

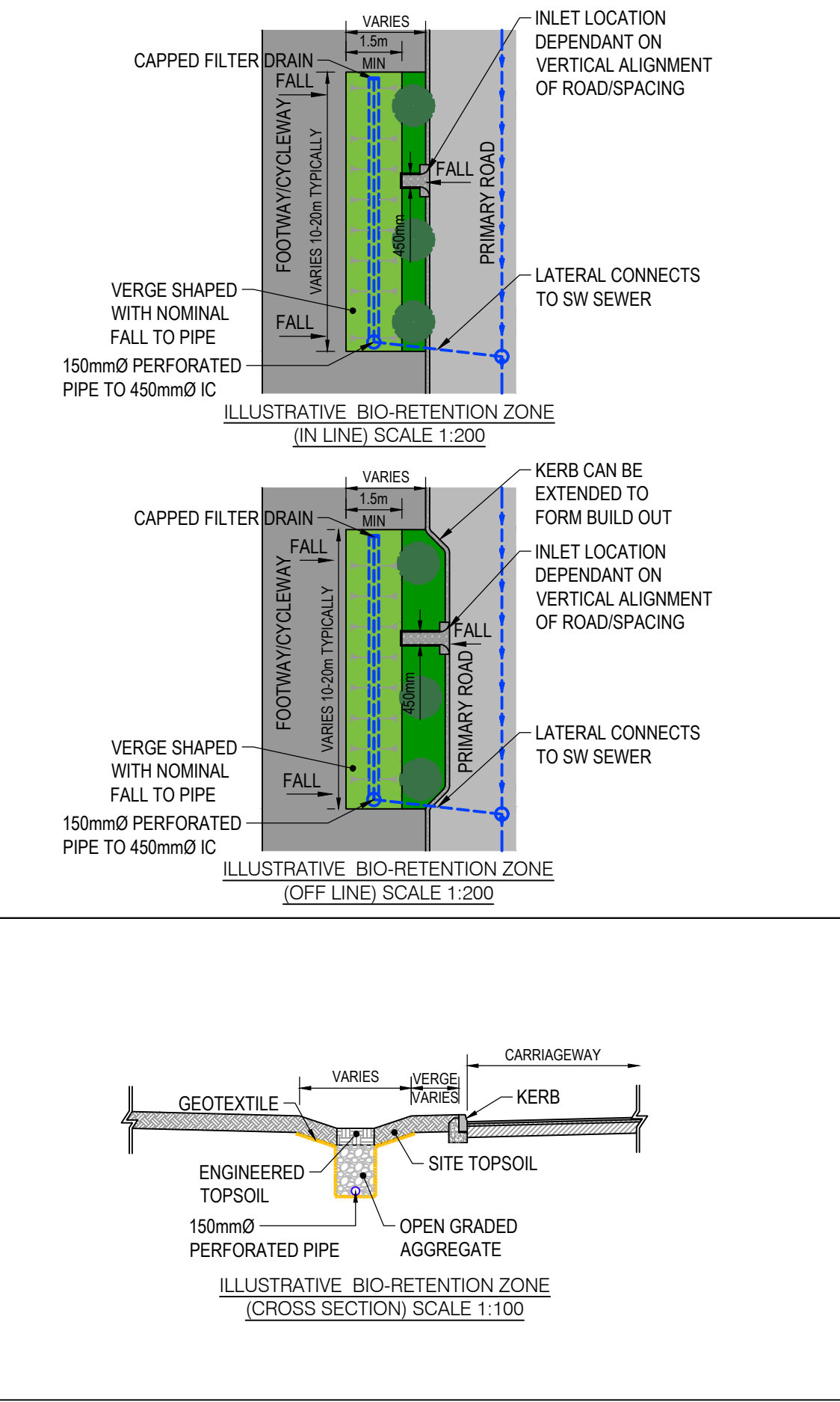
TABLE IDENTIFYING PROPOSED SURFACE WATER STRATEGY AND CONTRASTING AREAS

CATCHMENT AREA	CONTRASTING TOTAL SURFACE WATER	CONTRASTING TOTAL IMPERMEABLE AREA	CONTRASTING TOTAL BUILDING FLOOR AREA
CATCHMENT AREA DRIVING DIRECTLY TO SURFACE WATER	2.8ha	2.0ha	1.81ha
CATCHMENT AREA DRIVING DIRECTLY TO SW	1.07ha	1.0ha	1.14ha
CATCHMENT AREA DRIVING TO SURFACE WATER	2.0ha	1.0ha	1.14ha
CATCHMENT AREA DRIVING TO SURFACE WATER	1.07ha	1.0ha	1.14ha
CATCHMENT AREA DRIVING DIRECTLY TO SW	1.07ha	1.0ha	1.14ha
TOTAL	8.04ha	6.0ha	6.35ha

TABLE IDENTIFYING PROPOSED CONTRASTING AREAS TO SW BROOK AND ADJACENT BROOK WATERSHED

TOTAL CATCHMENT AREA	TOTAL CATCHMENT IMPERMEABLE AREA	TOTAL CATCHMENT BUILDING FLOOR AREA
SW BROOK CATCHMENT	0.0ha	0.0ha
ADJACENT BROOK CATCHMENT	0.0ha	0.0ha
TOTAL	0.0ha	0.0ha

- ### NOTES
1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 2. ALL LEVELS ARE IN METRES RELATIVE TO ORDNANCE DATUM NEWLYN UNLESS NOTED OTHERWISE.
 3. ALL COORDINATES ARE IN METRES RELATIVE TO ORDNANCE DATUM SURVEY NATIONAL GRID.
 4. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK OR PREPARING SHOP DRAWINGS.
 5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS AND ARCHITECTS DRAWINGS AND SPECIFICATIONS.
 6. FOR FURTHER INFORMATION ON SITE WIDE PROPOSED STORAGE PROVISIONS AND ARRANGEMENTS PLEASE REFER TO PBA DRAWINGS 31500-2006-116, 117 & 118.
 7. ALL EXISTING INVERT LEVELS SHOWN ON THIS PLAN HAVE BEEN BASED OFF THE FOLLOWING:
 - GREEN HATCH TOPOGRAPHICAL SURVEY.
 - CANINE SERVICES CCTV SURVEY.
 8. THE COVER LEVELS SHOWN ON THIS PLAN REPRESENT EXISTING GROUND LEVEL. THESE LEVELS WILL BE SUBJECT TO CHANGE AS PROPOSED WORKS AND DEVELOPMENT LEVELS ARE SET. THESE LEVELS SHOULD BE USED AS HIGHLY INDICATIVE AT THIS STAGE.
 9. ON PLOT STORAGE ESTIMATES SHOWN ON THIS PLAN ARE BASED OFF THE 1:100 YEAR +40% STORM EVENT AND ARE ASSUMING EACH PLOT WILL UTILISE A SINGLE CONTROL RELEASING WATER AT THE 1:1yr GREENFIELD RUNOFF RATE (MIN FLOW RATE OF 1.1% - SEE NOTE 14).
 10. THE PIPE SIZES SHOWN ON THIS PLAN HAVE BEEN TESTED FOR FLOODING FOR THE 1:30 YEAR RETURN PERIOD STORM ONLY. IT WILL ALSO NEED TO BE DEMONSTRATED THAT FLOODING TO BUILDING AREAS DOES NOT OCCUR DURING THE 1:100 YEAR STORAGE EVENT +40% CLIMATE CHANGE EVENT. WITHOUT ADEQUATE PROPOSED LEVELS HOWEVER, THIS CANNOT BE SATISFACTORILY DETERMINED AT THIS STAGE AND THEREFORE THE PIPE SIZES SHOWN ON THIS PLAN ARE SUBJECT TO RUNNING THIS SIMULATION WHEN PLOT LEVELS BECOME AVAILABLE.
 11. ALL STORAGE VOLUMES SHOWN ON THIS PLAN HAVE INCLUDED FOR AN ADDITIONAL 40% ALLOWANCE FOR CLIMATE CHANGE. THIS REPRESENTS THE 'UPPER' LIMIT OF GOVERNMENT GUIDANCE.
 12. THE COVER LEVELS SHOWN NORTH OF THE 'ORIGINAL WATERSHED' LINE ON THIS PLAN ARE SUBJECT TO CHANGE AS PART OF THE OVERALL SITE EARTHWORKS. THESE SHOULD THEREFORE BE SEEN AS HIGHLY INDICATIVE AT THIS STAGE.
 13. AREAS SHOWN HATCHED PINK ON THIS PLAN INDICATE AREAS WHERE ON SITE PLOT STORAGE (REFER TO NOTE 9) IS REQUIRED. INDIVIDUAL SITE DEVELOPERS ARE FREE TO DELIVER ON PLOT SURFACE WATER STORAGE AS THEY DEEM NECESSARY AND FITTING WITH THE CHARACTERISTICS OF THEIR DEVELOPMENT. IT IS ENVISAGED THIS WILL MEAN UTILISING SUDS FEATURES SUCH AS GREEN! BLUE ROOFS, SWALES AND PERMEABLE PAVING.
 14. IT IS ASSUMED THE MINIMUM SW DISCHARGE RATE FROM INDIVIDUAL PLOTS WILL BE CAPPED AT 1% IN ORDER TO REDUCE BLOCKAGE RISK ASSOCIATED WITH FLOW CONTROLS. MONTHLY INSPECTIONS OF ALL FLOW CONTROLS (IN ACCORDANCE WITH THE CAMBROSHIRE SUDS ADOPTION GUIDE) WILL BE CARRIED OUT AND OVERFLOW WEIRS INSTALLED.
 15. PEAK FLOW RATES SHOWN ON THIS PLAN HAVE BEEN DETERMINED BY MULTIPLYING TOTAL PLOT DEVELOPABLE FLOOR AREAS (TAKEN FROM AECOM DEVELOPMENT SCHEDULE VERSION 5, DATES 10.02.2016) BY 2.25% THIS CAPACITY HAS BEEN AGREED WITH ANGLIAN WATER.
 16. ALL FINISHED FLOOR LEVELS WILL BE ESTABLISHED TAKING IN TO FULL ACCOUNT DRAINAGE CONNECTIONS.
 17. WHILEST AREAS SHOWN HATCHED GREEN ON THIS PLAN HAVE A FREE FLOW DISCHARGE TO THE EXISTING WESTERN LAKE, INDIVIDUAL PLOT DEVELOPERS ARE REQUIRED TO IMPLEMENT MEASURES ON SITE TO PROVIDE TREATMENT OF FLOWS LEAVING PLOTS.
 18. ALL DEVELOPMENT PARCELS IMPLEMENTING SERVICE YARDS WILL BE REQUIRED TO ENSURE ALL RUNOFF LEAVING THESE AREAS IS PASSED THROUGH A CLASS 1 BYPASS SEPARATOR PRIOR TO RUNOFF ENTERING THE WIDER SURFACE WATER NETWORK.
 19. SUDS FEATURES SHOWN ON THIS PLAN ARE INDICATIVE. ALL LOCATIONS SHOWN ARE SUBJECT TO VERIFICATION AND CO-ORDINATION WITH EXISTING AND PROPOSED UNDERGROUND UTILITY INFRASTRUCTURE. ALL FEATURES TO BE IN ACCORDANCE WITH CAMBROSHIRE SUDS DESIGN AND ADOPTION GUIDE.
 20. THESE INSET PLOT PLANS ARE TO BE READ IN CONJUNCTION WITH THE INFRASTRUCTURE DRAWINGS: 38814201/1104-118.
 21. IT WILL BE THE RESPONSIBILITY OF PLOT DEVELOPERS TO ENSURE THEIR INDIVIDUAL PLOT DRAINAGE ARRANGEMENTS ARE ROUTED TO THE SPUR CONNECTION DISCHARGE POINTS SHOWN ON THIS DRAWING. THIS INCLUDES EXISTING BUILDINGS WHICH WILL REQUIRE THEIR EXISTING DRAINAGE TO BE AMENDED TO ALIGN WITH THE PROPOSED STRATEGY SHOWN ON THIS DRAWING.



Mark	Revision	Date	Drawn	Chkd	Appd
C	AMENDED TO REPRESENT UPDATED MASTERPLAN	30.06.17	GC	ST	ST
B	BIO-RETENTION ZONES AMENDED	12.12.16	GC	RC	ST
A	AMENDED FOLLOWING CPA COMMENTS	01.09.16	DRM	DRM	ST

Drawing Issue Status: **PRELIMINARY**

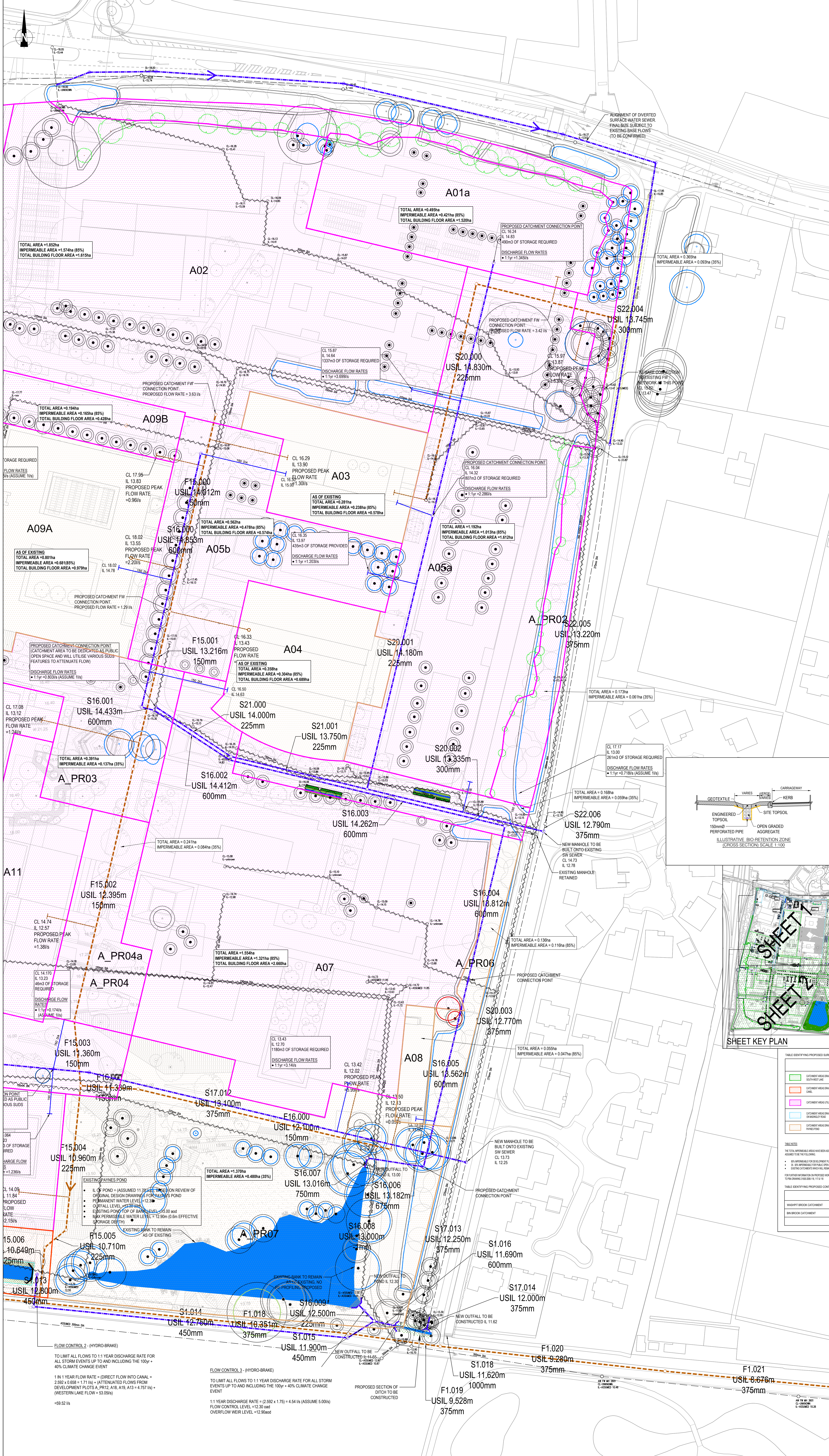
SURFACE WATER AND FOUL WATER DRAINAGE STRATEGY SHEET 4 OF 6 WEST CAMBRIDGE DENSIFICATION

Client: **UNIVERSITY OF CAMBRIDGE**

Date of Issue: 24.12.15
 Design: DRM
 Drawn: DRM
 No Scale
 Checked: ST
 Approved: ST

Drawing Number: **31500/2001/153**
 Revision: **C**

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- ### NOTES
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 6. FOR FURTHER INFORMATION ON SITE WIDE PROPOSED STORAGE PROVISIONS AND ARRANGEMENTS PLEASE REFER TO PDA DRAWING 31500/2001/16: 117 & 118
 7. ALL EXISTING INVERT LEVELS SHOWN ON THIS PLAN HAVE BEEN BASED OFF THE FOLLOWING:
 - GREEN HATCH TOPOGRAPHICAL SURVEY.
 - CAMLINE SERVICES CCTV SURVEY.
 8. THE COVER LEVELS SHOWN ON THIS PLAN REPRESENT EXISTING GROUND LEVEL. THESE LEVELS WILL BE SUBJECT TO CHANGE AS PROPOSED WORKS AND DEVELOPMENT LEVELS ARE SET. THESE SHOULD THEREFORE BE SEEN AS HIGHLY INDICATIVE AT THIS STAGE
 9. ON PLOT STORAGE ESTIMATES SHOWN ON THIS PLAN ARE BASED OFF THE 100 YEAR + 40% CLIMATE CHANGE EVENT AND ARE ASSUMING EACH LOT WILL UTILISE A SINGLE CONTROL. RELEASING WATER AT THE 1:1yr GREENFIELD RUNOFF RATE (MM FLOW RATE OF 1.1 - SEE NOTE 14)
 10. THE PIPE SIZES SHOWN ON THIS PLAN HAVE BEEN TESTED FOR FLOODING FOR THE 1:30 YEAR RETURN PERIOD STORM ONLY. IT WILL ALSO NEED TO BE DEMONSTRATED THAT FLOODING TO BUILDING AREAS DOES NOT OCCUR DURING THE 1:100 YEAR STORM EVENT + 40% CLIMATE CHANGE EVENT WITHOUT ADEQUATE PROPOSED CYCLES AND FITTING WITH THE CHARACTERISTICS OF THEIR DEVELOPMENT. IT IS ENVIAGED THIS WILL MEAN UTILISING SUDS FEATURES SUCH AS GREEN / BLUE ROOFS, SWALES AND PERMEABLE PAVING.
 11. ALL STORAGE VOLUMES SHOWN ON THIS PLAN HAVE INCLUDED FOR AN ADDITIONAL 40% ALLOWANCE FOR CLIMATE CHANGE. THIS REPRESENTS THE "UPPER" LIMIT OF GOVERNMENT GUIDANCE.
 12. THE COVER LEVELS SHOWN NORTH OF THE "ORIGINAL WATERSHED" LINE ON THIS PLAN ARE SUBJECT TO CHANGE AS PART OF THE OVERALL SITE EARTHWORKS. THESE SHOULD THEREFORE BE SEEN AS HIGHLY INDICATIVE AT THIS STAGE
 13. AREAS SHOWN HATCHED PINK ON THIS PLAN INDICATE AREAS WHERE ON SITE STORAGE (REFER TO NOTE 9) IS REQUIRED. INDIVIDUAL SITE DEVELOPERS ARE FREE TO DELIVER ON PLOT SURFACE WATER STORAGE AS THEY DEEM NECESSARY AND FITTING WITH THE CHARACTERISTICS OF THEIR DEVELOPMENT. IT IS ENVIAGED THIS WILL MEAN UTILISING SUDS FEATURES SUCH AS GREEN / BLUE ROOFS, SWALES AND PERMEABLE PAVING.
 14. IT IS ASSUMED THE MINIMUM SW DISCHARGE RATE FROM INDIVIDUAL PLOTS WILL BE CAPPED AT 11% IN ORDER TO REDUCE BLOCKAGE RISK ASSOCIATED WITH FLOW CONTROLS. MONTHLY INSPECTIONS OF ALL FLOW CONTROLS IN ACCORDANCE WITH THE CAMBRIDGESHIRE SUDS ADOPTION GUIDE WILL BE CARRIED OUT AND OVERFLOW WEIRS INSTALLED)
 15. PEAK FLOW RATES SHOWN ON THIS PLAN HAVE BEEN DETERMINED BY MULTIPLYING TOTAL PLOT DEVELOPABLE FLOOR AREAS (TAKEN FROM ACCORD DEVELOPMENT SCHEDULE VERSION 5, DATES 10.02.2016) BY 2.25% (THIS CAPACITY HAS BEEN AGREED WITH ANGLIAN WATER.
 16. ALL FINISHED FLOOR LEVELS WILL BE ESTABLISHED TAKING IN TO FULL ACCOUNT DRAINAGE CONNECTIONS.
 17. WHILST AREAS SHOWN HATCHED GREEN ON THIS PLAN HAVE A FREE FLOW DISCHARGE TO THE EXISTING WESTERN LAKE. INDIVIDUAL PARCEL OCCUPIERS WILL BE REQUIRED TO IMPLEMENT MEASURES ON SITE TO PROVIDE TREATMENT OF FLOWS LEAVING PLOTS.
 18. ALL DEVELOPMENT PARCELS IMPLEMENTING SERVICE YARDS WILL BE REQUIRED TO ENSURE ALL RUNOFF LEAVING THESE AREAS IS PASSED THROUGH A CLASS 1 BYPASS SEPARATOR PRIOR TO RUNOFF ENTERING THE WIDER SURFACE WATER NETWORK
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 20. THESE INSET PLOT PLANS ARE TO BE READ IN CONJUNCTION WITH THE INFRASTRUCTURE DRAWINGS: 38814/2001/16:118
 21. IT WILL BE THE RESPONSIBILITY OF PLOT DEVELOPERS TO ENSURE THEIR INDIVIDUAL PLOT DRAINAGE ARRANGEMENTS ARE ROUTED TO THE SPUR CONNECTION DISCHARGE POINTS SHOWN ON THIS DRAWING. THIS INCLUDES EXISTING BUILDINGS WHICH WILL REQUIRE THEIR EXISTING DRAINAGE TO BE AMENDED TO ALIGN WITH THE PROPOSED STRATEGY SHOWN ON THIS DRAWING

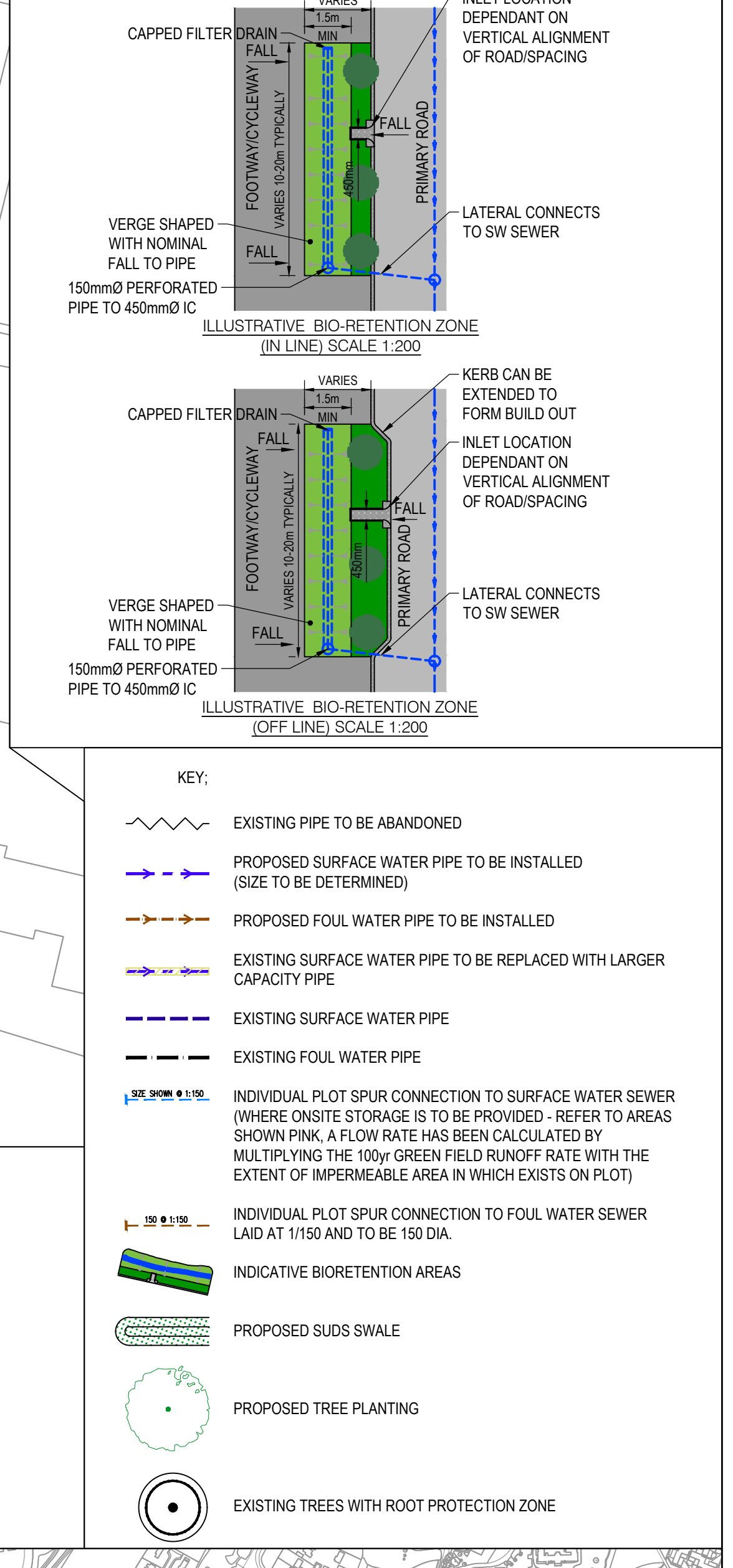


TABLE IDENTIFYING PROPOSED SURFACE WATER STRATEGY AND CONTRIBUTING AREAS

CONTRIBUTING AREA	TOTAL AREA (m²)	TOTAL IMPERMEABLE AREA (m²)	PROPOSED SURFACE WATER RELEASE RATE (L/S)
EXISTING ROAD DRAINAGE TO DRAINAGE	1200	1200	1.1 (100 YEAR GREENFIELD RUNOFF RATE FOR ALL STORM EVENTS)
EXISTING ROAD DRAINAGE TO SWALE	1470	1470	1.1 (100 YEAR GREENFIELD RUNOFF RATE FOR ALL STORM EVENTS)
CATCHMENT AREAS UTILISING STORAGE	2240	1500	1.1 (100 YEAR GREENFIELD RUNOFF RATE FOR ALL STORM EVENTS)
EXISTING ROAD DRAINAGE TO SWALE	1000	1000	1.1 (100 YEAR GREENFIELD RUNOFF RATE FOR ALL STORM EVENTS)
EXISTING ROAD DRAINAGE TO SWALE	1000	1000	1.1 (100 YEAR GREENFIELD RUNOFF RATE FOR ALL STORM EVENTS)
TOTAL	5670	4170	

TABLE IDENTIFYING PROPOSED CONTRIBUTING AREAS TO SW BROOK AND WASHBROOK DRAINAGE

CONTRIBUTING AREA	TOTAL CATCHMENT AREA (m²)	TOTAL CATCHMENT IMPERMEABLE AREA (m²)
SW BROOK CATCHMENT	6300	4370
SW BROOK CATCHMENT	5870	3890
TOTAL SW	12170	8260

REVISIONS

Mark	Revision	Date	Drawn	Checked	App'd
C	AMENDED TO REPLACE UPDATED MASTERPLAN	30.08.17	GC	ST	ST
B	BIO-RETENTION ZONES AMENDED	12.12.16	GC	RC	ST
A	AMENDED FOLLOWING CPA COMMENT	01.09.16	DRM	DRM	ST

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty is made as to its accuracy or depth. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status

PRELIMINARY

SURFACE WATER AND FOUL WATER DRAINAGE STRATEGY SHEET 5 OF 6 WEST CAMBRIDGE DENSIFICATION

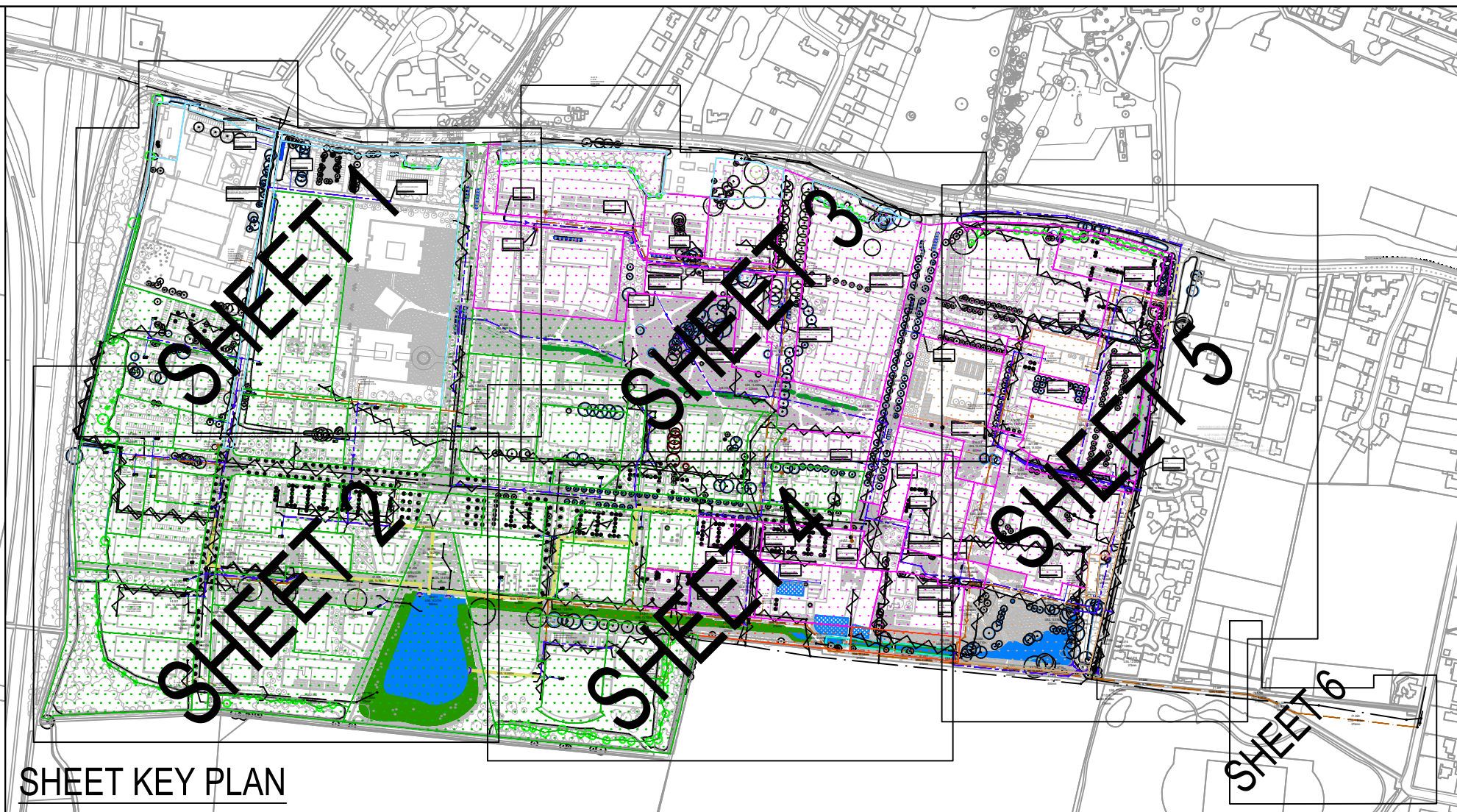
Client: UNIVERSITY OF CAMBRIDGE

Date of 1st Issue: 24.12.15 | Designed: DRM | Drawn: DRM | AD Scale: 1:500@AG | Checked: DRM | Approved: ST

Drawing Number: 31500/2001/154 | Revision: C

aba peterbrett

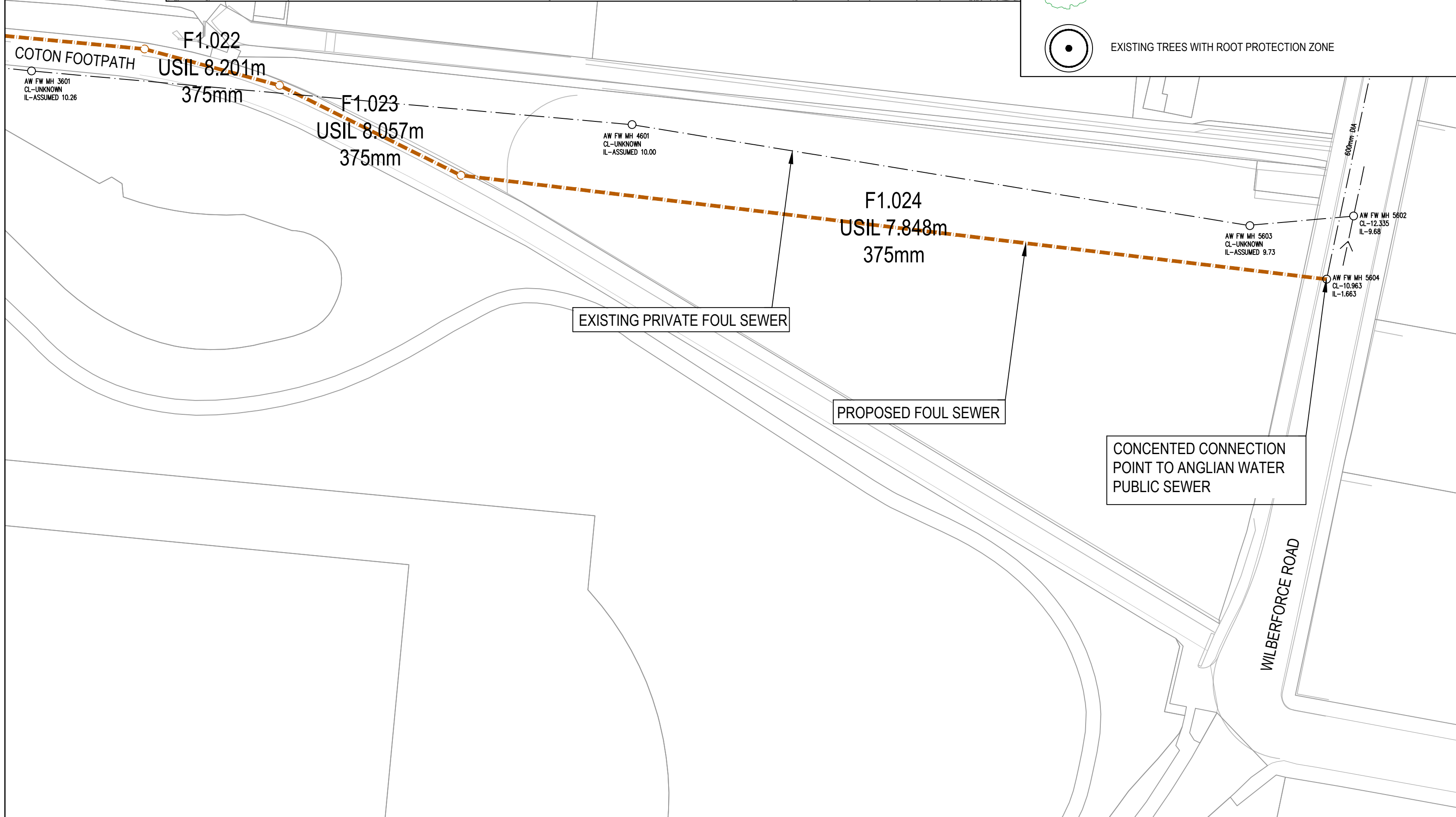
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KEY:

- EXISTING PIPE TO BE ABANDONED
- PROPOSED SURFACE WATER PIPE TO BE INSTALLED (SIZE TO BE DETERMINED)
- PROPOSED FOUL WATER PIPE TO BE INSTALLED
- EXISTING SURFACE WATER PIPE TO BE REPLACED WITH LARGER CAPACITY PIPE
- EXISTING SURFACE WATER PIPE
- EXISTING FOUL WATER PIPE
- INDIVIDUAL PLOT SPUR CONNECTION TO SURFACE WATER SEWER (WHERE ONSITE STORAGE IS TO BE PROVIDED - REFER TO AREAS SHOWN PINK, A FLOW RATE HAS BEEN CALCULATED BY MULTIPLYING THE 100yr GREEN FIELD RUNOFF RATE WITH THE EXTENT OF IMPERMEABLE AREA IN WHICH EXISTS ON PLOT)
- INDIVIDUAL PLOT SPUR CONNECTION TO FOUL WATER SEWER LAID AT 1/150 AND TO BE 150 DIA.
- INDICATIVE BIORETENTION AREAS
- PROPOSED SUDS SWALE
- PROPOSED TREE PLANTING
- EXISTING TREES WITH ROOT PROTECTION ZONE

- NOTES**
1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
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 - CAMLINE SERVICES CCTV SURVEY.
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 9. ON PLOT STORAGE ESTIMATES SHOWN ON THIS PLAN ARE BASED OFF THE 1:100 YEAR + 40%cc STORM EVENT AND ARE ASSUMING EACH PLOT WILL UTILISE A SINGLE CONTROL RELEASING WATER AT THE 1:1yr GREENFIELD RUNOFF RATE (MIN FLOW RATE OF 1 l/s - SEE NOTE 14).
 10. THE PIPE SIZES SHOWN ON THIS PLAN HAVE BEEN TESTED FOR FLOODING FOR THE 1:30 YEAR RETURN PERIOD STORM ONLY. IT WILL ALSO NEED TO BE DEMONSTRATED THAT FLOODING TO BUILDING AREAS DOES NOT OCCUR DURING THE 1:100 YEAR STORM EVENT + 40% CLIMATE CHANGE EVENT. WITHOUT ADEQUATE PROPOSED LEVELS HOWEVER, THIS CANNOT BE SATISFACTORILY DETERMINED AT THIS STAGE AND THEREFORE THE PIPE SIZES SHOWN ON THIS PLAN ARE SUBJECT TO RUNNING THIS SIMULATION WHEN PLOT LEVELS BECOME AVAILABLE
 11. ALL STORAGE VOLUMES SHOWN ON THIS PLAN HAVE INCLUDED FOR AN ADDITIONAL 40% ALLOWANCE FOR CLIMATE CHANGE. THIS REPRESENTS THE 'UPPER' LIMIT OF GOVERNMENT GUIDANCE
 12. THE COVER LEVELS SHOWN NORTH OF THE "ORIGINAL WATERSHED" LINE ON THIS PLAN ARE SUBJECT TO CHANGE AS PART OF THE OVERALL SITE EARTHWORKS. THESE SHOULD THEREFORE BE SEEN AS INDICATIVE AT THIS STAGE
 13. AREAS SHOWN HATCHED PINK ON THIS PLAN INDICATE AREAS WHERE ONSITE PLOT STORAGE (REFER TO NOTE 9) IS REQUIRED. INDIVIDUAL SITE DEVELOPERS ARE FREE TO DELIVER ON PLOT SURFACE WATER STORAGE AS THEY DEEM NECESSARY AND FITTING IN WITH THE CHARACTERISTICS OF THEIR DEVELOPMENT. IT IS ENVISAGED THIS WILL MEAN UTILISING SUDS FEATURES SUCH AS GREEN / BLUE ROOFS, SWALES AND PERMEABLE PAVING.
 14. IT IS ASSUMED THE MINIMUM SW DISCHARGE RATE FROM INDIVIDUAL PLOTS WILL BE CAPPED AT 1 l/s. IN ORDER TO REDUCE BLOCKAGE RISK ASSOCIATED WITH FLOW CONTROLS, MONTHLY INSPECTIONS OF ALL FLOW CONTROLS (IN ACCORDANCE WITH THE CAMBRIDGESHIRE SUDS ADOPTION GUIDE) WILL BE CARRIED OUT AND OVERFLOW WEIRS INSTALLED)
 15. PEAK FOUL FLOW RATES SHOWN ON THIS PLAN HAVE BEEN DETERMINED BY MULTIPLYING TOTAL PLOT DEVELOPABLE FLOOR AREAS (TAKEN FROM AECOM DEVELOPMENT SCHEDULE VERSION 5, DATES 10.02.2016) BY 2.25 l/s/ha. THIS CAPACITY HAS BEEN AGREED WITH ANGLIAN WATER.
 16. ALL FINISHED FLOOR LEVELS WILL BE ESTABLISHED TAKING IN TO FULL ACCOUNT DRAINAGE CONNECTIONS.
 17. WHILST AREAS SHOWN HATCHED GREEN ON THIS PLAN HAVE A FREE FLOW DISCHARGE TO THE EXISTING WESTERN LAKE, INDIVIDUAL PARCEL OCCUPIERS WILL BE REQUIRED TO IMPLEMENT MEASURES ONSITE TO PROVIDE TREATMENT OF FLOWS LEAVING PLOTS.
 18. ALL DEVELOPMENT PARCELS IMPLEMENTING SERVICE YARDS WILL BE REQUIRED TO ENSURE ALL RUNOFF LEAVING THESE AREAS IS PASSED THROUGH A CLASS 1 BYPASS SEPARATOR PRIOR TO RUNOFF ENTERING THE WIDER SURFACE WATER NETWORK
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C	AMENDED TO REPRESENT UPDATED MASTERPLAN	30.06.17	GC	ST	ST
B	BIO-RETENTION ZONES AMENDED	12.12.16	GC	RC	ST
A	AMENDED FOLLOWING CPA COMMENT	01.09.16	DRM	DRM	ST
Mark	Revision	Date	Drawn	Chkd	Appd

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Drawing Issue Status
PRELIMINARY

SURFACE WATER AND FOUL WATER DRAINAGE STRATEGY SHEET 6 OF 6 WEST CAMBRIDGE DENSIFICATION

Client
UNIVERSITY OF CAMBRIDGE



Date of 1st Issue	Designed	Drawn
24.12.15	DRM	DRM
A2 Scale	Checked	Approved
1:500@A2	ST	ST

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Drawing Number
31500/2001/154B

Revision
C

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
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4. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK OR PREPARING SHOP DRAWINGS.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS AND ARCHITECTS DRAWINGS AND SPECIFICATIONS.
6. THE PURPOSE OF THIS DRAWING IS TO IDENTIFY WHERE SURFACE WATER FLOODING ABOVE 6m³ ARISING FROM A 100yr + 40% CLIMATE CHANGE STORM EVENT OCCURS AND WHERE IT WILL BE STORED. IT SHOULD BE NOTED THAT WHERE FLOODING DOES OCCUR, FINISHED FLOOR LEVELS OF BUILDINGS WILL BE A MINIMUM OF 300mm ABOVE FLOOD LEVELS.
7. THE FLOOD DEPTHS AND LOCATIONS SHOWN ON THIS PLAN HAVE BEEN INFORMED BY A FULL MACRODRAINAGE NETWORK ANALYSIS OF THE PROPOSED SURFACE WATER SYSTEM. THE HYDRAULIC CALCULATIONS SHOULD BE REFERRED TO FOR MORE INFORMATION.
8. FOR FLOOD VOLUMES LESS THAN 6m³, PLEASE REFER TO STORM WATER CALCULATIONS.



B	AMENDED FOLLOWING CHANGES TO MASTERPLAN	30.06.17	GC	SF	ST
A	BIO-RETENTION AREAS AMENDED	12.12.16	GC	RC	ST
Mark	Revision	Date	Drawn	Chkd	Appd

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Drawing Issue Status

PRELIMINARY
100 YEAR PLUS 40% CLIMATE CHANGE FLOOD ROUTES AND OVERLAND EXCEEDANCE FLOW PATHS WEST CAMBRIDGE DENSIFICATION

Client
UNIVERSITY OF CAMBRIDGE

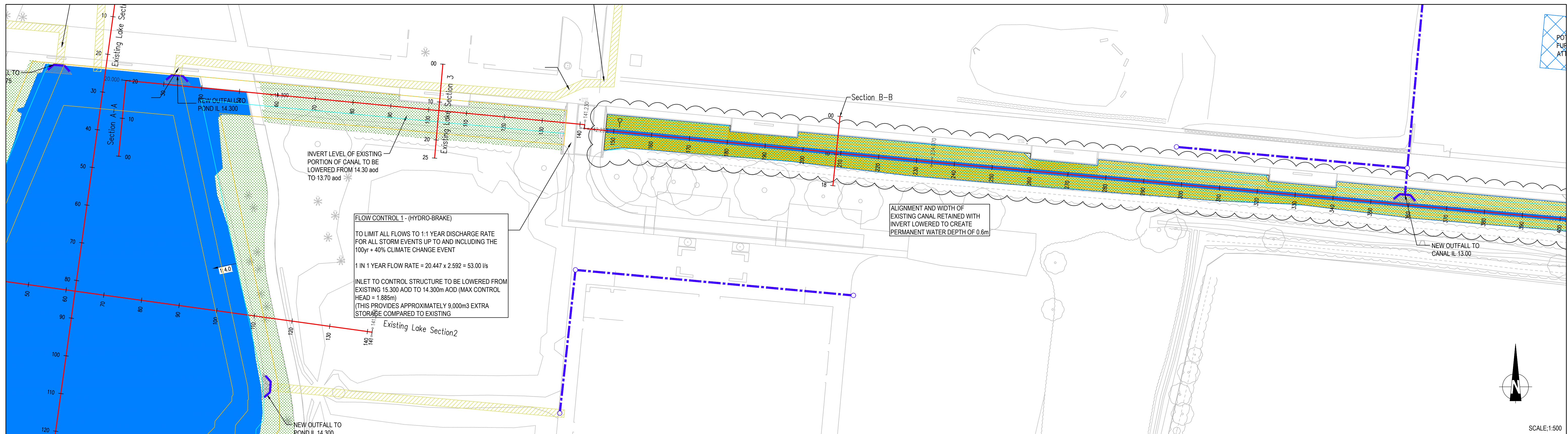
Date of 1st Issue	Designed	Drawn
07.11.2016	DRM	DRM
AO Scale	Checked	Approved
1:1250@A0	DRM	ST
Drawing Number	Revision	
31500/2001/157	B	

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KEY:

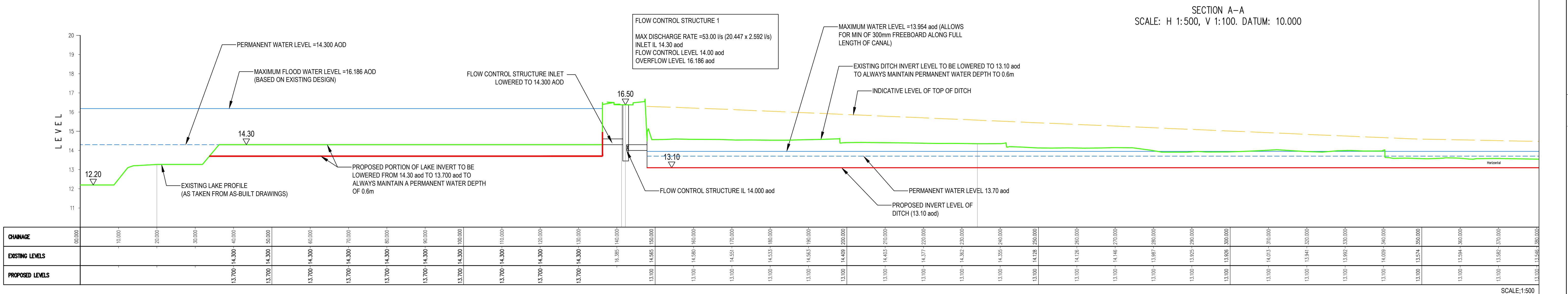
- INDICATIVE EXTENTS OF FLOOD WATER ARISING FROM CRITICAL 100yr + 40% CLIMATE CHANGE STORM EVENT
- OVERLAND FLOW ROUTE DURING EXCEEDANCE STORM EVENT (A STORM EVENT GREATER THAN THE 100 YEAR PLUS 40% CLIMATE CHANGE EVENT)

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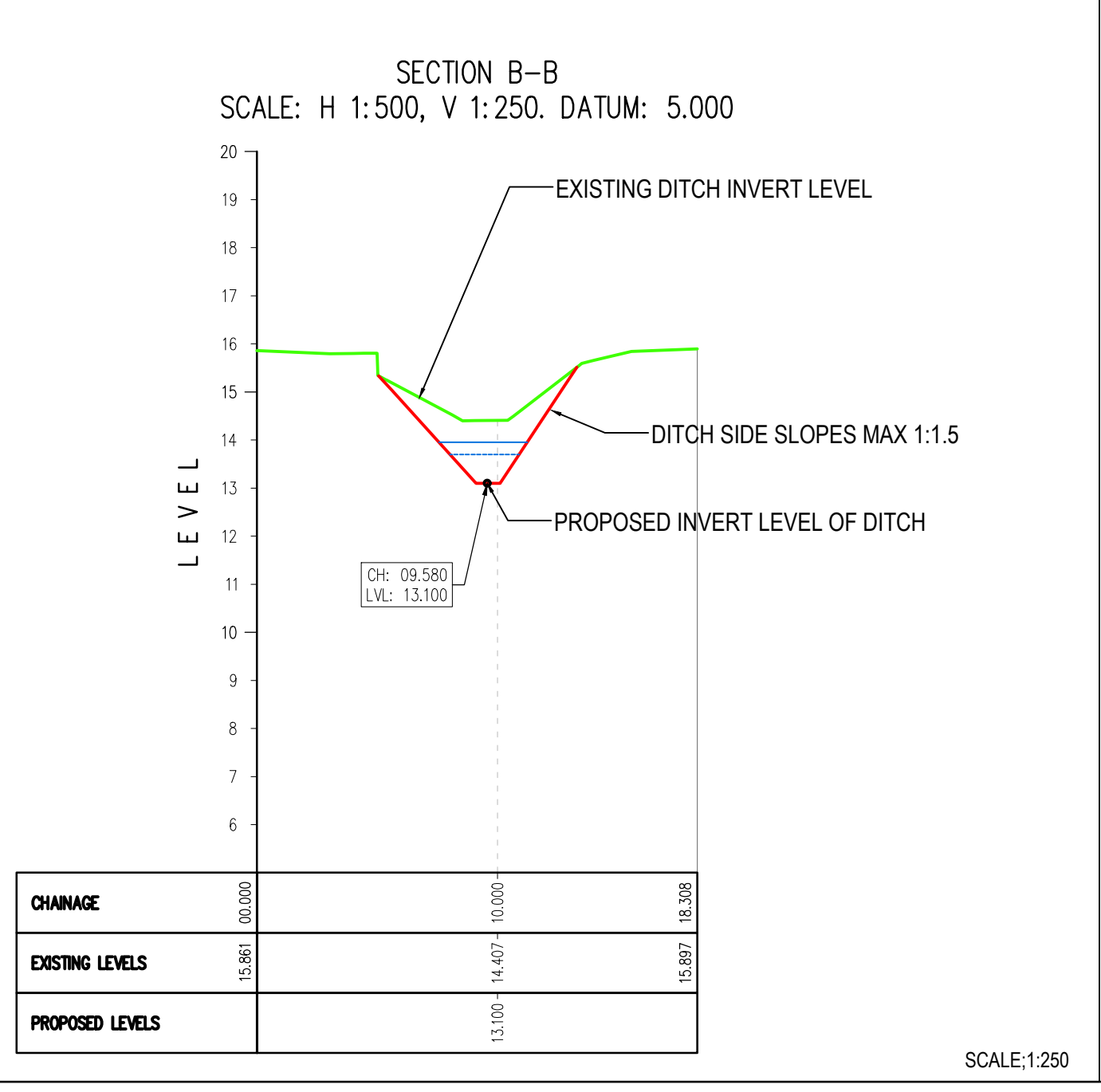


FLOW CONTROL 1 - (HYDRO-BRAKE)
 TO LIMIT ALL FLOWS TO 1:1 YEAR DISCHARGE RATE FOR ALL STORM EVENTS UP TO AND INCLUDING THE 100yr + 40% CLIMATE CHANGE EVENT
 1 IN 1 YEAR FLOW RATE = 20.447 x 2.592 = 53.00 l/s
 INLET TO CONTROL STRUCTURE TO BE LOWERED FROM EXISTING 15.300 AOD TO 14.300m AOD (MAX CONTROL HEAD = 1.885m)
 (THIS PROVIDES APPROXIMATELY 9,000m³ EXTRA STORAGE COMPARED TO EXISTING)

ALIGNMENT AND WIDTH OF EXISTING CANAL RETAINED WITH INVERT LOWERED TO CREATE PERMANENT WATER DEPTH OF 0.6m



CANAL LONG SECTION



SCALE:1:250

STORAGE FEATURE	EXISTING STORAGE VOLUME (m ³)	PROPOSED STORAGE VOLUME (m ³)
EASTERN LAKE	9,466m ³	18,334m ³
CANAL	UNKNOWN	554m ³
PAYNES POND	1,200m ³ APPROX	1,200m ³ APPROX (AS OF EXISTING)

- NOTES**
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
 - ALL LEVELS ARE IN METRES RELATIVE TO ORDNANCE DATUM NEWLYN UNLESS NOTED OTHERWISE.
 - ALL COORDINATES ARE IN METRES RELATIVE TO ORDNANCE SURVEY NATIONAL GRID.
 - THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK OR PREPARING SHOP DRAWINGS.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS AND ARCHITECTS DRAWINGS AND SPECIFICATIONS.
 - PROFILES OF EXISTING STORAGE FEATURES SHOWN ON THIS PLAN HAVE BEEN BASED OFF AS-BUILT INFORMATION AND VERIFIED VISUALLY FROM A SITE VISIT

Mark	Revision	Date	Drawn	Chkd	Appd
C	MASTERPLAN UPDATED	30.06.17	GC	ST	ST
B	NOTES AMENDED	12.12.16	GC	RC	ST
A	AMENDED IN-LINE WITH CCC COMMENT	03.11.16	DRM	DRM	ST

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.
 UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status

PRELIMINARY

PROPOSED WORKS TO EXISTING DRAINAGE INFRASTRUCTURE WEST CAMBRIDGE DENSIFICATION (SHEET 2 OF 3)

Client
WEST CAMBRIDGE

Date of 1st Issue 19.04.2016	Designed DRM	Drawn DRM
A1 Scale AS SHOWN	Checked DRM	Approved ST
Drawing Number 31500/2006/117	Revision C	

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