

Foul Drainage Key:

- Foul Drain (1000 Unless Noted Otherwise)
- FW Type 3F Non-Entry Access Chamber
- FW Type 4F Non-Entry Access Chamber
- Foul Water Outlet / Soil Pipe
- FWP Twin Effluent Pump Chamber (supplied by Kingspan Environmental)

Storm Drainage Key:

- Private storm manhole
- ▶ Private Flow Control Chamber
- Storm Drain (1000 Unless Noted Otherwise)
- SW Type 3F Non-Entry Access Chamber
- SW Type 4F Non-Entry Access Chamber
- SW Rodding Eye
- Typical Depth to Invert 0.45-0.6m (Or as specified in schedule)
- Rainwater Pipe
- Road gully
- Sump gully (Heavy duty permeable paving outlet)
- Threshold drain
- 2500 Silt trap chamber (Wavin 6LB300) 0.475m to invert unless noted otherwise
- Outlet Permeavoid (1000 outlet 0.45m to invert)
- Heavy duty Permeable Paving Finished level
- FL 5.26 FM 4.70
- SuDS Heavy Duty Permeable Block Paving (Type C system - 350mm attenuation sub-base 32% void ratio)
- SuDS Cellular storage tank
- SuDS Light Duty Permeable Block Paving (Type C system - Light duty)
- SuDS Attenuation pond (1 in 100 Year plus 40% CC)
- Strategic Road gully
- Rainwater Butt

IMPORTANT NOTE ON DEEP DRAINS:

WHERE A DRAIN RUN PASSES NEAR A BUILDING WITHIN THE 45 DEGREE LOADLINE, THE DRAINAGE TRENCH SHALL BE BACKFILLED WITH CONCRETE TO THE BUILDING FOUNDATION FORMATION LEVEL.

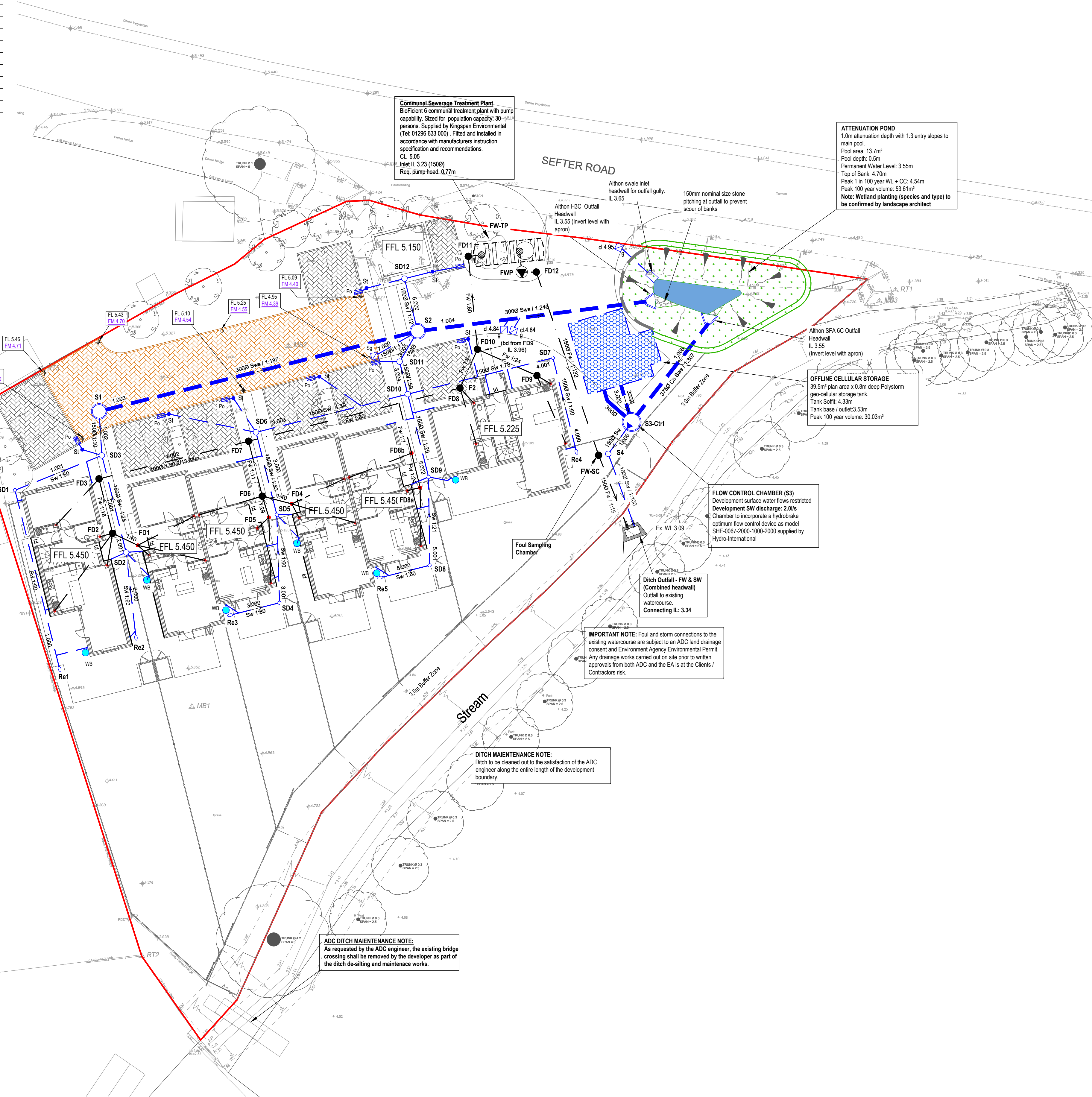
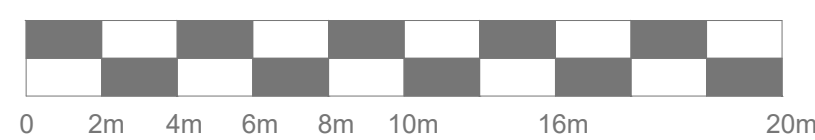
STORM CHAMBER SCHEDULES

MH REF	MANHOLE TYPE	MANHOLE SIZE	COVER TYPE	COVER LEVEL	INVERT LEVEL
Re1	Rodding eye	Rodding eye	B125	5.38	4.78
SD1	4F	250	B125	5.30	4.51
Re2	Rodding eye	Rodding eye	B125	5.43	4.85
SD2	3F	450	B125	5.40	4.67
SD3	3F	450	B125	5.30	4.32
S1	MH E	1200	D400	5.29	3.79
Re3	Rodding eye	Rodding eye	B125	5.43	4.85
SD4	4F	250	B125	5.42	4.78
SD5	4F	250	B125	5.40	4.59
SD6	3F	450	B125	5.22	4.45
Re4	Rodding eye	Rodding eye	B125	5.00	4.40
SD7	4F	250	B125	5.00	4.26
Re5	Rodding eye	Rodding eye	B125	5.43	4.85
SD8	4F	250	B125	5.42	4.78
SD9	4F	250	B125	5.43	4.35
SD10	3F	450	B125	5.10	4.09
SD11	3F	450	B125	4.96	4.04
SD12	3F	450	B125	5.07	4.18
Sg	Sump gully	450 x 450	D400	4.98	4.21
S2	MH E	1200	D400	4.93	3.64
Pond	---	---	---	4.40	3.56
CS-Tank	---	---	---	4.98	3.53
S3-Ctrl	Control Chamber	1500	D400	5.17	3.52
S4	3F	450	B125	5.01	3.48
Watercourse	Outfall	Outfall	---	4.90	3.39

FOUL CHAMBER SCHEDULES

MH REF	MANHOLE TYPE	MANHOLE SIZE	COVER TYPE	COVER LEVEL	INVERT LEVEL
FD1	4F	250	B125	5.43	4.55
FD2	3F	450	B125	5.40	4.49
FD3	3F	450	B125	5.32	4.21
FD4	4F	250	B125	5.43	4.55
FD5	4F	250	B125	5.43	4.55
FD6	3F	450	B125	5.40	4.48
FD7	3F	450	B125	5.24	4.04
FD8a	4F	250	B125	5.43	4.63
FD8b	4F	250	B125	5.40	4.50
FD8	3F	450	B125	4.99	3.80
FD9	3F	450	B125	5.00	4.20
FD10	3F	450	B125	4.93	3.40
FD11	3F	450	B125	5.03	3.25
FW-TP	T-Plant	T.B.C	T.B.C	5.05	3.23
FD12	3F	450	B125	5.05	4.00
FW-SC	Sampling cham	450	B125	5.10	3.87
Watercourse	Outfall	Outfall	B125	3.50	3.39

SCALE 1:200



Communal Sewerage Treatment Plant
Bio-Cent 6 communal treatment plant with pump capacity. Sized for population capacity: 30 persons. Supplied by Kingspan Environmental (Tel: 01296 633 000). Fitted and installed in accordance with manufacturers instruction, specification and recommendations.
CL 5.05
Inlet IL 3.23 (1500)
Req. pump head: 0.77m

ATTENUATION POND
1.0m attenuation depth with 1:3 entry slopes to main pool.
Pool area: 13.7m²
Pool depth: 0.5m
Permanent Water Level: 3.55m
Top of Bank: 4.70m
Peak 1 in 100 year WL + CC: 4.54m
Peak 100 year volume: 53.61m³
Note: Wetland planting (species and type) to be confirmed by landscape architect

OFFLINE CELLULAR STORAGE
39.5m² plan area x 0.8m deep Polystorm geo-cellular storage tank.
Tank Soffit: 4.33m
Tank base / outlet: 3.53m
Peak 100 year volume: 30.03m³

FLOW CONTROL CHAMBER (S3)
Development surface water flows restricted Development SW discharge: 2.0l/s
Chamber to incorporate a hydrobrake optimum flow control device as model SHE-0067-2000-1000-2000 supplied by Hydro-International

Ditch Outfall - FW & SW (Combined headwall)
Outfall to existing watercourse.
Connecting IL: 3.34

IMPORTANT NOTE: Foul and storm connections to the existing watercourse are subject to an ADC land drainage consent and Environment Agency Environmental Permit. Any drainage works carried out on site prior to written approvals from both ADC and the EA is at the Clients / Contractors risk.

DITCH MAINTENANCE NOTE:
Ditch to be cleared out to the satisfaction of the ADC engineer along the entire length of the development boundary.

ADC DITCH MAINTENANCE NOTE:
As requested by the ADC engineer, the existing bridge crossing shall be removed by the developer as part of the ditch de-silting and maintenance works.

The Contractor is to check and verify in conjunction with the Architects details all setting out points, building and site dimensions, levels and sewer invert levels at connection points and ensure that they are fully compliant with the contents and of requirements the site investigation report before work starts. The Contractor is to comply in all respects with current building legislation, British Standard Specifications, Building Regulations etc., whether or not specifically stated on this drawing.

This drawing is not intended to show details of ground conditions or ground contaminants. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor any areas of formation for said structures which do not accord with the anticipated conditions as described in the site investigation report are to be immediately notified to the Engineer, where applicable. Any exposed fluid ground or ground contaminants on or within the ground should be further investigated by a suitable expert. Any earthworks shown indicate typical slopes for guidance only and should be investigated further by a suitable geotechnical expert.

Where existing trees are shown to be retained they should be subject to a full Arboricultural inspection for safety. All trees are to be planted so as to ensure they are a minimum of 3 metres from buildings and 3 metres from drainage and services, where applicable. A foundation is to be provided to accommodate the proposed tree planting, where applicable.

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NOTES:

- Building Drainage shall comply with BS 8301 1985, BS EN 752 and The Building Regulations Part H.
- All building drainage shall be 100mm diameter unless shown otherwise.
- All SW connections to adoptable sewers shall be minimum 150mm diameter.
- All building drainage shall be clayware to BS EN 295 or UPVC to BS 4060 with Class B or Class S bedding unless shown otherwise.
- All pipes under buildings without suspended floors shall have Class S bedding.
- Concrete protection shall be provided to all UPVC pipes with less than 600mm cover and to all clay pipes with less than 300mm cover.
- Where a pipe passes through a wall an opening is to be formed through the wall to give at least 50mm clearance around the pipe. Brickwork over shall be supported by a lintel. The opening is to be masked each side of the opening with rigid sheet material. Pipes embedded in walls shall have a joint formed within 150mm of each wall face. A ROCKER PIPE OF Maximum 600mm length shall be used to continue the pipework.
- Where a pipe trench is within 1m of a building it is to be filled with concrete up to a level below the building equal to the distance from the building less 150mm.
- Where the formation of a pipe trench is above original ground level levels are to be made up with well compacted DTP Type 2 material or better.
- All private drives which fall towards a public highway and exceed two parking bays in area are to be provided with a suitable gully or drainage channel to prevent water discharging onto the highway.
- Where a driveway falls towards a building it shall be provided with a suitable gully or drainage channel to prevent water damaging the building.
- The invert level of an access chamber on a foul drain from a building is to be set 600mm below finished ground level unless otherwise shown.
- The invert level of a rodding eye at the head of a surface water drain is to be set 450mm below finished ground level unless otherwise shown.
- Existing bank, base and water levels of the watercourse must be checked and verified by the Client / Contractor by way of topographical survey and findings presented to the engineer for checking.
- No connection works are permitted to the existing watercourse on-site until approval has been granted by the local drainage authority and environment agency for the proposed outfall from the sewerage treatment plant and stormwater network.
- Installation of the proposed bioplastic is to be strictly in accordance with the requirements of kingspan environmental. Client / contractor to liaise with kingspan technical on tel 01296 633 000.

CDM Notes:

- The attention of the client and the principal contractor is drawn to the following potential risks in conjunction with the proposed on-site and off-site works as designed for this project.
- Works in the vicinity of live services including gas, electricity and it may be necessary and the advice of all statutory service companies must be sought before any works commence. Particular attention is drawn to the existing overhead electric line crossing the site. The client must ensure that this is diverted to the satisfaction of UKPN prior to any works on site.
- Works within and abutting the existing highway will entail traffic hazards and all appropriate safety measures including barriers, signs and lighting must be undertaken to the approval of the local authority, the highway authority and the police department.
- Hazardous materials including cement and bituminous materials are specified and the manufacturers advice on safe handling procedures must be obtained and made clear to all operatives.
- The contractor will be responsible for locating all existing services within the vicinity of the works hand dug and ensure these are protected throughout the duration of the works. All utility plant should be clearly marked on the ground prior to commencement of the works.
- The contractor must ensure all working areas are fully secure.

PRELIMINARY DRAWING
NOT FOR CONSTRUCTION
FOR PLANNING PURPOSES ONLY

Rev.	Description	Drm	Ckd	Date
D	Pond design and permeable paving formation levels updated. Gully outlet headwall added. All completed following ADC, LLFA comments	MD	TL	11.08.2022
C	Communal treatment specification added to accord with Kingspan Environmental scheme proposals.	MD	TL	21.06.2022
B	Outfall headwall orientation to watercourse amended and ditch maintenance notes added. Completed following ADC engineers comments.	MD	TL	20.05.2022
A	Foul and storm outfall amended following LLFA comments and detailed watercourse survey	JH	TL	01.04.2022

Client

HHD
HARRISON HODGSON & DAVENPORT
www.hhd.co.uk

Project

Land adjacent Sefter School, House, Sefter Road

Title

Below Ground Drainage Layout

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Scale	1:200 on A1	Drawn	MD
Date	10/03/2022	Checked	TL
File	21-023-Acad-400	Drawing No	21-023-400
		Rev	D