Existing School Building

Proposed canopy to connect to nearest existing surface water drain

Existing hardstanding canopys to connect to nearest existing surface water drain

Surface and foul water drains diverted

Surface water drain diverted

School Extension

School Extension

Rainwater goods to the West boundary to connect to the nearest existing surface water drain

Existing Land Drain
Note, existing land drain runs parallel with the existing boundary line - refer to as-built drainage general arrangements

SUDs Planter and Swale
Designed to accommodate the first 5mm of rainfall

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Backdrop required at this location

New manhole or saddle connection on existing surface water line

Carrier drain to be non-perforated to manhole with silt trap

Carrier drain above attenuation tank - location to be adjusted to suit once final pitch location is agreed

Hydro-Brake Manhole
Discharge : 0.50l/s

Proposed 1800mm Ø weir wall manhole to discharge exceedance flows to existing off-site drain. Top of weir wall level TBC. Manhole to include overflow weir wall constructed in concrete preferably part of the precast chamber

Storm Water Attenuation Tank
The surface water attenuation system has been designed to accommodate a 1 in 100 year storm event with an additional 50% allowance for climate change, in line with current guidance.

Underground attenuation volume: up to 283 m³

Additional allowance for unknown surface water sources: 25 m³

Above-ground exceedance storage (via swale/landform): 50 m³

Total available storage: approximately 358 m³

For layout and volume allocation for above ground storage, refer to drawing no. 5666.

All land drains to be 100mm slotted or perforated pipes

Indicative General Arrangement Only (although pipes will be at maximum 4m centres) - Client to confirm whether new field drainage is required

Land Drainage
New Land drainage outfall to connection to existing outfall/manhole location - refer to as-built drainage general arrangements

Existing Outfall
Welsh Water Manhole
SJ28459799
Lower Mountain Road

Existing Swale

Existing Outfall
Discharge Rate : 4.3l/s
Stream outside of site boundary
Refer to As-Built Drainage General Arrangement

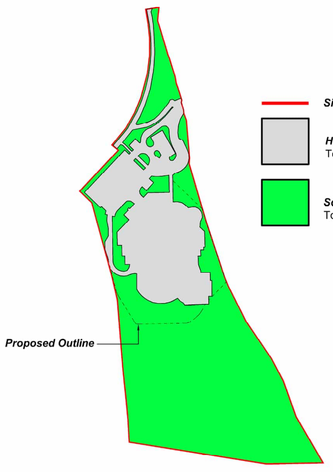
Image A (IA)



Image B (IB)



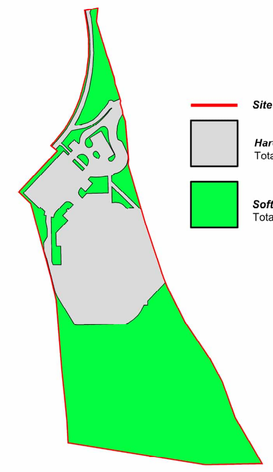
Drainage General Arrangement
(Scale 1:250)



Existing Topographic Survey
(Scale 1:2500)

Existing Areas
- Site = 29950m²
- Hardstanding = 9185m²

31% Hardstanding



Proposed Site Layout
(Scale 1:2500)

Proposed Areas
- Site = 29950m²
- Hardstanding = 11375m²

38% Hardstanding

Drainage Strategy Information

Site Area
2.995h - Brownfield

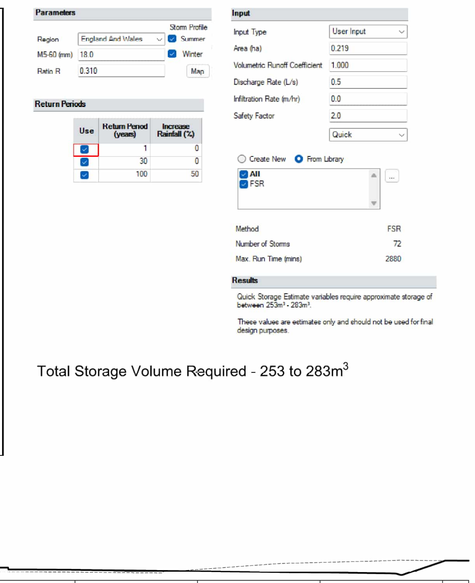
Brownfield Runoff Rate
4.3l/s (Existing Attenuated Surface Water)

Run Off Co-Efficients

Hardstanding Areas	-	1.00

Hardstanding Areas

Building and Play Area	-	1137.5m²
Existing Hardstanding Area Built Upon	-	1955m²
Approximate Discharge Rate from Built Upon Area	-	0.92l/s
Minimum Hydrobrake Flow Control	-	0.50l/s
Proposed Betterment	-	46%
Proposed Hardstanding Area to be Attenuated	-	2190m²
Storage Volume Required	-	up to 283m³



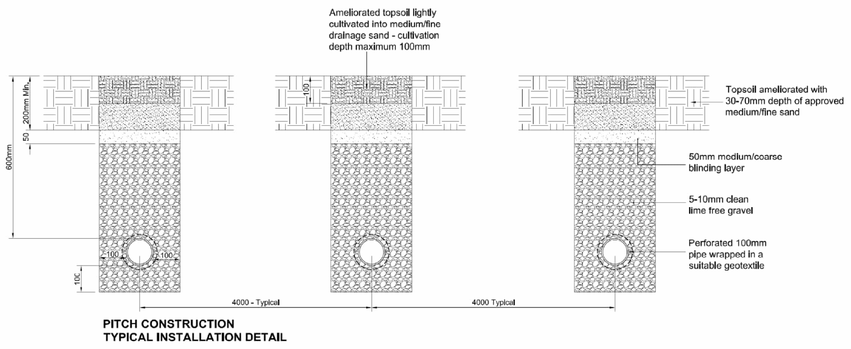
Total Storage Volume Required - 253 to 283m³

Level	180 / 179 / 178 / 177 / 176 / 175					
Chainage	00.000	10.000	20.000	30.000	40.000	42.126
Existing Levels	175.736	175.655	175.892	176.455	176.607	176.599
Proposed Levels	176.050	175.865	175.744	175.638	176.528	176.599
Level Difference	0.312	0.210	-0.148	-0.818	-0.079	0.000

BUILDING TO FOOTBALL PITCH - LONGSECTION
SCALE: H 1:50,V 1:50. DATUM: 175.000



Swale/Bank Typical Section
(Scale 1:50)



PITCH CONSTRUCTION
TYPICAL INSTALLATION DETAIL

Drainage Key

- ***Proposed Surface Water Manhole***
- ***Proposed Surface Inspection Chamber***
- ***Proposed Surface Water Drain***
- ***Proposed Foul Inspection Chamber***
- ***Proposed Foul Water Drain***
- ***Existing Manhole***
- ***Existing Surface Water Drain***
- ***Existing Foul Water Drain***
- ***Fin Drain***
- ***Perforated Surface Water Drain***
- ***Proposed Attenuation Tank*** (Plastic Crates)
- ***Proposed Swale***
- ***Existing Swale***
- ***New Impermeable Surface***
- ***New Permeable Surface*** Closed System (Impermeable Subsoils)
- ***New SUDs Planter*** - picking up down pipes from roof

Client: **Wrexham County Borough Council**	Project: **Proposed Extension - Ysgol I.D. Hooson**	Drawing Title: **Drainage Strategy General Arrangement**	Drawing Number: **IDH-ENA-XX-XX-D-C-5006**		
			Purpose of Issue: **Preliminary**		
			Revision: **P3**	P3	23.06.25 DRB DRB ***Updated*** - 0.5l/s Discharge Rate (46% Betterment over Brownfield)
			Status: **S2**	Rev	Date Drn Chk Details

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