



Civil Engineers & Transport Planners

Reading Metropolitan

Drainage Strategy

December 2018

181017/DS/JR/RS/01



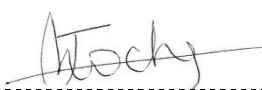
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1 INTRODUCTION

1.1 Scope

- 1.1.1 Lanmor Consulting has been appointed to prepare a Drainage Strategy for a proposed mixed-use development on the site of the former Royal Mail Sorting Office, Caversham Road, Reading. This report has been commissioned to advise on the technical feasibility of providing drainage for the proposed development. Figure 1.1 below shows the location of the site.

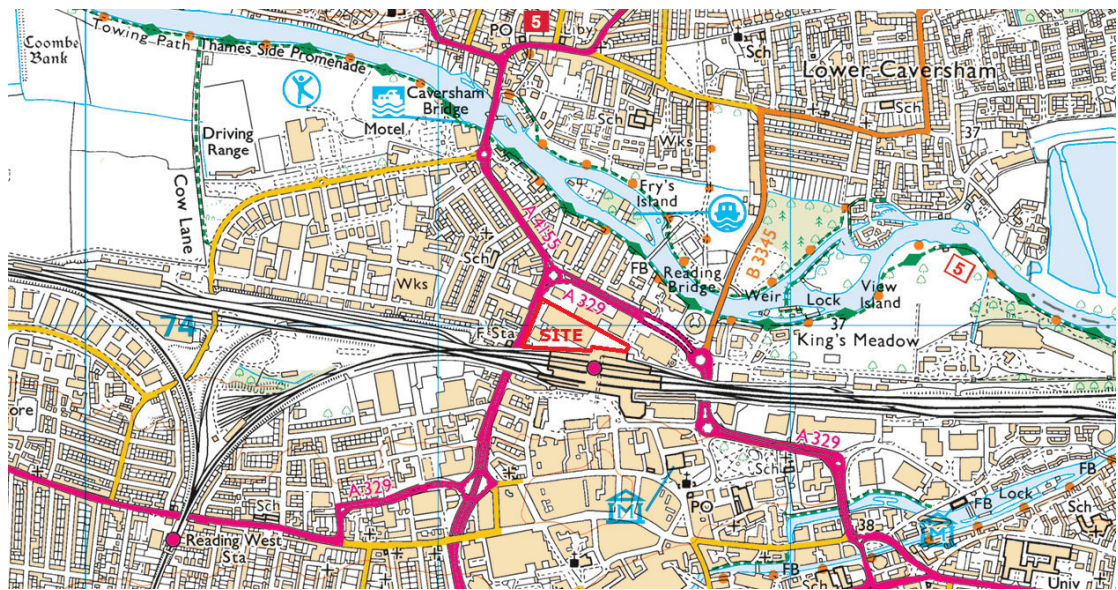


Figure 1.1 – Site Location Plan

- 1.1.2 This report will consider the proposed drainage regime for the site, it will assess the sites current discharge, its Greenfield runoff rate, suitable methods of discharging the runoff from the development and set the drainage strategy for the development including proposed discharge rates and any requirements for attenuation. A separate Flood Risk Assessment FRA has been prepared to advise on the flood risk to the development and the impact these proposals will have on flood risk in the area.
- 1.1.3 The information and details within this report will be refined, modified and updated as the detailed design is progressed, post planning. The scope of works for this drainage strategy report is outlined below:

- Review available data relating to on-site drainage and other drainage networks in the vicinity of the site.
- Review of the sites ground conditions for suitability of SUDS.
- Consider the use of Sustainable Urban Drainage Systems as an option for dispose of surface water runoff from the proposed development.
- Undertake drainage assessments for the proposed development to establish discharge rates, attenuation requirements to deal with any increased surface water runoff.

2 SITE LOCATION AND DESCRIPTION

2.1 Location

2.1.1 The site is located off Caversham Road at nation grid reference 471389E 173949N. The site is currently occupied by a number of buildings including a large warehouse unit with external hard standing paved areas. The site is bounded by railway lines to the south, commercial development to the north and east and Caversham Road to the west. A topographic survey of the site is included in Appendix A as drawings P1368-T-01 to 04 and shows that there is a gentle fall from southeast to northwest from a level of 38.4m to 38.0m AOD.

2.2 Proposed Development

2.2.1 The application seeks approval for the development of the site to provide the following uses

- 658 residential units
- 1,889 m² of retail
- 772 m² of community uses
- 16,604 m² of office

2.2.2 The proposals also include a basement car park along with soft and hard landscaped amenity areas. A site layout plan for the development is included in Appendix A as drawing A11113-C-2-100.

2.3 Regional Geology

2.3.1 The British Geological Survey maps show the underlying bedrock beneath the site to be Seaford Chalk Formation and Newhaven Chalk Formation – Sedimentary Bedrock formed approximately 72 to 90 million years ago, overlaid by superficial deposits of the Langley Silt Member – Clay and Silt. Superficial Deposits formed up to 2 million years ago.

- 2.3.2 Historic boreholes in the vicinity of the site indicates the presence of 'Valley Gravel' river terrace deposits. The borehole logs show the presence of localised shallow perched water in some areas. Ground water level encountered was between 2m and 3m below ground level.
- 2.3.3 Site investigations undertaken by Tony Bedford Drilling Specialist in December 2010, involved drilling 2 boreholes on the site. The ground level elevation for both borehole locations was 38.0m AOD.
- 2.3.4 The first borehole was located to the far east of the site. The second borehole was located slightly further north west of Borehole 1 next to the sorting office. Groundwater was struck in both boreholes; groundwater in Borehole 1 was encountered at 35.5m AOD rising to 35.75m AOD (2.25m below ground level), groundwater in Borehole 2 was encountered at 35.8m AOD rising to 36m AOD (2.0m below ground).

3 EXISTING DRAINAGE REGIME

3.1 Existing Foul Water Drainage

- 3.1.1 The nearest foul sewer to the site is located in Caversham Road, it is a 300mm diameter foul water sewer owned by Thames Water. Details of the adopted sewers are shown on the Thames Water Asset Location Search in Appendix B. It is understood the existing sorting office and offices currently drain to this sewer.

3.2 Existing Surface Water Drainage

- 3.2.1 The sewer records also show there to be surface water sewers in Caversham Road. A culverted watercourse is also recorded running through the site, Thames Water have confirmed this is not an asset of theirs and they do not maintain it. The surface water culvert runs through the site, emanating in the west and out falling into a ditch in the east before joining the River Thames.
- 3.2.2 The development proposals will impact on the culvert, a survey of the culvert was undertaken in 2008. The culvert was identified as originally being built of brick, it varies in size along its length from approximately 600mm diameter where it enters the site increasing to a 1350mm by 1050 high arch. Sections of the culvert have been replaced with pre-cast concrete sections of 1500mm x 800mm.
- 3.2.3 It is most likely that surface water runoff from the existing buildings drains to this watercourse, and the topographical survey identifies numerous gullies across the paved areas which again are most likely to drain to the watercourse. No existing sustainable drainage systems were identified by the survey.

4 PROPOSED DRAINAGE REGIME

4.1 Proposed Foul Water Drainage

4.1.1 The foul discharges from the development will be connected to the foul sewer in Caversham Road. The foul water system shall be designed to comply with Sewers for Adoption, 7th Edition and Part H of the Building Regulations. The foul water system will be separate from the surface water drainage network.

4.1.2 The existing foul sewer connection from the site will need to be CCTV surveyed to assess its condition and suitability for reuse for the proposed development. If not suitable, the development will have a new foul water connection to the 300mm diameter sewer in Caversham Road. The foul water flows from the mixed-use development have been estimated for the proposed uses. Subject to the final layout of the development it is anticipated that a gravity connection for the majority of the site, if not all, can be achieved. Any areas of the development that cannot be provided with a gravity connection will be provided with a foul water pumping station which will cater for the 24-hour storage in accordance with Building Regulations.

4.1.3 The existing discharge from the current building on site was estimated to be 5 l/s. the proposed development will generate in the region of 40l/s.

4.2 Proposed Surface Water Drainage

4.2.1 A surface water culvert has been identified running through the site, this will need to be diverted. It is proposed that the culvert will be diverted from within the boundary of the site and run north along the western boundary to the new access road "avenue" that will be created as part of the development proposals. It will then run eastwards and join the old culvert section in front of Reading Railway station.

4.2.2 The existing culvert in Caversham Road is understood to be a 600mm diameter pipe, through the site it increases in size to a 1500x800mm box culvert section, the box culvert section has been assessed as having a maximum capacity of 693 l/s.

- 4.2.3 The proposed diversion will be slightly longer and have a slightly reduced fall, to ensure the diverted section of the culvert has the same capacity the section size of the diverted route will be 1750x800mm to provide a maximum capacity of 1034 l/s. The capacity of both the existing culvert and proposed diversion are well in excess of the capacity of the 600mm pipe in Caversham Road and given the proposed culvert will have a greater capacity than the section being diverted there will be no reduction in flow and therefore no increased risk of surface water flooding to the area.
- 4.2.4 Sustainable Drainage Systems (SuDS) were considered as part of this assessment for disposal of surface water run from the development. The new blocks of apartments will have flat roofs and therefore Green roofs will be employed on all buildings. Green roofs will be provided on all roofs, some of which will form formal gardens for the residents in the blocks. Rainwater harvesting will also be used in the development for the reuse of the surface water runoff within the proposed buildings / irrigation.
- 4.2.5 The development proposals will also include soft landscaped communal areas at ground floor, which will result in a reduction in the impermeable areas across the site. Permeable paving will also be used in areas where ground conditions allow, the water table is assumed to be very high so it unlikely the permeable paving will be able to infiltrate in the ground.
- 4.2.6 A new surface water drainage network will be provided for the development, this will connect to the diverted watercourse that passes through the site. The runoff from the development that is not treated by SuDS features above ground will be attenuated in underground storage tanks before being released to the culvert.

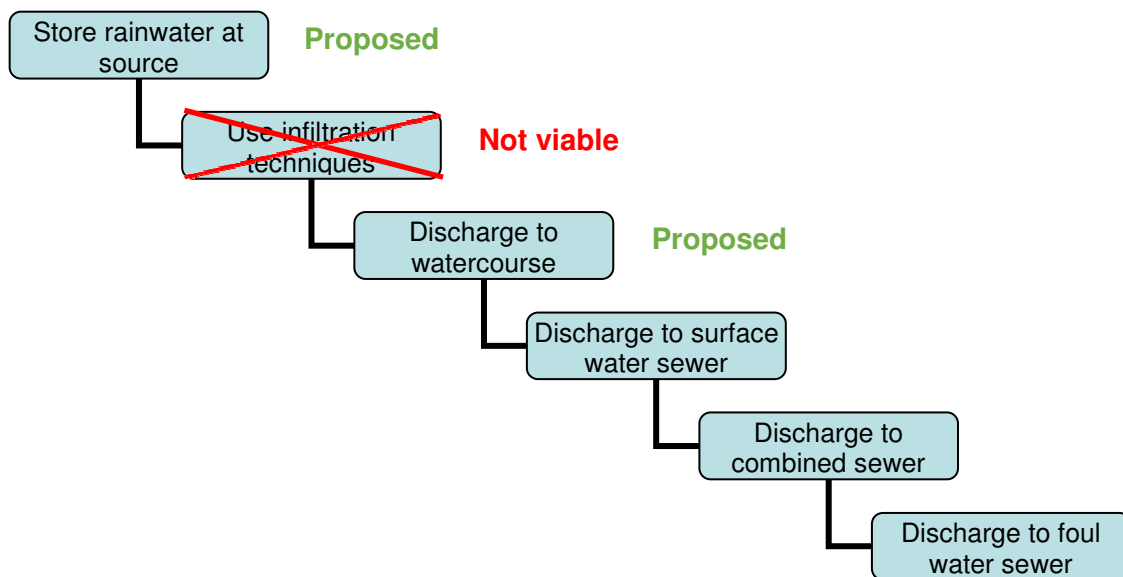


Figure 4.1 – Sustainable Drainage Hierarchy

- 4.2.7 The green roofs comprise of a vegetative cover over a drainage layer which mimics the natural drainage regime of a Greenfield site, through absorption by the plants and retention of precipitation within the growing medium. This reduces the volume of runoff and attenuates peak flows. Green roofs will be used in the development on all the residential blocks, some will also provide amenity space for use by residents in the developments.
- 4.2.8 Rainwater Harvesting involves collecting rainwater from the roofs of buildings and storing this run-off for later use in the building. This rainwater would undergo a filtration process before being recycled back into the building to be used to flush toilets. Rainwater harvesting can also be used for irrigation purposes. Rainwater harvesting will be used across the development.

4.2.9 Permeable paving is a load bearing construction surfaced with materials that allow surface water to enter the granular sub base, from where it will infiltrate into the underlying subsoil. The site is known to have a high water table so the use of permeable paving may not be practical. Where ground conditions permit the use of permeable hard surfaces will be considered. If ground conditions do not permit, then it will form part of the attenuation system proposed with underground storage as required. For the benefit of this strategy it is assumed the permeable paving will provide treatment and attenuation of runoff only. This will be reviewed at the design stage and if the ground investigation show infiltration is possible the permeable paving will be designed on that basis

4.2.10 The above SuDS techniques are not sufficient to cater for all the runoff generated by the development, the next level in the SuDS hierarchy is to discharge to a watercourse. There is a watercourse running through the site, so this will be used for the main discharge of runoff from the site.

4.2.11 In order to ensure the risk of flooding is not increased as a result of the development, peak discharge rates will be limited back to nearer Greenfield runoff rates and attenuation storage provided. In line with policy set out in NPPF PPG the climate change allowances of 20-40% increase in rainfall intensities should be considered in the design of surface water drainage.

4.2.12 The whole of the existing site is positively drained to the existing surface water culvert, the existing discharge rate from the site has been estimated at 152.8 l/s for the 1 in 1 storm event. The greenfield runoff rates have also been calculated for different return periods, the associated rates are tabulated below.

4.2.13

Return Period	Greenfield Rate (l/s)	Brownfield Rate (l/s)	Proposed Discharge (l/s)	% Reduction
1 in 1	0.7	152.8	10	142.8
1 in 30	1.8	374.8	10	364.8
1 in 100	2.5	488.3	10	478.3
1 in 100 +40% CC	3.5	681.5	10	671.5

Table 4.1 – Existing & Proposed Runoff Rates

- 4.2.14 The proposed development will be constructed in 3 phases, the first phase will be the retail units and residential blocks on the northeast corner and eastern side of the site and basement car park. Phase 2 is likely to consist of residential properties on the southwest corner of Phase 1. The third and final stage will be the office, health and residential units along the eastern side of the site.
- 4.2.15 The roads will be needed to service the site so they will be constructed in the first phase. The surface water drainage for development has been designed to accommodate each phase of development, there are also proposals to Landscape the area to the front of Reading Station and these will have their own separate drainage system (permeable paving).
- 4.2.16 The drainage has been designed as a series of pipes and manholes around each block to collect the runoff from the roofs, a separate drainage network of pipe are proposed within the carriageways to collected runoff from the roads and footways. There will be 5 points of connection to the culverted water course running through the site. The first connection will be from the phase 1 development, the flow rate will be restricted to 4 l/s. Excess runoff from the roofs of phase 1 and court yard areas will collect and attenuated in a two underground tanks to the east of the building and the other in the amenity area to the side of phase 1.
- 4.2.17 Each attenuation tank will be restricted to a discharge rate of 2l/s, it is unlikely that a gravity connection will be achievable from the tanks to the culvert. There is approximately 1m of cover on the culvert and the underground tanks 1.6m deep and need at least 600mm cover in landscaped areas so pumping is likely to be required for the discharge from the tanks. This will be reviewed at the detailed design stage and if there are opportunities to discharge some of all of the runoff under gravity these will be used.

- 4.2.18 The access roads will employ permeable paving, ground conditions are unlikely to allow suitable infiltration to allow the runoff to soak directly into the ground so they only store runoff before discharging to the culvert. Additional attenuation for the roads and paved areas will be provided by an underground attenuation tank to the middle of the site. It will be located under the access road and collect all runoff from the roads and hard standing including the permeable paving before discharging to the culvert to the north.
- 4.2.19 The discharge rate from this tank will also be set at a maximum flow rate of 2l/s, the depth of the tank means a gravity connection is not possible, so pumping will again be required. some of the permeable paving areas could be discharge direct to the culvert and these options will be consider further at the detail design stage, but for the benefit of this assessment the worst case has been assumed.
- 4.2.20 The runoff second phase of the development will also discharge to the underground attenuation tank in the amenity area to the side of phase 1. This attenuation tank will be provided as part of phase 1 and will sized to cater for phase 2, there will be no need to adjust the discharge rate to cater for Phase 2.
- 4.2.21 Phase 3 will have it is own underground attenuation tank to collect excess runoff from the building and surrounding hard surfaced areas. This attenuation tank will have it own connection to the culvert and it will also have a restriction of 2l/s.
- 4.2.22 The landscaped area to the front of the station will contain permeable paving elements which will provide the required storage for runoff from this area. This will discharge direct to the culvert at a rate of no more than 2l/s. in total the 5 points of connection to the culvert will be restricted to a maximum of 10l/s for all events considerably less than the current 152l/s for the 1 in 1 year event.
- 4.2.23 A phasing plan for the development has been included in Appendix C as drawing 18017/DS/02

4.2.24 The drainage network has been designed to cater for all rainfall events up to and including the 1.0% plus 40% allowance for climate change. An indicative drainage layout for development is included in Appendix C as drawing 181017/DS/01. The supporting calculations prepared using Microdrainage for the attenuation facilities are also included in Appendix D.

During the construction phase of the development there is no need to provide any attenuation of the surface water runoff. The site is 100% impermeable therefore there will be no change in the volumetric and/or rate of discharge during construction activities so attenuation of runoff is not required. Pollution controls measures should be employed to prevent any contamination from construction activities polluting the water course.

5 SURFACE WATER / SUD'S MAINTENANCE

- 5.1.1 SuDS features need to be maintained in good working order to ensure they perform as intended and do not cause flooding. Regularly inspecting the surface water drainage network for blockages and clearing unwanted debris / silt from the system should improve the performance of the surface water network and decrease the need for future repairs. In the event of blockages, high pressure water jets can be used to clear the gullies and pipes to ensure they are functioning correctly, this should be undertaken by certified trained professionals.
- 5.1.2 The level and frequency of maintenance required on site is dependent on the type of facility. The type of maintenance will fall into one of three categories “regular maintenance”, “remedial maintenance” and “monitoring”.
- 5.1.3 Regular maintenance of the drainage and SUDs features will include, inspections, removal of litter / debris and sweeping of the surfaces. Remedial actions will include structural repairs. Monitoring will involve inspecting the structural elements and surveying the tank itself for any build-up of sediments.
- 5.1.4 The drainage and SUDs elements after an initial inspection following construction should be inspected on a monthly basis for the first 12 months and after large storms, thereafter the following maintenance regime should be applied and adjusted if the 12 month monitoring process has identified any issues.

5.1.5 For the attenuation storage tank, the following maintenance is recommended.

Attenuation Storage Tank Maintenance Schedule		
Maintenance Schedule	Required Action	Typical Frequency
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
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary	Annually
	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	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 years or as required

Table 7.1 – Attenuation Storage Tank Maintenance Schedule

5.1.6 For permeable paving areas, the following maintenance is recommended:

Permeable Paving Maintenance Schedule		
	Required Action	Typical Frequency
Regular maintenance	Remove debris and leaves etc.	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surfaces from adjacent impermeable areas as this area is most likely to collect the most sediment.
Occasional maintenance	Stabilise and mow contributing and adjacent areas	As required
	Removal of weeds	As required- once per year on less frequently used pavements
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving	As required
	Remedial work to any depressions, rutting etc	As required
	Rehabilitation of surface and upper substructure	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Inspect for evidence of poor operation and/or weed growth - if required, take remedial action.	Three-monthly, 48 hours after large storms in the first six months
	Inspect silt accumulation rates and establish appropriate frequencies for rehabilitation	Annually
	Monitor inspection chambers	Annually

Table 7.2 – Permeable Paving Maintenance Schedule

5.1.7 For greenroofs, the following maintenance is recommended:

Greenroof Maintenance Schedule		
	Required Action	Typical Frequency
Regular inspections	Inspect all components including soil substrate, vegetation, drains, irrigation systems (if applicable), membranes and roof structure for proper operation, integrity of waterproofing and structural stability	Annually and after severe storms
	Inspect soil substrate for evidence of erosion channels and identify any sediment sources	Annually and after severe storms
	Inspect drain inlets to ensure unrestricted runoff from the drainage layer to the conveyance or roof drain system	Annually and after severe storms
	Inspect underside of roof for evidence of leakage	Annually and after severe storms
Regular maintenance	Remove debris and litter to prevent clogging of inlet drains and interference with plant growth	Six monthly and annually or as required
	During establishment (ie year one), replace dead plants as required	Monthly (but usually responsibility of manufacturer)
	Post establishment, replace dead plants as required (where > 5% of coverage)	Annually (in autumn)
	Remove fallen leaves and debris from deciduous plant Foliage	Six monthly or as required
	Remove nuisance and invasive vegetation, including weeds	Six monthly or as required
	Mow grasses, prune shrubs and manage other planting (if appropriate) as required – clippings should be removed and not allowed to accumulate	Six monthly or as required
Remedial actions	If erosion channels are evident, these should be stabilised with extra soil substrate similar to the original material, and sources of erosion damage should be identified and controlled	As required
	If drain inlet has settled, cracked or moved, investigate and repair as appropriate	As required

Table 7.3 – Greenroof Maintenance Schedule

5.1.8 For Rainwater Harvesting, the following maintenance is recommended:

Rainwater Harvesting Maintenance Schedule		
	Required Action	Typical Frequency
Regular inspections	Inspection of the tank for debris and sediment build- up, inlets/outlets/ withdrawal devices, overflow areas, pumps, 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)
Regular 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
	Pump repairs	As required

Table 7.3 – Rainwater Harvesting Maintenance Schedule

5.1.9 The above information is only intended as guidance in standard maintenance practise for surface water drainage and SUDs features. The above measures should be reviewed regularly and modified to suit the site conditions.

6 SUMMARY AND CONCLUSION

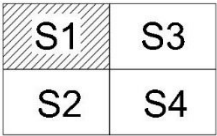
- 6.1.1 The proposals seek approval for the construction of a mixed use development consisting of 658 residential units, 1,889 m² of retail, 772 m² of community uses and 16,604 m² of office.
- 6.1.2 The proposed development will involve the diversion of the existing culvert 'ordinary water course' to the north of the site. The new culvert section will be larger than the existing section being replaced to ensure there is no loss of capacity in the culvert as a result of the diversion.
- 6.1.3 The existing site is currently impermeable and drains directly to the culvert running through the site, there is no attenuation provided for the existing runoff from the site.
- 6.1.4 The Proposed development will introduce landscaped areas between the proposed buildings, the impermeable area draining to the culvert will therefore reduce. The development will also employ SuDS techniques for the treatment of runoff from the development. these will include greenroofs, rainwater harvesting, permeable paving and underground attenuation.
- 6.1.5 The attenuation tanks will collect any excess runoff from the other SuDS features and areas not benefiting from SuDS treatment and attenuate the flow to the culvert, allowing the discharge rate from the whole development to be restricted down to 10 l/s. This restricted discharge rate is slightly higher than the estimated greenfield rate but is considerably less than the current discharge rate from the site.
- 6.1.6 The proposed drainage regime for the surface water runoff, SuDS features and attenuation tanks have all been designed to cater for a storm with a probability of 1 in 100 year + 40% allowance for climate change. MicroDrainage calculations for the attenuation tanks have been provided to show that it can cater for the above storm event and will not result in flooding across the site.

- 6.1.7 The drainage strategy for the development is considered suitable for the proposed development, as there will be no increased risk of flooding from surface water runoff and adequate provisions can be provided to drainage the development.

APPENDIX A

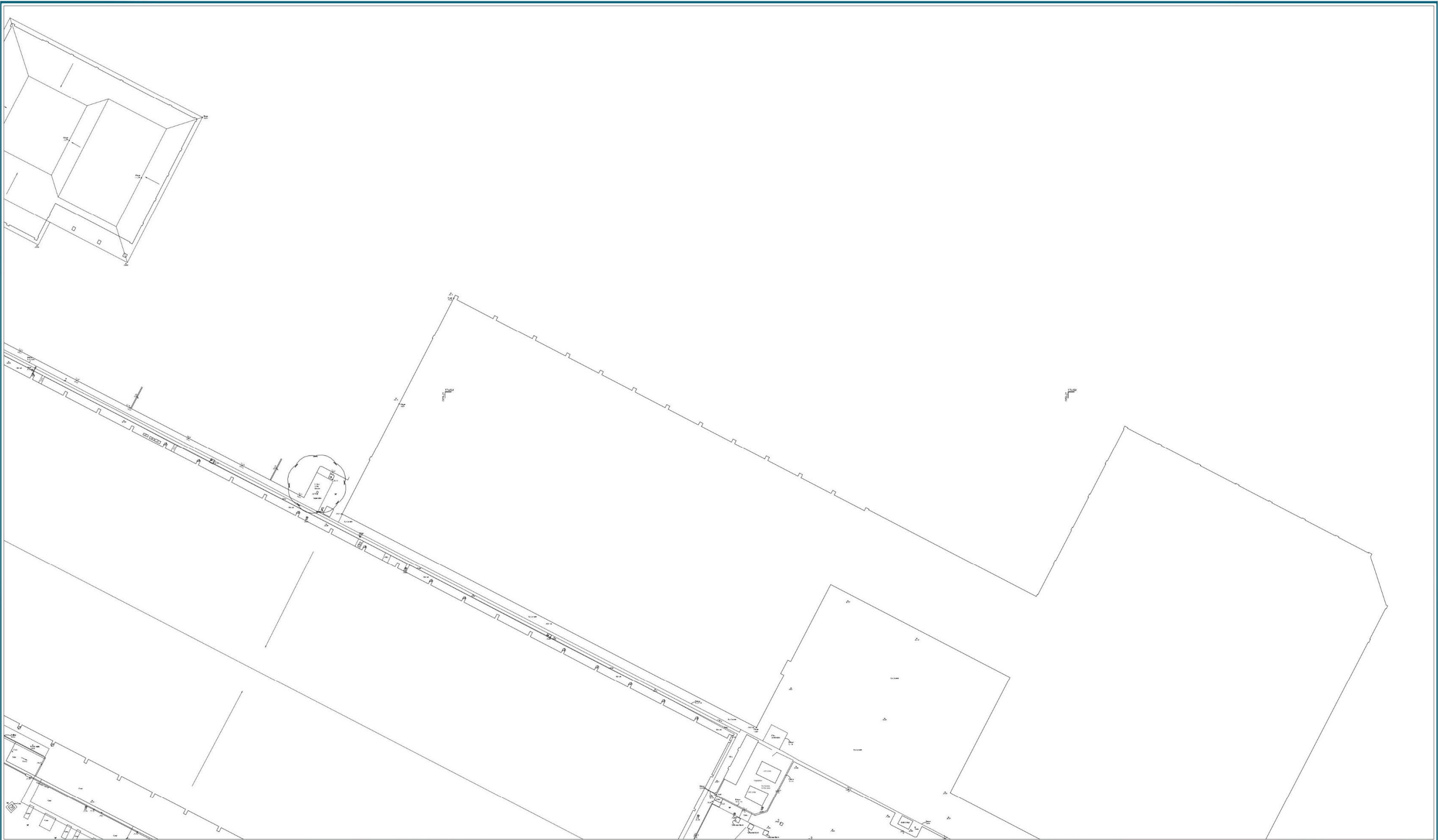
Drawing P1368/T/01-04 – Topographical Survey



Sources: Levels are related to Ordnance Survey Datum via GPS Observations Survey location is related to Ordnance Survey Grid via GPS Observations. All information contained in this drawing (including digital data) should be checked and verified prior to any fabrication or construction.		Key: A/C Air Conditioning Unit B Bollard BP Brick Paving BT BT Inspection Cover CATV Cable Television Inspection Cover CPS Concrete Paving Slab DK Dropped Kerb DP Down Pipe EC Electricity Inspection Cover EL Eaves Level FH Fire Hydrant G Gully GP Gate Post IC Inspection Cover ILB Illuminated Bollard IRS Illuminated Road Sign JB Junction Box LP Lamp Post MH Man Hole Cover PB Post Box PL Pavement Light PO Post RL Ridge Level SRFC Surface Change S/O Smoke Outlet SV Stop Valve TCB Telephone Call Box TP Tactile Paving W Water Inspection Cover WM Water Meter 		Project: Reading Metropolitan		Title: Topographic Survey Sheet 1		Point 2 Surveyors Ltd, 3rd Floor, 17 Slingsby Place, London WC2E 9AB, 0207 836 5828 www.point2surveyors.com
Stations: STN 01 471269.643, 174043.279, 38.115 STN 02 471289.324, 174065.969, 38.034 STN 03 471254.832, 173981.916, 37.961		RevA: Location of Electric Substation Added to Plans October 2018		Drawn By: SC	Scale: 1:200 @ A0	Date: September 2017	Dwg No: P1368/T/01-RevA	



Sources: Levels are related to Ordnance Survey Datum via GPS Observations Survey location is related to Ordnance Survey Grid via GPS Observations. All information contained in this drawing (including digital data) should be checked and verified prior to any fabrication or construction.		Key: A/C Air Conditioning Unit B Bollard BP Brick Paving BT BT Inspection Cover CATV Cable Television Inspection Cover CPS Concrete Paving Slab DK Dropped Kerb DP Down Pipe EC Electricity Inspection Cover EL Eaves Level FH Fire Hydrant G Gully GP Gate Post IC Inspection Cover ILB Illuminated Bollard IRS Illuminated Road Sign JB Junction Box LP Lamp Post MH Man Hole Cover PB Post Box PL Pavement Light PO Post RL Ridge Level SRFC Surface Change S/O Smoke Outlet SV Stop Valve TCB Telephone Call Box TP Tactile Paving W Water Inspection Cover WM Water Meter S1 S3 S2 S4		Project: Reading Metropolitan		Title: Topographic Survey Sheet 2		Point 2 Surveyors Ltd, 3rd Floor, 17 Slingsby Place, London WC2E 9AB, 0207 836 5828 www.point2surveyors.com
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		Drawn By: SC		Scale: 1:200 @ A0		Date: September 2017							
				Dwg No: P1368/T/03-RevA									



Sources: Levels are related to Ordnance Survey Datum via GPS Observations Survey location is related to Ordnance Survey Grid via GPS Observations. All information contained in this drawing (including digital data) should be checked and verified prior to any fabrication or construction. Stations: STN 01 471269.643, 174043.279, 38.115 STN 02 471289.324, 174065.969, 38.034 STN 03 471254.832, 173981.916, 37.961	Key: A/C Air Conditioning Unit B Bollard BP Brick Paving BT BT Inspection Cover CATV Cable Television Inspection Cover CPS Concrete Paving Slab DK Dropped Kerb DP Down Pipe EC Electricity Inspection Cover EL Eaves Level FH Fire Hydrant G Gully GP Gate Post IC Inspection Cover ILB Illuminated Bollard IRS Illuminated Road Sign JB Junction Box LP Lamp Post MH Man Hole Cover PB Post Box PL Pavement Light PO Post RL Ridge Level SRFC Surface Change S/O Smoke Outlet SV Stop Valve TCB Telephone Call Box TP Tactile Paving W Water Inspection Cover WM Water Meter
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Drawing A11113-C-2-100 – Site Layout Plan

APPENDIX B

Thames Water Asset Location Search

Asset location search



Property Searches

Lanmor Consulting Ltd
34 Tolworth Close
SURBITON
KT6 7EW

Search address supplied Caversham Road
Reading
RG1 8AJ

Your reference 181017 (Post Office Reading)

Our reference ALS/ALS Standard/2018_3894324

Search date 19 October 2018

Keeping you up-to-date

Notification of Price Changes

From 1 September 2018 Thames Water Property Searches will be increasing the price of its Asset Location Search in line with RPI at 3.23%.

For further details on the price increase please visit our website: www.thameswater-propertysearches.co.uk
Please note that any orders received with a higher payment prior to the 1 September 2018 will be non-refundable.



Thames Water Utilities Ltd
Property Searches, PO Box 3189, Slough SL1 4WW
DX 151280 Slough 13



searches@thameswater.co.uk
www.thameswater-propertysearches.co.uk



0845 070 9148



Asset location search



Property Searches

Search address supplied: Caversham Road, Reading, RG1 8AJ

Dear Sir / Madam

An Asset Location Search is recommended when undertaking a site development. It is essential to obtain information on the size and location of clean water and sewerage assets to safeguard against expensive damage and allow cost-effective service design.

The following records were searched in compiling this report: - the map of public sewers & the map of waterworks. Thames Water Utilities Ltd (TWUL) holds all of these.

This search provides maps showing the position, size of Thames Water assets close to the proposed development and also manhole cover and invert levels, where available.

Please note that none of the charges made for this report relate to the provision of Ordnance Survey mapping information. The replies contained in this letter are given following inspection of the public service records available to this company. No responsibility can be accepted for any error or omission in the replies.

You should be aware that the information contained on these plans is current only on the day that the plans are issued. The plans should only be used for the duration of the work that is being carried out at the present time. Under no circumstances should this data be copied or transmitted to parties other than those for whom the current work is being carried out.

Thames Water do update these service plans on a regular basis and failure to observe the above conditions could lead to damage arising to new or diverted services at a later date.

Contact Us

If you have any further queries regarding this enquiry please feel free to contact a member of the team on 0845 070 9148, or use the address below:

Thames Water Utilities Ltd
Property Searches
PO Box 3189
Slough
SL1 4WW

Email: searches@thameswater.co.uk

Web: www.thameswater-propertysearches.co.uk