwater harvesting attenuation has reached capacity, further roof runoff will be conveyed to ground level via downpipes, before flowing to the underground surface water network.
For proposed surface water drainage plans, please refer to Appendix B.

Surface water flows will be collected and conveyed to one of two surface water sewer networks. The network serving the access road and service yard area will pass flows through a catchpit, vortex separator and a Class 1 Full Retention Separator and discharge into a bioretention basin. This basin will comprise a planted area in which surface water will enter before infiltrating through a filter medium and an attenuation storage layer. Once the surface water has passed through both media, the water will discharge via means of infiltration, into the permeable strata.

The network serving the car park receives surface water flows from the parking area and the footways to the south of the buildings. Runoff will be conveyed through a catchpit, vortex separator and a Class 1 Full Retention Separator before entering a below-ground cellular infiltration system. This infiltration system will be comprised of geocellular crates with a minimum void ration of 95%. This underground structure will attenuate flows before being discharged from the crates to the ground by means of infiltration.

5.7. Peak Flow Control and Discharge Method

Given the existing and proposed drainage strategies for this site both make use of the permeable strata to infiltrate surface water, there is no requirement for peak flow control throughout the drainage design. The design ensures the surface attenuation features retain at least 50% capacity after a 24-hour period for a 1 in 30-year (+climate change) storm event.

5.8. Sustainable Drainage Systems (SuDS)

To achieve the desired pollution protection level required for a development within SPZ1, the following Sustainable Urban Drainage Systems have been directly employed in the drainage design. Refer to Appendix B for the *Surface Water Drainage Plan* for details.

Oil Interceptor

Oil separators will be installed upstream of both the underground infiltration tank and the bioretention basin. The aim of which will be to protect the downstream watercourses from pollution via oil, this may be present due to minor leaks from vehicles, accidental spillages or due to deliberate illegal tipping into drains. It is a mandatory requirement under PPG3 (Pollution Prevention Guidelines) to fit oil separators with an automatic oil level warning device (alarm).

Vortex Separator

A vortex separator will be employed immediately upstream of inlets of the proposed attenuation features. This will remove pollutants that are typically found attached to silt and debris which enter the drainage system in surface water runoff. PPG3 requires a vortex separator (or catchpit) to be installed upstream of an oil separator.

Bioretention Basin

A bioretention basin will be employed to discharge flows arising from the access road surface water drainage network and roof areas. The inclusion of natural vegetation, in conjunction with a filter media will remove pollutants that are typically found attached to silt and debris which enter the drainage system in surface water runoff.

5.9. National Standards for Sustainable Drainage Systems Compliance Statement

This outline application is supported by a sustainable drainage strategy centred on a bioretention pond, shown indicatively on the illustrative masterplan, which will manage surface water in accordance with NPPF Policy and the National Standards for Sustainable Drainage Systems. The pond will attenuate runoff for events up to and including the 1 in 100 year plus climate change allowance.
The bioretention pond will provide at least one stage of water quality treatment through vegetated filtration media in line with the Simple Index Approach.

The runoff destination hierarchy will be followed, with infiltration prioritised based upon positive ground investigation findings as detailed within the supporting Ground Condition Assessment (5032745-RDG-XX-ST-T-C-00GCA01).

Beyond its hydraulic function, the pond has been located and designed to deliver multifunctional benefits, contributing amenity value to the public realm and supporting biodiversity net gain through native, wetland-tolerant planting integrated with the wider green infrastructure network.

Maintenance will be secured through a SuDS maintenance plan (Appendix F), with the maintaining body and adoption arrangements to be confirmed in consultation with the Lead Local Flood Authority.
As the application is outline in nature, this represents a strategy-level commitment; site-specific detailed hydraulic modelling, and a finalised drainage design will be submitted to confirm full compliance at the reserved matters stage.

5.10. Surface Water Quality

WCC in their capacity as the LLFA, encourages that all new developments should aim to include surface features to promote water quality and biodiversity. In response to this, the surface water drainage design employs two bioretention ponds. The ponds are designed to be dry with planting to promote both quality and biodiversity.

The site can be defined according to Table 26.2 of the CIRIA SuDS Manual as having a 'Medium' pollution hazard level. Using data from Tables 26.3 and 26.13 of the same document, it can be seen that, as flows pass through a four-stage treatment process, namely a vortex separator, oil interceptor and infiltrate via the bioretention basins, the water quality improvements are greater than the average pollution level as specified by the SuDS Manual, 2015.

Table 7 - Inflow to SuDS Components

INFLOW TO SUDS COMPONENTS	SUSPENDED SOLIDS (MG/L)	CADMIUM (µG/L)	COPPER (µG/L)	ZINC (µG/L)	NICKEL (µG/L)
Average values from surface water	25	0.6	6	50	20

Table 8 - Outflow from SuDS Components

OUTFLOW FROM SUDS COMPONENTS	SUSPENDED SOLIDS (MG/L)	CADMIUM (µG/L)	COPPER (µG/L)	ZINC (µG/L)	NICKEL (µG/L)
Vortex Separator	10 – 71	0.5	6 – 17	34 - 107	
Oil Separator	16 – 87		6 – 18	60 - 121	
Bioretention Basin	5 - 20	0.04 – 0.1	4 - 10	5 - 29	3 - 8
Engineered Filter Media (SDS Aqua Xchange)	7 - 24		3 - 10	19 - 59	

It should be noted that, as the site falls within the Source Protection Zone 1, careful consideration has been given to ensure the treatment levels of surface water flows are satisfactory with those as laid out within the CIRIA SuDS Manual.

5.11. Calculations

At the Outline Planning stage, Tekla Tedds has been used to undertake a full soakaway analysis based on the BRE365 soakaway calculation requirements. For soakaway calculations in accordance with BRE365, refer to Appendix C.

To cater for the 1 in 100-year storm event (+40% CCA) a total attenuation volume of 1080m^3 is required. This has been achieved across both the underground cellular attenuation system and the bioretention system.

The bioretention basin is split into two parts, the above ground open swale and the below ground filter media and storage layer. In total, the bioretention provides approximately 700m^3 of attenuation and the cellular infiltration system provides approximately 396m^3 of attenuation storage. This is a total of 1095m^3 across the site.
This context has been provided as the Tekla Tedds output does not consider the above ground 'open' portion of the bioretention as additional attenuation volume.

The results show that the proposed SuDS systems provide enough attenuation volume to cope with the critical storm event and also have half drain down times below the 24-hour threshold.

These calculations are to be revisited at Reserved Matters, and a full hydraulic model will be required, this should be built within Autodesk InfoDrainage or a similar piece of software.

6. FOUL WATER DRAINAGE STRATEGY

6.1. Relevant design guidance

The following documents have been used to formulate the proposed surface ate drainage strategy for the site.

- *Building Regulations, Part H*
- *Design and Construction Guidance, 2020.*

6.2. Proposed Strategy

The design allows for the design of a Foul Water (FW) gravity network, servicing the Policing Hub. The strategy is split into two separate elements:

1. A local network including Soil Vent Pipes (SVPs), discharging directly from the building,
2. A trunk/collector sewer running under the site roads,

The overarching FW strategy is to collect the waste from the Policing Hub building into SVPs within the ground floor slab of the building. At this point, the soil vent stacks will discharge into the main trunk sewer, located within the north car park. This trunk sewer will convey flows via gravity into the existing foul water network to the east of the site. This approach makes use of the topography of the site to mitigate the requirement for intermediate pumping and shallow gradients within the FW network.

Design and Construction Guidance, 2020, Paragraph B3.1 - 2 (a) states:
"The domestic design flow should be calculated in accordance with … or, in the absence of appropriate information, 0.6 litres per second per hectare of developable land"
Currently, the internal layouts of the units are unknown, therefore the 0.6 l/s value has been used throughout the foul water design calculations. The developable area of the Policing Hub is 0.123ha. The total demand for proposed development is calculated to be 0.074l/s. Refer to Appendix E for the Foul Water Drainage Plan.

The proposed design includes a 150mm diameter trunk sewer, with pipes laid to falls of 1 in 150 minimum, this ensures the system will be self-cleansing under the design flows.

The point of connection for the proposed foul water drainage will be to an existing foul water chamber which is located within Castle Well Road. This is owned and maintained by Leep Utilities.

7. CONCLUSION

This Flood Risk Assessment and Drainage Strategy is in support of the proposed Police Hub development located at Old Sarum, Salisbury.

Geotechnical assessment indicates that the development site may be underlain by Seaford Chalk Formation. Providing good means for discharge via means of infiltration. These assumptions have been reflected in the Ground Investigation undertaken by Ridge.

The site is wholly located in Environment Agency Flood Zone 1. The site has been assessed as having a very low risk of flooding from artificial sources whilst having a low risk of flooding from all other sources. The site has been considered within the context of the National Planning Policy Framework (NPPF) and is deemed as appropriate.

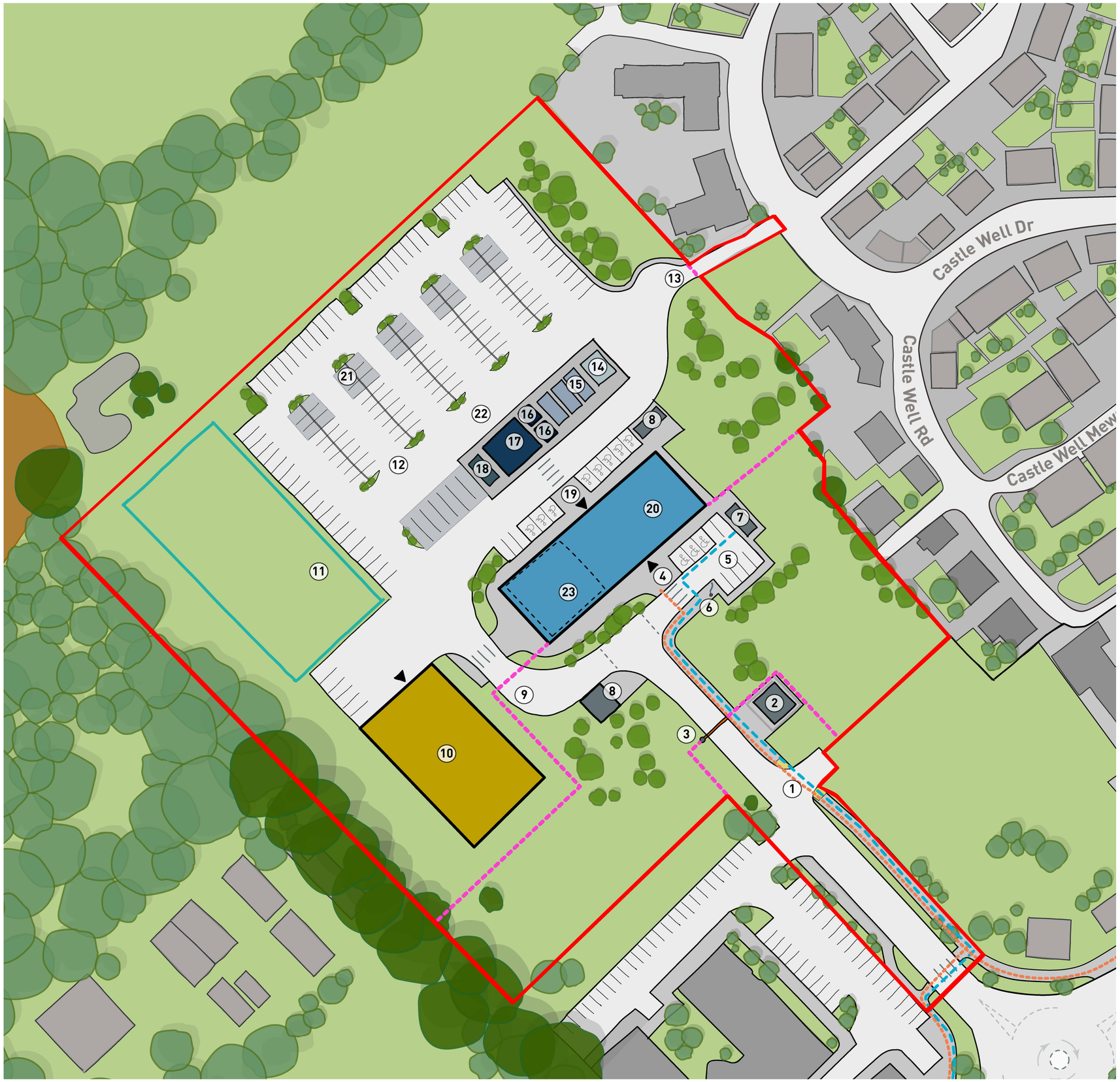
The proposed surface water drainage strategy makes use of multiple SuDS components, in line with the guidance set out by the LLFA, within both *Wiltshire Council's Developer's Guidance Note: Surface Water Soakaways, December 2018, and Wiltshire Council's Drainage and Betterment Strategy, June 2024*.
The site implements SuDS components which have been sized to attenuate, and discharge flows up to the critical storm event (1 in 100 year + 40% CCA).
In addition, the inclusion of SuDS has also been shown to provide improvements to the quality of surface water runoff discharging from the site, this is in line with the CIRIA SuDS Manual 2015 and at an adequate level for sites located within SPZ1.
Finally, the drainage design is compliant with all relevant local and national standards.

The proposed foul water drainage strategy makes use of the natural topography of the site and discharges flows via gravity to an existing foul water sewer network, located to the east of the site, in Castle Well Road. The drainage design is compliant with both Building Regulations Part H and all other relevant local and national standards.
The inclusion of a foul water sewer network further protects the groundwater from contamination.

Initial pre-application consultation with Wiltshire Council acting within their capacity as Lead Local Flood Authority (LLFA) has been positive and feedback received to date confirms that the LLFA are generally content with the proposed foul and surface water drainage strategies. This is on the basis that the remaining detailed design is to be progressed at the Reserved Matters stage. For details on pre-application correspondence, please refer to Appendix G.

The existing and proposed flood risk and drainage regimes of the site have been assessed. The proposals do not increase the risk of flooding. As such, this site is suitable from a flood risk and drainage perspective and is complaint with all relevant policies and standards.

APPENDIX A – ILLUSTRATIVE SITE MASTERPLAN



Key :

1 - Primary Site Entry / Exit point
2 - Electrical Substation
3 - Arm Barrier
4 - Main Staff and Public Entrance
5- Visitor Car Park
6 - Flagpole
7 - Cycle Storage
8 - Bin Storage
9 - Bi-fold vehicular and pedestrian gate to secure rear yard
10 - Storage Building
11 - Potential Expansion Space
12 - Staff Car Park
13 - Secondary Site Access (emergencies only)
14 - Generator & Fuel Tank
15 - Secure Store - FM store, SPR Store, Secure Store
16 - Waste Skips
17 - Vehicle Washdown
18 - Vehicular Fuel Store and Pumps
19 - Staff Entrance to Police Hub
20 - Police Hub Building – 3 storey
21 - Covered Parking Bays
22 - Secure Police Yard
23 - Roof Top Plant

Red Line Boundary & Secure Fence Line
Secure Line (segregating Public Area and Police Secure Yard)
Potential Expansion Space
Cyclist Route
Pedestrian Route
Arboricultural Surveyed Trees
Indicative Existing Trees
New Indicative Landscaping
Accessible Bays
Indicative Parking Bay Shelter Cover
Indicative Existing Buildings in Surrounding Context

N

5 0 5 10 15 20 25
SCALE 500 m
1:

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RDG-X_001

REV	DESCRIPTION	DATE	BY	CHKD
P02	Draft Planning Issue - Co-ordination Updates	16/06/2026	EP	EM
P01	Draft Planning Issue	04/06/2026	EP	EM

ORIGINATOR:

RIDGE

RIDGE PROJECT No: 5021146

CLIENT:
Wiltshire Police

IN ASSOCIATION WITH:

PROJECT:
Old Sarum Police Hub

TITLE:
ILLUSTRATIVE SITE PLAN

DRAWN BY: EP CHECKED BY: EM APPROVED BY: EM

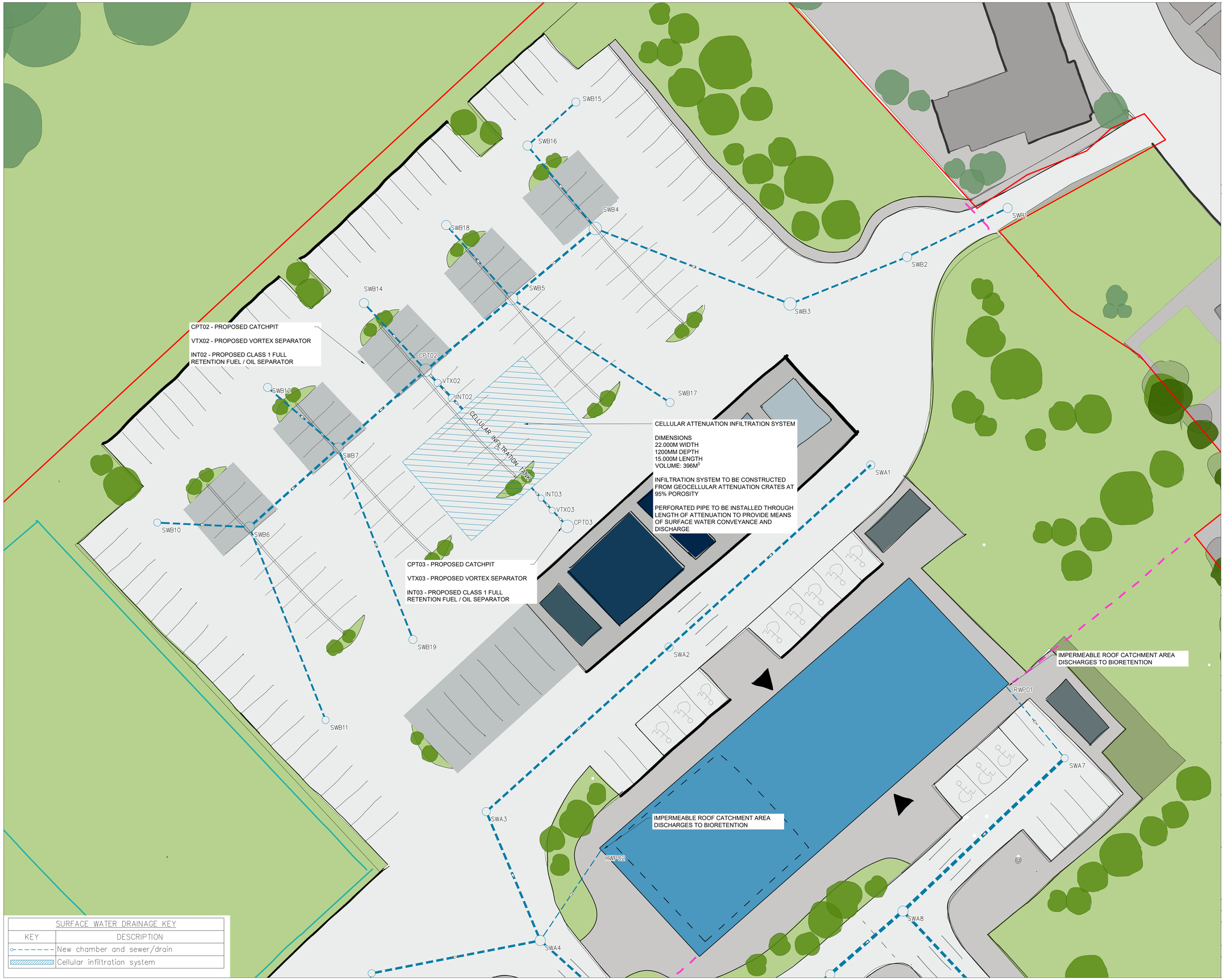
SCALE: As indicated @ A1 DATE: 16/06/2026

STATUS: S3 DESCRIPTION: Suitable for Review and Comment

MODEL REFERENCE: 5032745-RDG-XX-XX-M3-A-000001

PROJECTNUMBER - ORIGIN - FUNC - SPATIAL - FORM - DIS - NUMBER REV:
5021146 - RDG - XX - ST - D - A - 950001 P02

APPENDIX B – SURFACE WATER DRAINAGE DESIGN



SURFACE WATER DRAINAGE KEY	
KEY	DESCRIPTION
	New chamber and sewer/drain
	Cellular infiltration system

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1141-623_Mitre Way Salisbury_Topo Survey - DATED SEP 2023

INFILTRATION RESULTS ARE BASED ON THE FOLLOWING GROUND INVESTIGATION RESULTS:
5021146-RDG-XX-ST-DOC-C-00GCA01 - DATED FEB 2025

REV	DESCRIPTION	DATE	BY	CHKD
P01	DRAFT ISSUE	19/06/2026	KW	AB

ORIGINATOR: www.ridge.co.uk

RIDGE

PROJECT NUMBER: 5032745

CLIENT:
WILTSHIRE POLICE AND CRIME COMMISSIONER

IN ASSOCIATION WITH:

PROJECT:
WILTSHIRE POLICING HUB
OLD SARUM

TITLE:
SURFACE WATER DRAINAGE PLAN
SHEET 1 OF 2

DRAWN BY: KW CHECKED BY: JM APPROVED BY: AB

SCALE: 1:250 @ A1 DATE: 08/06/2026

STATUS: DESCRIPTION:
S3 FOR COMMENT

MODEL REFERENCE: 5032745--RDG-XX-XX-D-C-0501 SW DRAINAGE

PROJECT:	ORG:	FUNCTION:	SPATIAL:	FORM:	DISCIPLINE:	NUMBER:	REV:
5032745	RDG	ZZ	ST	D	C	520501	P01

SWB19
SWA2
SWB11
IMPERMEABLE ROOF CATCHMENT AREA DISCHARGES TO BIORETENTION
RWP01
SWA7
SWA3
IMPERMEABLE ROOF CATCHMENT AREA DISCHARGES TO BIORETENTION
RWP02
SWA8
SWA4
SWA6
SWA9
PROPOSED CATCHPIT
SWA01
CPT01
IMPERMEABLE ROOF CATCHMENT AREA DISCHARGES TO BIORETENTION
RWP03
PROPOSED VORTEX SEPARATOR
SWA10
VTX01
PROPOSED CLASS 1 FULL RETENTION FUEL / OIL SEPARATOR
INT01
PRECAST CONCRETE OR BAGWORK HEADWALL
BIORETENTION POND TO PROVIDE ATTENUATION STORAGE AND DISCHARGE VIA INFILTRATION

POND SIZED TO ACCOMODATE SW RUN-OFF DURING A CRITICAL STORM FROM A 1 IN 100 YEAR RETURN PERIOD WITH A 40% ALLOWANCE FOR CLIMATE CHANGE

POND TO REMAIN DRY IN NORMAL CONDITIONS
FREEBOARD - 300MM
TOP AREA - 632M^2
BASE AREA - 221M^2
APPROX. ABOVE GROUND VOLUME - 567M^3
APPROX. BELOW GROUND VOLUME - 132.6M^3
SIDE SLOPE - 1 in 3
EXCEEDANCE LEVEL - 71.250M
BASE LEVEL - 69.500M
DEPTH - 1.750M

SURFACE WATER DRAINAGE KEY	
KEY	DESCRIPTION
	New chamber and sewer/drain
	Cellular infiltration system

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5021146-RDG-XX-ST-DOC-C-00GCA01 - DATED FEB 2025

N

SCALE 1:250 2 0 2 4 6 8 10 m

REV	DESCRIPTION	DATE	BY	CHKD
P01	DRAFT ISSUE	19/06/2026	KW	AB

ORIGINATOR: www.ridge.co.uk

RIDGE

PROJECT NUMBER: 5032745

CLIENT:
WILTSHIRE POLICE AND CRIME COMMISSIONER

IN ASSOCIATION WITH:

PROJECT:
WILTSHIRE POLICING HUB
OLD SARUM

TITLE:
SURFACE WATER DRAINAGE PLAN
SHEET 2 OF 2

DRAWN BY: KW CHECKED BY: JM APPROVED BY: AB

SCALE: 1:250 @ A1 DATE: 08/06/2026

STATUS: DESCRIPTION:
S3 FOR COMMENT

MODEL REFERENCE: 5032745--RDG-XX-XX-D-C-0501 SW DRAINAGE

PROJECT:	ORG:	FUNCTION:	SPATIAL:	FORM:	DISCIPLINE:	NUMBER:	REV:
5032745	RDG	ZZ	ST	D	C	520502	P01

APPENDIX C – SURFACE WATER DRAINAGE CALCULATIONS

SOAKAWAY DESIGN

In accordance with BRE Digest 365 - Soakaway design

Tedds calculation version 2.0.05

Design rainfall intensity

Location of catchment area	Bournemouth
Impermeable area drained to the system	A = **8825.0** m^2
Return period	Period = **100** yr
Ratio 60 min to 2 day rainfall of 5 yr return period	r = **0.360**
5-year return period rainfall of 60 minutes duration	M5_60min = **18.7** mm
Increase of rainfall intensity due to global warming	$p_{climate}$ = **40** %

Soakaway / infiltration trench details

Soakaway type	Rectangular
Minimum depth of pit (below incoming invert)	d = **1100** mm
Width of pit	w = **9586** mm
Length of pit	l = **31437** mm
Percentage free volume	V_{free} = **40** %
Soil infiltration rate	f = **88.0×10^{-6}** m/s
Wetted area of pit 50% full	a_{s50} = l × d + w × d = **45125300** mm^2

Table equations

Inflow (cl.3.3.1)	I = M100 × A
Outflow (cl.3.3.2)	O = a_{s50} × f × D
Storage (cl.3.3.3)	S = I - O

Duration, D (min)	Growth factor Z1	M5 rainfalls (mm)	Growth factor Z2	100 year rainfall, M100 (mm)	Inflow (m^3)	Outflow (m^3)	Storage required (m^3)
5	0.36;	9.4;	1.90;	17.9;	157.71;	1.19;	156.52
10	0.51;	13.4;	1.96;	26.2;	231.37;	2.38;	228.99
15	0.62;	16.2;	2.00;	32.5;	286.47;	3.57;	282.89
30	0.79;	20.7;	2.03;	41.9;	370.02;	7.15;	362.87
60	1.00;	26.2;	2.00;	52.4;	462.21;	14.30;	447.91
120	1.22;	31.9;	1.95;	62.4;	550.90;	28.59;	522.31
240	1.48;	38.7;	1.90;	73.6;	649.69;	57.18;	592.51
360	1.67;	43.7;	1.86;	81.3;	717.74;	85.77;	631.97
600	1.90;	49.7;	1.81;	90.1;	795.45;	142.96;	652.49
1440	2.42;	63.4;	1.72;	108.9;	961.22;	343.10;	618.12

Required storage volume S_{req} = **652.49** m^3

Soakaway storage volume S_{act} = l × d × w × V_{free} = **132.60** m^3

FAIL - Soakaway storage volume inadequate

Time for emptying soakaway to half volume t_{s50} = S_{req} × 0.5 / (a_{s50} × f) = 22hr 49min 17s

PASS - Soakaway discharge time less than or equal to 24 hours

SOAKAWAY DESIGN

In accordance with BRE Digest 365 - Soakaway design

Tedds calculation version 2.0.05

Design rainfall intensity

Location of catchment area	Bournemouth
Impermeable area drained to the system	A = **7160.0** m^2
Return period	Period = **100** yr
Ratio 60 min to 2 day rainfall of 5 yr return period	r = **0.360**
5-year return period rainfall of 60 minutes duration	M5_60min = **19.0** mm
Increase of rainfall intensity due to global warming	$p_{climate}$ = **40** %

Soakaway / infiltration trench details

Soakaway type	Rectangular
Minimum depth of pit (below incoming invert)	d = **1350** mm
Width of pit	w = **22204** mm
Length of pit	l = **15000** mm
Percentage free volume	V_{free} = **95** %
Soil infiltration rate	f = **150.×10^{-6}** m/s
Wetted area of pit 50% full	a_{s50} = l × d + w × d = **50225673** mm^2

Table equations

Inflow (cl.3.3.1)	I = M100 × A
Outflow (cl.3.3.2)	O = a_{s50} × f × D
Storage (cl.3.3.3)	S = I - O

Duration, D (min)	Growth factor Z1	M5 rainfalls (mm)	Growth factor Z2	100 year rainfall, M100 (mm)	Inflow (m^3)	Outflow (m^3)	Storage required (m^3)
5	0.36;	9.6;	1.90;	18.2;	130.26;	2.26;	128.00
10	0.51;	13.6;	1.97;	26.7;	191.07;	4.52;	186.54
15	0.62;	16.5;	2.00;	33.0;	236.39;	6.78;	229.61
30	0.79;	21.0;	2.03;	42.6;	304.82;	13.56;	291.26
60	1.00;	26.6;	2.00;	53.1;	380.38;	27.12;	353.26
120	1.22;	32.5;	1.95;	63.3;	453.18;	54.24;	398.94
240	1.48;	39.4;	1.90;	74.6;	534.17;	108.49;	425.68
360	1.67;	44.4;	1.85;	82.4;	589.88;	162.73;	427.15
600	1.90;	50.5;	1.81;	91.3;	653.65;	271.22;	382.43
1440	2.42;	64.4;	1.71;	110.2;	789.19;	650.92;	138.27

Required storage volume S_{req} = **427.15** m^3

Soakaway storage volume S_{act} = l × d × w × V_{free} = **427.15** m^3

PASS - Soakaway storage volume

Time for emptying soakaway to half volume t_{s50} = S_{req} × 0.5 / (a_{s50} × f) = 7hr 52min 29s

PASS - Soakaway discharge time less than or equal to 24 hours

APPENDIX D – POST-DEVELOPMENT RUNOFF RATES

DESIGN RAINFALL

In accordance with the Wallingford Procedure

Tedds calculation version 2.0.02

Design rainfall intensity

Location of catchment area	Bournemouth
Storm duration	D = **5** min
Return period	Period = **1** yr
Ratio 60 min to 2 day rainfall of 5 yr return period	r = **0.350**
5-year return period rainfall of 60 minutes duration	M5_60min = **19.0** mm
Increase of rainfall intensity due to global warming	$p_{climate}$ = **0** %
Factor Z1 (Wallingford procedure)	Z1 = **0.36**
Rainfall for 5min storm with 5 year return period	$M5\_5min_i$ = Z1 × M5_60min = **6.8** mm
Factor Z2 (Wallingford procedure)	Z2 = **0.62**
Rainfall for 5min storm with 1 year return period	M1_5min = Z2 × $M5\_5min_i$ = **4.2** mm
Design rainfall intensity	I_{max} = M1_5min / D = **50.1** mm/hr

Maximum surface water runoff

Catchment area	A_{catch} = **16779** m^2
Percentage of area that is impermeable	p = **100** %
Maximum surface water runoff	Q_{max} = A_{catch} × p × I_{max} = **233.6** l/s

DESIGN RAINFALL

In accordance with the Wallingford Procedure

Tedds calculation version 2.0.02

Design rainfall intensity

Location of catchment area	Bournemouth
Storm duration	D = **5** min
Return period	Period = **30** yr
Ratio 60 min to 2 day rainfall of 5 yr return period	r = **0.350**
5-year return period rainfall of 60 minutes duration	M5_60min = **19.0** mm
Increase of rainfall intensity due to global warming	$p_{climate}$ = **0** %
Factor Z1 (Wallingford procedure)	Z1 = **0.36**
Rainfall for 5min storm with 5 year return period	$M5\_5min_i$ = Z1 × M5_60min = **6.8** mm
Factor Z2 (Wallingford procedure)	Z2 = **1.45**
Rainfall for 5min storm with 30 year return period	M30_5min = Z2 × $M5\_5min_i$ = **9.8** mm
Design rainfall intensity	I_{max} = M30_5min / D = **117.8** mm/hr

Maximum surface water runoff

Catchment area	A_{catch} = **16779** m^2
Percentage of area that is impermeable	p = **100** %
Maximum surface water runoff	Q_{max} = A_{catch} × p × I_{max} = **549.3** l/s

DESIGN RAINFALL

In accordance with the Wallingford Procedure

Tedds calculation version 2.0.02

Design rainfall intensity

Location of catchment area	Bournemouth
Storm duration	D = **5** min
Return period	Period = **100** yr
Ratio 60 min to 2 day rainfall of 5 yr return period	r = **0.350**
5-year return period rainfall of 60 minutes duration	M5_60min = **19.0** mm
Increase of rainfall intensity due to global warming	$p_{climate}$ = **0** %
Factor Z1 (Wallingford procedure)	Z1 = **0.36**
Rainfall for 5min storm with 5 year return period	$M5\_5min_i$ = Z1 × M5_60min = **6.8** mm
Factor Z2 (Wallingford procedure)	Z2 = **1.83**
Rainfall for 5min storm with 100 year return period	M100_5min = Z2 × $M5\_5min_i$ = **12.4** mm
Design rainfall intensity	I_{max} = M100_5min / D = **149.0** mm/hr

Maximum surface water runoff

Catchment area	A_{catch} = **16779** m^2
Percentage of area that is impermeable	p = **100** %
Maximum surface water runoff	Q_{max} = A_{catch} × p × I_{max} = **694.6** l/s

DESIGN RAINFALL

In accordance with the Wallingford Procedure

Tedds calculation version 2.0.02

Design rainfall intensity

Location of catchment area	Bournemouth
Storm duration	D = **5** min
Return period	Period = **100** yr
Ratio 60 min to 2 day rainfall of 5 yr return period	r = **0.350**
5-year return period rainfall of 60 minutes duration	M5_60min = **19.0** mm
Increase of rainfall intensity due to global warming	$p_{climate}$ = **40** %
Factor Z1 (Wallingford procedure)	Z1 = **0.36**
Rainfall for 5min storm with 5 year return period	$M5\_5min_i = Z1 \times M5\_60min \times (1 + p_{climate})$ = **9.5** mm
Factor Z2 (Wallingford procedure)	Z2 = **1.90**
Rainfall for 5min storm with 100 year return period	$M100\_5min = Z2 \times M5\_5min_i$ = **18.0** mm
Design rainfall intensity	I_{max} = M100_5min / D = **216.0** mm/hr

Maximum surface water runoff

Catchment area	A_{catch} = **16779** m^2
Percentage of area that is impermeable	p = **100** %
Maximum surface water runoff	$Q_{max} = A_{catch} \times p \times I_{max}$ = **1007.0** l/s

APPENDIX E – FOUL WATER DRAINAGE PLAN

APPROXIMATE POINT OF CONNECTION FOR PROPOSED DEVELOPMENT

TO CONNECT TO EXISTING LEEP UTILITIES OWNED FOUL WATER NETWORK VIA GRAVITY

INDICATIVE LOCATION OF CONNECTIONS FROM POLICING HUB TO FOUL WATER NETWORK

INDICATIVE LOCATION OF SPUR TO FACILITATE CONNECTION TO STORAGE FACILITY

FOUL WATER DRAINAGE KEY	
KEY	DESCRIPTION
	Existing chamber and sewer/drain
	New chamber and sewer/drain
	Existing chamber / new sewer connection
SVP	Soil Vent Stack to below ground drainage

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N

SCALE 1:250 2 2 4 6 8 10 m

REV	DESCRIPTION	DATE	BY	CHKD
P02	ISSUE FOR OUTLINE PLANNING	10/08/2026	KW	AB
P01	DRAFT ISSUE	19/06/2026	KW	AB

ORIGINATOR: www.ridge.co.uk

RIDGE

PROJECT NUMBER: 5032745

CLIENT:
WILTSHIRE POLICE AND CRIME COMMISSIONER

IN ASSOCIATION WITH:

PROJECT:
WILTSHIRE POLICING HUB
OLD SARUM

TITLE:
FOUL WATER DRAINAGE PLAN

DRAWN BY: KW CHECKED BY: JM APPROVED BY: AB

SCALE: 1:250 @ A1 DATE: 08/06/2026

STATUS: DESCRIPTION:
S2 FOR INFORMATION

MODEL REFERENCE: 5032745--RDG-XX-XX-D-C-0510 FW DRAINAGE

PROJECT:	ORG:	FUNCTION:	SPATIAL:	FORM:	DISCIPLINE:	NUMBER:	REV:
5032745	RDG	ZZ	ST	D	C	520510	P02

APPENDIX F – SUDS MAINTENANCE SCHEDULE

Surface Water / SuDS / Foul Water - Maintenance Schedule

Site Name: Southern Policing Hub, Old Sarum, Wiltshire
Person responsible for inspections and maintenance: Wiltshire Council / Building tenant

SuDS/SW Element	Inspections/maintenance item and action taken	Frequency (Months or as specified)	Date Undertaken dd/mm/yy	Next scheduled inspection	Initials
General Site Maintenance	**Regular Maintenance:** • Visual inspection of car park areas, patios and other impermeable surfaces • Clearance of gutters and downpipes and leaf guards if applicable • Root trimming	3 3 12			
Channels and Gullies	**Regular Maintenance:** • Remove litter • Inspect channels • Remove silt and oil from channels and gully traps. Recommend this is done after 1 year of operation then every 2 years thereafter or as required if heavily silting is observed during inspection	As required. 6 After first 12 months and then every 24 months or as required.			
Silt Chambers / Catch pits	**Regular Maintenance:** • Inspect chambers for silt build up and remove silt and debris if discovered	6			
Non-Permeable Paved surfaces	**Routine maintenance:** • Remove debris and litter from the surface • Cut back vegetation to surrounding landscaping • Manual brushing	As required.			

Surface Water / SuDS / Foul Water - Maintenance Schedule

Bioretention ponds	• Inspect after storms to make sure that rainwater has drained and there is no erosion. • Remove sediment and debris from in and around the pond. • Remove weeds and plants that do not belong. • Check for any obstruction or blockage of flow along inflow areas or pipes, including trash, debris, or sediment. • Mow grass no shorter than 3 to 6 inches. Adjust mower height to avoid scalping the edges of the side slopes. • Reseed bare areas to avoid erosion. • Be sure to water during the initial establishment period. • Inspect and maintain or repair components. After rainfall, check the pond to ensure the water does not remain longer than 1 or 2 days after a storm.	As required. Monthly. Monthly. Monthly. 3 As required. As required. As required.			

APPENDIX G – CORRESPONDENCE WITH WILTSHIRE COUNCIL (LLFA)

Keanan Waters

From: Singh, Rohit <Rohit.Singh@wiltshire.gov.uk>
Sent: 23 July 2026 16:17
To: Keanan Waters
Subject: RE: 5032745 - Wiltshire Old Sarum - Outline Planning Application

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Good Afternoon Keanan,

Thank you for the additional information.
The inclusion of the 2025 Ground Investigation findings and BRE365-compliant infiltration calculations within the Flood Risk Assessment and Drainage Strategy should provide an appropriate level of evidence to demonstrate the feasibility of the proposed infiltration approach at outline stage.

I note your comments regarding the site topography and the challenges associated with directing runoff from the proposed development to a single bioretention feature. The supporting Drainage Strategy should clearly explain the relevant level constraints and demonstrate how these have informed the selection of the preferred drainage approach.
Whilst Wiltshire Council would generally encourage the use of surface, vegetated SuDS features wherever practicable, our preference would typically be for a distributed SuDS approach that manages runoff as close to source as possible. In particular, the DEFRA SuDS Standards (2025) place significant emphasis on interception and the management of everyday rainfall before runoff enters a piped drainage system. This is generally best achieved through the incorporation of source control measures distributed throughout the site.

Depending on the final layout and operational requirements of the development, opportunities should be explored for measures such as rain gardens, swales, filter drains, permeable paving, permeable parking areas and other source control features that intercept, store, treat and infiltrate runoff close to where it falls. Such an approach is generally more consistent with the SuDS management train and the multifunctional objectives of the DEFRA SuDS Standards (2025), delivering water quantity, water quality, biodiversity and amenity benefits whilst reducing reliance on conventional piped drainage and underground attenuation structures.
I look forward to reviewing the submission in due course.

Kind regards,

Rohit Singh
Principal Technical Officer Drainage Planning
Weather and Drainage Team
Highways Asset Management and Commissioning

Wiltshire Council

Tel: +44 1225 770326

Email:Rohit.Singh@wiltshire.gov.uk
Web: www.wiltshire.gov.uk

From: Keanan Waters <keananwaters@ridge.co.uk>
Sent: 23 July 2026 10:22
To: Singh, Rohit <Rohit.Singh@wiltshire.gov.uk>
Subject: RE: 5032745 - Wiltshire Old Sarum - Outline Planning Application

Good morning, Rohit,

Thank you for responding so quickly and providing a very detailed response. This is very helpful.

As part of the Outline application, the submitted Flood Risk Assessment and Drainage Strategy report will detail a full GI which was completed in 2025.
I will also be including calculations compliant with BRE365 Soakaway Guidance, this has been used to size the infiltration structures.

Whilst I fully appreciate the need for vegetated sustainable drainage systems, the limiting factor in this development is the topography of the site.
The site naturally falls from south to north and therefore to drain the proposed car parking area to the bioretention basin, the drainage pipework, inlet to the pond and the pond itself will need to be considerably deeper than what may be considered reasonable.
I will explore our options to see if there is any alternative which could be achieved over Option 1.

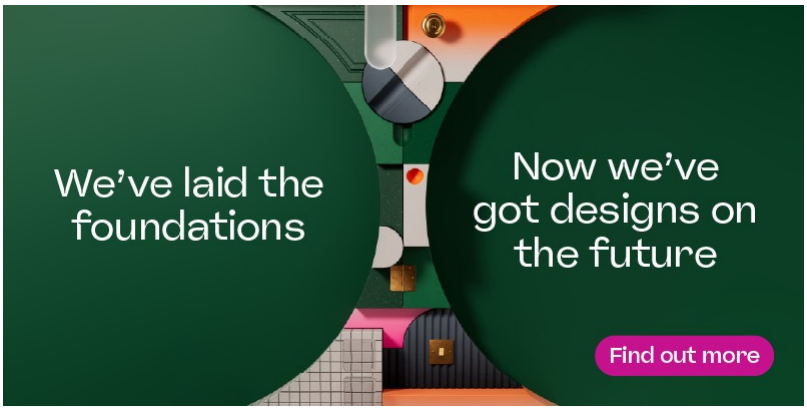
Again, thank you for your input at this stage, it's very much appreciated.

Kind regards,

Keanan Waters | Senior Civil Engineer
BEng (Hons) IEng MICE

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7823857396
keananwaters@ridge.co.uk
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From: Singh, Rohit <Rohit.Singh@wiltshire.gov.uk>
Sent: 23 July 2026 10:10

To: Keanan Waters <keananwaters@ridge.co.uk>
Subject: RE: 5032745 - Wiltshire Old Sarum - Outline Planning Application

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Good morning Keanan,

Thank you for your email and apologies for the delay in responding.
Having reviewed the information provided, I can offer the following informal advice ahead of the submission of the outline application.

At outline planning stage, Wiltshire Council would not normally expect a fully detailed hydraulic model or a complete set of detailed InfoDrainage calculations. However, sufficient preliminary calculations and supporting evidence should be provided to demonstrate that the proposed drainage strategy is feasible, that infiltration is a viable drainage destination, and that adequate space has been safeguarded within the site layout for the proposed SuDS features.

Based on the information provided, the principle of an infiltration-led drainage strategy appears reasonable, subject to the supporting ground investigation information confirming suitable infiltration rates and an absence of constraints that would preclude infiltration.

In relation to the two options presented, Option 2 would generally be more closely aligned with the objectives of the DEFRA SuDS Standards (2025), as it maximises the use of a surface bioretention feature and provides greater opportunity to deliver multifunctional benefits, including water quality treatment, biodiversity enhancement and amenity value, in addition to managing surface water runoff.

Wiltshire Council would generally encourage the use of above-ground, vegetated SuDS features where practicable. Whilst underground attenuation and infiltration systems can form part of an acceptable drainage strategy, their use should typically be justified where site constraints limit the opportunity for surface-based solutions.

For the outline application, we would generally expect:

- An outline drainage strategy demonstrating the proposed drainage concept and SuDS layout.
- Evidence supporting the feasibility of infiltration as the preferred drainage destination.
- Indicative sizing demonstrating that sufficient space has been safeguarded for the proposed SuDS features.
- Confirmation that exceedance flows can be safely managed on-site.
- Sufficient information to demonstrate that surface water can be managed without increasing flood risk elsewhere.

Detailed hydraulic calculations, network design, final attenuation sizing, construction details and maintenance requirements would normally be addressed through a subsequent Reserved Matters application and/or planning condition discharge process.
Please note that these comments are provided on an informal basis and are without prejudice to the Council's formal assessment of any future planning application.
I trust this is helpful.

Kind regards,

Rohit Singh
Principal Technical Officer Drainage Planning
Weather and Drainage Team
Highways Asset Management and Commissioning

Wiltshire Council

Tel: +44 1225 770326
Email:Rohit.Singh@wiltshire.gov.uk
Web: www.wiltshire.gov.uk

From: Keanan Waters <keananwaters@ridge.co.uk>
Sent: 23 July 2026 08:29
To: Singh, Rohit <Rohit.Singh@wiltshire.gov.uk>
Subject: RE: 5032745 - Wiltshire Old Sarum - Outline Planning Application

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Morning Rohit,

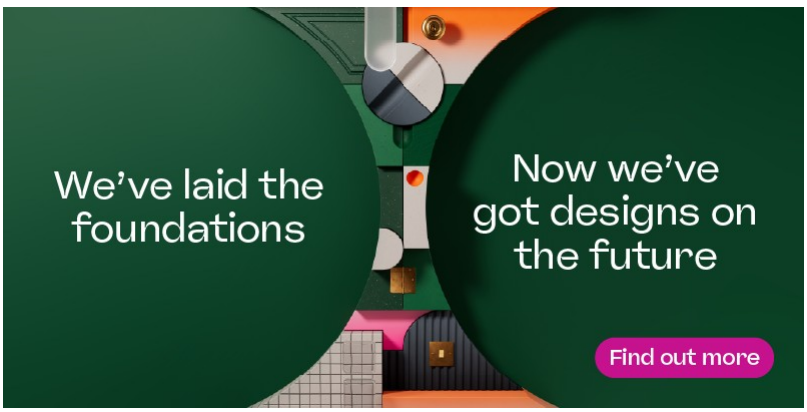
I just wanted to follow up on the email below to see if you had any updates.

Kind regards,

Keanan Waters | Senior Civil Engineer
BEng (Hons) IEng MICE

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From: Keanan Waters
Sent: 08 July 2026 16:15
To: 'Singh, Rohit' <Rohit.Singh@wiltshire.gov.uk>
Subject: RE: 5032745 - Wiltshire Old Sarum - Outline Planning Application

Hi Rohit,

The proposed development comprises a policing hub (i.e. office building, ancillary maintenance buildings, access road, and car parking areas).

The site area is approximately 3.35ha, post-development, the impermeable area will be approximately 1.67ha (~50%).
The illustrative site plan is attached. Please note, this layout is **only illustrative** at this point and will be subject to change through reserved matters.

I have also included the proposed outline drainage strategy drawing for reference.
Sizes of attenuation / infiltration SuDS features have been derived through BRE 365 Soakaway Design, these calculations are based upon infiltration rate results from a GI undertaken in 2025.
This information will be submitted for consideration within a future Outline Planning application.

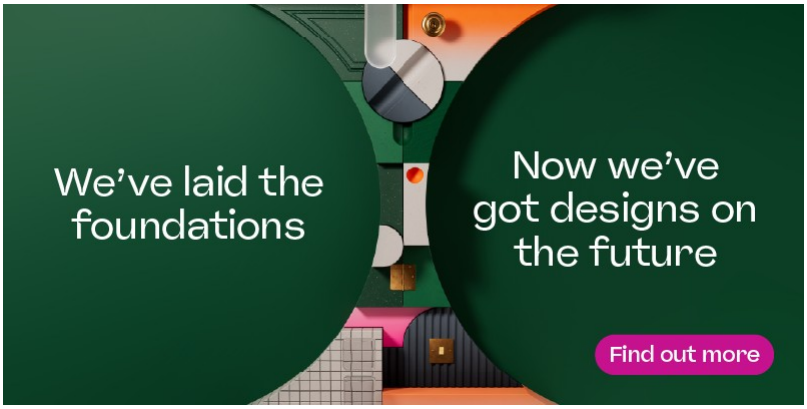
Any comments/concerns at this early stage would be welcomed.

Kind regards,

Keanan Waters | Senior Civil Engineer
BEng (Hons) IEng MICE

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From: Singh, Rohit <Rohit.Singh@wiltshire.gov.uk>
Sent: 26 June 2026 09:42
To: Keanan Waters <keananwaters@ridge.co.uk>
Cc: Drainage <Drainage@wiltshire.gov.uk>
Subject: RE: 5032745 - Wiltshire Old Sarum - Outline Planning Application

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Good morning,

Thank you for your enquiry.
Before commenting in detail, it would be helpful to confirm the nature and scale of the proposal, including:

- The proposed number of dwellings (or development quantum)
- The site area and indicative layout (if available)
- Whether the application is purely residential or includes mixed uses (e.g. roads, parking courts, open space, etc.)

This information helps ensure that any advice provided on the drainage strategy and SuDS approach is proportionate and aligned with the scale of development proposed, particularly in relation to the application of the DEFRA SuDS Standards (2025) and the expected level of information at outline stage.

Kind Regards

Rohit Singh
Principal Technical Officer Drainage Planning
Weather and Drainage Team
Highways Asset Management and Commissioning

Wiltshire Council

Tel: +44 1225 770326
Email:Rohit.Singh@wiltshire.gov.uk
Web: www.wiltshire.gov.uk

From: Drainage <Drainage@wiltshire.gov.uk>
Sent: 25 June 2026 16:31
To: Singh, Rohit <Rohit.Singh@wiltshire.gov.uk>
Subject: FW: 5032745 - Wiltshire Old Sarum - Outline Planning Application

Hi Rohit,

This email has not been responded to.
Would you like me to send it to Atkins?

Best regards,
Emma

Emma Biggs IEng MICE
Drainage Engineer (Manager)
Highways Asset Management and Commissioning

Wiltshire Council

Tel: 01225 718064

Mob (new): 07442 855022

From: Keanan Waters <keananwaters@ridge.co.uk>
Sent: 12 June 2026 10:37
To: Drainage <Drainage@wiltshire.gov.uk>
Subject: 5032745 - Wiltshire Old Sarum - Outline Planning Application

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Good morning,

I am currently preparing an Outline Planning application for a scheme located in Old Sarum, Wiltshire, and have a few queries regarding the level of detail required at this stage.

To inform the drainage strategy, I have reviewed the SuDS Validation Checklist, the Betterment Strategy (June 2024), and the relevant soakaway guidance. A ground investigation has also been undertaken, which indicates good infiltration potential due to the underlying chalk strata.

My primary query relates to the expected level of detail for hydraulic calculations at the outline stage. On previous outline applications outside of Wiltshire, I have been asked to provide a full set of detailed calculations (typically completed in InfoDrainage). However, my understanding is that Wiltshire Council does not generally require this level of detail at this stage, and I would welcome confirmation on what is expected of a typical outline drainage strategy.

The current drainage strategy considers two potential options:

Option 1:
Two separate networks, with one discharging to a bioretention basin via infiltration, and the second discharging beneath a car park via an infiltration-based attenuation crate system.
In this arrangement, the crates would be located outside the required 10m offset from any structures or public highway.

Option 2:
A combined network approach, whereby the crate system is converted to an online underground attenuation system, all flows being conveyed to and discharged via the bioretention basin.

Please can you advise whether any further information or analysis is required at the outline stage to support the acceptability of locating infiltration beneath the car park, or whether this would instead be addressed at Reserved Matters (if at all)?

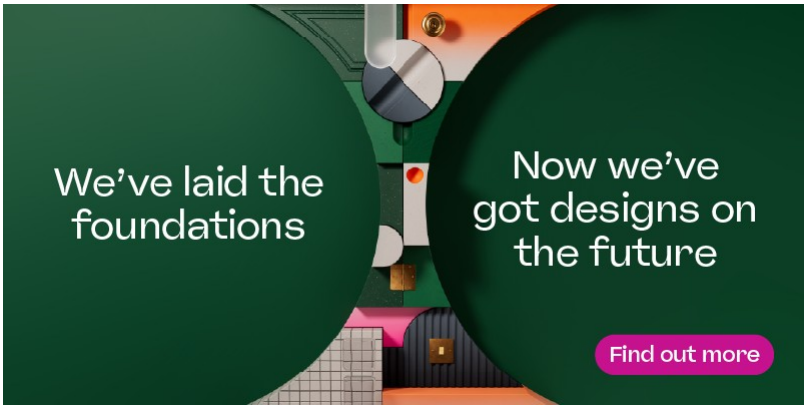
I would appreciate your guidance on the above points.

Kind regards,

Keanan Waters | Senior Civil Engineer
BEng (Hons) IEng MICE

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