

Campsfield IRC

Drainage & SuDS Strategy

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Author	Signature	Date
 BEng (Hons) Civil Engineer		12/03/2026

Reviewed	Signature	Date
 Meng (Hons) CEng MICE Principal Civil Engineer		12/03/2026

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1 Introduction

1.1 Project Overview

Curtins has been appointed by the Home Office to prepare a Drainage Strategy for the proposed expansion and refurbishment of Campsfield IRC. This report is based on current best practice guidance, referenced where relevant. The existing and proposed site plans for the development are contained in **Appendix A & B**.

The outline planning application is seeking the relevant approval for the expansion of the IRC¹ on land at Campsfield, Kidlington, Oxfordshire, OX5 1RE, as shown on the accompanying red line plan (Figure 1-2), which shows the extent of the site (approximately 4.5 hectares) with all matters reserved except access.

The description of the proposed development is:

Planning approval for use of land as a permanent Immigration Removal Centre including:

- the demolition of existing modular buildings, cold store, and removal of existing fencing,
- erection of new accommodation buildings (up to 16 metres in height) for 240 residents/detained individuals and associated services for health care, visitors, interview rooms, administration, drivers' rest area, kitchens, and faith rooms,
- replacement and erection of additional [REDACTED] perimeter fences,
- erection of internal zonal fencing, vehicular and pedestrian gates,
- creation of internal road, car parking and hard surfacing including space to support safe site access during events.
- Installation of lighting columns,
- Installation of roof top solar PV panels,
- provision of bunds to re-use excavated materials, creation of biodiversity enhancements and landscaping.

Proposals contained or forming part of this report represent the design intent and may be subject to alteration or adjustment in completing the detailed design for this project.

1.2 Site Location

The site is located to the north of Oxford in Kidlington. The site lies to the South of Oxford Airport and to the East of the A44. The centre of the site is approximately located at National Grid Reference 447524, 214531 and the gross development site area equates to approximately 4.5 hectares.

The overall site location plan can be seen in Figure 1-1. The development site location can be seen below in Figure 1-2.

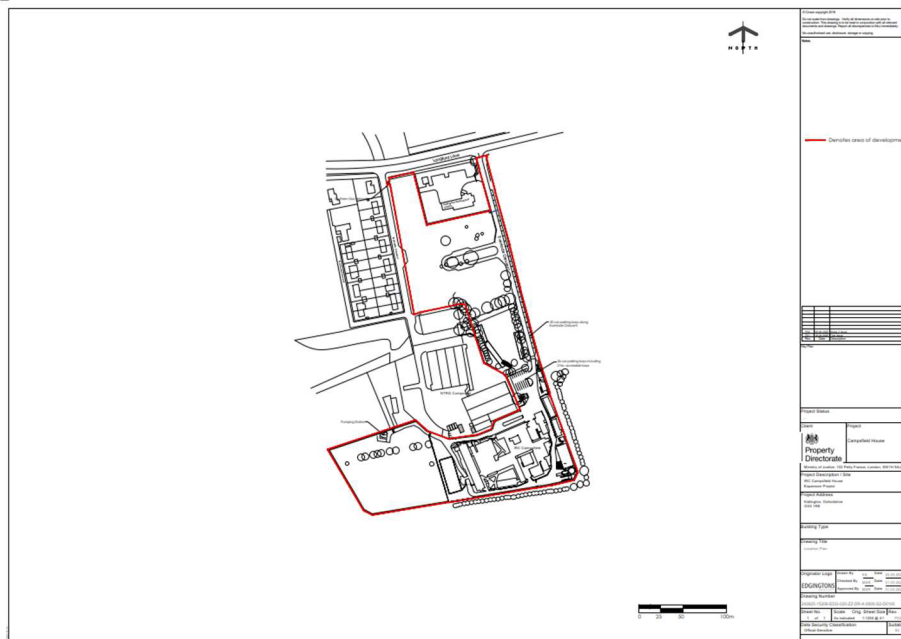


Figure 1-1: Site Location Plan



Figure 1-2: Development Site Location Plan

1.3 Site Description

Campsfield IRC reopened in December 2025.

Access to Campsfield IRC is past the Kidlington Ambulance Station down Evenlode Crescent.

The total area within the red line boundary is approximately 4.5ha. The existing site has a number of buildings located to the West with a small area of car parking.

The existing development currently has an impermeable area of approximately 1.25ha. Using the Modified Rational Method, with a Time of Concentration of 5 minutes. The existing discharge rates are shown below.

Table 1: Existing Discharge Rates

Rainfall Event	Runoff Rate
1 in 1 Year	207.6
1 in 30 Year	490.7
1 in 100 Year	622.0

The topographical survey available in **Appendix C**, was produced by Tower Surveys in November 2014.

It shows that the site currently falls in a South to North direction. The highest point in the site sits within the proposed development at approximately 73.11mAOD, at the southern boundary, with the site falling to 70.30mAOD along the site boundary tree line.

A Site investigation has been carried out by Ground&Water on the existing development and identifies ground conditions on site to consist of made ground overlying Kellaways Clay Member and the bedrock Cornbrash Formation.

1.4 Project Proposal

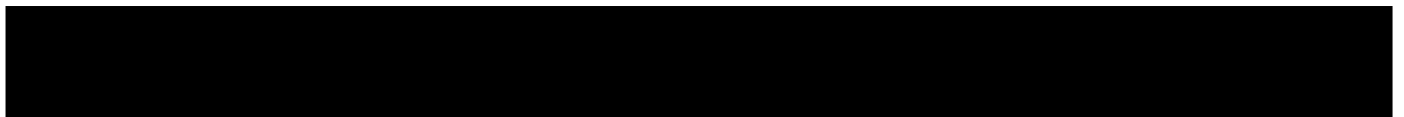


Reimbursement and Reopening of IRC

The reimbursement and reopening of IRC saw refurbishment to the existing buildings. The proposals can be seen on the architect site plan included in **Appendix A**. The centre was opened in December 2025.

The reimbursement and reopening of the IRC does not form part of this outline planning application. A description of the drainage has been provided in this report to show continuity across both locations.

The Proposed Development



The proposed development also includes the relocation of the existing Thames Water pumping station on the site.

The proposal drawings can be found in **Appendix B**.

2 Planning and Policy Considerations

2.1 National Planning Policy Requirements

2.1.1 National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG)

In recent years, the Government and local Councils have placed increased priority on the need for developers to take full account for the risks of their development at all stages of the planning process. The National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) identifies how the issue of flooding is dealt with through the planning process and with the creation of a site-specific Flood Risk Assessment (FRA) for sites over 1ha in area or in Flood Zones 2 & 3.

2.1.2 DEFRA – Sustainable Drainage Systems

The Department for Environment, Food and Rural Affairs (DEFRA) national standards for sustainable drainage systems provides technical guidance on the design, construction and maintenance of Sustainable Drainage Systems (SuDS).

2.2 Local Planning Policy Requirements

2.2.1 The Cherwell Local Plan 2011-2031

This report has been specifically produced with the following policies in mind;

Policy ESD 6: Sustainable Flood Risk Management

This policy aims to reinforce the guidance set out in the NPPF and outlines Cherwell's requirements for new developments in respect to flooding. As with the requirements of the NPPF, ESD 6 outlines the requirements of site-specific flood risk assessment. The policy states the need of the FRA to demonstrate that there will be no increase in surface water discharge or volume emanating from a site for any event up to and including the 1 in 100 year (plus climate change), it also places the requirement for developments not to experience flooding for any events up to and including the 1 in 30 year storm event, ensuring any flood water is held safely on site.

Policy ESD 7: Sustainable Drainage Systems (SuDS)

This policy aims to promote the use of SuDS for all new developments in the management of surface water runoff. The policy states that;

“Where site specific Flood Risk Assessments are required in association with development proposals, they should be used to determine how SuDS can be used on particular sites and to design appropriate systems.

In considering SuDS solutions, the need to protect ground water quality must be taken into account, especially where infiltration techniques are proposed. Where possible, SuDS should seek to reduce flood risk, reduce pollution and provide landscape and wildlife benefits. SuDS will require the approval of Oxfordshire County Council as LLFA and SuDS Approval Body, and proposals must include an agreement on the future management, maintenance and replacement of the SuDS features”

2.2.2 Strategic Flood Risk Assessment

Cherwell District Council produced a SFRA in May 2017 which provides an update on a previous version with new legislative policy and summary of flood risk in Cherwell. The document provides guidelines on use of SuDS and guidance for FRAs. The document requires consideration of groundwater emergence as part of the decision-making process on the type of the SuDS techniques. The document outlines Site Drainage Strategies should include;

- SuDS proposals;

- Outfall locations and levels, including confirmation from relevant authorities that the proposed outfall location will be accepted;
- Rates of discharge including confirmation from relevant authorities that the proposed discharge rate will be accepted;
- On-site storage requirements including storage location indicated within the proposed development plan, confirmation that it is to be located outside the existing 1% AEP+CC flood extent, and evidence that sufficient space is available; and
- Maintenance, funding and operation proposals for the SuDS.

The proposed site is highlighted and has been highlighted as a potential development site.

2.2.3 Oxfordshire Flood Risk Management Plan

Oxfordshire County Council acts as the Lead Local Flood Authority for the county. A Flood Risk Management Strategy has been produced as part of this role, with an aim to;

- Setting out a long-term programme for flood risk reduction.
- Setting out procedures for identifying relative priorities of measures for flood risk reduction.
- Establish how to find area where a holistic approach to flood risk reduction will achieve multiple benefits.
- Establish how to identify affordable measures for implementation to agreed time frames,
- Facilitate engagement and consultation with community and strategic partners.

2.2.4 Local Standards and Guidance for Surface Water Drainage On Major Development In Oxfordshire

The Local Standards and Guidance for Surface Water Drainage on Major Development in Oxfordshire intends to assist developers in the design of surface water drainage systems, and to support Local Planning Authorities in considering drainage proposals for new developments within Oxfordshire.

The LLFA encourages all new development and redevelopment that requires planning permission to use SuDS to reduce flood risk, improve water quality and present options for biodiversity and public amenity.

The Guidance states;

SuDS should be considered in all developments at an early stage. This allows for allocation of appropriate land take to accommodate adequate SuDS features that are technically appropriate for the environment in which they are to be placed.

The Guidance provides information on different SuDS that can be implemented on developments.

3 Flood Risk Summary

A detailed site-specific Flood Risk Assessment (FRA) has been written for this site (082153-CUR-00-XX-RP-D-92001). The FRA outlines the existing flood risk posed to the site, as well as evaluating how the proposed development will affect these risks. A summary of the FRA is given below.

3.1 Fluvial Flood Risk

With reference to the Environment Agency's (EA) indicative flood maps, it can be seen that the site lies wholly in Flood Zone 1. The current site has less than 1 in 1,000 annual probability of river or sea flooding. A screenshot from the EA flood mapping is shown in Figure 3-2.

Therefore the site has been assessed as having a **low** flood risk from fluvial flooding.



Figure 3-1: EA Fluvial Flood Map

3.1.1 Pluvial Flooding and Overland Flow

With reference to the EA's online mapping, data related to the risk of potential surface water inundation or flooding is also provided. This shows that the site is at a low risk of surface water flooding. As shown in Figure 3-2.

According to the Strategic Flood Risk Assessment, the site shows minimal risk of Surface Water Vulnerability for the 1 in 200yr event. Figure 3-3 shows a screenshot from the EA flood mapping. It would be expected that the small areas at risk of surface water flooding would be mitigated by the proposed drainage design.

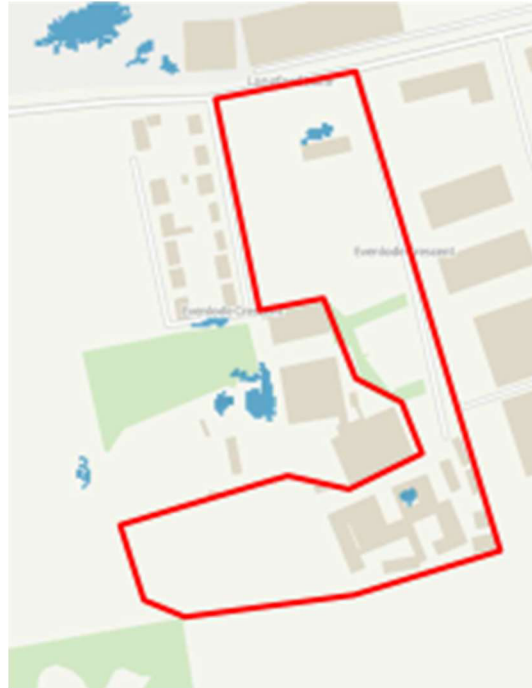


Figure 3-2: EA Pluvial Flood Map

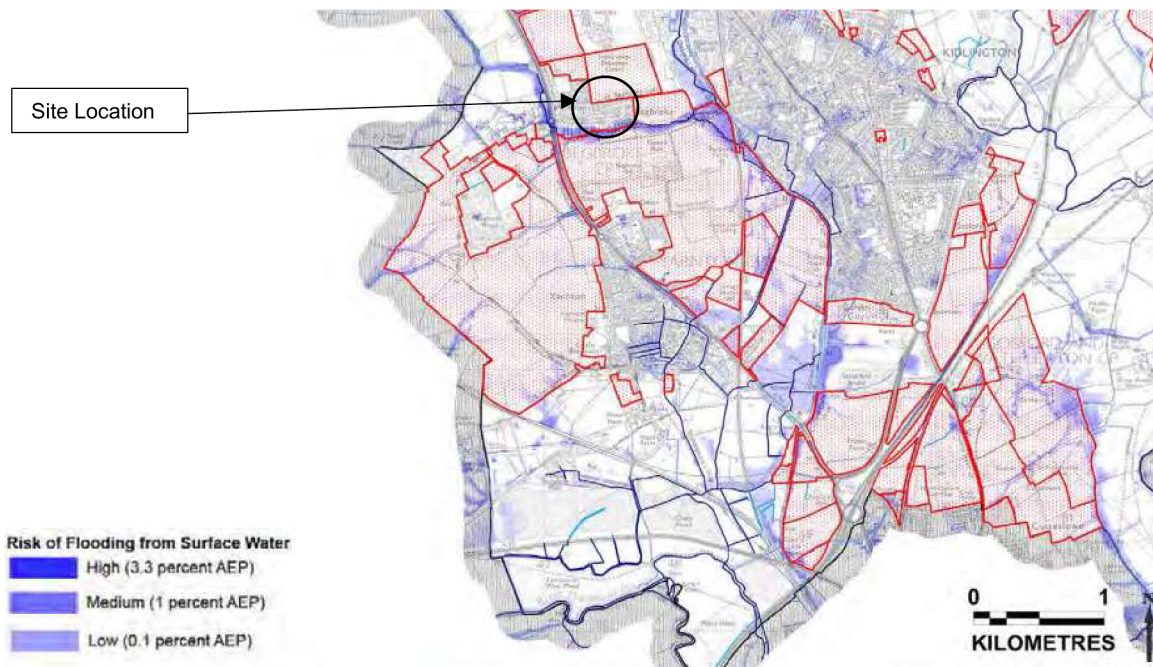


Figure 3-3: SFRA Risk of Flooding from Surface Water

Therefore the site has been assessed as having a **low** flood risk from surface water flooding.

3.1.2 Ground Water Flooding

According to Strategic Flood Risk Assessment the site is not in an area 'susceptible to groundwater flooding.' During the site investigation carried out in April 2014, groundwater was met at depths between 0.50m and 1.30m below ground level.

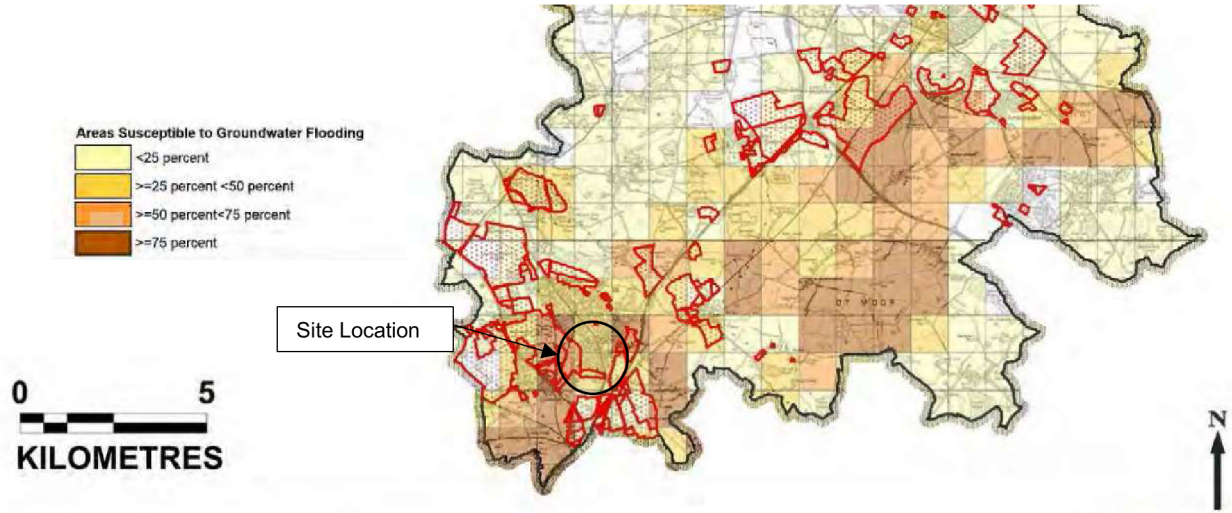


Figure 3-4: SFRA Groundwater Map

A site investigation report has been prepared by Ground & Water (ref. GWPR5323/SIR/June 2023 for refurbishment of the IRC).

Groundwater was only encountered in trial hole TP9 at 0.60m bgl. All the remaining trial holes were recorded as dry.

Changes in groundwater level occur for a number of reasons including seasonal effects and variations in drainage. The investigation was undertaken in April 2023 when groundwater levels are likely to be approaching their annual maximum (highest elevation). Exact groundwater levels may only be determined through long term measurements from monitoring wells installed on-site.

The report shows ground water monitoring to have been undertaken on two occasions. On both occasions the wells were reported as dry with no groundwater encountered.

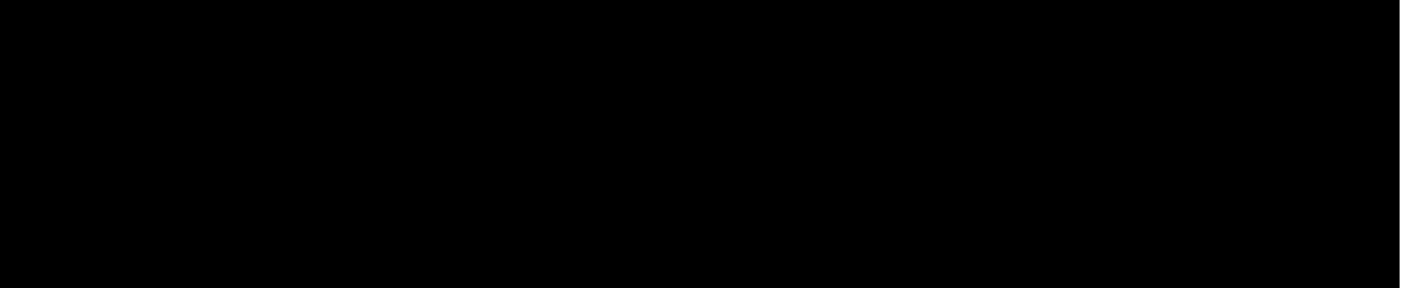
Groundwater flooding has been assessed as a **low/ medium** risk.

Grounding monitoring is scheduled to be carried out on the proposed development site in April 2026.

4 Existing Drainage

4.1 Public Sewerage

Sewer records obtained from Thames Water are included in **Appendix D** for reference.



A screenshot of the sewer records are shown in Figure 4-1.

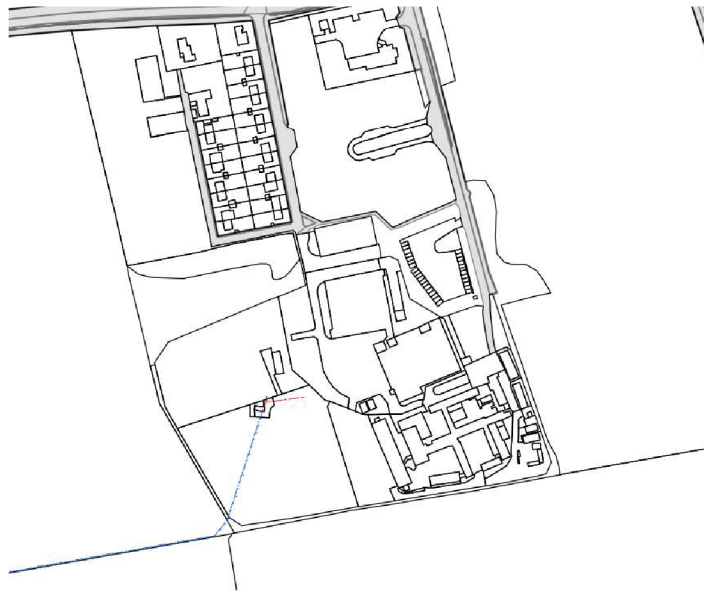


Figure 4-1: Thames Water Records Screenshot



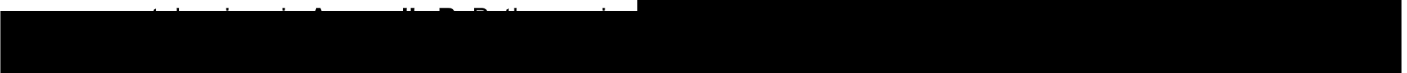
4.2 Private Drainage

Existing IRC

A GPR survey has been carried out by Tower Surveys in November 2022 and is included in **Appendix E**. The survey shows extensive surface and foul water drainage to be located within the site to serve the existing buildings.

There are a number of soakaways identified on site indicating the main form of surface water disposal to be infiltration.

There are 2 foul pumping stations located within the site boundary. The pumping stations have been surveyed to confirm their dimensions and cover and invert levels.



The Proposed Development



5 Proposed Drainage Strategy – Existing IRC

The existing IRC is not included as part of the outline planning application. The strategy below has been included to detail the infiltration testing carried out and the total capacity required for the Thames Water foul pumping station.

5.1 General

The proposed drainage strategy for the existing IRC consisted of separate foul and surface water networks. The existing drainage was reused wherever possible to reduce the amount of proposed drainage required. As the impermeable areas of the development in most cases remaining the same, direct connections into the existing network were proposed. In the places where impermeable areas were increasing new ring soakaways were built. The proposed drainage drawings are included in **Appendix F**.

BRE365 soakage testing, results included in Ground & Water Phase 2 Site Investigation Report (ref. GWPR5323/SIR/June 2023), were carried out on site and an infiltration rate of 6.48m/hr was used in the below ground drainage design.

The foul drainage utilised the existing foul drainage and outfall to the Thames Water pumping station. A new temporary pumping station was required for the temporary buildings with a new below ground storage tank to provide the required 24-hour storage as per Building Regulations Part H guidance.

5.1.1 Flood Exceedance

The Topographical Survey showed site levels to fall from south to north. In a flooding event the flood water will follow the access roads on the west and east of the development and flow away from the site to the north.

On the southern side of the development it is possible that flood water could get trapped and build up in the courtyards as these are enclosed and ground levels fall towards the buildings. Flood water would likely remain here until flooding ceases and the water will gradually drain by the existing drainage in these areas.

5.2 Foul Water

The existing foul drainage infrastructure was retained and reused as much as possible at IRC.

The arrangement for the foul drainage can be seen on drawing 243925-8127-CUR-ZZZ-00-DR-C-9200-D0100 included in **Appendix F**.

The foul drainage will discharge into the Thames Water pumping station which is due to be relocated as part of the proposed development.

6 Proposed Drainage Strategy -- Proposed Development

6.1 General

The general arrangement drawings of the proposed drainage are included in Appendix G.

The drainage has been designed in accordance with Building Regulations Part H and MOJ Technical Standard STD/X/SPEC/010.

For the proposed development there will be separate foul and surface water networks. The surface water will discharge entirely through infiltration via the use of a below ground geocellular soakaway. The network will consist of a soakaway, which forms the outfall of surface water for the network, and four upstream attenuation tanks. The soakaway has been designed based upon an infiltration rate of 1.6×10^{-5} m/s. This infiltration rate has been calculated via BRE 365 infiltration testing carried out by Curtins in December 2024. The test result can be found in Appendix H.

It is proposed to provide attenuation in the form of below ground geocellular crated tanks. The total attenuation volume proposed for the site is 1112.150m³.

A pre-planning enquiry has been submitted to Thames Water. We are yet to receive formal approval of the proposed connection to the pumping station. As the pre-planning enquiry and pumping station upgrade works are currently being reviewed simultaneously by Thames Water. We would expect to receive a response once both items have been further developed.

The implementation of SuDS throughout the scheme will be reviewed once the landscape design proposals are received, and the inclusion of rain gardens and permeable paving will be applied wherever feasible. The integration of SuDS and above-ground drainage features requires careful consideration due to the secure nature of the development.

6.2 Surface Water

In line with the Drainage Hierarchy, surface water run off from a site should endeavour to be controlled as close to the source as possible. Discharge from site should be via one of the methods detailed in **Table 1**, in descending priority;

Table 2: Discharge Opportunities

London Sustainable Drainage Hierarchy	Site Specific Application
Store rainwater for later use	Rainwater harvesting has not been considered in this development due to the nature of the project. The below ground drainage network is designed to current MoJ standards.
Use infiltration techniques, such as porous surfaces in non-clay areas	It is proposed to utilise a below ground geocellular soakaway in the design. Which is to dispose of surface water from the entire site through infiltration.

London Sustainable Drainage Hierarchy	Site Specific Application
Attenuate rainwater in ponds or open water features for gradual release	There is insufficient open space on site to accommodate the use of open water features.
Attenuate rainwater by storing in tanks or sealed water features for gradual release	Rainwater is to be attenuated in the proposed below ground geocellular tanks.
Discharge rainwater direct to a water course	There are no suitable watercourses nearby to the development to allow for discharge direct to a water course.
Discharge rainwater to a surface water sewer/drain	There are no surface water sewers nearby to allow for a connection into a surface water sewer.
Discharge rainwater to a combined sewer	The preferred method of discharge is infiltration, hence discharge to a combined sewer has not been deemed suitable for this development.

6.2.1 Proposed Site Discharge

It is proposed to discharge surface water entirely through infiltration via a below ground geocellular tank. BRE 365 infiltration testing has been carried out and the lowest rate recorded in the testing has been used to size the soakaway. The infiltration test results are included in **Appendix G**.

See **Appendix H** for the Causeway Flow hydraulic calculations for the proposed development.

A consecutive storm model has also been completed due to the soakaway not achieving the required half drain times. The consecutive storm analysis shows that the proposed drainage system can handle a 1 in 100 year plus 40% climate change event followed immediately by a 1 in 30 year event without any flooding.

6.2.2 Attenuation

A total of 1058.89m³ of attenuation volume is to be provided. This volume has been determined through the use of 'worst case' infiltration rates taken from BRE 365 infiltration testing carried out by Curtins in December 2024.

The attenuation volume is to be provided via the use of geocellular tanks. The location and dimension of these is shown on the drainage general arrangement drawing included in **Appendix F**. The position and size of the tanks has been determined based upon the proposed site plans and allowing a 5m distance from the soakaway to the proposed buildings and the site boundary as per Building Regulations Part H guidance.

There are to be five tanks situated on the site. four of these are to be sealed attenuation tanks and are to provide additional storage in the system only with one of the tank being a soakaway system and is to infiltrate directly to ground.

The tanks are referenced as below on the drainage general arrangement drawings and have the following volumes:

- Tank A = 76.60m³
- Tank B = 95.00m³
- Tank C = 457.00m³

- Tank D = 171.00m³
- Soakaway = 312.55m³

6.2.3 Flood Exceedance

Ground levels generally fall from south to north and east to west. In the event of flooding on site surface water would flow to the north west corner of the site and into the neighbouring farmland to the west of the development. See the Exceedance Plan drawing included in **Appendix I**.

6.2.4 Interception Mechanisms

By using the SuDS proposed, these provide interception storage, where the first 5mm of rainfall can be captured and attenuated, resulting in no runoff.

In accordance with the CIRIA SuDS Manual, the proposed SuDS can be assumed to be compliant for ensuring no runoff in the first 5mm of rainfall for 80% of summer events and 50% of winter events:

- **Permeable Paving** – The paving is compliant assuming no extra area is drained, which in this case is true as permeable paving is proposed site-wide, where all runoff generated from impermeable areas enters the surface water network via this pavement.

6.2.5 Water Quality

To ensure the proposed drainage strategy will manage the pollution risk and maintain a suitable water quality, the simple qualitative method as defined in the CIRIA SuDS Manual C753, consisting of an assessment of likely pollution hazard levels for the site and SuDS performance capacities:

Step 1. Allocate suitable pollution hazard indices for the proposed land use

TABLE 26.2 Pollution hazard indices for different land use classifications				
Land use	Pollution hazard level	Total suspended solids (TSS)	Metals	Hydro-carbons
Residential roofs	Very low	0.2	0.2	0.05
Other roofs (typically commercial/ industrial roofs)	Low	0.3	0.2 (up to 0.8 where there is potential for metals to leach from the roof)	0.05
Individual property driveways, residential car parks, low traffic roads (eg cul de sacs, homezones and general access roads) and non-residential car parking with infrequent change (eg schools, offices) ie < 300 traffic movements/day	Low	0.5	0.4	0.4

Figure 6-1: Extract of CIRIA SuDS Manual C753. Pollution Hazard Indices for Land Use Classification

The proposed development consists of other roofs and associated low traffic roads. The access road is anticipated to have low traffic movements, so the land use can be classified as '*individual property driveways, residential car parks, low traffic roads and non-residential car parking with infrequent change*'. Therefore, the pollution hazard can be considered 'low', as seen in [redacted], above.

Step 2. Select SuDS with a total pollution mitigation index that is equal or exceeds the pollution hazard index.

TABLE 26.3 Indicative SuDS mitigation indices for discharges to surface waters			
Type of SuDS component	Mitigation indices ¹		
	TSS	Metals	Hydrocarbons
Filter strip	0.4	0.4	0.5
Filter drain	0.4 ²	0.4	0.4
Swale	0.5	0.6	0.6
Bioretention system	0.8	0.8	0.8
Permeable pavement	0.7	0.6	0.7
Detention basin	0.5	0.5	0.6
Pond ⁴	0.7 ³	0.7	0.5
Wetland	0.8 ³	0.8	0.8
Proprietary treatment systems ^{5,6}	These must demonstrate that they can address each of the contaminant types to acceptable levels for frequent events up to approximately the 1 in 1 year return period event, for inflow concentrations relevant to the contributing drainage area.		

Figure 6-2: Extract of CIRIA SuDS Manual C753. Pollution Mitigation Indices

The inclusion of SuDS will help mitigate the potential pollution generated by the proposed development.

As seen in Figure 6-2 the pollution hazard indices for the land use classification are 0.5, 0.4 and 0.4, for total suspended solids, metals and hydrocarbons respectively. Once the landscape proposals have been finalised the mitigation indices for all proposed and potential SuDS can be assessed against the pollution indices to determine the treatment achieved.

Furthermore, the land use classifications will be applied to the hydraulic modelling in Causeway Flow. Causeway Flow assesses the water quality discharging from the outfalls.

6.3 Foul Water

It is proposed to discharge foul water into the Thames Water pumping station located on the site. The pumping station is existing however as part of the proposed works it is to be relocated to suit the proposed development. The

This will require a formal application to be made to Thames Water. A new rising main is to installed in order to suit the proposed location for the building.

Discussions have begun with Thames Water on the requirements for the relocated pumping station and are included in **Appendix J**.

7 Proposed Drainage Strategy – Proposed Development Gatehouse and Visitor Reception

7.1 Gatehouse

7.1.1 General

It is proposed to provide new surface and foul water drainage networks to serve the proposed Gatehouse building. The location for the Gatehouse can be seen on the architect site plan included in **Appendix B**.

The layout of the proposed drainage for the Gatehouse building can be seen on the drainage general arrangement drawing 243925-8127-CUR-ZZZ-00-DR-C-9224 included in **Appendix F**.

7.1.2 Surface water

The surface water system is to collect rainwater from the roof via rain water pipes and then discharge of the surface water via a new ringed soakaway located to the north of the Gatehouse building beneath the access road for the site. The soakaway has been sized and designed using Causeway Flow and is based upon the ground and water infiltration rate of 6.48m/hr, as used in the IRC drainage design. Localised BRE 365 soakage testing is required prior to construction of the soakaway.

The relocation of 2 existing soakaways is required as part of the design. The existing soakaways will be located within the permitted 5m distance of the proposed gatehouse building once it is complete. It is proposed to relocate these soakaways to be further than 5m away from the proposed gatehouse building but as close as possible to their existing positions. These soakaways are to be reused for the collection of surface water from the surrounding hardstanding. The collection system for the hardstanding areas is to be confirmed at a later design stage when proposed site levels are made available. It is anticipated that there will be reduction in the catchments areas to the existing soakaways so their functionality will remain as per existing, or better than existing.

7.1.3 Foul water

The foul water system has been designed to go around the perimeter of the gatehouse building to ensure all internal foul drainage can be collected by the below ground network. The foul drainage is to outfall into the existing foul drainage located within the IRC site, to the south of the gatehouse building.

A pumping station will be required to allow the connection into the existing foul drainage on site. Due to falling site levels as shown on the Topographical Survey a gravity fed connection into the existing foul drainage on site is not feasible. An allowance for 24-hour storage volumes is to be made within the pump design as per Building Regulations Part H. Storage volumes are to be confirmed at a later design stage once internal above ground drainage requirements are confirmed.

7.2 Visitor Reception

7.2.1 General

It is proposed to provide new surface and foul water drainage networks to serve the proposed Visitor Reception building. The location for the visitor reception can be seen on the architect site plan included in **Appendix B**.

The layout of the proposed drainage for the visitor reception building can be seen on the drainage general arrangement drawing 243925-8127-CUR-ZZZ-00-DR-C-9224 included in **Appendix F**.

7.2.2 Surface Water

It is proposed to collect rainwater from the roof of the building via rain water pipe connections into the proposed below ground surface water network. The surface water is to be discharged via infiltration through a new ringed

soakaway. The soakaway has been sized and designed using Causeway Flow and is based upon the ground and water infiltration rate of 6.48m/hr, as used in the IRC drainage design. Localised BRE 365 soakage testing is required prior to construction of the soakaway.

7.2.3 Foul Water

The foul drainage will be collected from the visitor reception and discharge into the foul drainage network serving the Gatehouse. Where it will then be discharge as explained in section 7.1.3 above.


8 Option 2 – Surface Water Drainage Strategy

Curtins carried out a pre-application meeting with Oxfordshire County Council to discuss the proposed development

The LLFA required groundwater monitoring to be carried out on site over a period of months.

As the current proposal utilises a soakaway the LLFA requested groundwater levels to prove that groundwater levels will not rise to within 1m below the base of the proposed soakaways.

The Home Office has commissioned groundwater monitoring to be carried out in April 2026.



Attenuation will be provided using below-ground attenuation tanks and permeable paving. The discharge rate will be limited to 2 l/s through a flow control device. The proposed 2 l/s discharge rate is based on the greenfield runoff rate of 0.4 l/s for the site, which cannot be practically achieved with a flow control device without risking significant blockage. The total proposed attenuation volume is 920m³.

Long-term ground water monitoring is currently being established at the proposed development site to inform the preferred drainage approach.

9 General Maintenance

It is assumed that all drainage within the site will be maintained as a private network. A suitable maintenance strategy will be included within handover documentation by the contractor once final details and suppliers have been chosen for the individual drainage elements. This strategy should be adopted to ensure the drainage network is cleaned regularly and the routine maintenance and cleansing regime should be documented.

An Operation and Maintenance Manual has been written by Curtins and should be referenced for general maintenance, 243925-8127-CUR-XXX-00-RP-C-9202-S2-D0100 this can be found in **Appendix L**.

10 Conclusions and Recommendations

The purpose of this report is to support the submission of the outline planning application at Campsfield IRC. This report is intended to provide further details on the design of the drainage systems for the proposed development. The conclusions to be drawn from this report are as follows:

- The site is located entirely within Flood Zone 1, and is at low risk from all sources of flooding.
- Groundwater flooding poses a low/medium risk. Groundwater monitoring has been commissioned for the site.
- The proposed development utilises 4 sealed attenuation tanks along with one tanked soakaway.
- The proposed development includes the relocation of an existing Thames Water pumping station and rising main.
- An additional option has been included in the event infiltration is deemed unsuitable.