

THE PROPOSED SURFACE WATER DRAINAGE SCHEME WILL COMPLY BY ADHERING TO THE SIX STANDARD PRINCIPLES WHILST DISCHARGING TO AN AGREED RUN-OFF RATE.

ATTENUATION SHALL BE ACHIEVED BY POROUS PAVING WITH LINED SUB-BASE.

THE BIO-RETENTION AREA IS ALSO AN ADDED AMENITY
FEATURE, WITH A FOOTPATH TO BE PROVIDED FOR ACCESS
WITH BENCH SEATING

THE PROPOSED RUN-OFF WILL BE DISPOSED OF VIA A CONNECTION TO THE EXISTING SW STRATEGIC SEWER SERVING THE SITE AND DISCHARGED AT A PRE-AGREED RATE OF 59.6 l/s.

STANDARD 2 - SURFACE WATER RUNOFF HYDRAULIC CONTROL

FLOW RESTRICTION SHALL BE ACHIEVED BY UTILISING FLOW CONTROL CHAMBERS WITH ORIFICE PLATES FITTED.

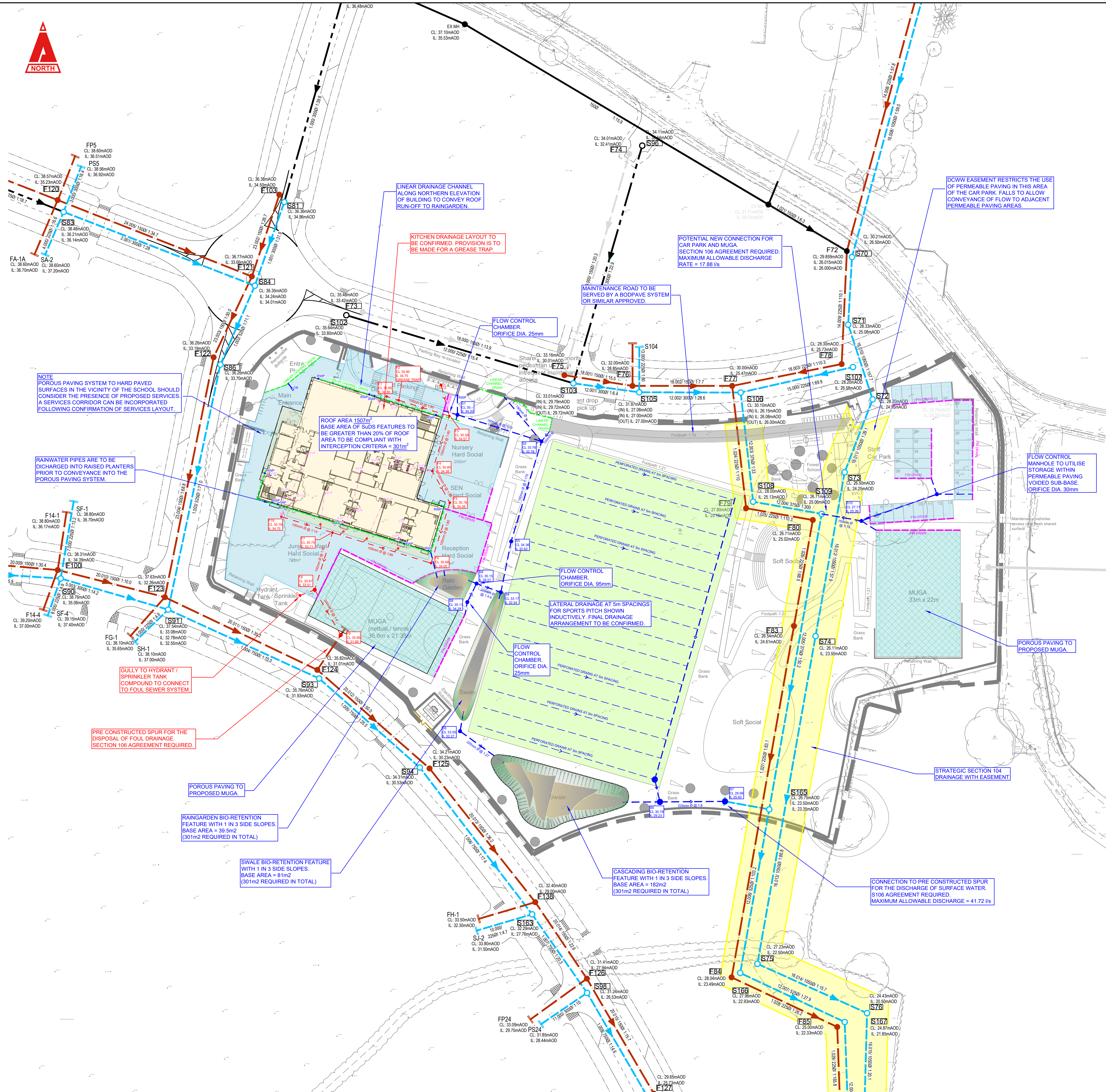
THE PROPOSED RUN-OFF SHALL BE TREATED THROUGH A PROCESS OF FILTRATION VIA A COMBINATION OF RAISED PLANTERS, POROUS PAVING WITH LINED VOIDED SUB-BASE AND A BIO-RETENTION FEATURE.

THE PROVISION OF A BIO-RETENTION AREA SHALL PROVIDE AMENITY. THIS SUDS FEATURE WOULD BE ENHANCED VIA THE PROVISION OF A SURROUNDING FOOTPATH, SPECIFIC PLANTING AND SEATED AREAS, WITH INFORMATION BOARDS PROVIDING FURTHER AMENITY.

THE SCHEME PROVIDES BIODIVERSITY VIA THE PROVISION OF
SUDS FEATURES THAT WILL BENEFIT FROM SPECIFIED
PLANTING.

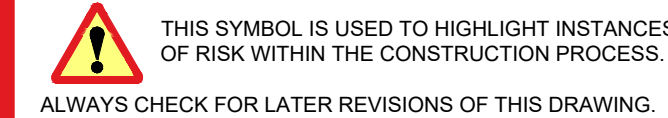
THE SUDS SOLUTION HAS BEEN DESIGNED IN ACCORDANCE WITH THE SUDS MANUAL AND IS GENERALLY SERVED BY SHALLOW SUDS FEATURES. THERE ARE NO INHERENT SAFETY ISSUES WITH THE PROPOSED SCHEME AND ANY ISSUES WILL BE ADDRESSED VIA DESIGNER'S RISK ASSESSMENTS DURING THE REMAINDER OF THE DESIGN PROCESS.

THE FLOWS SHALL BE DIRECTED AWAY FROM THE PROPOSED BUILDING AND FOLLOW PRE-DEVELOPMENT FLOOD FLOW ROUTES.



DO NOT SCALE FROM THIS DRAWING

THE CONTRACTOR IS TO REFER TO THE SPECIFICATION FULL SCHEDULE OF RESIDUAL RISKS IN THE CONTRACT DOCUMENTATION AND ALSO TO INFORMATION FROM OTHER DESIGNERS, IN PARTICULAR THE M&E CONSULTANT REGARDING EXISTING LIVE SERVICES.



1. SURFACE WATER DISPOSAL TO COMPLY WITH SUDs HIERARCHY AS SET OUT IN BUILDING REGULATIONS AND NATURAL RESOURCES WALES GUIDANCE.
2. THE IMPERMEABLE CATCHMENT AREA = $7,261\text{ m}^2$. (0.72ha)
3. WARDLE ARMSTRONG DRAINAGE NETWORK ALLOWS FOR IMPERMEABLE AREA OF 0.599HA FOR SCHOOL SITE.
4. THE SURFACE WATER DRAINAGE SCHEME WILL NEED TO BE DESIGNED IN ACCORDANCE WITH THE 'STATUTORY STANDARDS FOR SUSTAINABLE DRAINAGE SYSTEMS' - WHICH ARE CONSTRUCTING OPERATING AND MAINTAINING SURFACE WATER DRAINAGE SYSTEMS' AND WILL BE SUBJECT TO SUDS APPROVAL BODY (SAB) APPROVAL.
5. PROPOSED SURFACE WATER DISCHARGE RATES FROM WARDLE ARMSTRONG MODEL
 - 1YR - 59.6 l/s
 - 10YR - 113.6 l/s
 - 10YR - 137.6 l/s
6. MEETING THE 5min INTERCEPTION CRITERIA (NO INFILTRATION) ALL EXTERNAL HANDSTANDING TO BE A MIXTURE OF PERMEABLE AND RUNOFF DIRECTLY INTO THE DRAINAGE AREA. MINIMUM INFILTRATION WHERE POSSIBLE. 150^{mm} OF ROOF AREA REQUIRES INTERCEPTION PROVISIONS (5:1 RATIO). THEREFORE SUB BASE AREA OF 301^m REQUIRED. THE PROPOSED LAUNCH PAD AND 302^m
7. STORAGE VOLUME FOR THE 1 IN 100 YR + 40% CC EVENT USING MICRO DRAINAGE QUICK STORAGE ESTIMATE TO BASED ON 1YR ALLOWABLE DISCHARGE RATE GIVEN BY WARDLE ARMSTRONG MODEL
8. POROUS PAVING SUB-BASE VOLDS (30%) PROVIDE APPROXIMATELY 300^m STORAGE CAPACITY.

	PROPOSED FW DRAINAGE
	PROPOSED SW DRAINAGE
	PROPOSED FW INTERNAL DRAINAGE
	POROUS PAVING WITH TANKED SUB-BASE
	BODPAVE SYSTEM
	FIN DRAIN
	LINEAR DRAINAGE
	RAINWATER PIPE
	RAINGARDEN
	RAISED PLANTER

 PROPOSED FW DRAINAGE
 PROPOSED SW DRAINAGE
 EASEMENT

P07	ISSUED FOR PLANNING.	LW	BW	02/10/25
P06	TENDER ISSUE.	PY	BW	12/08/25
				12/08/25
P05	REVISED TO SUIT LEVEL CHANGES.	PY	BW	14/04/25
P04	RIBA STAGE 3.	PY	BW	02/09/25
P01	DRAFT ISSUE FOR INFORMATION.	PY	BW	29/11/25
Rev.	Description	By	Chk	



REDROW
HOMES

LLANWERN PRIMARY
SCHOOL

DRAINAGE STRATEGY

SuDS CONCEPT

Drawing No. CC1823 CAM ZZ 00 DR C 52 1101

Project No.	Org.	Vol.	Level	Type	Dis.	Class	N
Suitability Status:			Scale @A1:		Rev:		
S1 PRELIMINARY			1:500		P0		

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