Drainage Notes:

- This drawing is to be read in conjunction with all relevant Architect's, Engineer's and other specialists' drawings
- The contractor is responsible for checking dimensions and levels and for confirming the given level of outfall into public sewer, watercourse or other detail
- Refer to architect for all setting out
- Work to figured dimension only. Do not scale
- All works to be in accordance with BS EN752: British Standard for drain and sewer systems outside buildings and the Building Regulations and Sewers for Adoption 7th Addition
- All clay pipework and fittings to be plain and vitrified clay with flexible polypropylene couplings as Hepworth supersleeve or Naylor densleeve. All concrete pipework to be to BS5911
- All gravity PVCU pipework to be to BS4660 or BS5481 where relevant unless noted otherwise
- Trenches for pipework under roads and access ways to be backfilled with granular material in accordance with the requirements of the local authority
- All pipes under roads, car parking and access ways with depth less than 1200mm to have 150mm concrete bed & surround
- All pipes to be laid on Class S granular bed and surround
- Polypropylene access chambers to be min. 225 dia for depths up to 600mm and a min. 450 dia. for depths up to 1000mm. 600 dia. IC's for 225/300mm pipe
- All chamber and manhole covers and frames in roads, foot paths and access ways to be to BS EN 124 class D400. In gardens, landscaped areas to be to class B125
- Minimum pipe diameter under roads and access ways to be 150mm uno
- Foul water - all pipes beneath buildings and from SVP's, gullies and WC connections to access chambers to be 100mm at a minimum gradient of 1:40 unless noted otherwise. Min. gradient of 100mm pipe between access chambers outside building to be 1:80 uno
- Surface water - Min. gradient of 100mm pipe between access chambers/rodding eyes outside buildings to be 1:100 uno
- Foul Water : minimum pipe gradients to achieve 0.75m/s at one third design flow. Surface Water : minimum pipe gradients to achieve 1.00m/s at pipe full flow
- Connection to existing public sewer manhole to be agreed with Welsh Water
- All materials are to fully comply with the requirements of clause "E" in sewers for adoption 7th edition, of which the contractor must fully acquaint himself with to ensure compliance.
- Subject to a section 104 Adoption Agreement being complete, a Section 106 application to connect must be made to DCWW, the developer sENAI give 21 days' notice prior to connection. The works may only be undertaken by an SSIP health & safety approved contractor.
- The developer must self-vet and certify that the design criteria, material standards and workmanship specifications for the proposed adoptable sewers are in accordance with those set out in "Sewers For Adoption 7th Edition, The Welsh Ministers Standards and the requirements of DCWW as the Statutory Sewerage Undertaker.

⚠ Important Note: following formation dig highlight any apparent hardstanding low points that arent served by a gully or aco drain - additional drainage may be required

New Kerb Lines
A new drainage channel and associated pipework shall be installed to discharge into the nearest appropriate surface water system, thereby mitigating the risk of overloading the existing gully

Heat Exchange Compound
A new drainage channel and associated pipework shall be installed to discharge into the nearest appropriate surface water system

Footpath
A new drainage channel and associated pipework shall be installed to discharge into the nearest appropriate surface water system to prevent any surface water runoff from upstream (car park area) which may over top the 25mm kerb upstand

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

Drainage in close proximity of trees and within root zone to be wrapped in a suitable polyethylene root barrier with welded joints

Existing School Building

possible future parking expansion

Existing hardstanding canopys to connect to nearest existing surface water drain

Due to no SUDs planters, SIC2 to be oversized/sumped with a perforated base to allow for storage/slow percolation within the natural ground to retain the 5mm interception rate

Surface water drain diverted

School Extension

RWP/SVP to be confirmed by both the Architect and M&E Engineer

All Internal (below ground) Foul - 100mm

School Extension

Surface and foul water drains diverted

Existing Manholes
F16 and S20 not lifted during survey — proposed invert levels to be confirmed and adjusted on site once access is possible

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

Existing Water Main
Note, existing water main runs parallel with the existing boundary line - refer to M&E consultant service drawings

Drainage channel provided to all access door thresholds - connected to the nearest surface water outfall (chamber/pipe)

Important Note: all 100mm SVP/toilet connections to have direct connections to external inspection chamber or manholes - sink connections only to be branched off main runs

SUDs Planter and Swale
Designed to accommodate the first 5mm of rainfall (Rain Garden locations have been shifted to avoid clash with existing manhole/inspection chamber covers)

Important Note: allow for 50m long aco drain to pick up existing hardstanding area previously picked up by 3 No. gullys

Plastic uPVC (Typical Throughout)

SO - swale outlet, 150mm pipe from 450mm sumped (300mm deep), grated cover, concrete inspection chamber

All inlet/outlet tank pipes minimum of 225mm

Backdrop (**BD**) required at this location

New manhole or saddle connection on existing surface water line

Hydro-Brake Manhole (SMH3)
Discharge : 6.0l/s
Ref : SHE-0092-6000-2900-6000
Design Head : 2.9m

Proposed 1800mm Ø weir wall manhole to discharge exceedance flows to existing off-site drain. Top of weir wall level 175.20m. Manhole to include overflow weir wall constructed in concrete preferably part of the precast chamber

Ex. FMB

1:3 Slope Typical (Swale and Bank to Football Pitch)

Swale/Bank Typical Section
(Scale 1:50)

Existing Water Main
Note, existing water main runs crosses existing football pitch - refer to M&E consultant service drawings

Storm Water Attenuation Tank
Attenuation designed for a 1:100 year storm plus 50% climate change (10% Creep)
Volume : 1282m³
Tank Size : 20x27x2.5m Deep
Invert Leve : 172.50m

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

All land drains to be 100mm slotted or perforated pipes

4000

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

The existing surface water drainage system serving the school's swale has been cleared. A CCTV survey has been carried out to confirm the condition and connectivity of the system from the swale inlet to the outfall location

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

Refer to drawing '5615' for existing swale remediation details

Existing Swale

Existing Outfall
Welsh Water Manhole
SJ28459799
Lower Mountain Road

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

Drainage General Arrangement
(Scale 1:250)

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***
- ***Channel/Slot 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
- ***Swale Outlet***

Client	**Wrexham County Borough Council**
Project	**Proposed Extension - Ysgol I.D. Hooson**
Drawing Title	**Drainage General Arrangement**
Drawing Number	**IDH-ENA-XX-XX-D-C-5600**
Purpose of Issue	**Tender**
Revision	**P3**
Status	**D2**

Rev	Date	Drn	Chk	Details
P3	15.12.25	DRB	DRB	***Updated*** - SAB Comments/Requirements

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