



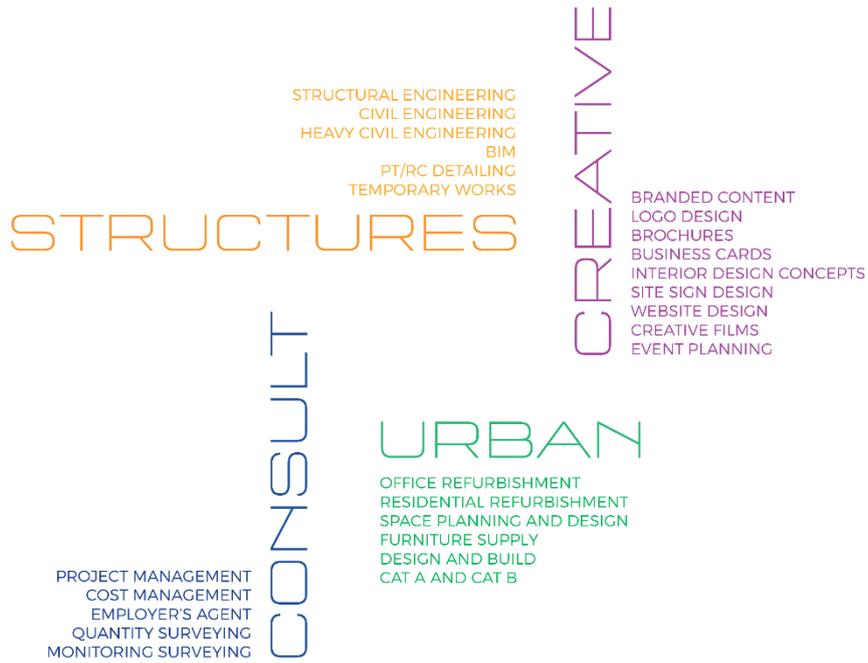
DRAINAGE DESIGN TECHNICAL NOTE

HAYES TOWN CENTRE

LONDON BOROUGH OF HILLINGDON

JANUARY 2026

HTC-IES-XX-00-RP-C-3010



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REPORT ISSUE

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CONTENTS

1	INTRODUCTION	1
2	DRAINAGE DESIGN TECHNICAL NOTE	1
2.1	COMBINED DRAINAGE STRATEGY FOR HAYES TOWN CENTRE	1
2.2	SURFACE WATER DRAINAGE	1
2.3	FOUL WATER DRAINAGE	2
3	APPENDIX A – HTC-IES-A1-00-DR-D-3000_DRAINAGE GA-P03 (S73)	3
4	APPENDIX B – HTC-IES-A1-00-DR-D-3000_DRAINAGE GA-P04 (RMA)	4
5	APPENDIX C - HTC-IES-A1-00-DR-D-3010_DRAINAGE OVERLAND FLOODING ROUTE-P03 (RMA)	5
6	APPENDIX D - HTC-IES-A1-00-DR-D-3020_DRAINAGE CATCHMENT-P02 (RMA)	6

1 INTRODUCTION

This Drainage Design Technical Note has been prepared by SLR Consulting on behalf of the London Borough of Hillingdon ('LBH') in support of a reserved matters application for Land at Austin Road, pursuant to Condition 1 of the hybrid permission for the site. A Section 73 application (application ref: 76550/APP/2025/2864) is currently pending and will be determined prior to the approval of this Reserved Matters Application. Therefore, this RMA responds to the revised wording of the planning conditions proposed within the Section 73 application. The drainage design for the RMA relates to only phases 2 and 3 of the development.

2 DRAINAGE DESIGN TECHNICAL NOTE

2.1 COMBINED DRAINAGE STRATEGY FOR HAYES TOWN CENTRE

The Reserved Matter drainage application (RMA) has followed the principles set out by the Section 73 (S73) drainage application, the core system proposed in the RMA has been directly derived from the S73 plan. This ensures the RMA application is in continuation of the approved drainage strategy, with only site-specific changes to the infrastructure such as differences in types, sizes and details. Please see **Appendix A** for the S73 design and **Appendix B** for the RMA design to assess the principles shared between the applications.

2.2 SURFACE WATER DRAINAGE

Surface water runoff will be directed through a gravity-controlled drainage network designed to promote sustainable water management and mitigate flood risk. The system will incorporate attenuation tanks strategically located beneath the proposed car park and landscaped areas. These tanks are designed to temporarily hold stormwater during peak rainfall events, controlling discharge rates before being directed into the mains system.

The controlled discharge will be directed via two outfall points:

- Connection to the Phase 1 drainage system, restricted to a discharge rate of 2.9 l/s.
- Connection to the public Thames Water surface water sewer at manhole Ex 9610 in Silverdale Road, limited to 1.6 l/s.

This dual-discharge arrangement ensures compliance with sustainable drainage design principles by controlling surface water discharge from peak flows and preventing excess surface water flooding.

To enhance surface water management and biodiversity, rain gardens will be implemented across the site. Each rain garden will be constructed with an underlying perforated pipe to manage overflow during extreme rainfall events. Additionally, green roofs at first-floor level will provide further attenuation and improve surface water management. For conservative design purposes, these green roofs have been included within impermeable catchment calculations, to reduce attenuation volumes during the detailed design stage.

2.3 FOUL WATER DRAINAGE

Foul water will be directed via a gravity drainage network, discharging through the Phase 1 foul network to a proposed connection to the existing public Thames Water foul sewer in Pump Lane.

The proposed connection point, discharge rate, and technical details will be confirmed with Thames Water as part of the application and approval process.

3 APPENDIX A – HTC-IES-A1-00-DR-D-3000_DRAINAGE GA-P03 (S73)

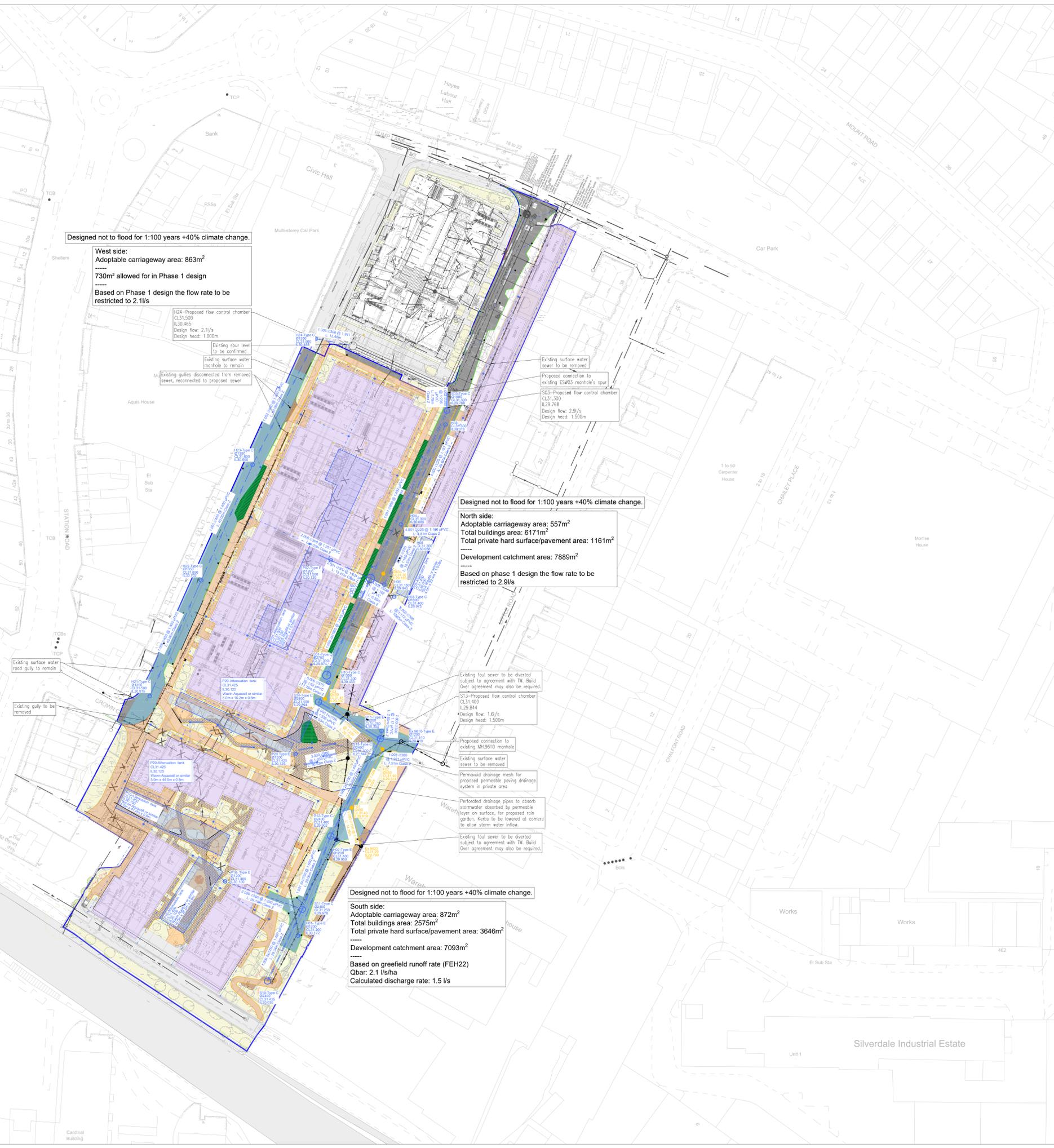


Botwell House
RC Primary School

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
Regular maintenance	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
Regular maintenance	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, silt or other matter, remove and replace surface infiltration medium as necessary	Annually
Regular maintenance	Remove sediment from pre-treatment structures and/or internal landings	Annually, or as required
Remedial actions	Repair/replace shafts, outlet, overflows and vents	As required
Remedial actions	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
Monitoring	Turn on inside of tank for sediment build-up and remove if necessary	Every 5 years or as required

- NO PART OF THIS DRAWING MAY BE COPIED, TRANSFERRED, OR MADE AVAILABLE TO USERS OTHER THAN THE ORIGINAL RECIPIENT, INCLUDING ELECTRONICALLY, WITHOUT PRIOR PERMISSION FROM IES.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS & ENGINEERS AND SPECIALIST DRAWINGS & SPECIFICATIONS.
- ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER FOR ACTION PRIOR TO CONSTRUCTION.
- THIS DRAWING IS BASED ON:
 - TOPOGRAPHIC SURVEY DWS 56562 DATED NOV 2021 BY SITECH SURVEYING SERVICES
 - GROUND FLOOR LAYOUT DWG: HTC-PP-ZZ-00-DR-A-10050 - Site Plan Ground Level GA - P11
- ALL DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY AND IN CONJUNCTION WITH ALL RELEVANT BRITISH STANDARDS, CODES OF PRACTICE AND CODE TO ADOPT AND AMENDMENTS AS APPROPRIATE. ALL DRAINAGE SHALL COMPLY WITH THE TYPICAL DRAINAGE CONSTRUCTION DETAILS AND THE REQUIREMENTS OF BS EN 752.
- ALL EXISTING DRAINAGE ON SITE TO BE CONFIRMED BY CONTRACTOR. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER FOR ACTION PRIOR TO ANY NEW CONSTRUCTION. PROPOSED DRAINAGE SHOWN ON THIS DRAWING IS SUBJECT TO CHANGE UPON RECEIPT OF REVISED EXISTING DRAINAGE INFORMATION.
- THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT AND DIVERSION WORKS NECESSARY, TO ALL EXISTING SERVICES TO THE SATISFACTION OF THE STATUTORY UNDERTAKER.
- THE PROPOSED BUILDING OUTLINES SHOWN ON THIS DRAWING ARE FOR INFORMATION ONLY. REFER TO ARCHITECTS PLANS FOR SETTING OUT INFORMATION AND DETAILS.
- FOR SETTING OUT DIMENSIONS OF SSS, SVPs, RWPs, FLOOR GULLY & OTHER DRAINAGE 'POP UP' LOCATIONS, REFER TO ARCHITECTS OR MECHANICAL & ELECTRICAL ENGINEERS DRAWINGS. LOCATION OF EXTERNAL CHANNEL DRAINING AND GULLY LOCATIONS / REQUIREMENTS TO BE CONFIRMED BY ARCHITECT.
- ALL DRAINAGE PIPEWORK SHOWN SHALL BE 100MM DIAMETER FOR FOUL AND 150MM FOR SURFACE WATER UNLESS NOTED OTHERWISE. ALL DRAINAGE PIPEWORK SHALL BE LAID SOFFIT TO SOFFIT UNLESS NOTED OTHERWISE.
- ALL UNDERSLAB DRAINAGE SHALL BE LAID AT GRADIENTS OF 1:40 MIN. FOR FOUL PIPEWORK AND 1:150 MIN. FOR SURFACE WATER UNLESS NOTED OTHERWISE.
- ALL SURFACE WATER PIPES 300MM Ø OR LESS TO BE UPVC OR SIMILAR APPROVED. SURFACE WATER PIPES GREATER THAN 300MM Ø TO BE CONCRETE. ALL 100MM AND 150MM DIAMETER FOUL WATER DRAINS TO BE UPVC.
- ALL UNDERSLAB DRAINAGE SHALL BE CLEAR OF FOUNDATIONS UNLESS SHOWN OTHERWISE. ALL BENDS IN PIPEWORK TO BE AS LARGE A RADIUS AS POSSIBLE (EXCLUDING CONNECTIONS TO CHAMBERS) TO ENSURE FREE FLOW. SHORT RADIUS BENDS TO BE AGREED WITH DRAINAGE ENGINEER.
- ALL SURFACE WATER DROP DOWN POSITIONS SHALL HAVE A BEND SET AT INVERT LEVEL NO GREATER THAN 13M BELOW FINISH FLOOR LEVEL.
- AT LEAST ONE SOIL PIPE AT THE HEAD OF EACH FOUL RUN SHALL BE VENTED TO THE ATMOSPHERE. ALL SVPs, SSS AND RWP DOWNPIPES SHALL BE ACCESSIBLE AT GROUND LEVEL FOR ROIDDING PURPOSES.
- COVER LEVELS SHOWN ON THIS DRAWING ARE APPROXIMATE AND SHALL BE ADJUSTED TO SUIT LEVELS ON SITE BY CONTRACTOR. COVERS SHALL BE ORIENTATED TO SUIT PAVEMENT FINISHES WHERE APPROPRIATE. ALL COVER LEVELS ARE TO BE CONFIRMED BY THE ARCHITECT
- ACCESS COVERS AND FRAMES SHALL COMPLY WITH THE LOADINGS SPECIFIED AND TO BS EN 124 AND KITEMARKED OR IF RECESSED COVERS ARE SPECIFIED THEN IN ACCORDANCE WITH FACTA ASSOCIATION EQUIVALENT. ALLOW FOR RECESS MANHOLE COVERS TO ACCEPT LANDSCAPE ARCHITECT FINISHES TO ALL LANDSCAPED AREAS
- ALL PRIVATE DRAINAGE PIPEWORK FOR FOUL AND SURFACE WATER SYSTEMS HAVE BEEN DESIGNED ON THE BASIS OF UPVC TO BS EN 1401-1, UNLESS NOTED OTHERWISE. ALL PRIVATE DRAINAGE WORKS TO BE CARRIED OUT IN ACCORDANCE WITH BUILDING REGULATIONS PART H.
- CONCRETE ENGASEMENT OF THE PIPEWORK SHALL BE REQUIRED WHERE VERTICAL CLEARANCE BETWEEN TWO PIPES CROSSING IS LESS THAN 300MM. ROCKER PIPES ARE TO BE PROVIDED AT ALL CONCRETE CASSED INTERFACES. WHERE NEW DRAINAGE IS SITUATED WITHIN 5 METRES OF NEW OR EXISTING TREES THE PIPEWORK SHALL BE ENCASED IN CONCRETE TO REDUCE THE RISK OF ROOT INGRESS.
- ALL DRAINAGE CONNECTING TO THE PUBLIC SEWER NETWORK SHALL NOT COMMENCE UNTIL RECEIPT OF THE APPROVAL FROM THE DRAINAGE AUTHORITY AND SHALL COMPLY WITH REQUIREMENTS USING UNTRIFIED CLAY PIPEWORK TO BS EN 256 WITH FLAIN SLEEVED OR SOCKETED FLEXIBLE JOINTS SUBJECT TO APPROVAL.
- PRIOR TO CONSTRUCTION THE FLOW CONTROL MANUFACTURER'S DRAWING AND HYDRAULIC TABLE SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL
- PRIOR TO CONSTRUCTION THE ATTENUATION TANK MANUFACTURER'S DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL.
- ALL PROPOSED DRAINAGE IS SUBJECT TO APPROVAL FROM THE LFA. DISCHARGE IS SUBJECT TO FORMAL APPROVAL BY THAMES WATER, WHERE DRAINAGE WORKS ARE CARRIED OUT IN THE PUBLIC HIGHWAY THE RELEVANT NECESSARY APPROVALS AND ROAD OPENING NOTICES SHALL BE OBTAINED FROM THE HIGHWAY AUTHORITY AND UTILITY COMPANIES.
- UPON COMPLETION ALL NEW DRAINAGE INSTALLATION TOGETHER WITH ANY EXISTING DRAINAGE RETAINED SHALL BE JETTED AND CCTV SURVEYED UPON COMPLETION. CONTRACTOR TO ENSURE THAT THE DRAINAGE SYSTEM IS FULLY OPERATIONAL, FREE OF EXCESS DEBRIS/SILT AND ALL IDENTIFIED FAILTS RECTIFIED.

HAYES TOWN



Designed not to flood for 1:100 years +40% climate change.
 West side:
 Adoptable carriageway area: 863m²
 730m² allowed for in Phase 1 design
 Based on Phase 1 design the flow rate to be restricted to 2.1l/s

Designed not to flood for 1:100 years +40% climate change.
 North side:
 Adoptable carriageway area: 557m²
 Total buildings area: 6171m²
 Total private hard surface/pavement area: 1161m²
 Development catchment area: 7889m²
 Based on phase 1 design the flow rate to be restricted to 2.9l/s

Designed not to flood for 1:100 years +40% climate change.
 South side:
 Adoptable carriageway area: 872m²
 Total buildings area: 2575m²
 Total private hard surface/pavement area: 3646m²
 Development catchment area: 7093m²
 Based on greenfield runoff rate (FEH22)
 Qbar: 2.1 l/s/ha
 Calculated discharge rate: 1.5 l/s

HEALTH & SAFETY: THE WORKS SHALL BE CARRIED OUT BY SPECIALIST COMPETENT AND EXPERIENCED CONTRACTORS. ALL OPERATIVES SHALL HAVE RECEIVED FULL AND APPROPRIATE TRAINING WITH APPROPRIATE QUALIFICATIONS FOR THE OPERATIONS THEY ARE REQUIRED TO UNDERTAKE. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT HEALTH & SAFETY REGULATIONS.

ATTENUATION VOLUME HAS BEEN CALCULATED BASED ON REQUIRED STORAGE FOR A 1 IN 100YR EVENT + 40% CLIMATE CHANGE

KEY:

- LEGEND:
- Site boundary
 - Existing surface water drainage
 - Phase 1 & existing foul water drainage
 - Proposed adoptable surface water flow control chamber
 - Proposed adoptable surface water sewer and manhole
 - Proposed adoptable foul water sewer and manhole
 - Existing pipe to be removed
 - Private surface water/ Gully connection
 - Surface water inspection chamber
 - Surface water manhole
 - Private foul water drain
 - Foul water inspection chamber
 - Surface water impermeable area building
 - Surface water impermeable area hard landscaping
 - Surface water impermeable area carriageway
 - Proposed rain garden
 - Proposed permeable paving
 - Proposed channel drain
 - Existing surface water road gully
 - Proposed surface water road gully
 - Permeoid SW diffuser for permeable paving

IES STRUCTURES

PRELIMINARY

CLIENT: HIGGINS PARTNERSHIP

PROJECT: HAYES TOWN CENTRE PHASES 2-5

DRAWING TITLE: BELOW GROUND DRAINAGE GENERAL ARRANGEMENT

JOB NUMBER: SE2508 SCALE AT A3: 1:500 REV STATUS: P03

DRAWING NUMBER: HTC-IES-A1-00-DR-D-3000 REVISION: S2

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4 APPENDIX B – HTC-IES-A1-00-DR-D-3000_DRAINAGE GA-P04 (RMA)