

Surface and Foul Water Drainage Strategy Report

Crabbet Park Padel Centre
PADEL CENTRIC LTD

13th August 2026

CRABBET PARK PADEL CENTRE PADEL CENTRIC LTD

Prepared for

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EXECUTIVE SUMMARY

Ridge and Partners LLP have been commissioned by Padel Centric Ltd to prepare a Surface and Foul Water Drainage Strategy in support of a full planning application for a proposed 6 court padel centre and café.

Surface Water management has been designed in accordance with the surface water drainage hierarchy and has the following outcomes:

- **Infiltration:** Soakage testing was undertaken which showed the site to be practically impervious, with the test failing to drain by 25% over a 6 hour testing time.
- **Discharge to surface waters:** There are no watercourses within 300 m of the proposed site and are separated from the site by third party land including an existing hotel and sports centre.
- **Discharge to surface water drain / sewer:** There are no known surface water sewers recorded on the Thames Water asset plans for the proposed site. All private surface water assets are owned by the hotel and sports centre and we understand they have not been designed with spare capacity to manage any additional flows.
- **Discharge to combined drain / sewer:** There are no known combined sewers/drains in close proximity to the site.

The surface water drainage strategy has been developed to mimic the natural surface water overland flow occurring on the site, whilst providing betterment by restricting the outflow rates to the greenfield runoff rate (Q_{BAR}) for all events. The existing site is practically impervious, and so any surface water falling on the site will mostly flow overground towards the low point to the northeast corner and into an existing woodland. Surface water from the proposed impermeable areas will be collected and attenuated in below ground geocellular attenuation tanks beneath the proposed building. The outflow of the tanks will be restricted to the greenfield runoff rate. Gravel trench outfall structures will be constructed on the east of the site which have been designed to be overtopped and all the surface water to rejoin the existing overland flow route.

Additionally, an above ground rainwater harvesting tank will be provided with collected water used for irrigating the soft landscaping around the site. A green roof is also proposed to be provided on the roof of the café building.

There is no existing foul water drainage serving the proposed site with the closest Thames Water sewer located ~220 m north of the site. As such, foul water drainage will be provided in the form of a cesspool, likely to be positioned beneath the proposed car park.

1. INTRODUCTION

Ridge and Partners LLP have been commissioned by Padel Centric Ltd to prepare a Surface and Foul Water Drainage Strategy in support of a full planning application for a proposed 6 court padel centre and café.

The total development area associated with this planning application covers an approximate area of 0.62 ha.

The scope of this report is to review data in relation to the existing drainage regime, review ground conditions for the suitability of SuDS, consider the use of SuDS for the disposal of surface water runoff and consider the disposal of foul water. This report has been carried out in accordance with the National Planning Policy Framework (NPPF), National Standards for Sustainable Drainage Systems and local guidance.

2. EXISTING SITE

2.1. Site Location

Site Name: Crabbet Park

Site Address: Crabbet Park, Turners Hill Road, Crawley, RH10 4ST

Site Location: Easting: 530552, Northing: 137029

National Grid Reference: TQ 305370

Site Area: Approx. 0.62 ha

The site is located to the south of the Crabbet Park estate and is bounded by Turners Hill Road to the west, the Holiday Inn and car park to the north, woodland to the east and green fields to the south.

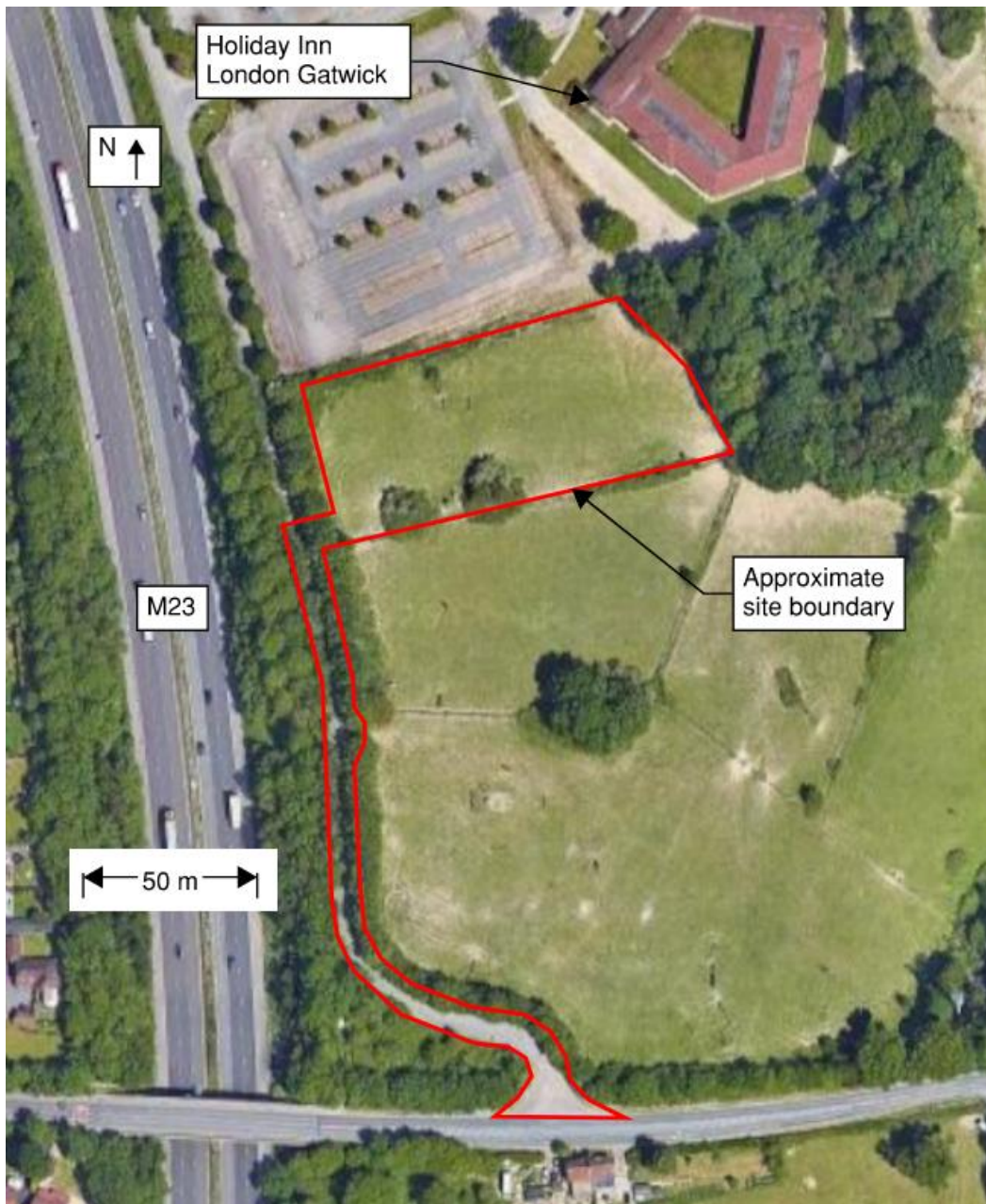


Figure 1 – Crabbet Park (Google Maps, 2025)

2.2. Land use and Topography

The site falls steeply from a high point in the southwest corner of the site to a low point in the northeast corner. The highest point is approximately 100.52 mAOD and the lowest point 91.44 mAOD, resulting in a

level difference of up to 9.08 m across the site. The existing site is a greenfield site previously used as farmland.

A topographic survey has been undertaken with a copy of the survey drawing provided in Appendix A – Topographical .

2.3. Hydrology

The site falls within the Mole Management Catchment area. The nearest onsite watercourse is ~325 m to the north of the site. Following an onsite walkover, it is assumed the watercourse drains via the existing lake into Burleys Brook ~650 m north of the site boundary.

The ditch to the west of the site has been observed and has little depth or flow to it to.

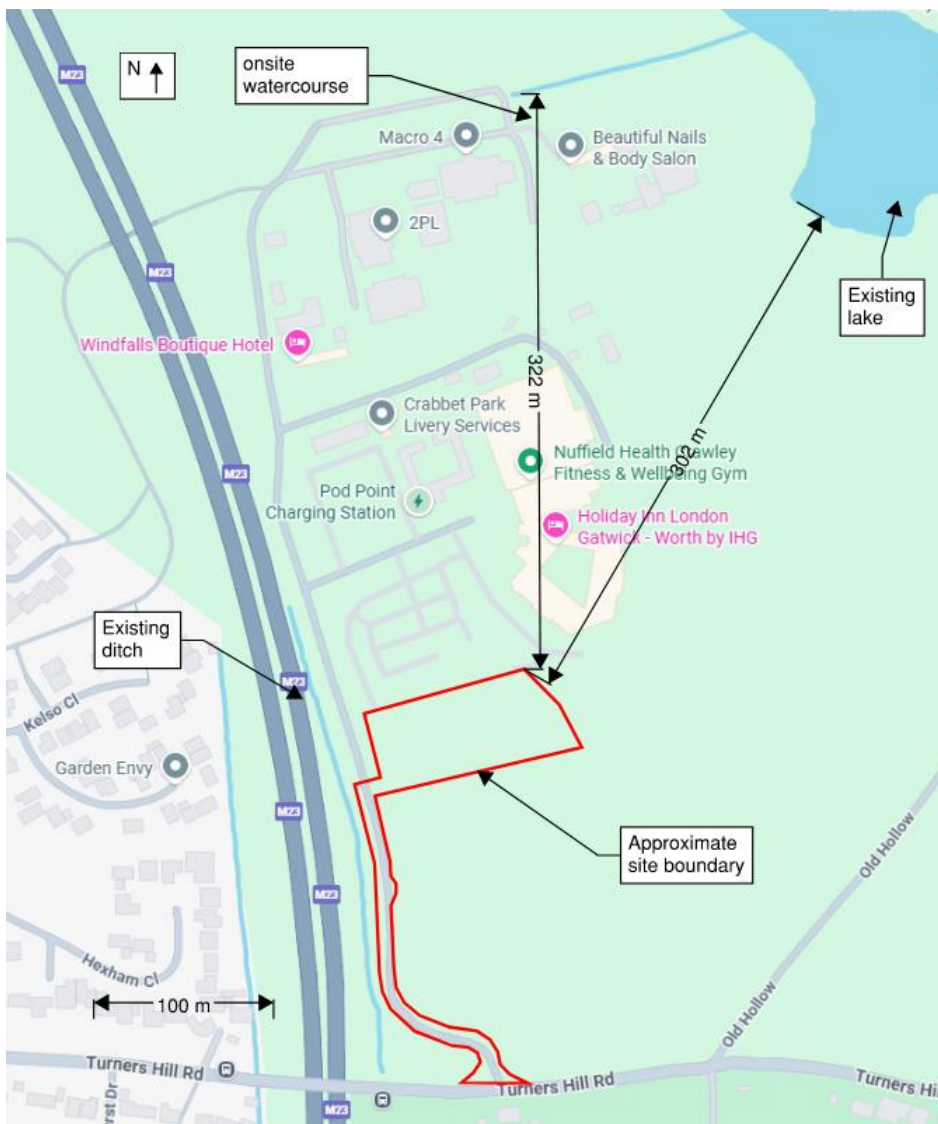


Figure 2 – Onsite Hydrology (Google Maps, 2025)

The closest Main Rivers are Gatwick Stream, ~1.4 km to the southwest, and Kits Brook, ~1.8 km to the northeast. Main Rivers are regulated by the Environment Agency. An extract of the Statutory Main River map is presented in Figure 3.

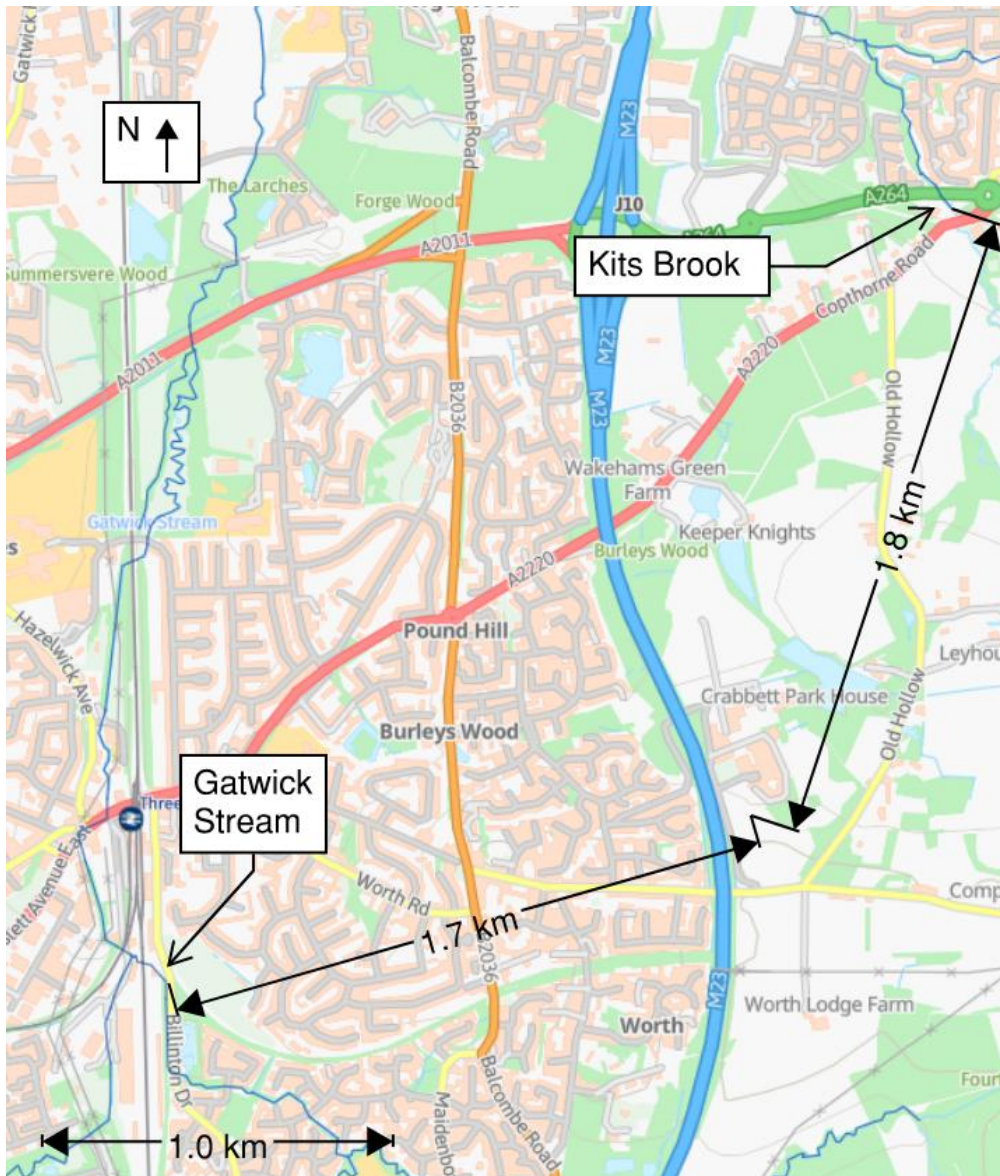


Figure 3 – Extract of Statutory Main River Map (Environment Agency. 2025)

2.4. Geological Records

British Geological Survey (BGS) online mapping shows the site is likely to be underlain by a bedrock of Upper Tunbridge Wells Sand Formation. No superficial geology information is available on the BGS mapping. The BGS bedrock geology records pertaining to the site are illustrated in Figure 4.



Figure 4 – Bedrock Deposits (Bedrock Geological Surveys, 2025)

2.5. Ground Investigation

Infiltration testing was undertaken on 18th August 2025 to determine whether infiltration would be a viable means of surface water disposal for the proposed site.

The following ground conditions were encountered in the trial pit:

STRATUM	DEPTH TO TOP (MBGL)	DEPTH TO BASE (MBGL)
Topsoil	0.00	0.50
Silty sandy CLAY	0.50	2.20
Silty CLAY	2.20	2.50

The soakage testing was carried out for just under 6 hours, within which time the water did not drain to the 75% mark. As such, the soil has been deemed 'practically impervious', and infiltration will not be a

viable form of surface water disposal. The full infiltration testing results can be found in Appendix F – Infiltration Testing Results.

2.6. Hydrogeology

There are no groundwater Source Protection Zone (SPZ) within 10 km of the proposed site.

2.7. Existing Drainage

There are no existing foul or surface water drainage provisions on the proposed site.

There are no Thames Water surface water sewers shown on the asset mapping serving the wider Crabbet Park site. The closest Thames Water foul water sewer is approximately 219 m north of the site.

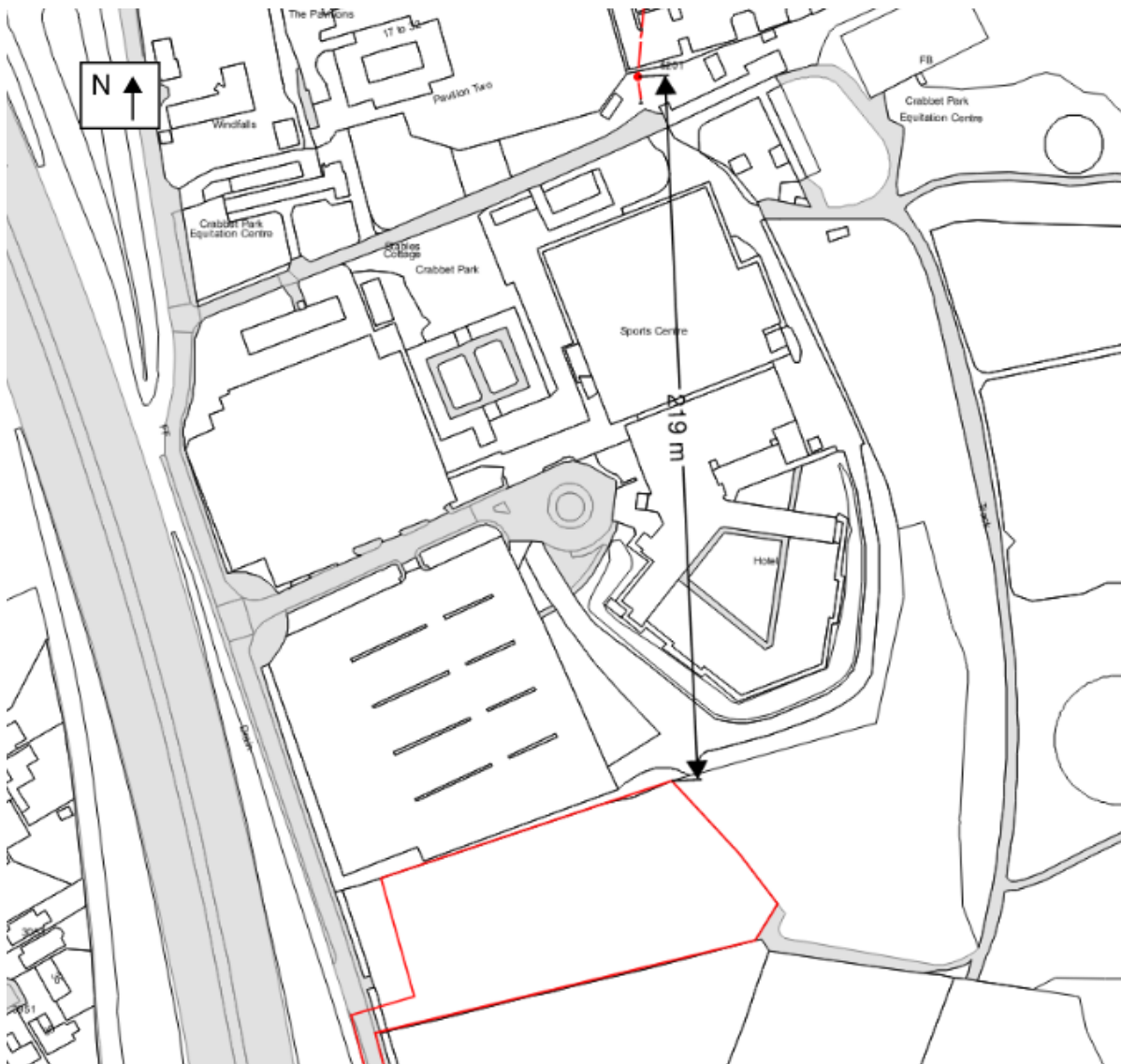


Figure 5 – Extract from Thames Water Asset Map (Thames Water, 2017)

3. DEVELOPMENT PROPOSALS

The proposed development consists of a new covered padel centre housing 6 courts, a café, car park and other associated facilities.

An extract of the proposed site plan can be seen Figure 6 and in full in Appendix C – Proposed Site Plan.



Figure 6 – Extract of Proposed Site Plan (Gavin Jones, Architecture, 2026)

4. SUDS POLICY

4.1. National SuDS Policy

DEFRA (Department for Environment, Food and Rural Affairs) have newly produced guidance titled '**National standards for sustainable drainage systems (SuDS)**'¹. The guidance contains standards for the design of new surface water drainage systems on both brownfield and greenfield sites. The guidance contains the following two types of standards:

- *The Hierarchy Standard (Standard 1)* – providing criteria the choice of discharge location from the proposed site.
- *Fixed Standards (Standards 2-7)* – the minimum design criteria for the SuDS features and guidance on how they should be built, maintained and operated.

The standards laid out in the above document has been used to inform the development of the surface water drainage strategy. Furthermore, in accordance with paragraph 3.10, where local guidance is more stringent than the above documentation, local guidance will take precedent.

4.2. Local SuDS Policy

Water, People, Places – A guide for master planning sustainable drainage into developments²

This document was produced by Aecom on behalf of the Lead Local Flood Authorities of the Southeast of England, Brighton and Hove City Council, Kent County Council, Southampton City Council, East Sussex County Council, Medway Council, Surrey County Council, Hampshire County Council, Portsmouth City Council and West Sussex County Council.

The document provides guidance on the different types of SuDS features, selection matrices based on existing site conditions and demonstrations of the methodologies on sites with different functions, e.g. education campuses, mixed use developments and industrial premises.

Mid Sussex District Council Level 1 Strategic Flood Risk Assessment³

The Level 1 SFRA developed by Aegaea on behalf of Mid Sussex DC in 2024 as part of the evidence base for the updated District Plan for 2021–2039. The document was produced to aid in the understanding of flood risk across the district and provide guidance for managing onsite and offsite flood risk. The SFRA includes information of the design and implementation of sustainable drainage systems as the best way to manage on site surface water flood risk. It also notes that at time of writing there are no critical drainage areas within the district.

Mid Sussex District Plan 2014–2031⁴

The Mid Sussex District Plan was adopted in March 2018 and sets out a delivery strategy to evolve Mid Sussex. District Plan 41: Flood Risk and Drainage, sets out the requirements for sustainable drainage systems within the district. It should be noted that more detailed requirements are set out in the 2021 – 2039 draft district plan but this has not yet been adopted.

¹ [National standards for sustainable drainage systems \(SuDS\) – GOV.UK](#)

² [Water.People.Places – A guide for master planning sustainable drainage into developments](#)

³ [Mid Sussex District Council Level 1 SFRA](#)

⁴ [Mid Sussex District Plan 2014–2031](#)

5. SURFACE WATER DRAINAGE PROPOSALS

5.1. Overview

The proposed surface water drainage strategy can be seen in Appendix D – Proposed Drainage Strategy and is outlined below:

- Approximately 270 m² green roof above café building;
- 1 no. 5,000 l rainwater harvesting tank;
- ~1,005 m² permeable paving beneath car parking areas;
- 2 no. below ground geocellular attenuation tanks with a total volume of ~412 m³;
- Piped connection to 2 no. HydroBrake flow control chamber restricted to 0.5 l/s and 1.8 l/s respectively to total the Q_{bar} greenfield runoff rate; and
- 2 no. outflow structures formed of a perforated pipe sat in a gravel filter trench to slowly discharge surface water at the greenfield runoff rate into the adjacent woodland in accordance with the existing overland flow routes.

5.2. Greenfield Runoff Estimates

The greenfield runoff rates were calculated using FSR data using the latest InfoDrainage design software (released by Innovyze) which has superseded MicroDrainage for only the proposed areas of hard standing i.e. 4220m².

The greenfield runoff rates have been summarised in Table 1 below and an extract from InfoDrainage has been included in Figure 7.

Table 1 – Greenfield Runoff Rate Summary (InfoDrainage, 2025)

CATCHMEN AREA (HA)	GREENFIELD RUNOFF RATE, Q _{BAR} (L/S)
0.38	2.3

ICP SUDS / IH 124	ADAS 345	FEH	ReFH2												
Method ☒ ICP SUDS ☐ IH 124															
Area (ha) 0.38															
SAAR (mm) 855.0															
Soil 0.470 Map															
Region Region 6 ...															
Additional Options Urban 0.000 Return Period (years) 0 Growth Curve (None) Graph Reset															
Calculate															
Results <table border="1"> <thead> <tr> <th>Region</th> <th>QBAR Rural (L/s)</th> <th>QBAR Urban (L/s)</th> <th>Q 1 (years) (L/s)</th> <th>Q 30 (years) (L/s)</th> <th>Q 100 (years) (L/s)</th> </tr> </thead> <tbody> <tr> <td>Region 6</td> <td>2.3</td> <td>2.3</td> <td>2.0</td> <td>5.3</td> <td>7.4</td> </tr> </tbody> </table>				Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)	Region 6	2.3	2.3	2.0	5.3	7.4
Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)										
Region 6	2.3	2.3	2.0	5.3	7.4										

Figure 7 – Greenfield Runoff Rate (InfoDrainage, 2025)

5.3. Proposed SuDS Strategy

For the proposed surface water drainage strategy, the SuDS hierarchy provided in the Level 1 SFRA has been followed, with the hierarchy set out as follows:

- Infiltration;
- Gravity discharge to surface waters;
- Gravity discharge to a surface water sewer; and
- Gravity discharge to a combined sewer.

As discussed in Section 2.5, the ground conditions are practically impervious and as such infiltration is not a viable form of surface water disposal.

There are no watercourses within 300 m of the site boundary (see Section 2.3), therefore it is unfeasible for the site to discharge surface water to a watercourse.

All surface water drains within close proximity to the site are owned by the adjacent hotel. Following recent construction (associated with planning applications DM/24/1572 and DM/17/3447) a flow control chamber has been introduced on the outlet of the hotel surface water drainage system. It is understood the control was sized to limit the discharge to the 1 in 100 year discharge rate (prior to the construction of works associated with planning application DM/17/3447). The hydraulic modelling included an allowance for the proposed car park (planning application DM/24/1572), and following this the calculations show that the network is at full capacity. As such, there will not be sufficient capacity within this network to allow for the additional discharge associated with the proposed development.

There are no combined sewers within known proximity to the site.

Due to the constraints listed, a surface water strategy has been developed to mimic the natural flow path of surface water across the site. The proposed surface water drainage strategy will provide betterment in comparison to the existing state by attenuating surface water beneath the proposed building and restricting the outflow for all storm events to the greenfield runoff rate (Q_{BAR}). Surface water will then discharge via shallow perforated pipes in gravel trenches to the east of the building, mimicking the existing drainage arrangement. The cover level of the gravel trenches will be set lower than the invert level of upstream geocellular attenuation tank, as this will allow the head of water to push surface water through the trench, overtopping evenly along the length of the trench and rejoin the predevelopment overland flow route.

As a result, the proposed development will provide betterment by reducing the rate at which water reaches the adjacent woodland by limiting the outflow to the Q_{bar} greenfield runoff rate for all storm events up to and including the 1 in 100+40% climate change event.

Other SuDS to be incorporated into the scheme include the provision of a rainwater harvesting system which will be provided for irrigation of the soft landscaping. The harvested rainwater will be stored in an above ground water tank with a capacity of approximately a 5,000L capacity. A green roof is proposed to be provided on the roof of the café building covering a footprint of approximately 270m². Refer to the architects’ drawings for details. For the purposes of the attenuation tank design, the green roof is assumed to provide no betterment to the peak rate of discharge, however it is widely accepted that during many rainfall events throughout a typical year that runoff rates and volume will reduce. The green roof also provides additional benefits including water quality treatment and biodiversity enhancements.

5.4. Design of Surface Water Drainage and InfoDrainage Modelling

The site drainage has been modelled using InfoDrainage with network details and results for the 1-year, 30-year, 30-year + 25% climate change, 100-year, and 100-year+ 40% climate change storm events are provided in Appendix C of this report.

This Section of the report should be read in conjunction with drawing information presented in Appendix B.

Crabbet Park site lies within the ‘Mole Management Catchment’. See Figure 8 for the latest climate change allowances for the Mole Management Catchment peak rainfall:

1% annual exceedance rainfall event

Epoch	Central allowance	Upper end allowance
2050s	20%	40%
2070s	25%	40%

Figure 8 – Mole Management Catchment Peak Rainfall Allowances (Environment Agency, 2025)

The upper end climate change allowance for the 2050s epoch (to be utilised for development with a lifetime up to 2060) is 40%. As such, a 40% uplift to the FSR design rainfall has been utilised for the design of the surface water drainage in the InfoDrainage software.

Below ground geocellular attenuation crates have been specified below each level of the padel courts. Permeable paving structures for storage were considered below the proposed car park, however, due to the steeply sloping nature of the site, sufficient storage could not be provided, therefore additional attenuation is provided in the form of below ground geocellular attenuation tanks. The system has been designed for no infiltration and can attenuate runoff up to and including the 1 in 100 + 40% climate change event.

The SuDS features have been summarised in the tables below:

Table 2 – Proposed Attenuation Summary

ATTENUATION TANK	DEPTH (M)	LENGTH (M)	WIDTH (M)	VOLUME (M ³)	OUTFLOW CONTROL
Northern Tank	0.4	30	10	114	HydroBrake flow control chamber FC2.
Southern Tank	0.4	40	12	244	HydroBrake flow control chamber FC1.

Table 3 – Proposed Permeable Paving Summary

PERMEABLE PAVING	PLAN AREA (M ²)	DEPTH (M)	VOLUME (M ³)	POROSITY	OUTFLOW CONTROL
East Permeable Paving	567	0.35	60	30	Free discharge to S1
West Permeable Paving	448	0.35	51	30	Free discharge to S2

The proposed peak discharge rates for the 1 in 1, 1 in 30, 1 in 30 +35% climate change, 1 in 100 and 1 in 100 +40% climate change events are summarised in Table 4.

Table 4 – Peak Discharge Rate Tables

CRITICAL STORM BY RETURN PERIOD	PEAK DISCHARGE RATE FC1 (L/S)	PEAK DISCHARGE RATE FC2 (L/S)	TOTAL PEAK DISCHARGE RATE (L/S)
1 in 1	1.8	0.5	2.3
1 in 30	1.8	0.5	2.3
1 in 30 + 25%cc	1.8	0.4	2.2
1 in 100	1.8	0.4	2.2

CRITICAL STORM BY RETURN PERIOD	PEAK DISCHARGE RATE FC1 (L/S)	PEAK DISCHARGE RATE FC2 (L/S)	TOTAL PEAK DISCHARGE RATE (L/S)
1 in 100 + 40%cc	2.1	0.5	2.3

Half drain times for the North and South attenuation tanks have been calculated and are presented below for the 1 in 30 year + 25% climate change event.

Table 5 – Half Drain Times

ATTENUATION TANK	HALF DRAIN
North	1795
South	1140

The half drain time for the northern tank is slightly longer than 24 hours. However, the tank only reached 65% capacity in this storm event. Within 24 hours the tank will empty to approximately 43 m³, which is less than half of the tank's full capacity (114 m³). Therefore, the tank will drain sufficiently within a 24 hour period to manage a subsequent storm event.

5.5. Water Quality

In accordance with Table 4.3 in Chapter 4 of the SUDS manual (C753) a water quality assessment has been undertaken to meet the requirements of the Lead Local Flood Authority using the Simple Index Approach. This approach is set out in Section 26.7.1 of the SUDS Manual and is an appropriate measure of water quality.

From Table 26.2 of the SUDS Manual, the pollution hazard indices are notes as follows:

Table 6 – Pollution Hazard Indices (CIRIA C753, 2015)

LAND USE	POLLUTION HAZARD LEVEL	TOTAL SUSPENDED SOLIDS (TSS)	METALS	HYDROCARBONS
Commercial Roofs	Low	0.3	0.2	0.05
Non-residential parking with infrequent change (i.e. < 300 traffic movements a day)	Low	0.5	0.4	0.4

To deliver adequate treatment, the selected SUDS components should have a total mitigation index that equals or exceeds the pollution hazard index.

$$\text{Total SUDS Mitigation} \geq \text{Pollution Hazard Index}$$

The indicative SUDS mitigation indices for the SUDS components that drains to groundwater is as follows

Table 7 – SuDS Mitigation Indices (CIRIA C753, 2015)

TYPE OF SUDS COMPONENT	MITIGATION INDICES		
	TSS	Metals	Hydrocarbons
Permeable Paving	0.7	0.6	0.7
Infiltration Trench	0.4	0.4	0.4

The proposed car parking areas will receive treatment from both the permeable paving structure and the gravel infiltration strips. Where multiple SuDS components are proposed:

Total SuDS Mitigation Index = Mitigation index of the primary SuDS component + 0.5 * Mitigation indices of the secondary SuDS components

Table 8 – Treatment Train Mitigation Indices

POLLUTION SOURCE	TSS		METALS		HYDROCARBONS	
	Pollution Hazard Index	SuDS Mitigation Index	Pollution Hazard Index	SuDS Mitigation Index	Pollution Hazard Index	SuDS Mitigation Index
Non-residential parking with infrequent change (i.e. < 300 traffic movements a day)	0.5	0.9	0.4	0.8	0.4	0.9

Therefore, the design complies with the water quality requirements set out in Chapter 4 of the SUDS Manual.

6. FOUL DRAINAGE STRATEGY

This section should be read in conjunction with the Proposed Drainage Strategy in Appendix D – Proposed Drainage Strategy.

The closest Thames Water asset from the proposed site is 215 m northeast of the proposed site, located north of the Holiday Inn and Nuffield Sports Centre. In order to avoid constructing the foul drain in private land, the route would be > 300 m. There are no private foul drains on the proposed site, and all other foul drainage belongs to the sports centre and hotel.

Therefore, the site is proposed to be drained to a cesspool located beneath the car park. An initial sizing of the cesspool has been undertaken, providing 45 days of storage at 160,000 L. The cesspool will need to be emptied regularly (as required) by a registered waste carrier. It is recommended that after pumping out, the cesspool is inspected for any signs of damage. Full records should be kept of the pumping and inspection schedules for future reference.

7. MAINTENANCE PLAN

The construction, operation, and maintenance requirements of all SuDS components has been considered as part of the proposed drainage strategy. It is important for the performance of the surface water systems that they are maintained on a regular basis.

Maintenance shall be undertaken by the site operator for the duration of use. A summary of the recommended management and maintenance requirements is provided below:

MAINTENANCE SCHEDULE	REQUIRED ACTION	TYPICAL FREQUENCY	ESTIMATED ASSET DESIGN LIFE
Filter Drain Outlet Structure			
Regular Maintenance	Remove litter (including leaf litter) and debris from filter drain surface, surrounding gravel surface and access chambers / rodding eyes	Monthly (or as required)	
	Inspect filter drain surface, inlet/outlet pipework and control systems for blockages, clogging, standing water and structural damage	Monthly	
	Remove or control tree roots where they are encroaching the sides of the filter drain, using recommended methods	As required	
	Remove surface geotextile and replace, and wash or replace overlying filter medium	Five yearly, or as required	
	Clear perforated pipework of blockages	As required	
Geocellular Attenuation Tank			>50 years if installed to manufacturer recommendations.
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then annually.	
	Remove debris from the catchment surface (where it may cause risks to performance).	Monthly.	

MAINTENANCE SCHEDULE	REQUIRED ACTION	TYPICAL FREQUENCY	ESTIMATED ASSET DESIGN LIFE
	Remove sediment from pre-treatment structures and/ or internal forebays.	Annually, or as required.	
Remedial Actions	Repair/ rehabilitate inlets, outlet, overflows and vents.	As required.	
Monitoring	As per 'Regular Maintenance' activities.	Annually.	
	Survey inside of tank for sediment build-up and remove if necessary.	Every 5 years or as required.	
HydroBrake Flow Control Chamber			>50 years
Regular Maintenance	Inspect for build-up of any debris/ algae/ sediment and remove as required.	Minimum every 3 months (particularly in advance of a forecasted storm)	
Monitoring	As per 'Regular Maintenance' activities.	Annually.	
Manholes/ Catchpits			>50 years
Regular Maintenance	Inspect chamber for build-up of any debris/ sediment in the base of catchpits and remove as required.	Annually.	
	Inspect covers and frames for any signs of damage, or indications of covers becoming loose/ tampered with.	Annually.	
Remedial Actions	Repair/ replace covers or frame. Remove silt/ debris from base of catchpit.	As required.	
Monitoring	As per 'Regular Maintenance' activities.	Annually.	
Pipes			>50 years
Regular Maintenance	Inspect chamber by visually checking for evidence of standing water in pipe runs (pipe invert submerged) and	Annually.	

MAINTENANCE SCHEDULE	REQUIRED ACTION	TYPICAL FREQUENCY	ESTIMATED ASSET DESIGN LIFE
	chamber is free-flowing. This may be an indication of blockages within the pipe. High-pressure jet/ rod as necessary to remove any blockage.		
	Check for any obstructions across pipe inlets/ outlets within chamber/ Remove any debris or other obstructions as necessary.	Annually.	
Remedial Actions	Rodding and/ or CCTV condition survey and high-pressure jetting. Clearance of pipe inlets/ outlets within the chamber.	As required.	
Monitoring	Intrusive inspection (CCTV condition survey) to be undertaken of pipes and high-pressure jet washing/ rodding to be undertaken as required to cleanse systems of debris/ blockages. Undertake any other repairs e.g. pipe lining if identified from survey.	Every 10 years or as required.	
Rainwater Harvesting System			<i>In accordance with manufacturer's recommendations.</i>
Regular maintenance	Inspection of the tank for debris and sediment build-up, inlets/outlets/ withdrawal devices, overflow areas, pumps and filters	Annually (and following poor performance)	
	Cleaning of tank, inlets, outlets, gutters, withdrawal devices and roof drain filters of silts and other debris	Annually (and following poor performance)	
Occasional maintenance	Cleaning and/or replacement of any filters	Three monthly (or as required)	
Remedial Actions	Repair of overflow erosion damage or damage to tank	As required	

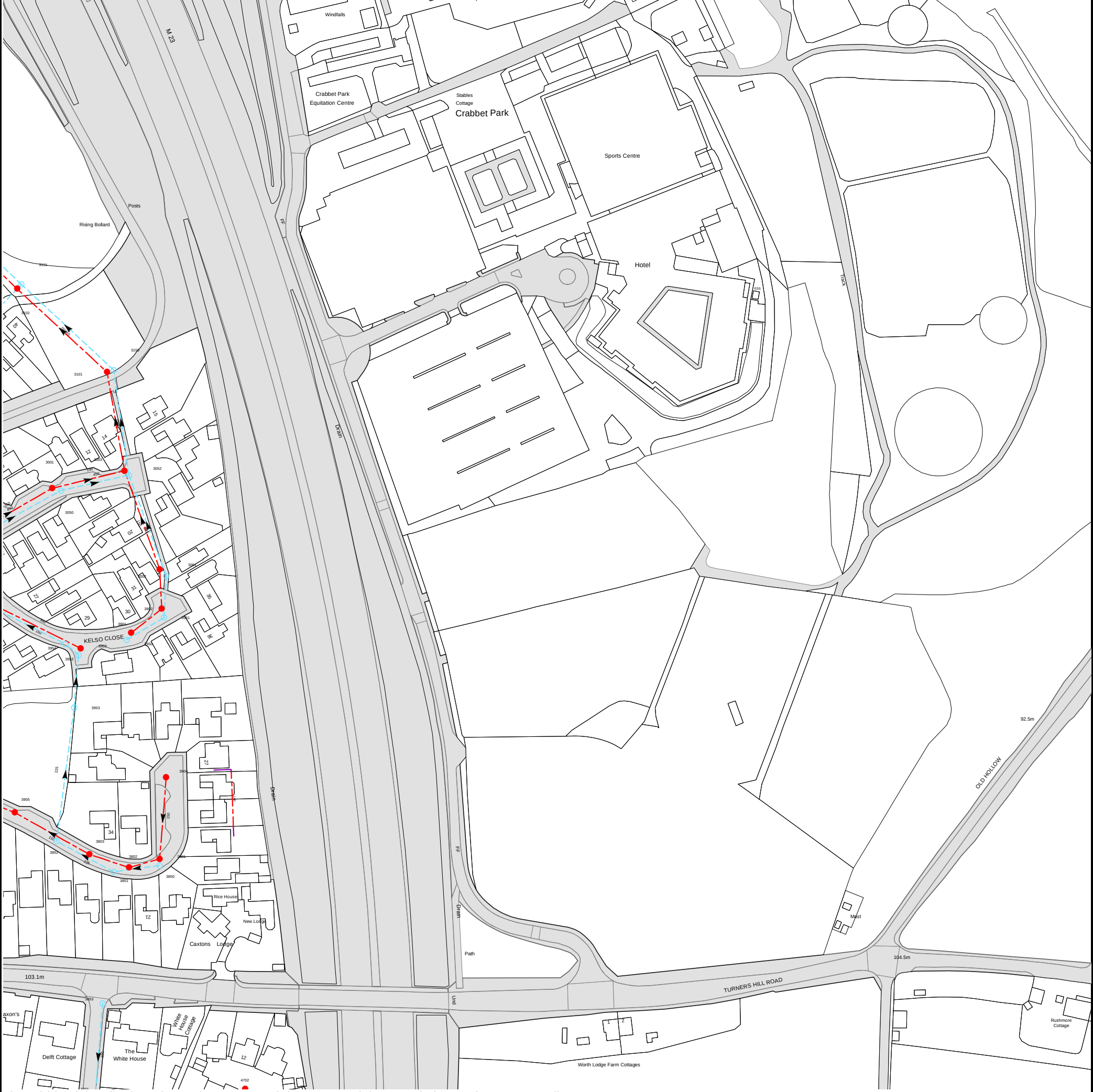
MAINTENANCE SCHEDULE	REQUIRED ACTION	TYPICAL FREQUENCY	ESTIMATED ASSET DESIGN LIFE
	Pump repairs	As required	

8. CONCLUSION

Ridge and Partners LLP have been commissioned by Padel Centric Ltd to prepare a Drainage Strategy in support of the planning application for the proposed padel centre at Crabbet Park, Crawley. Surface water drainage has been provided in the form of below ground geocellular attenuation tanks restricted to the Q_{BAR} for returns periods up to and including the 1 in 100 + 40% climate change event. Surface water will be discharged towards the woodland in line with the existing overland flow routes across the proposed site. Betterment will be provided by reducing the outflow rate to the greenfield run off rate for all return periods including the 1 in 100 + 40% climate change event.

APPENDIX A – TOPOGRAPHICAL SURVEY

APPENDIX B – THAMES WATER RECORDS



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 530553,137029
The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map (2024) with the Sanction of the controller of H.M. Stationery Office, License no. AC0000849556 Crown Copyright Reserved.

NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
3102	n/a	n/a
3151	90.14	88.34
3001	n/a	n/a
3050	n/a	n/a
3101	n/a	n/a
3150	92.26	90.24
3003	n/a	n/a
3052	95.13	92.52
3953	n/a	n/a
3952	100.73	98.48
3903	n/a	n/a
3954	100.55	98.22
3950	n/a	n/a
3901	n/a	n/a
3951	n/a	n/a
3902	n/a	n/a
3051	n/a	n/a
3002	n/a	n/a
4702	100.98	99.65
3853	102.68	101.31
3851	103.27	102.04
3802	n/a	n/a
3850	n/a	n/a
3801	n/a	n/a
3803	n/a	n/a
3852	103.55	101.67
3905	n/a	n/a
3904	n/a	n/a
The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.		

REFERENCE	COVER LEVEL	INVERT LEVEL
361B		
361C		
071B		
9156	95.43	93.73
9152	91.34	88.81
9304	85.07	81.85
9253	85.4	83.21
9303	84.91	81.89
9106	95.19	93
0952	103.09	100.24
3702	101.06	99.26
3701	101.59	99.79
3751	101.67	100.29
3853	102.68	101.31
2250	85.6	81.55
2950		
2154	88.56	85.2
2105		
2904		
0057	99.34	97.71
0851	102.89	100.44
0804	102.87	100.29
3852	103.55	101.67
3050		
3703	100.74	98.94
3750	100.73	99.28
0304		
0310	83.95	81.16
0357	83.97	81.6
0850		
0056	98.61	97.11
3953		
0753	100.08	98.39
0803		
1850	102.99	100.84
1103		
1050		
1055	93.96	91.97
1801		
2751	101.78	100
1702	102.28	100.78
3902		
3904		
4650	100.66	99.3
1253	85.46	82.48
2801		
2351		
2350	80.08	77.58
2102		
2901		
0751	100.6	98.56
1950		
1251	86.23	82.79
1652		
1203		
1252	86.04	82.63
1951	101.88	100.14
0052	95.95	95.14
0204	84.92	82.08
0101	89.91	86.81
0255	84.81	82.71
0601		
3150	92.26	90.24
3950		
1752	101.18	98.7
1250	84.49	83.23
0201		87.31
0352		
0353	82.2	80.86
1701	101.44	99.51
3802		
3901		
3603	100.6	98.65
3801		
0354		
0055	96.73	95.28
0005	96.61	95.03
0102	91.78	90.14
0351	84.82	81.87
2701	101.83	99.93
2651	101.41	98.39

REFERENCE	COVER LEVEL	INVERT LEVEL
3602	100.4	98.53
361A		
321A		
9105	91.07	88.81
9201	85.45	82.72
9406	84.14	81.41
9151	90.38	88.5
9354	85	82.29
0103	92.52	90.58
0151	92.38	90.59
3752	101.03	99.62
3803		
1750	101.46	100.05
2152	91.5	89.33
2153		
2104		
2050	97.91	96.06
2953		
0703	100.4	97.46
0006	98.58	96.82
0350		
3001		
3302	79.55	79.18
3601	100.43	98.36
3954	100.55	98.22
0051	96.95	95.66
0001	96.48	94.95
0250	89.47	87.13
0058	99.85	98.2
0008	99.87	98.02
0050		
3952	100.73	98.48
0305		
0950	101.2	99.18
1001		
1152	89.32	87.31
1006	94.01	92.45
1454		
2155		
1354	80.22	77.7
1350		
3951		
4301	84.92	80.48
4750	100.59	99.7
1204	85.41	82.01
2301	80.05	78
2302		
2201	85.53	81.54
2103		
0003	95.22	94.22
0702	101.65	100.32
1053	95.71	94.02
1602		
1007	95.22	93.68
1902	101.81	99.7
1802		
0453	84.04	81.95
0452		
0104	95.81	94.26
0802	102.61	100.04
2003		
3851	103.27	102.04
3651	100.44	98.82
1150		
1753	100.94	98.67
1201		
0750	99.98	98.31
0303		
1102		
1005		
3052	95.13	92.52
3303	80.56	80.22
3850		
0307	81.64	79.72
0150	94.62	92.81
0004	95.9	94.45
0301		
0358	84.89	82.53
2750	101.61	99.98
2752	102	100.69
2702	101.99	100.21

ALS/ALS/24/2025_5216406

NB: Level quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates no Survey information is available.

REFERENCE	COVER LEVEL	INVERT LEVEL
2601	101.37	98.04
2952		
0007	99.41	97.54
0202		
0203		
1004		
1901		
0752	99.86	98.49
0701		
0254	84.36	82.83
1008	95.84	94.07
2951	102.86	99.2
2903	101.89	99.52
2051	97.73	95.1
0053	95.13	93.68
2602	100.99	98.23
3955		
3905		
3653	100.74	98.56
1002		
1054	95.11	93.29
1304		
1305	80.07	78.17
1353	79.66	78.61
4651	100.58	99.36
4751	101	99.92
4303		
5201	87.6	85.85
111B		
0306		
0308		
9755	99.03	97.03
1101		
1351	80.35	77.84
1604	101.05	98.97
1151		
161C	99.98	97.2
0604	99.51	97.03
081B		
1601		
3003		
011A		
201A		
4601	100.67	98.87
2001		
0403		
1751	102.29	101.25
3650	100.41	98.8
4602	100.59	99
0951	102.44	99.86
0901	102.34	99.4
181D		
181E		
091A		
191B		
201E		
0903	101.3	98.96
091C		
091F	102.1	101.43
091H		
171A		
091J		
081D		
1303		
1405		
071C		
071E		
091L		
3102		
181A		
061E		
001A		
1352	79.99	79.03
141E		
061H		
1104		
111C		
011E		
371A		
131A		
001C		

REFERENCE	COVER LEVEL	INVERT LEVEL
2101		
0356		
0252	88.02	84.56
0309		
0253		
1003		
1052		
0054	96.04	94.61
0302		
1754	100.81	98.63
2303		
2151	88.38	86.13
2902		
0454		
2652	100.98	98.58
2002		
3301	79.76	78.94
3604	100.8	98.26
3151	90.14	88.34
1051	98.21	96.75
1455		
1603	101.22	97.62
1653	101.26	98
1301		
4702	100.98	99.65
4302	84.95	80.82
5301		
5302		
061C		
3002		
1654	101.04	99.57
0355		
1056		
4701	100.55	99.3
3652	100.54	98.85
161A		
061A	99.9	97
161B	99.99	97.25
0602		
3051		
0251		
461B		
201B		
461A		
201D		
1153		
3903		
1302	80.35	78.37
2150		
0902	103.1	100.07
111A		
181C		
1202		
191A		
191C		
0801		
091B		
091E	101.16	100.01
091G		
091I		
081C		
081A		
1404		
091K		
091M		
071D		
071F		
201C		
3101		
181B		
011D		
011C		
141H		
141G		
471B		
0603		
111D		
011F		
371B		
131B		
001B		

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified before any works are undertaken. Crown copyright Reserved

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NB: Level quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates no Survey information is available.

REFERENCE	COVER LEVEL	INVERT LEVEL
031F		
031B		
031C		
031D		
011I		
011J		88.5
011H		
011K	89.01	88.26
021A		
031I		

REFERENCE	COVER LEVEL	INVERT LEVEL
031A		
031E		
031H		
171B		
021C		
021B		
011M		
011N		
031J		



Asset Location Search - Sewer Key

Public Sewer Types (Operated and maintained by Thames Water)

	Foul Sewer: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.
	Surface Water Sewer: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.
	Combined Sewer: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.
	Storm Sewer
	Sludge Sewer
	Foul Trunk Sewer
	Surface Trunk Sewer
	Combined Trunk Sewer
	Foul Rising Main
	Surface Water Rising Main
	Combined Rising Main
	Vacuum
	Thames Water Proposed
	Vent Pipe
	Gallery

Other Sewer Types (Not operated and maintained by Thames Water)

	Sewer
	Culverted Watercourse
	Proposed
	Decommissioned Sewer
	Content of this drainage network is currently unknown
	Ownership of this drainage network is currently unknown

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plan are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate the direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

	Air Valve
	Meter
	Dam Chase
	Vent
	Fitting

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

	Ancillary
	Drop Pipe
	Control Valve
	Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol. Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

	Inlet
	Outfall
	Undefined End

Other Symbols

Symbols used on maps which do not fall under other general categories.

	Change of Characteristic Indicator
	Public / Private Pumping Station
	Invert Level
	Summit

Areas

Lines denoting areas of underground surveys, etc.

	Agreement
	Chamber
	Operational Site

Ducts or Crossings

	Casement
	Conduit Bridge
	Subway
	Tunnel

Ducts may contain high voltage cables. Please check with Thames Water.

5) 'na' or '0' on a manhole indicates that data is unavailable.

6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimeters. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology, please contact Property Searches on 0800 009 4540.

APPENDIX C – PROPOSED SITE PLAN



Bin Store Example
Ino. 1100L General Waste
Ino. 1100L Recycling
Ino. 240L Food Waste



Rev	Date
-----	------



Gravin Jones Architecture

Project Details

New Padel Courts
Crabbet Park
RH10 4SS

Drawing Details

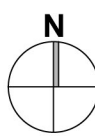
Title:
Proposed Site Layout

Job no. 049	Dwg no. 005
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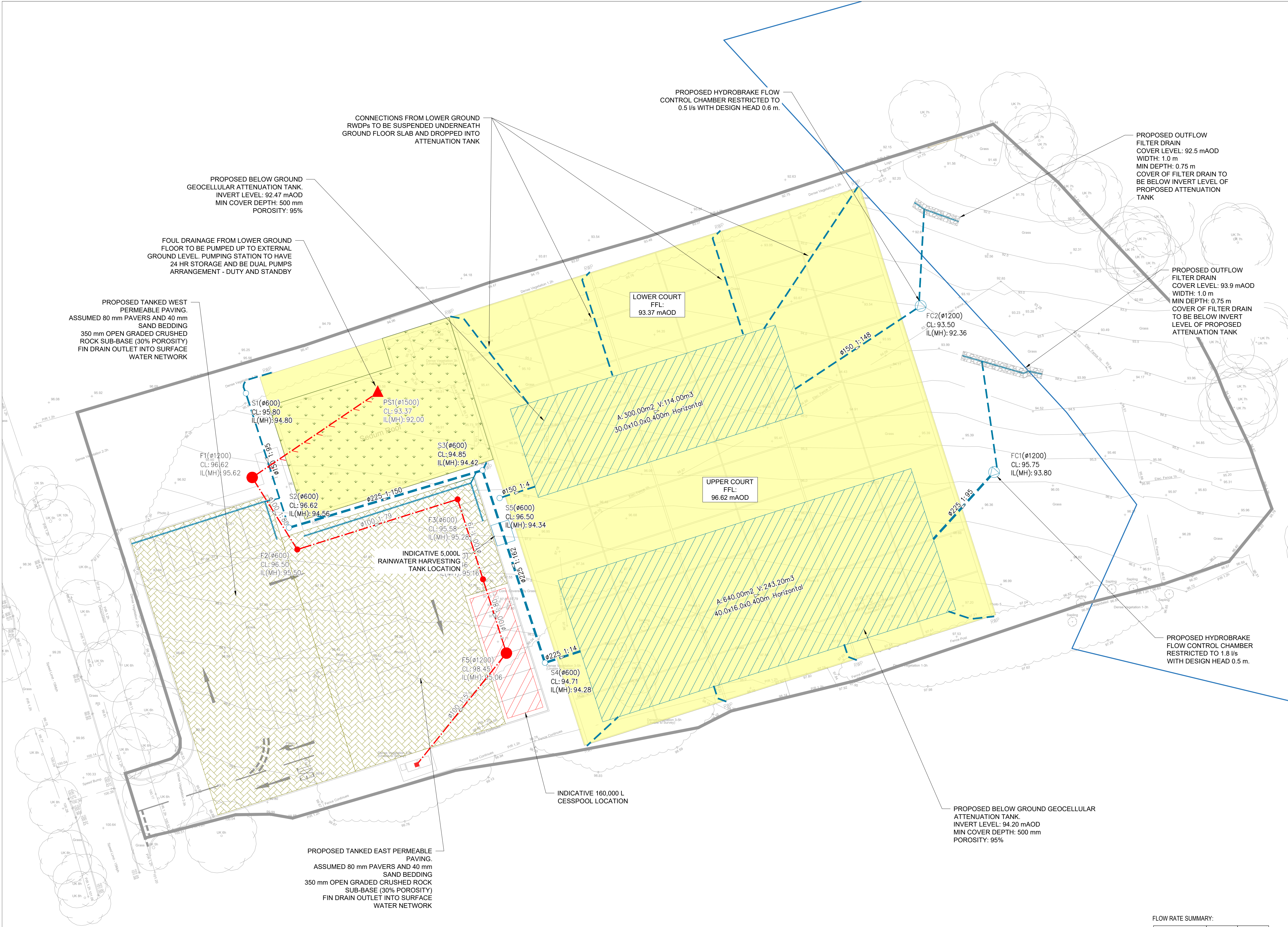
Scale: 1:200 @ A1	Date: July '26
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Status:
Draft

Revision:
PL00



APPENDIX D – PROPOSED DRAINAGE STRATEGY



DISCLAIMER NOTES:

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DRAWING NOTES:

CDM REGULATIONS 2015
CDM REGULATION 9(1) RISKS AND RISKS WHICH ARE DIFFICULT TO MANAGE ARE IDENTIFIED ON THIS DRAWING USING THE FOLLOWING SYMBOLS. IDENTIFIED RISKS ARE IDENTIFIED ON THIS DRAWING USING THE FOLLOWING SYMBOLS. IDENTIFIED RISKS ARE IDENTIFIED ON THIS DRAWING USING THE FOLLOWING SYMBOLS. IDENTIFIED RISKS ARE IDENTIFIED ON THIS DRAWING USING THE FOLLOWING SYMBOLS.

CDM REGULATION 9(1) RISKS AND RISKS WHICH ARE DIFFICULT TO MANAGE ARE IDENTIFIED ON THIS DRAWING USING THE FOLLOWING SYMBOLS. IDENTIFIED RISKS ARE IDENTIFIED ON THIS DRAWING USING THE FOLLOWING SYMBOLS. IDENTIFIED RISKS ARE IDENTIFIED ON THIS DRAWING USING THE FOLLOWING SYMBOLS. IDENTIFIED RISKS ARE IDENTIFIED ON THIS DRAWING USING THE FOLLOWING SYMBOLS.

KEY	
KEY	DESCRIPTION
	NEW SURFACE WATER CHAMBER AND DRAIN
	NEW SURFACE WATER FLOW CONTROL
	NEW GRAVEL INFILTRATION TRENCH
	NEW BELOW GROUND GEOCELLULAR ATTENUATION TANK
	GREEN ROOF TO ARCHITECT'S DETAILS
	IMPERMEABLE LINED PERMEABLE PAVING WITH FINDRAIN COLLECTION SYSTEM
	NEW FOUL WATER CHAMBER AND DRAIN
	NEW FOUL WATER PUMP AND RISING MAIN
	NEW BELOW GROUND FOUL GRP CESS POOL

- NOTES:
- PROPOSED OVERFLOW FILTER DRAINS DESIGNED TO MIMIC EXISTING OVERLAND FLOW ROUTES ACROSS SITE. FILTER DRAINS DESIGNED TO FLOOD FOLLOWING A STORM EVENT DISCHARGING SURFACE WATER AT THE GREENFIELD RUNOFF RATE INTO THE WOODLAND TO THE NORTH EAST OF THE SITE.
 - PROPOSED ATTENUATION TANKS TO BE COORDINATED WITH PROPOSED COLUMN AND FOUNDATION LAYOUT.
 - EXISTING GROUND LEVELS TO BE MAINTAINED ACROSS FULL SITE. BUILDINGS TO BE CONSTRUCTED ON STILTS TO MINIMISE CUT AND FILL.

P05	UPDATED IN ACCORDANCE WITH CLIENT COMMENTS	13/08/2026	EP	PC
P04	UPDATED IN ACCORDANCE WITH LATEST SITE PLAN	29/07/2026	EP	ACB
P03	UPDATED IN ACCORDANCE WITH LATEST SITE PLAN	05/12/2025	EP	PC
P02	ISSUED FOR PLANNING	11/11/2025	TW	PC
P01	FIRST ISSUE	20/10/2025	EP	PC
REV	DESCRIPTION	DATE	BY	CHKD
ORIGINATOR: www.ridge.co.uk				

RIDGE

PROJECT NUMBER: 5030609

CLIENT: PADEL CENTRIC LTD

IN ASSOCIATION WITH:

PROJECT: CRABBT PARK PADEL CENTRE

TITLE: PROPOSED DRAINAGE STRATEGY

DRAWN BY: EP CHECKED BY: PC APPROVED BY: PC

SCALE: 1:200 @ A1 DATE: OCT 2025

STATUS: DESCRIPTION: S2 - ISSUED FOR INFORMATION

MODEL REFERENCE: 5030609-RDG-XX-XX-D-C-110500

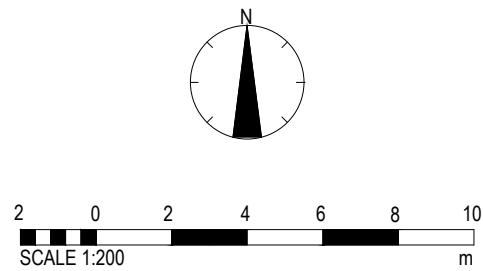
PROJECT: 5030609 RDG XX XX D C 110500 P05

FLOW RATE SUMMARY:

Storm	Existing	Proposed
1 in 1	2.2	2.2
1 in 30	5.8	2.2
1 in 30 + 25%cc		2.2
1 in 100	8.2	2.2
1 in 100 + 40%cc		2.3

SOURCES:

- TOPOGRAPHICAL SURVEY BY SURVEY SOLUTIONS. DRAWING NO 51404BWLS-06 DATED JUN 2025
- ARCHITECTURAL LAYOUT BY GAVIN JONES ARCHITECTURE. DRAWING NO 005 RECEIVED JULY 2026



APPENDIX E – INFODRAINAGE RESULTS AND OUTPUTS

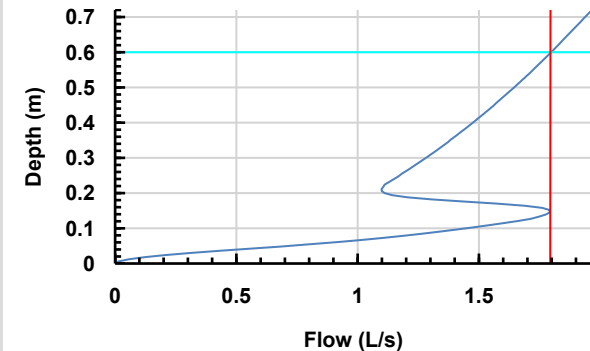
Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026					
	Designed by: EP	Checked by: ACB	Approved By: ACB			
	Report Details: Type: Junctions Storm Phase: Full Site					
			Company Address: Ridge and Partners LLP 3 Valentine Place London			

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)	Lock
S4	Manhole	530542.211	137008.951	98.000	3.715	94.285	Circular	0.600	None
FC1	Manhole	530593.270	137026.851	95.750	1.650	94.100	Circular	1.200	None
FC2	Manhole	530583.735	137044.271	93.500	1.140	92.360	Circular	1.200	None
S1	Manhole	530511.043	137036.681	95.800	1.000	94.800	Circular	0.600	None
S2	Manhole	530515.408	137021.655	96.670	2.105	94.565	Circular	0.600	None
S5	Manhole	530538.323	137024.051	96.500	3.000	93.500	Circular	0.600	None
S3	Manhole	530536.074	137028.222	96.620	2.200	94.420	Circular	0.600	None

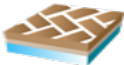
Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S4	Outlet	1.004	Free Discharge
	Outlet	(None)	Hydro-Brake®

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			RIDGE
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Details: Type: Junctions Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London			

FC1	Junction	Outlet Name	Outgoing Connection	Outlet Type
	Invert Level (m)	94.100		
	Design Depth (m)	0.600		
	Design Flow (L/s)	1.8		
	Objective	Minimise Upstream Storage Requirements		
	Application	Surface Water Only		
	Sump Available	☐		
	Unit Reference	CHE-0068-1800-0600-1800		
				
	Outlet	(None)	Hydro-Brake®	

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			RIDGE
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Details: Type: Stormwater Controls Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London			



West Permeable Paving

Type : Porous Paving

Dimensions

Exceedance Level (m)	96.620
Depth (m)	0.470
Base Level (m)	96.150
Paving Layer Depth (mm)	120
Membrane Percolation (m/hr)	2.5
Porosity (%)	30
Length (m)	35.025
Long. Slope (1:X)	15.00
Width (m)	13.978
Total Volume (m³)	51.404

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Car Park (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

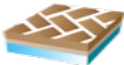
Outlet

Outgoing Connection	2.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	200.0
---------------------	-------

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			RIDGE
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Details: Type: Stormwater Controls Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London			



East Permeable Paving

Type : Porous Paving

Dimensions

Exceedance Level (m)	96.620
Depth (m)	0.470
Base Level (m)	96.150
Paving Layer Depth (mm)	120
Membrane Percolation (m/hr)	2.5
Porosity (%)	30
Length (m)	34.271
Long. Slope (1:X)	15.00
Width (m)	16.770
Total Volume (m³)	60.347

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Car Park
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	2.002
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	200.0
---------------------	-------

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Details: Type: Stormwater Controls Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London			



Southern Tank

Type : Cellular Storage

Dimensions

Exceedance Level (m)	95.500
Depth (m)	0.400
Base Level (m)	94.200
Number of Crates Long	40
Number of Crates Wide	32
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	244.100

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	1.004
Bypass Destination	(None)
Capacity Type	No Restriction

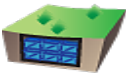
Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Roof 3B Roof 3A
Bypass Destination	(None)
Capacity Type	No Restriction

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Details: Type: Stormwater Controls Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London			

Outlets

Outlet	
Outgoing Connection	1.005
Outlet Type	Free Discharge



Northern Tank

Type : Cellular Storage

Dimensions

Exceedance Level (m)	93.400
Depth (m)	0.400
Base Level (m)	92.470
Number of Crates Long	30
Number of Crates Wide	20
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	114.530

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Details: Type: Stormwater Controls Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London			

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Roof 2A
Bypass Destination	Roof 2B
Capacity Type	(None)
	No Restriction

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	3.001
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	3.002
Outlet Type	Free Discharge

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			RIDGE
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Details: Type: Network Design Criteria Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London			

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Diameter (mm)	Min. Slope (1:X)	Max. Slope (1:X)
100	0.00	0.00
150	0.00	0.00

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			
	Designed by: EP	Checked by: ACB	Approved By: ACB	
	Report Details: Type: Outfall Details Storm Phase: Full Site			
			Company Address: Ridge and Partners LLP 3 Valentine Place London	

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
FC1	Free Discharge			
FC2	Free Discharge			

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			RIDGE
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Title: Rainfall Analysis Criteria	Company Address: Ridge and Partners LLP 3 Valentine Place London			

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

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Title: Rainfall Analysis Criteria	Company Address: Ridge and Partners LLP 3 Valentine Place London			

FSR

Type: FSR

Region	England And Wales
M5-60 (mm)	20.0
Ratio R	0.350
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
1.0	0.000
30.0	0.000
30.0	25.000
100.0	0.000
100.0	40.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	1440
360	1440
480	1440
960	4320
1440	4320

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Inflows Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Roof 1	FSR: 1 years: +0 %: 15 mins: Summer	0.03	5.1	2.205
Car Park	FSR: 1 years: +0 %: 15 mins: Summer	0.07	11.6	5.054
Car Park (1)	FSR: 1 years: +0 %: 15 mins: Summer	0.06	10.8	4.709
Roof 2A	FSR: 1 years: +0 %: 15 mins: Summer	0.06	9.6	4.170
Roof 3A	FSR: 1 years: +0 %: 15 mins: Summer	0.06	9.7	4.227
Roof 2B	FSR: 1 years: +0 %: 15 mins: Summer	0.06	9.5	4.137
Roof 3B	FSR: 1 years: +0 %: 15 mins: Summer	0.06	9.6	4.185
Roof 1A	FSR: 1 years: +0 %: 15 mins: Summer	0.00	0.8	0.336

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Inflows Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Roof 1	FSR: 30 years: +0 %: 15 mins: Summer	0.03	12.4	5.403
Car Park	FSR: 30 years: +0 %: 15 mins: Summer	0.07	28.5	12.396
Car Park (1)	FSR: 30 years: +0 %: 15 mins: Summer	0.06	26.5	11.536
Roof 2A	FSR: 30 years: +0 %: 15 mins: Summer	0.06	23.5	10.215
Roof 3A	FSR: 30 years: +0 %: 15 mins: Summer	0.06	23.8	10.353
Roof 2B	FSR: 30 years: +0 %: 15 mins: Summer	0.06	23.3	10.146
Roof 3B	FSR: 30 years: +0 %: 15 mins: Summer	0.06	23.6	10.248
Roof 1A	FSR: 30 years: +0 %: 15 mins: Summer	0.00	1.9	0.824

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Inflows Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 30 years: Increase Rainfall (%): +25: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Roof 1	FSR: 30 years: +25 %: 15 mins: Summer	0.03	15.5	6.755
Car Park	FSR: 30 years: +25 %: 15 mins: Summer	0.07	35.7	15.490
Car Park (1)	FSR: 30 years: +25 %: 15 mins: Summer	0.06	33.2	14.418
Roof 2A	FSR: 30 years: +25 %: 15 mins: Summer	0.06	29.4	12.774
Roof 3A	FSR: 30 years: +25 %: 15 mins: Summer	0.06	29.8	12.942
Roof 2B	FSR: 30 years: +25 %: 15 mins: Summer	0.06	29.2	12.681
Roof 3B	FSR: 30 years: +25 %: 15 mins: Summer	0.06	29.5	12.804
Roof 1A	FSR: 30 years: +25 %: 15 mins: Summer	0.00	2.4	1.033

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Inflows Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Roof 1	FSR: 100 years: +0 %: 15 mins: Summer	0.03	16.1	6.998
Car Park	FSR: 100 years: +0 %: 15 mins: Summer	0.07	37.0	16.056
Car Park (1)	FSR: 100 years: +0 %: 15 mins: Summer	0.06	34.4	14.945
Roof 2A	FSR: 100 years: +0 %: 15 mins: Summer	0.06	30.5	13.244
Roof 3A	FSR: 100 years: +0 %: 15 mins: Summer	0.06	30.9	13.418
Roof 2B	FSR: 100 years: +0 %: 15 mins: Summer	0.06	30.3	13.146
Roof 3B	FSR: 100 years: +0 %: 15 mins: Summer	0.06	30.6	13.274
Roof 1A	FSR: 100 years: +0 %: 15 mins: Summer	0.00	2.5	1.072

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Details: Type: Inflows Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London			



FSR: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Roof 1	FSR: 100 years: +40 %: 15 mins: Summer	0.03	22.6	9.801
Car Park	FSR: 100 years: +40 %: 15 mins: Summer	0.07	51.8	22.482
Car Park (1)	FSR: 100 years: +40 %: 15 mins: Summer	0.06	48.2	20.925
Roof 2A	FSR: 100 years: +40 %: 15 mins: Summer	0.06	42.7	18.536
Roof 3A	FSR: 100 years: +40 %: 15 mins: Summer	0.06	43.3	18.781
Roof 2B	FSR: 100 years: +40 %: 15 mins: Summer	0.06	42.4	18.404
Roof 3B	FSR: 100 years: +40 %: 15 mins: Summer	0.06	42.8	18.586
Roof 1A	FSR: 100 years: +40 %: 15 mins: Summer	0.00	3.5	1.500

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S4	FSR: 1 years: +0 %: 15 mins: Summer	98.000	94.285	94.335	0.050	5.4	0.014	0.000	5.2	2.530	OK
FC1	FSR: 1 years: +0 %: 960 mins: Summer	95.750	94.100	94.265	0.165	1.8	0.187	0.000	1.8	87.947	OK
FC2	FSR: 1 years: +0 %: 1440 mins: Summer	93.500	92.360	92.553	0.193	0.5	0.218	0.000	0.4	39.875	OK
S1	FSR: 1 years: +0 %: 15 mins: Summer	95.800	94.800	94.821	0.021	0.8	0.006	0.000	0.7	0.334	OK
S2	FSR: 1 years: +0 %: 240 mins: Summer	96.670	94.565	94.594	0.029	1.5	0.008	0.000	1.5	13.305	OK
S5	FSR: 1 years: +0 %: 15 mins: Summer	96.500	93.500	93.500	0.000	0.0	0.000	0.000	0.0	0.000	OK
S3	FSR: 1 years: +0 %: 15 mins: Summer	96.620	94.420	94.476	0.056	5.7	0.016	0.000	5.4	2.534	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S4	FSR: 30 years: +0 %: 960 mins: Summer	98.000	94.285	94.396	0.111	5.2	0.031	0.000	5.2	107.957	OK
FC1	FSR: 30 years: +0 %: 960 mins: Summer	95.750	94.100	94.396	0.296	1.8	0.335	0.000	1.8	180.562	OK
FC2	FSR: 30 years: +0 %: 960 mins: Winter	93.500	92.360	92.670	0.310	0.5	0.351	0.000	0.4	71.580	OK
S1	FSR: 30 years: +0 %: 15 mins: Summer	95.800	94.800	94.833	0.033	1.9	0.009	0.000	1.8	0.822	OK
S2	FSR: 30 years: +0 %: 60 mins: Summer	96.670	94.565	94.612	0.047	4.3	0.013	0.000	4.2	12.805	OK
S5	FSR: 30 years: +0 %: 15 mins: Summer	96.500	93.500	93.500	0.000	0.0	0.000	0.000	0.0	0.000	OK
S3	FSR: 30 years: +0 %: 15 mins: Summer	96.620	94.420	94.512	0.092	14.1	0.026	0.000	13.5	8.931	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 30 years: Increase Rainfall (%): +25: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S4	FSR: 30 years: +25 %: 960 mins: Winter	98.000	94.285	94.461	0.176	5.3	0.050	0.000	5.3	134.742	OK
FC1	FSR: 30 years: +25 %: 960 mins: Winter	95.750	94.100	94.461	0.361	1.8	0.408	0.000	1.8	225.490	OK
FC2	FSR: 30 years: +25 %: 1440 mins: Winter	93.500	92.360	92.733	0.373	0.4	0.422	0.000	0.4	83.548	OK
S1	FSR: 30 years: +25 %: 15 mins: Summer	95.800	94.800	94.837	0.037	2.4	0.010	0.000	2.3	1.031	OK
S2	FSR: 30 years: +25 %: 60 mins: Summer	96.670	94.565	94.621	0.056	5.9	0.016	0.000	5.9	16.359	OK
S5	FSR: 30 years: +25 %: 15 mins: Summer	96.500	93.500	93.500	0.000	0.0	0.000	0.000	0.0	0.000	OK
S3	FSR: 30 years: +25 %: 60 mins: Summer	96.620	94.420	94.528	0.108	18.3	0.031	0.000	18.1	43.205	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S4	FSR: 100 years: +0 %: 960 mins: Winter	98.000	94.285	94.466	0.181	5.4	0.051	0.000	5.4	136.949	OK
FC1	FSR: 100 years: +0 %: 960 mins: Winter	95.750	94.100	94.466	0.366	1.8	0.414	0.000	1.8	229.114	OK
FC2	FSR: 100 years: +0 %: 1440 mins: Winter	93.500	92.360	92.735	0.375	0.4	0.424	0.000	0.4	83.789	OK
S1	FSR: 100 years: +0 %: 15 mins: Summer	95.800	94.800	94.838	0.038	2.5	0.011	0.000	2.3	1.070	OK
S2	FSR: 100 years: +0 %: 60 mins: Summer	96.670	94.565	94.623	0.058	6.4	0.016	0.000	6.3	17.283	OK
S5	FSR: 100 years: +0 %: 15 mins: Summer	96.500	93.500	93.500	0.000	0.0	0.000	0.000	0.0	0.000	OK
S3	FSR: 100 years: +0 %: 60 mins: Summer	96.620	94.420	94.532	0.112	19.5	0.032	0.000	19.3	45.618	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S4	FSR: 100 years: +40 %: 960 mins: Winter	98.000	94.285	94.621	0.336	7.6	0.095	0.000	7.5	191.826	Surcharged
FC1	FSR: 100 years: +40 %: 960 mins: Winter	95.750	94.100	94.621	0.521	1.8	0.590	0.000	1.8	319.210	OK
FC2	FSR: 100 years: +40 %: 1440 mins: Winter	93.500	92.360	92.866	0.506	0.5	0.572	0.000	0.5	98.005	OK
S1	FSR: 100 years: +40 %: 15 mins: Summer	95.800	94.800	94.845	0.045	3.5	0.013	0.000	3.3	1.498	OK
S2	FSR: 100 years: +40 %: 60 mins: Summer	96.670	94.565	94.635	0.070	9.3	0.020	0.000	9.3	24.854	OK
S5	FSR: 100 years: +40 %: 15 mins: Summer	96.500	93.500	93.500	0.000	0.0	0.000	0.000	0.0	0.000	OK
S3	FSR: 100 years: +40 %: 960 mins: Winter	96.620	94.420	94.622	0.202	7.6	0.057	0.000	7.6	191.712	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London			



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

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
Southern Tank	FSR: 1 years: +0 %: 960 mins: Summer	94.266	94.266	0.066	0.066	5.0	39.999	0.000	0.000	1.8	87.951	83.614	OK
Northern Tank	FSR: 1 years: +0 %: 1440 mins: Summer	92.553	92.553	0.083	0.083	1.8	23.719	0.000	0.000	0.5	39.878	79.290	OK
West Permeable Paving	FSR: 1 years: +0 %: 120 mins: Summer	98.513	96.224	0.028	0.074	4.9	7.476	0.000	0.000	1.3	8.711	85.457	OK
East Permeable Paving	FSR: 1 years: +0 %: 120 mins: Summer	98.460	96.233	0.025	0.083	5.3	8.459	0.000	0.000	1.3	8.948	85.984	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026			
	Designed by: EP	Checked by: ACB	Approved By: ACB	
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London			



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

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
Southern Tank	FSR: 30 years: +0 %: 960 mins: Summer	94.396	94.396	0.196	0.196	10.2	119.211	0.000	0.000	1.8	180.569	51.163	OK
Northern Tank	FSR: 30 years: +0 %: 960 mins: Winter	92.670	92.670	0.200	0.200	3.2	57.056	0.000	0.000	0.5	71.601	50.183	OK
West Permeable Paving	FSR: 30 years: +0 %: 120 mins: Summer	98.551	96.240	0.066	0.090	11.5	15.455	0.000	0.000	3.4	21.817	69.934	OK
East Permeable Paving	FSR: 30 years: +0 %: 120 mins: Summer	98.494	96.258	0.059	0.108	12.4	17.225	0.000	0.000	3.4	23.455	71.456	OK

Project: 5030609 Crabbet Park Padel Centre		Date: 29/07/2026			
		Designed by: EP	Checked by: ACB		Approved By: ACB
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site		Company Address: Ridge and Partners LLP 3 Valentine Place London			



FSR: 30 years: Increase Rainfall (%): +25: Critical Storm Per Item: Rank By: Max. Resident Volume

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
Southern Tank	FSR: 30 years: +25 %: 960 mins: Winter	94.461	94.461	0.261	0.261	9.2	158.808	0.000	0.000	1.8	225.565	34.942	OK
Northern Tank	FSR: 30 years: +25 %: 1440 mins: Winter	92.733	92.733	0.263	0.263	3.0	75.011	0.000	0.000	0.4	83.904	34.506	OK
West Permeable Paving	FSR: 30 years: +25 %: 120 mins: Summer	98.568	96.245	0.083	0.095	14.4	18.917	0.000	0.000	4.2	27.416	63.199	OK
East Permeable Paving	FSR: 30 years: +25 %: 120 mins: Summer	98.509	96.268	0.074	0.118	15.4	21.034	0.000	0.000	4.3	29.485	65.145	OK

Project: 5030609 Crabbet Park Padel Centre		Date: 29/07/2026			
		Designed by: EP	Checked by: ACB		Approved By: ACB
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site		Company Address: Ridge and Partners LLP 3 Valentine Place London			



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

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
Southern Tank	FSR: 100 years: +0 %: 960 mins: Winter	94.466	94.466	0.266	0.266	9.3	161.975	0.000	0.000	1.8	229.214	33.644	OK
Northern Tank	FSR: 100 years: +0 %: 1440 mins: Winter	92.735	92.735	0.265	0.265	3.0	75.554	0.000	0.000	0.4	84.146	34.032	OK
West Permeable Paving	FSR: 100 years: +0 %: 120 mins: Summer	98.572	96.246	0.087	0.096	15.1	19.791	0.000	0.000	4.4	28.825	61.498	OK
East Permeable Paving	FSR: 100 years: +0 %: 120 mins: Summer	98.513	96.270	0.078	0.120	16.2	22.004	0.000	0.000	4.6	31.025	63.537	OK

Project: 5030609 Crabbet Park Padel Centre		Date: 29/07/2026			
		Designed by: EP	Checked by: ACB		Approved By: ACB
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site		Company Address: Ridge and Partners LLP 3 Valentine Place London			



FSR: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Resident Volume

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
Southern Tank	FSR: 100 years: +40 %: 960 mins: Winter	94.621	94.621	0.421	0.421	13.1	243.430	0.000	0.000	1.8	319.238	0.274	OK
Northern Tank	FSR: 100 years: +40 %: 1440 mins: Winter	92.866	92.866	0.396	0.396	4.2	112.881	0.000	0.000	0.5	98.488	1.440	OK
West Permeable Paving	FSR: 100 years: +40 %: 120 mins: Summer	98.609	96.256	0.124	0.106	21.1	26.974	0.000	0.000	6.2	40.574	47.525	OK
East Permeable Paving	FSR: 100 years: +40 %: 120 mins: Summer	98.546	96.292	0.112	0.142	22.7	30.038	0.000	0.000	6.2	43.663	50.226	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Connections Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
3.001	FSR: 1 years: +0 %: 15 mins: Summer	Pipe	S5	Northern Tank	96.500	93.500	0.014	0.000	0.0	0	0.0	OK
1.004	FSR: 1 years: +0 %: 15 mins: Summer	Pipe	S4	Southern Tank	98.000	94.335	0.029	2.530	1.7	0.09	5.2	OK
1.005	FSR: 1 years: +0 %: 360 mins: Summer	Pipe	Southern Tank	FC1	95.500	94.263	0.112	61.139	0.2	0.04	1.9	OK
1.001	FSR: 1 years: +0 %: 15 mins: Summer	Pipe	S1	S2	95.800	94.821	0.021	0.334	0.5	0.04	0.7	OK
1.002	FSR: 1 years: +0 %: 240 mins: Summer	Pipe	S2	S3	96.670	94.594	0.039	13.305	0.3	0.04	1.5	OK
3.002	FSR: 1 years: +0 %: 60 mins: Summer	Pipe	Northern Tank	FC2	93.400	92.517	0.102	1.793	0.2	0.09	1.3	OK
1.003	FSR: 1 years: +0 %: 15 mins: Summer	Pipe	S3	S4	96.620	94.476	0.053	2.534	0.7	0.13	5.4	OK
2.001	FSR: 1 years: +0 %: 240 mins: Summer	Pipe	West Permeable Paving	S2	98.955	96.200	0.024	12.378	0.7	0.05	1.3	OK
2.002	FSR: 1 years: +0 %: 240 mins: Summer	Pipe	East Permeable Paving	S3	98.905	96.198	0.033	13.316	0.6	0.22	1.4	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Connections Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
3.001	FSR: 30 years: +0 %: 15 mins: Summer	Pipe	S5	Northern Tank	96.500	93.500	0.035	0.000	0.0	0	0.0	OK
1.004	FSR: 30 years: +0 %: 15 mins: Summer	Pipe	S4	Southern Tank	98.000	94.363	0.049	8.872	2.0	0.22	13.1	OK
1.005	FSR: 30 years: +0 %: 120 mins: Winter	Pipe	Southern Tank	FC1	95.500	94.342	0.192	14.820	0.2	0.04	2.3	OK
1.001	FSR: 30 years: +0 %: 15 mins: Summer	Pipe	S1	S2	95.800	94.833	0.032	0.822	0.6	0.1	1.8	OK
1.002	FSR: 30 years: +0 %: 60 mins: Summer	Pipe	S2	S3	96.670	94.612	0.069	12.805	0.4	0.1	4.2	OK
3.002	FSR: 30 years: +0 %: 15 mins: Winter	Pipe	Northern Tank	FC2	93.400	92.539	0.124	0.733	0.4	0.12	1.7	OK
1.003	FSR: 30 years: +0 %: 15 mins: Summer	Pipe	S3	S4	96.620	94.512	0.085	8.931	1.0	0.32	13.5	OK
2.001	FSR: 30 years: +0 %: 60 mins: Summer	Pipe	West Permeable Paving	S2	98.955	96.250	0.039	11.462	1.0	0.14	3.5	OK
2.002	FSR: 30 years: +0 %: 120 mins: Summer	Pipe	East Permeable Paving	S3	98.905	96.250	0.055	23.455	0.8	0.53	3.4	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Connections Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 30 years: Increase Rainfall (%): +25: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
3.001	FSR: 30 years: +25 %: 15 mins: Summer	Pipe	S5	Northern Tank	96.500	93.500	0.044	0.000	0.0	0	0.0	OK
1.004	FSR: 30 years: +25 %: 60 mins: Summer	Pipe	S4	Southern Tank	98.000	94.376	0.091	43.101	1.6	0.3	17.9	OK
1.005	FSR: 30 years: +25 %: 60 mins: Summer	Pipe	Southern Tank	FC1	95.500	94.331	0.181	7.322	0.2	0.05	2.7	OK
1.001	FSR: 30 years: +25 %: 15 mins: Summer	Pipe	S1	S2	95.800	94.837	0.036	1.031	0.7	0.13	2.3	OK
1.002	FSR: 30 years: +25 %: 60 mins: Summer	Pipe	S2	S3	96.670	94.621	0.082	16.359	0.5	0.14	5.9	OK
3.002	FSR: 30 years: +25 %: 15 mins: Winter	Pipe	Northern Tank	FC2	93.400	92.557	0.142	0.786	0.3	0.19	2.7	OK
1.003	FSR: 30 years: +25 %: 60 mins: Summer	Pipe	S3	S4	96.620	94.528	0.099	43.205	1.1	0.43	18.1	OK
2.001	FSR: 30 years: +25 %: 60 mins: Summer	Pipe	West Permeable Paving	S2	98.955	96.272	0.045	14.663	1.0	0.18	4.5	OK
2.002	FSR: 30 years: +25 %: 120 mins: Summer	Pipe	East Permeable Paving	S3	98.905	96.272	0.064	29.485	0.8	0.66	4.3	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Connections Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
3.001	FSR: 100 years: +0 %: 15 mins: Summer	Pipe	S5	Northern Tank	96.500	93.500	0.045	0.000	0.0	0	0.0	OK
1.004	FSR: 100 years: +0 %: 60 mins: Summer	Pipe	S4	Southern Tank	98.000	94.379	0.099	45.495	1.6	0.31	19.1	OK
1.005	FSR: 100 years: +0 %: 60 mins: Summer	Pipe	Southern Tank	FC1	95.500	94.338	0.188	7.357	0.2	0.06	3.0	OK
1.001	FSR: 100 years: +0 %: 15 mins: Summer	Pipe	S1	S2	95.800	94.838	0.037	1.070	0.7	0.13	2.3	OK
1.002	FSR: 100 years: +0 %: 60 mins: Summer	Pipe	S2	S3	96.670	94.623	0.085	17.283	0.5	0.15	6.3	OK
3.002	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	Northern Tank	FC2	93.400	92.560	0.146	0.793	0.3	0.2	2.9	OK
1.003	FSR: 100 years: +0 %: 60 mins: Summer	Pipe	S3	S4	96.620	94.532	0.103	45.618	1.1	0.45	19.3	OK
2.001	FSR: 100 years: +0 %: 60 mins: Summer	Pipe	West Permeable Paving	S2	98.955	96.278	0.046	15.505	1.0	0.19	4.9	OK
2.002	FSR: 100 years: +0 %: 120 mins: Summer	Pipe	East Permeable Paving	S3	98.905	96.278	0.066	31.025	0.8	0.7	4.6	OK

Project: 5030609 Crabbet Park Padel Centre	Date: 29/07/2026		
	Designed by: EP	Checked by: ACB	Approved By: ACB
Report Details: Type: Connections Summary Storm Phase: Full Site	Company Address: Ridge and Partners LLP 3 Valentine Place London		

RIDGE



FSR: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
3.001	FSR: 100 years: +40 %: 15 mins: Summer	Pipe	S5	Northern Tank	96.500	93.500	0.063	0.000	0.0	0	0.0	OK
1.004	FSR: 100 years: +40 %: 60 mins: Summer	Pipe	S4	Southern Tank	98.000	94.404	0.158	65.003	1.8	0.46	28.2	OK
1.005	FSR: 100 years: +40 %: 15 mins: Winter	Pipe	Southern Tank	FC1	95.500	94.289	0.139	2.145	0.3	0.06	3.4	OK
1.001	FSR: 100 years: +40 %: 15 mins: Summer	Pipe	S1	S2	95.800	94.845	0.044	1.498	0.8	0.18	3.3	OK
1.002	FSR: 100 years: +40 %: 60 mins: Summer	Pipe	S2	S3	96.670	94.635	0.106	24.854	0.5	0.22	9.3	OK
3.002	FSR: 100 years: +40 %: 60 mins: Winter	Pipe	Northern Tank	FC2	93.400	92.688	0.150	2.785	0.3	0.09	1.3	Surcharged
1.003	FSR: 100 years: +40 %: 60 mins: Summer	Pipe	S3	S4	96.620	94.562	0.131	65.313	1.2	0.67	28.3	OK
2.001	FSR: 100 years: +40 %: 60 mins: Summer	Pipe	West Permeable Paving	S2	98.955	96.323	0.058	22.351	1.2	0.28	7.2	OK
2.002	FSR: 100 years: +40 %: 60 mins: Summer	Pipe	East Permeable Paving	S3	98.905	96.315	0.086	23.749	0.9	0.96	6.3	Surcharged

APPENDIX F – INFILTRATION TESTING RESULTS

Key to exploratory hole symbols and abbreviations

SAMPLE TYPES

ACM - Asbestos sample	AMAL - Amalgamated sample	B - Bulk disturbed sample
BLK - Block sample	C - Core sample	CBR - CBR test sample
D - Disturbed sample	ES - Environmental sample	EW - Environmental water sample
G - Gas sample	J - Jar sample	L - Liner sample
TW - Pushed thin wall sample	U - Undisturbed sample	UT - Undisturbed thin wall sample
W - Water sample		

IN-SITU TESTS

HV - Hand shear vane	HV(r) - Hand shear vane residual	PID - Photo ionisation detector
PP - Hand penetrometer	SPT - Standard penetration test	SPT(C) - SPT using cone

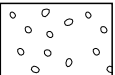
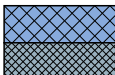
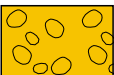
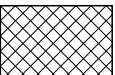
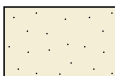
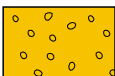
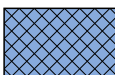
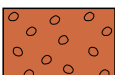
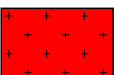
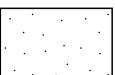
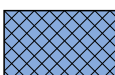
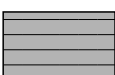
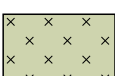
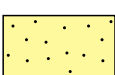
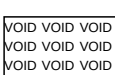
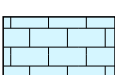
GROUNDWATER

 Groundwater strike	 Groundwater rest level
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ROTARY CORE DETAILS

TCR - Total core recovery (%)	SCR - Solid core recovery (%)	RQD - Rock quality designation (%)
FI - Fracture index	NI - Non-intact core	AZCL - Assumed zone of core loss

LEGEND

 Topsoil	 Clay	 Chalk	 Sand backfill
 Peat	 Silt	 Breccia	 Gravel backfill
 Made ground [cohesive]	 Sand	 Conglomerate	 Arisings
 Concrete	 Gravel	 Metamorphic	 Bentonite
 Wood	 Cobbles	 Igneous	 Concrete
 Brick	 Boulders		 Grout
 Bituminous material	 Mudstone		 Plain pipe
 Gypsum	 Siltstone		
 Coal	 Sandstone		 Slotted pipe
 Void	 Limestone		

RIDGE					Trial Pit					TP01 Sheet 1 of 1																																																																															
Hole Type TP					Easting 530595.00					Northing 137051.00					Ground Level (m) 94.00					Scale 1:15																																																																					
Project Name Crabbet Park, Crawley					Project No. 5030609					Start Date 2025-08-14					End Date 2025-08-14																																																																										
Client Union 4 Planning										Consultant OS										Contractor ABSI																																																																					
Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m)	Legend	Strata																																																																																	
		Depth (m)	Type/ Ref	Results				Description																																																																																	
					93.50	(0.50)		TOPSOIL: Grass overlying very dense light brown beige slightly gravelly silty SAND. Sand is medium and coarse. Flint and sandstone gravels are sub-angular to sub-rounded, fine.							0.5																																																																										
												</																																																																													



Test 1

Date: 18/08/25

[illegible]

Pit Size		Time in mins	
Length	3.20		75%
Width	1.20		25%
Depth	2.50		

<u>Infiltration Rate</u>	from 75%-25%	not valid m/s
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Water level did not reach 75% or 25% - unable to calculate infiltration rate.

