Key.

F1 (1200Ø)
CL 130.000
IL 130.000
Proposed foul sewer (Invert level shown)

C1 (1200Ø)
CL 130.000
IL 130.000
Proposed Combined water sewer

S10 (1200Ø)
CL 131.050
IL 128.391
Proposed surface water drain (roof water/ highway/treated external area flows only)

Land drainage system - cut off drain. 600mm wide 600mm deep.

600/460/225 "non -accessible" inspection chambers

Minimum 1200Ø "accessible" manholes

Proposed road gully and lateral Connection

RE
Proposed Rodding Eye point

Proposed channel drainage system - hauraton faserfix super or similar approved. 150mm wide.

Existing drain - to remain - Foul water

Existing drain - to remain - Surface water

Existing sewers to be diverted/made redundant /built over

Proposed surface water attenuation/Soakaway unit
Crate Soakaway units. Graft eco bloc or similar approved.

Proposed surface water flow control unit

Foul Water package treatment unit, marsh Ensign or similar approved.

Note: All Treatment units noted are for indicative costing purposes only. Full detailed design specification to be obtained from the manufactures prior to any orders being placed.

Drainage Design Subject to confirmation on proposed finished site levels and surface finishing.

FFL 130.000 Proposed Finished Floor Level

x131.05m Proposed site levels

1:35 Proposed Gradients

Embankment (@1:3 unless stated)

600mm high Retaining wall/SOE detail

600mm high Underbuild detail

For retaining wall positions refer to landscaping proposals

Permeable paving construction, Gravel Grasscrete, aqua blocks porous bituminous etc. 300mm min storage layer.

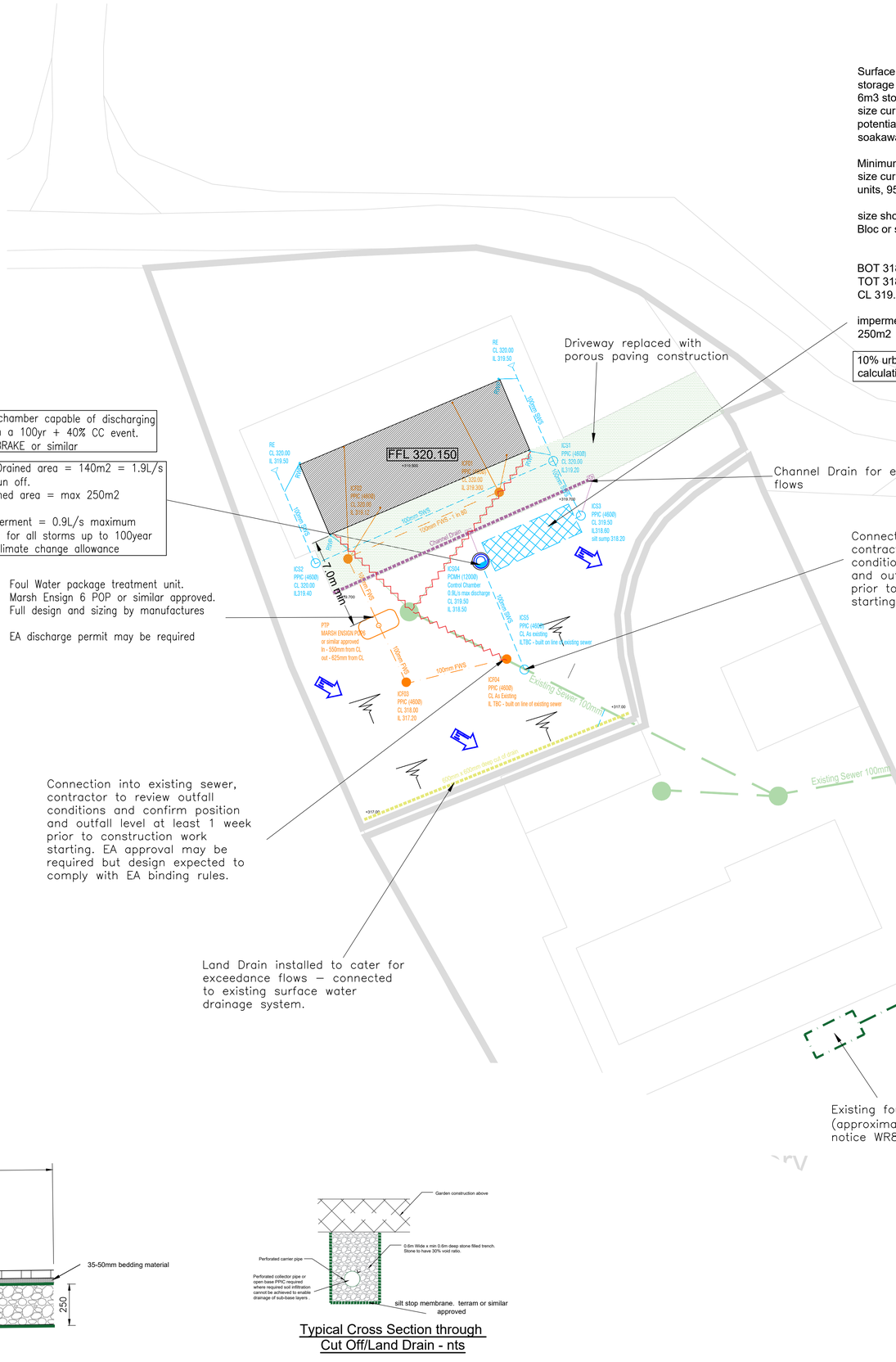
Exceedance Flow routes.

RWP and internal foul points positions are indicative only

Levels provided are indicative only to assist with completion of drainage design works. For precise level information refer to architects/landscaping information

Site name	The Piggeries - Slaithwaite
Location	The Piggeries, Burnt Plats Lane, Slaithwaite, West Yorkshire, HD7 5UZ.
Grid reference	406050E ,415106N
Application Site Area (Ha)	250m2 – 0.025Ha – all existing building area and hardstanding
Development type	Residential
Flood zone classification	Zone 1
NPPF Vulnerability	More Vulnerable
Environment Agency Office	Yorkshire - neyorkshire@environment-agency.gov.uk.
Lead Local Flood Authority	Kirklees Council
Local Planning Authority	Kirklees Council

FLOOD SOURCE RISK SUMMARY				
Risk Source	Risk Level	Residual Risk	Flood resilience design required	Appropriate for development
Rivers	Low zone 1	none	no	yes
Tidal	low	none	no	yes
Surface Water	Low	none	Yes – SW drainage design	yes
Sewerage	low	none	no	yes
Reservoir	Low	none	no	yes
Ground Water	Low	none	no	yes



Driveway replaced with porous paving construction

Channel Drain for exceedance flows

Control chamber capable of discharging 0.9l/s in a 100yr + 40% CC event. HYDRO BRAKE or similar

Current Drained area = 140m2 = 1.9L/s 1 year run off.
new drained area = max 250m2

50% betterment = 0.9L/s maximum discharge for all storms up to 100year + 40% climate change allowance

Foul Water package treatment unit. Marsh Ensign 6 POP or similar approved. Full design and sizing by manufactures

EA discharge permit may be required

Connection into existing sewer, contractor to review outfall conditions and confirm position and outfall level at least 1 week prior to construction work starting.

Connection into existing sewer, contractor to review outfall conditions and confirm position and outfall level at least 1 week prior to construction work starting. EA approval may be required but design expected to comply with EA binding rules.

Land Drain installed to cater for exceedance flows – connected to existing surface water drainage system.

Existing Sewer 100mm

Existing Sewer 100mm

Existing Sewer 100mm assumed route

To Merry Dale Clough Watercourse

Existing foul water treatment unit (approximate location). consent notice WR8901

Surface water attenuation unit -Crate storage .
6m3 storage volume.
size currently based on minimal soakaway potential. Size to be reduced following soakaway testing if infiltration possible.

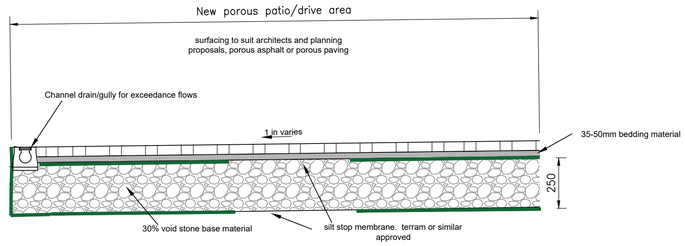
Minimum 800mm cover depth
size currently based on 350mm deep crate units, 95% void ratio.

size shown = 2.4x8x0.35m deep. Graf Eco Bloc or similar approved.

BOT 318.500
TOT 318.890
CL 319.500 min

impermeable new site area up to = 250m2

10% urban creep allowed to SW calculations



Typical Cross Section through porous patio/Drive area - nts

Typical Cross Section through Cut Off/Land Drain - nts

General Notes

Do not scale this drawing. If in doubt, consult with the Engineer

1. This drawing is to be read in conjunction with all other relevant Engineers, Architects and Specialist design drawings and specifications.
2. All dimensions and levels are in metres unless noted otherwise.
3. This drawing is for information purposes and all information displayed is subject to detailed design.
4. Cover levels noted are indicative or best design levels. constructed levels should take into account as-built surfacing levels and gradients.
5. The Contractor shall be responsible for checking all tie-ins for line and level with existing foul and surface water systems before commencing any works.
6. The Engineer shall be notified immediately, in writing, should any errors or discrepancies be found prior to the commencement or continuation of any works. All work is to be carried out in accordance with current British Standards, Building Regulations and NHBC Standards.
7. All drainage work is to be strictly in accordance with the requirements of the Building Regulations 2010, Approved Document Part H, "Drainage and waste disposal".
8. It is the responsibility of the Contractor to execute the works at all times in strict accordance with the requirements of the Health and Safety at Work Act 1974, and the C.D.M. Regulations 2015. The Contractor will be deemed to have allowed for full compliance, including full liaison with the Principle Contractor, within his rates.
9. All existing land drains encountered on site during construction are to be re-connected.
10. Should any departure from the proposed slab or external levels be considered, agreement shall be sought from the Engineer immediately and prior to the commencement or continuation of any works. Proposals should take full account of all restrictions to the slab level.
11. Temporary protection to be provided to drainage work during construction as necessary.
12. Power supply to separator/treatment units, alarm, panel, vent etc to be provided by contractor in accordance with manufacturers recommendations.
13. Topographical survey shown is based upon - not available - OS tile used
14. Architects layout shown is based upon eight One two architects Site Layout drawing no. 24-803-001 This layout may be subject to change and is intended for indicative purposes only.

Specification Notes

15. The following types of pipe may be used unless noted or agreed otherwise;

- Pipes up to 300mm diameter to be Structured Walled to BS EN 13476, Polypropylene to BS EN 1852 or PVC-U to BS EN 1401.
- Pipes 300mm diameter or over to be Concrete to BS 5911.

16. Both Clay and Concrete pipes shall be strength class 120 (100/150mm min crushing strength 28kN/m). Thermoplastic pipes shall have a minimum ring stiffness of SN4.
17. Pipes which run adjacent to buildings shall be installed in strict accordance with Part H, Clauses 2.23 to 2.25.
18. All pipes, chambers and fittings shall be installed, bedded and backfilled in accordance with the manufacturers instructions subject to the following minimum requirements;

Pipe Location	Cover to crown	Clay/Concrete Pipe * Bedding	Plastic Pipe Bedding	Backfill
Roads (HGV)	>1.2m <1.2m	Class S Class 'A' (Concrete)	Class S (S1or2) Class 'A' (Concrete)	Type 1Granular
Drives / car parking	>0.9m <0.9m	Class S Class 'A' (Concrete)	Class S (S1or2) Class 'A' (Concrete)	Type 1 Granular
Hard and soft Landscaping	>0.6m <0.6m	Class S Class 'A' (Concrete)	Class S (S1or2) Class 'A' (Concrete)	Suitable as dug material

19. The first flexible joint in pipes adjoining a manhole shall be a maximum length of 600mm from the inside face of the manhole, connecting to a rocker pipe. The length of the rocker pipe shall be as follows;

Pipe diameter	Length of Rocker pipe
150-600mm	600mm
675-750mm	1000mm
over 750mm	1250mm

20. All manholes and inspection chambers situated in areas subject to vehicular loading to have class D400 covers and frames to BS EN124 and those not subject to vehicular loading to have class minimum class B125 covers and frames.
21. Drainage frames must be tied to manhole risers by use of manufacturers ties (eg. Polypipe ref FRK500 fixing kit and FRK501 black ties.) The ground works contractor will be held fully responsible for any accidents due to incorrect fitting or failure to use the correct manufacturers fixing equipment.
22. All drains in the vicinity of existing or proposed trees to be constructed in accordance with the requirements of NHBC Practice Note 3.

REV	DATE	DESCRIPTION	BY

CLIENT
MR + MRS DOWEN
via eight-onetwo + holmes Planning

PROJECT
Redevelopment - The Piggeries
Burnt Plats Lane, Slaithwaite

DRAWING TITLE
Drainage Strategy

Planning/Approval

BACE
Benjamin Allen Consulting Engineers
T : 07745 643638
E : info@benjaminallen-ce.co.uk
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DRAWN BY	DATE
BD	20.05.24
CHECKED BY	SCALE
	1:200

PROJECT No	SHEET SIZE	REVISION
77248	A1	-

DRAWING No
77248-BACE-24-00-DR-C-500