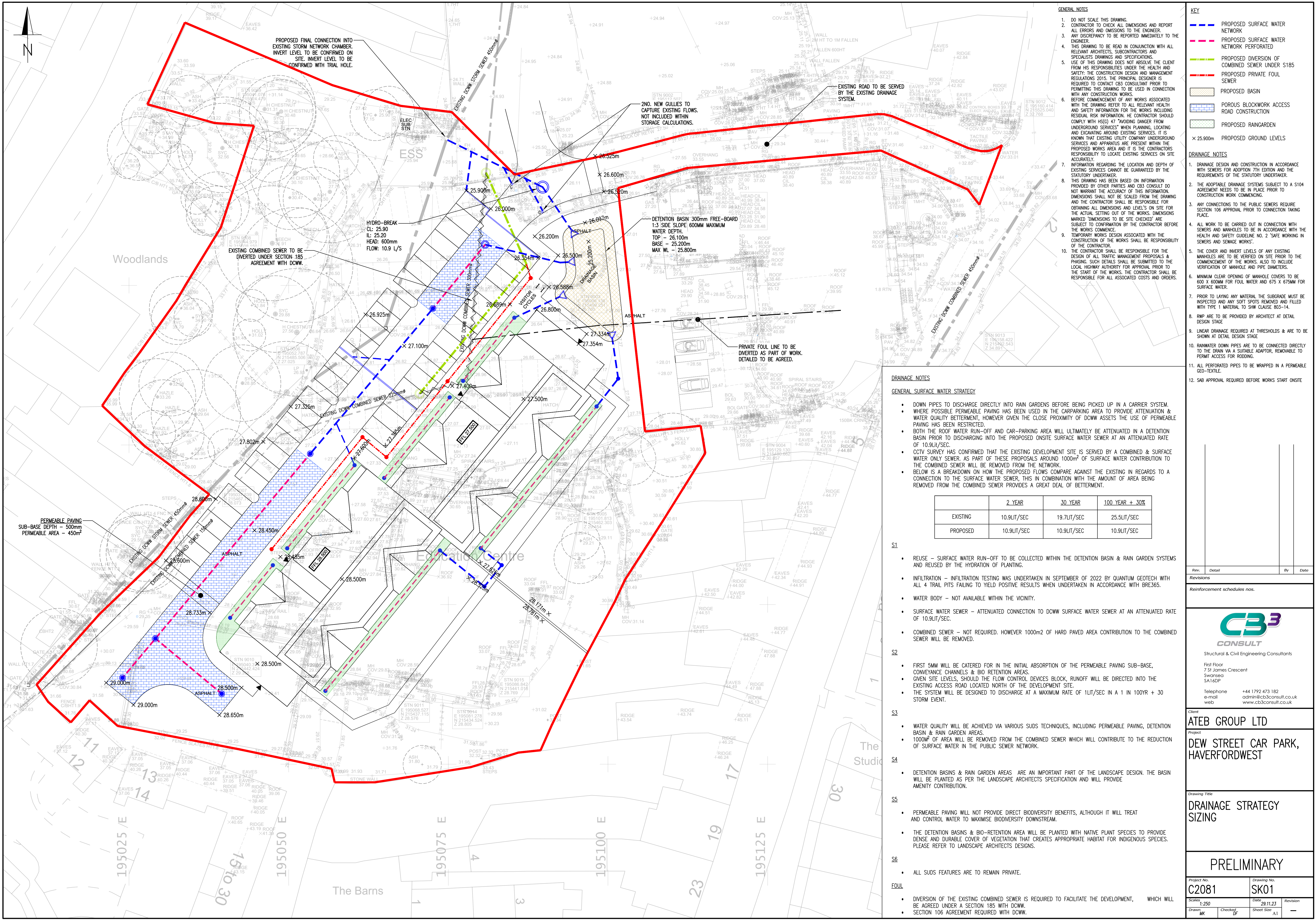




GENERAL NOTES

- DO NOT SCALE THIS DRAWING.
- CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE ENGINEER.
- ANY DISCREPANCY TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
- USE OF THIS DRAWING DOES NOT ABSOLVE THE CLIENT FROM HIS RESPONSIBILITIES UNDER THE HEALTH AND SAFETY, THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015. THE PRINCIPAL DESIGNER IS REQUIRED TO CONTACT CB3 CONSULTANT PRIOR TO PERMITTING THIS DRAWING TO BE USED IN CONNECTION WITH ANY CONSTRUCTION WORKS.
- BEFORE COMMENCEMENT OF ANY WORKS ASSOCIATED WITH THE DRAWING REFER TO ALL RELEVANT HEALTH AND SAFETY INFORMATION FOR THE WORKS INCLUDING RESIDUAL RISK INFORMATION. HE CONTRACTOR SHOULD COMPLY WITH HS(G) 47 "AVOIDING DANGER FROM UNDERGROUND SERVICES" WHEN PLANNING, LOCATING AND EXCAVATING AROUND EXISTING SERVICES. IT IS KNOWN THAT EXISTING UTILITY COMPANY UNDERGROUND SERVICES AND APPARATUS ARE PRESENT WITHIN THE PROPOSED WORKS AREA AND IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE EXISTING SERVICES ON SITE ACCURATELY.
- INFORMATION REGARDING THE LOCATION AND DEPTH OF EXISTING SERVICES CANNOT BE GUARANTEED BY THE STATUTORY UNDERTAKER.
- THIS DRAWING HAS BEEN BASED ON INFORMATION PROVIDED BY OTHER PARTIES AND CB3 CONSULT DO NOT WARRANT THE ACCURACY OF THIS INFORMATION. DIMENSIONS SHALL NOT BE SCALED FROM THE DRAWING AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL DIMENSIONS AND LEVELS ON SITE FOR THE ACTUAL SETTING OUT OF THE WORKS. DIMENSIONS MARKED "DIMENSIONS TO BE SITE CHECKED" ARE SUBJECT TO CONFIRMATION BY THE CONTRACTOR BEFORE THE WORKS COMMENCE.
- TEMPORARY WORKS DESIGN ASSOCIATED WITH THE CONSTRUCTION OF THE WORKS SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL TRAFFIC MANAGEMENT PROPOSALS & PHASING. SUCH DETAILS SHALL BE SUBMITTED TO THE LOCAL HIGHWAY AUTHORITY FOR APPROVAL PRIOR TO THE START OF THE WORKS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASSOCIATED COSTS AND ORDERS.

KEY

- PROPOSED SURFACE WATER NETWORK
- PROPOSED SURFACE WATER NETWORK PERFORATED
- PROPOSED DIVERSION OF COMBINED SEWER UNDER S185
- PROPOSED PRIVATE FOUL SEWER
- PROPOSED BASIN
- POROUS BLOCKWORK ACCESS ROAD CONSTRUCTION
- PROPOSED RAINGARDEN
- 25.900m PROPOSED GROUND LEVELS

DRAINAGE NOTES

- DRAINAGE DESIGN AND CONSTRUCTION IN ACCORDANCE WITH SEWERS FOR ADOPTION 7TH EDITION AND THE REQUIREMENTS OF THE STATUTORY UNDERTAKER.
- THE ADAPTABLE DRAINAGE SYSTEMS SUBJECT TO A S104 AGREEMENT NEEDS TO BE IN PLACE PRIOR TO CONSTRUCTION WORK COMMENCING.
- ANY CONNECTIONS TO THE PUBLIC SEWERS REQUIRE SECTION 106 APPROVAL PRIOR TO CONNECTION TAKING PLACE.
- ALL WORK TO BE CARRIED OUT IN CONNECTION WITH SEWERS AND MANHOLES TO BE IN ACCORDANCE WITH THE HEALTH AND SAFETY GUIDELINE NO. 2 'SAFE WORKING IN SEWERS AND SEWAGE WORKS'.
- THE COVER AND INVERT LEVELS OF ANY EXISTING MANHOLES ARE TO BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORKS. ALSO TO INCLUDE VERIFICATION OF MANHOLE AND PIPE DIAMETERS.
- MINIMUM CLEAR OPENING OF MANHOLE COVERS TO BE 600 X 600MM FOR FOUL WATER AND 675 X 675MM FOR SURFACE WATER.
- PRIOR TO LAYING ANY MATERIAL THE SUBGRADE MUST BE INSPECTED AND ANY SOFT SPOTS REMOVED AND FILLED WITH TYPE 1 MATERIAL TO SHW CLAUSE 803-14.
- RWP ARE TO BE PROVIDED BY ARCHITECT AT DETAIL DESIGN STAGE
- LINEAR DRAINAGE REQUIRED AT THRESHOLDS & ARE TO BE SHOWN AT DETAIL DESIGN STAGE
- RAINWATER DOWN PIPES ARE TO BE CONNECTED DIRECTLY TO THE DRAIN VIA A SUITABLE ADAPTOR, REMOVABLE TO PERMIT ACCESS FOR ROOING.
- ALL PERFORATED PIPES TO BE WRAPPED IN A PERMEABLE GEO-TEXTILE.
- SAB APPROVAL REQUIRED BEFORE WORKS START ONSITE

DRAINAGE NOTES

GENERAL SURFACE WATER STRATEGY

- DOWN PIPES TO DISCHARGE DIRECTLY INTO RAIN GARDENS BEFORE BEING PICKED UP IN A CARRIER SYSTEM.
- WHERE POSSIBLE PERMEABLE PAVING HAS BEEN USED IN THE CARPARKING AREA TO PROVIDE ATTENUATION & WATER QUALITY BETTERMENT, HOWEVER GIVEN THE CLOSE PROXIMITY OF DCWW ASSETS THE USE OF PERMEABLE PAVING HAS BEEN RESTRICTED.
- BOTH THE ROOF WATER RUN-OFF AND CAR-PARKING AREA WILL ULTIMATELY BE ATTENUATED IN A DETENTION BASIN PRIOR TO DISCHARGING INTO THE PROPOSED ONSITE SURFACE WATER SEWER AT AN ATTENUATED RATE OF 10.9LIT/SEC.
- CDTV SURVEY HAS CONFIRMED THAT THE EXISTING DEVELOPMENT SITE IS SERVED BY A COMBINED & SURFACE WATER ONLY SEWER. AS PART OF THESE PROPOSALS AROUND 1000m² OF SURFACE WATER CONTRIBUTION TO THE COMBINED SEWER WILL BE REMOVED FROM THE NETWORK.
- BELOW IS A BREAKDOWN ON HOW THE PROPOSED FLOWS COMPARE AGAINST THE EXISTING IN REGARDS TO A CONNECTION TO THE SURFACE WATER SEWER, THIS IN COMBINATION WITH THE AMOUNT OF AREA BEING REMOVED FROM THE COMBINED SEWER PROVIDES A GREAT DEAL OF BETTERMENT.

	2 YEAR	30 YEAR	100 YEAR + 30%
EXISTING	10.9LIT/SEC	19.7LIT/SEC	25.5LIT/SEC
PROPOSED	10.9LIT/SEC	10.9LIT/SEC	10.9LIT/SEC

S1

- REUSE - SURFACE WATER RUN-OFF TO BE COLLECTED WITHIN THE DETENTION BASIN & RAIN GARDEN SYSTEMS AND REUSED BY THE HYDRATION OF PLANTING.
- INFILTRATION - INFILTRATION TESTING WAS UNDERTAKEN IN SEPTEMBER OF 2022 BY QUANTUM GEOTECH WITH ALL 4 TRAIL PITS FAILING TO YIELD POSITIVE RESULTS WHEN UNDERTAKEN IN ACCORDANCE WITH BRE365.
- WATER BODY - NOT AVAILABLE WITHIN THE VICINITY.
- SURFACE WATER SEWER - ATTENUATED CONNECTION TO DCWW SURFACE WATER SEWER AT AN ATTENUATED RATE OF 10.9LIT/SEC.
- COMBINED SEWER - NOT REQUIRED. HOWEVER 1000m² OF HARD PAVED AREA CONTRIBUTION TO THE COMBINED SEWER WILL BE REMOVED.

S2

- FIRST 5MM WILL BE CATERED FOR IN THE INITIAL ABSORPTION OF THE PERMEABLE PAVING SUB-BASE, CONVEYANCE CHANNELS & BIO RETENTION AREAS.
- GIVEN SITE LEVELS, SHOULD THE FLOW CONTROL DEVICES BLOCK, RUNOFF WILL BE DIRECTED INTO THE EXISTING ACCESS ROAD LOCATED NORTH OF THE DEVELOPMENT SITE.
- THE SYSTEM WILL BE DESIGNED TO DISCHARGE AT A MAXIMUM RATE OF 1LIT/SEC IN A 1 IN 100YR + 30 STORM EVENT.

S3

- WATER QUALITY WILL BE ACHIEVED VIA VARIOUS SUDS TECHNIQUES, INCLUDING PERMEABLE PAVING, DETENTION BASIN & RAIN GARDEN AREAS.
- 1000m² OF AREA WILL BE REMOVED FROM THE COMBINED SEWER WHICH WILL CONTRIBUTE TO THE REDUCTION OF SURFACE WATER IN THE PUBLIC SEWER NETWORK.

S4

- DETENTION BASINS & RAIN GARDEN AREAS ARE AN IMPORTANT PART OF THE LANDSCAPE DESIGN. THE BASIN WILL BE PLANTED AS PER THE LANDSCAPE ARCHITECTS SPECIFICATION AND WILL PROVIDE AMENITY CONTRIBUTION.

S5

- PERMEABLE PAVING WILL NOT PROVIDE DIRECT BIODIVERSITY BENEFITS, ALTHOUGH IT WILL TREAT AND CONTROL WATER TO MAXIMISE BIODIVERSITY DOWNSTREAM.
- THE DETENTION BASINS & BIO-RETENTION AREA WILL BE PLANTED WITH NATIVE PLANT SPECIES TO PROVIDE DENSE AND DURABLE COVER OF VEGETATION THAT CREATES APPROPRIATE HABITAT FOR INDIGENOUS SPECIES. PLEASE REFER TO LANDSCAPE ARCHITECTS DESIGNS.

S6

- ALL SUDS FEATURES ARE TO REMAIN PRIVATE.

FOUL

- DIVERSION OF THE EXISTING COMBINED SEWER IS REQUIRED TO FACILITATE THE DEVELOPMENT, WHICH WILL BE AGREED UNDER A SECTION 185 WITH DCWW.
- SECTION 106 AGREEMENT REQUIRED WITH DCWW.

Rev.	Detail	By	Date
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Revisions

Reinforcement schedules nos.



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Client

ATEB GROUP LTD

Project

DEW STREET CAR PARK,
HAVERFORDWEST

Drawing Title

DRAINAGE STRATEGY
SIZING

PRELIMINARY

Project No.	Drawing No.
C2081	SK01
Scales	Date
1:250	29.11.23
Drawn	Checked
WK	DF
Sheet Size	Revision
A1	-