



DRAINAGE DESIGN TECHNICAL NOTE

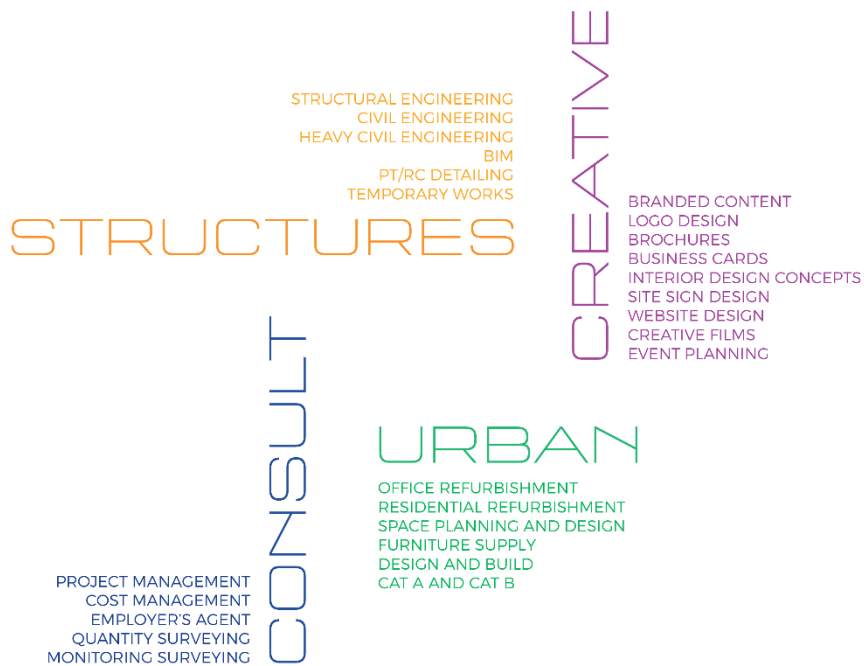
AVONDALE DRIVE ESTATE

HIGGINS PARTNERSHIP

DECEMBER 2025

AVD-IES-XX-00-RP-C-3010

IES|STRUCTURES



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DRAINAGE DESIGN TECHNICAL NOTE

AVD-IES-XX-00-RP-C-3010

REPORT ISSUE

Revision	Date	Notes
P01	17/12/2025	First Issue

PREPARED BY

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REVIEWED BY

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IESISGROUP

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CONTENTS

1	DRAINAGE DESIGN TECHNICAL NOTE	1
1.1	COMBINED DRAINAGE STRATEGY FOR AVONDALE DRIVE	1
1.2	SURFACE WATER DRAINAGE	1
1.3	FOUL WATER DRAINAGE	1
2	APPENDIX A – AVD-IES-A1-00-DR-C-3540_DRAINAGE GA-P02 (S73)	3
3	APPENDIX B – AVD-IES-A1-00-DR-D-3000_DRAINAGE GA-P05 (RMA)	4
4	APPENDIX C - AVD-IES-A1-00-DR-D-3010_DRAINAGE OVERLAND FLOODING ROUTE-P04 (RMA)	5
5	APPENDIX D - AVD-IES-A1-00-DR-D-3020_DRAINAGE CATCHMENT-P02 (RMA)	6

1 DRAINAGE DESIGN TECHNICAL NOTE

1.1 COMBINED DRAINAGE STRATEGY FOR AVONDALE DRIVE

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.

1.2 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 1.0 l/s.
- Connection to the public Thames Water surface water sewer in Avondale Drive, limited to 2.3 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.

Proposed impermeable highway areas are designed to drain into the existing highway drainage network. Detailed design for these elements will be developed as part of the Section 278 (S278) works.

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.

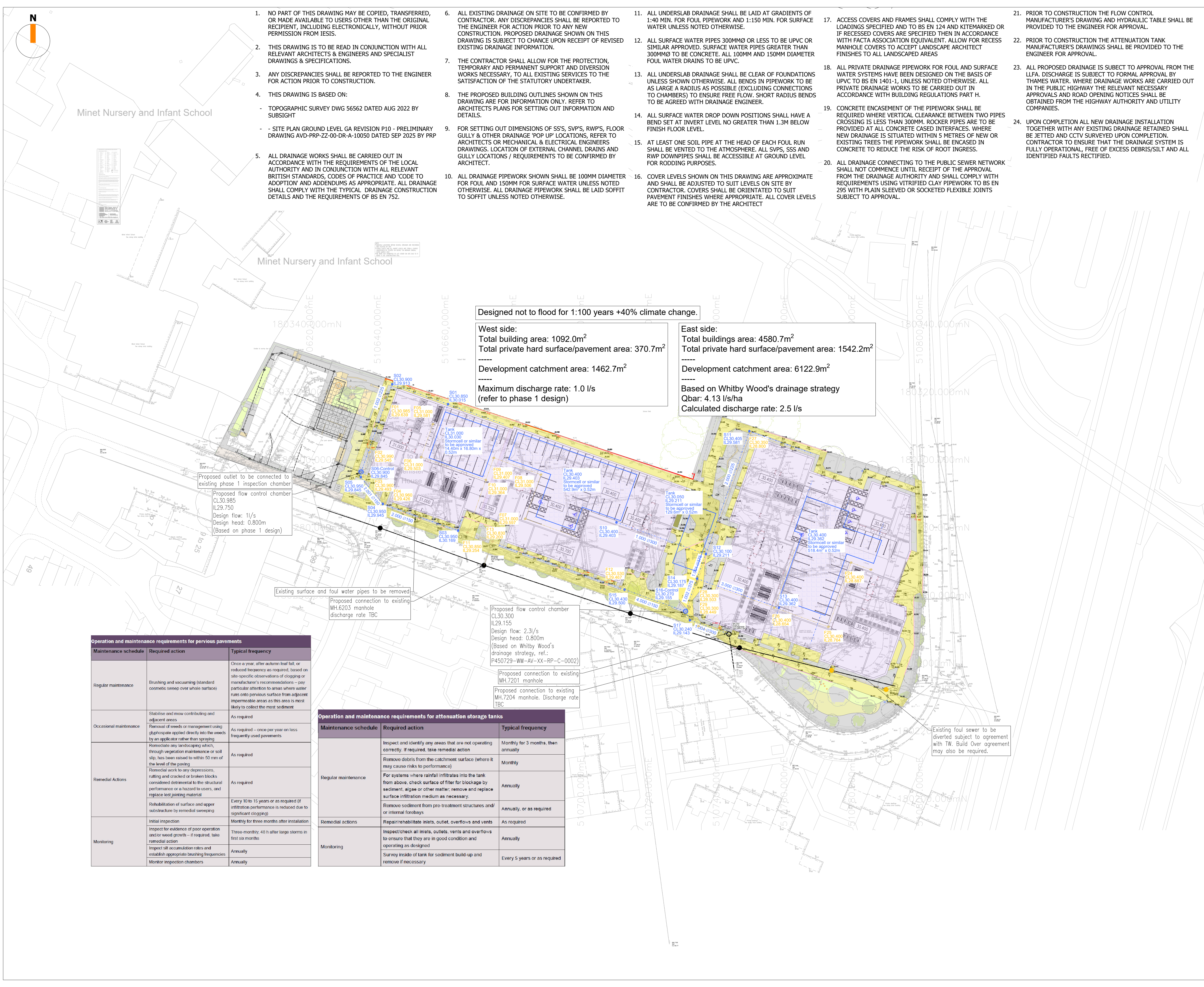
1.3 FOUL WATER DRAINAGE

Foul water will be directed via a gravity drainage network, discharging through two proposed connections to the existing public Thames Water foul sewer in Avondale Drive. An existing foul sewer located adjacent to the southeast corner of the building footprint will require local diversion to accommodate the revised development layout. Following diversion, this sewer will provide an additional foul discharge connection point.

The diversion works will be subject to a build-over agreement and a diversion agreement with Thames Water. All new on-site foul drainage infrastructure will remain private and will be managed and maintained by the development's management company. The diverted foul sewer will be adopted and maintained by Thames Water, subject to their approval.

All proposed connection points, discharge rates, and technical details will be confirmed with Thames Water as part of the application and approval process.

2 APPENDIX A – AVD-IES-A1-00-DR-C-3540_DRAINAGE GA-P02 (S73)



Operation and maintenance requirements for pervious pavements		
Maintenance schedule	Required action	Typical frequency
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	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 surface from adjacent impermeable areas as this area is most likely to collect the most sediment
Occasional maintenance	Stabilise and mow contributing and adjacent areas Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying	As required 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 Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material Rehabilitation of surface and upper substructure by remedial sweeping	As required As required Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection Inspect for evidence of poor operation and/or weed growth – if required, take remedial action Inspect silt accumulation rates and establish appropriate brushing frequencies Monitor inspection chambers	Monthly for three months after installation Three-monthly, 48 h after large storms in first six months Annually Annually

Operation and maintenance requirements for attenuation storage tanks		
Maintenance schedule	Required action	Typical frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action Remove debris from the catchment surface (where it may cause risks to performance) 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. Remove sediment from pre-treatment structures and/or internal forebays	Monthly for 3 months, then annually Monthly Annually 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 Survey inside of tank for sediment build-up and remove if necessary	Annually Every 5 years or as required

NOTES:

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

TOTAL DISCHARGE FROM SITE TO PUBLIC SEWER NETWORK TO BE RESTRICTED TO 5l/s/ha BASED ON THAMES WATER REQUIREMENT

KEY:

LEGEND:

Existing surface water drainage

Existing foul water drainage

Proposed surface water flow control chamber

Surface water drain

Surface water inspection chamber

Foul water drain

Foul water access point

Foul water inspection chamber

Surface water impermeable area hard surface/pavement

Surface water impermeable area building

Proposed channel drain

Proposed gully

YG

P02 16.09.25 GH/JAK LAYOUT UPDATED.

P01 13.08.25 PB/JAK PRELIMINARY ISSUE.

REV DATE DRAWN/CHK REVISION INFO

STATUS:

CLIENT:

HIGGINS PARTNERSHIPS

PROJECT:

AVONDALE DRIVE

PHASE 2,3,5

DRAWING TITLE:

BELOW GROUND DRAINAGE

GENERAL ARRANGEMENT

JOB NUMBER:

SE2508

SCALE AT A1:

1:500

REV. STATUS:

P2

DRAWING NUMBER:

AVD-IES-A1-00-DR-D-3000

REVISION:

S2

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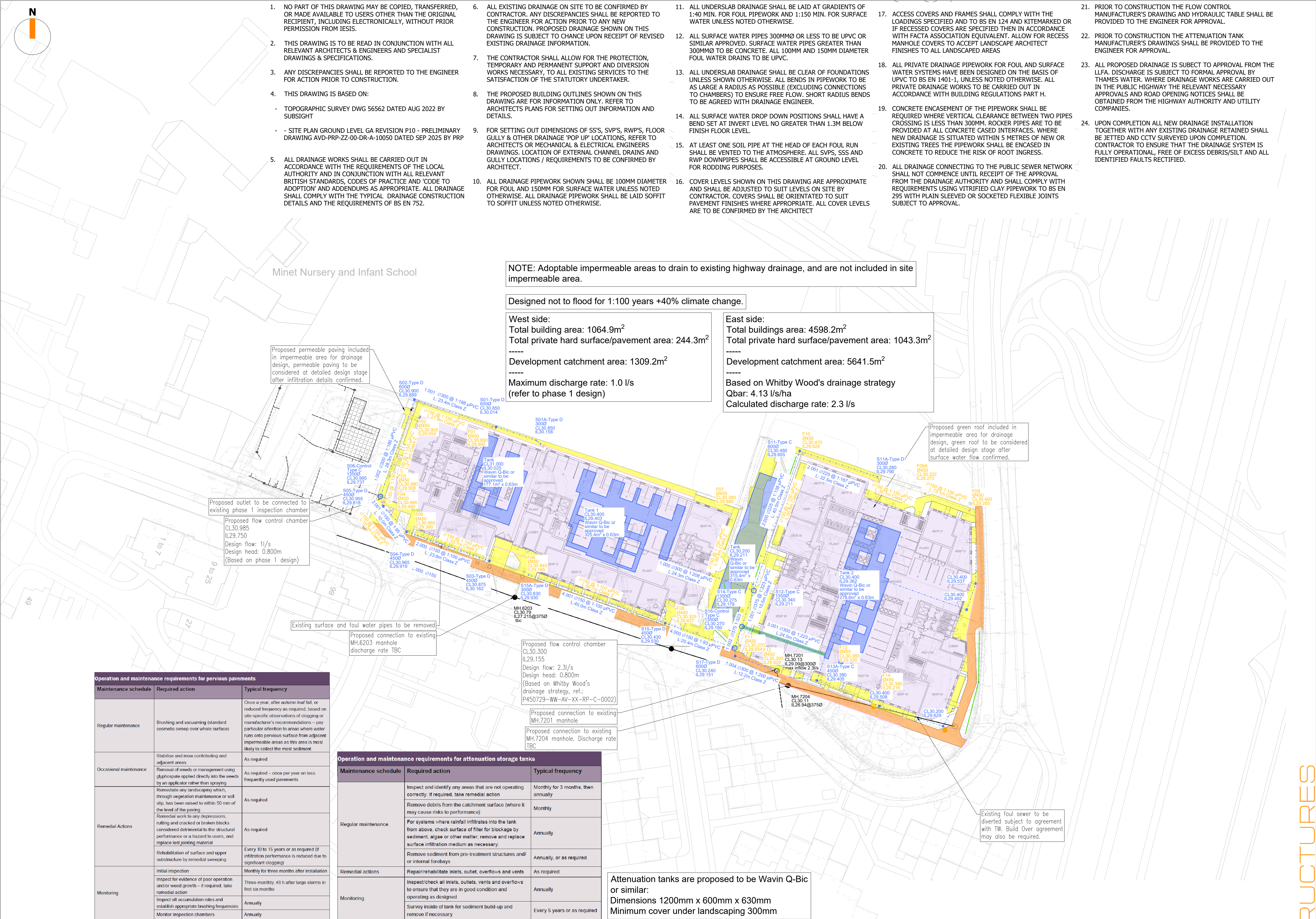
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3 APPENDIX B – AVD-IES-A1-00-DR-D-3000_DRAINAGE GA-P05 (RMA)



Operation and maintenance requirements for pervious pavements		
Maintenance schedule	Required action	Typical frequency
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	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 surface from adjacent impermeable areas as this area is most likely to collect the most sediment
	Stabilise and mow contributing and adjacent areas	As required
Occasional maintenance	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying	As required – once per year on less frequently used pavements
	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 Actions	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth – if required, take remedial action	Three-monthly, 48 h after large storms in first six months
Monitoring	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Operation and maintenance requirements for attenuation storage tanks		
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

NOTES:

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

TOTAL DISCHARGE FROM SITE TO PUBLIC SEWER NETWORK TO BE RESTRICTED TO 5l/s/ha BASED ON THAMES WATER REQUIREMENT

LEGEND:	
	Existing surface water drainage
	Existing foul water drainage
	Proposed surface water flow control chamber
	Surface water drain
	Surface water inspection chamber
	Surface water access point
	Foul water drain
	Foul water inspection chamber
	Proposed channel drain
	Proposed yard gully
	Proposed perforated pipe
	Impermeable area (private)
	Impermeable area (buildings)
	Impermeable area (adoptable)
	Surface water pipe to be built through foundation

P05	11.12.25	GH/JAK	LAYOUT UPDATED.
P04	05.12.25	IO/JAK	NOTES ADDED.
P03	28.11.25	GH/JAK	DRAINAGE UPDATED.
P02	16.09.25	GH/JAK	LAYOUT UPDATED.
P01	13.08.25	PB/JAK	PRELIMINARY ISSUE.
REV	DATE	DRAWN/CHK	REVISION INFO

STATUS: PRELIMINARY

CLIENT: HIGGINS PARTNERSHIPS

PROJECT: AVONDALE DRIVE
PHASE 1B, 2

DRAWING TITLE: BELOW GROUND DRAINAGE
GENERAL ARRANGEMENT

JOB NUMBER:	SCALE AT A1:	REV. STATUS:
SE2508	1:500	S2
DRAWING NUMBER:	REVISION:	
AVD-IES-A1-00-DR-D-3000	P05	

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4 APPENDIX C - AVD-IES-A1-00-DR-D-3010_DRAINAGE OVERLAND FLOODING ROUTE-P04 (RMA)



Minet Nursery and Infant School

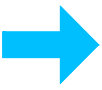
CLIVESDALE DRIVE

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3. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER FOR ACTION PRIOR TO CONSTRUCTION.
4. THIS DRAWING IS BASED ON:
 - TOPOGRAPHIC SURVEY DWG 56562 DATED AUG 2022 BY SUBSIGHT
 - SITE PLAN GROUND FLOOR - AVD-PRP-ZZ-00-GA-A-20600 DATED NOV 2025 BY PRP

NOTES:

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LEGEND:

 Flood route direction arrow

P04	10.12.25	GH/JAK	LAYOUT UPDATED.
P03	27.11.25	GH/JAK	LAYOUT UPDATED.
P02	16.09.25	GH/JAK	LAYOUT UPDATED.
P01	26.08.25	PB/JAK	PRELIMINARY ISSUE.
REV	DATE	DRAWN/CHK	REVISION INFO

STATUS: PRELIMINARY

CLIENT: HIGGINS PARTNERSHIPS

PROJECT: AVONDALE DRIVE
PHASE 1B, 2

DRAWING TITLE: DRAINAGE
OVERLAND FLOODING ROUTES

JOB NUMBER:	SCALE AT A1:	REV. STATUS:
SE2508	1:500	S2
DRAWING NUMBER:	REVISION:	
AVD-IES-A1-00-DR-D-3010	P04	

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