



PROPOSED GRAF PLATIN XL 10,000 LITRE RAINWATER HARVESTING TANK OR ALTERNATIVE BY CLIENT

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1.05

SURFACE WATER:

PERCOLATION TESTS WERE UNDERTAKEN IN ACCORDANCE WITH BRE 365 TO DETERMINE WHETHER THE IMPERMEABLE AREAS CREATED BY THE PROPOSED DEVELOPMENT COULD BE DRAINED BY INFILTRATION. PERCOLATION TESTS SHOWED THAT INFILTRATION COULD BE USED AS A MEANS TO DISPOSE OF SURFACE WATER. A RATE OF 0.522m/hr HAS BEEN USED FOR THE CALCULATION.

THE DRAINAGE LAYOUT IN THIS DRAWING SHOWS THE PROPOSED LAYOUT OF THE SURFACE WATER INFILTRATION SYSTEM AT THE SITE.

MICRO-DRAINAGE SOFTWARE HAS BEEN USED TO SIZE THE STORAGE REQUIRED TO DRAIN THE IMPERMEABLE AREAS FROM THE PROPOSED DEVELOPMENT. THIS CALCULATION IS BASED ON MODULAR INFILTRATION UNITS WITH A 95% VOID RATIO TO ACCOMMODATE THE WORST CASE DESIGN STORM (100-YEAR) WITH RAINFALL INTENSITIES INCREASED BY 50% TO ALLOW FOR THE EFFECTS OF CLIMATE CHANGE AS REQUIRED BY THE LOCAL DRAINAGE GUIDANCE FOR THIS AREA.

FOUL WATER:

THERE ARE NO MAIN SEWERS CLOSE TO THE SITE. THEREFORE A NON MAINS SOLUTION FOR FOUL DRAINAGE IS REQUIRED FOR THE PROPOSAL. THE PROPOSAL HAS THE FOLLOWING POPULATION EQIVALENT IN LINE WITH

BRITISH STANDARD FLOWS AND LOADS 36: 10 PEOPLE (10 PE) or 1500 l/day

PERCOLATION TESTING HAS BEEN CARRIED OUT WHICH HAS BEEN CONVERTED TO ADHERE TO BUILDING REGULATIONS PART H 1.34-1.1.38 AND YIELDED THE FOLLOWING RESULT:

AVERAGE VP Vp = 3s/mm

WHEN VP IS FASTER THAN 15s/mm IT IS NECCESSARY TO PROVIDE A LAYER OF SAND BENEATH THE SOAKAWAY CONSTRUCTION TO EFFECTIVELY SLOW DOWN EFFLUENT DISCHARGE TO THE GROUND AND TO ENCOURAGE FURTHER BIOLOGICAL TREATMENT/FILTRATION (SEE DETAIL BELOW)

THE TOTAL LENGTH OF SOAKAWAY TRENCH REQUIRED TO SERVE THE PROPOSED NEW UNIT WAS CALCULATED AS FOLLOWS. (WHERE PE = POPULATION EQUIVALENT AND VP = PERCOLATION VALUE).

A = Vp X PE 0.25 A = 15 X 10 X 0.25

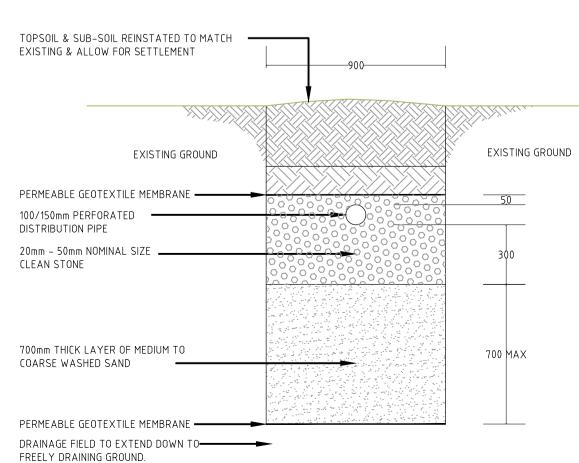
= 37.5m2

OR 37.5m2 / 0.9 = 41.7m OF 0.9m WIDE TRENCH

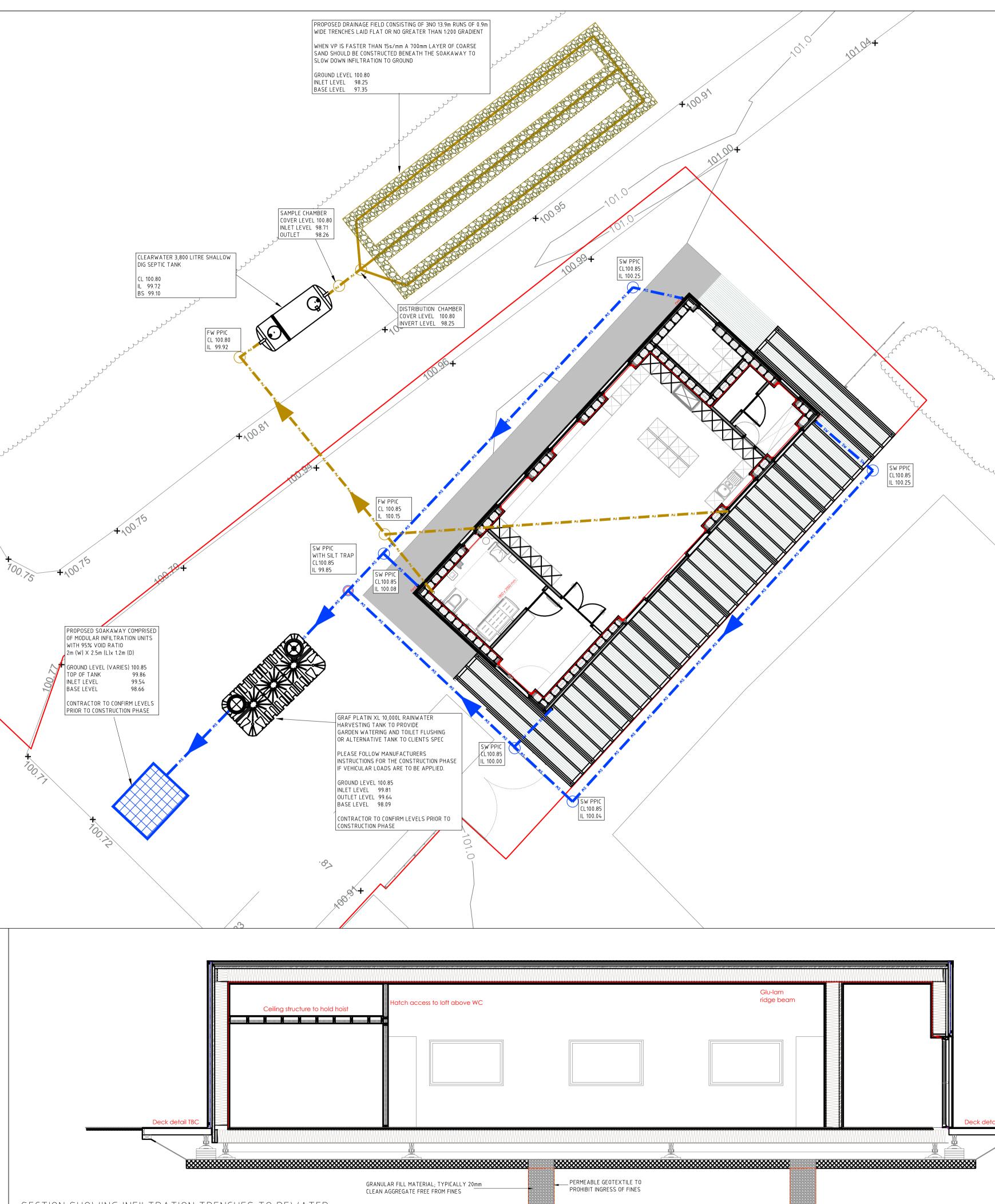
A SEPTIC TANK WITH A MINIMUM CAPACITY OF 3800L WOULD BE SUFFICIENT SEPTIC TANK SHOULD BE SIZED AS FOLLOWS:

2700L + 180L FOR EVERY USER ABOVE 4PE 2700 + 1080 = 3780L MINIMUM CAPACITY BELOW INLET

THE SEPTIC TANK SHOULD BE SITED A MINIMUM OF 7m FROM ANY DWELLING. THE DRAINAGE FIELD SHOULD BE SITUATED AS LEAST 7M FROM ANY HABITABLE DWELLING.



MODIFIED SECTION THROUGH DRAINAGE FIELD TRENCH1:20



SECTION SHOWING INFILTRATION TRENCHES TO DEWA SUMP BELOW BUILDING

to hold hoist	t Hatch access to loft above WC		Slu-lam dge beam	
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			NA.	
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	 Materials and workmanship shall comply to the appropriate British Standards and Codes of Practice unless otherwise stated.
	5. The activities required to construct the work, shown on drawings clearly marked CONSTRUCTION, may be subject to the provisions of the Construction (Design & Management Regulations 2015. The Contractor and Client must ensure that they are adequately conversant with these regulations and that the appropriate procedures required under the regulations are observed at all times.
	6. The contractor is responsible for locating services prior to excavation. Any services shown on the drawing should be considered 'indicative' only. Where no services are shown or the drawing it does not necessarily mean there are no services present, only that a services search has not been undertaken. Where in doubt refer to HSE booklet "avoiding danger from underground services"
<	7. Design Risk Assessment
L'ENER STRATCHE	A risk assessment relating to potential hazards associated with the works described within this drawing, in so far as they have been designed by EDS Ltd, has been undertaken. Risks identified have been eliminated by design wherever practicable. The status with regard to residual risks is as follows:
Lover man	The work is of low complexity with low level of risk; it is considered that there are no significant residual risks that would not be readily foreseeable by a competent contractor observing good working practices.
Here HAN	Designer – EDS Drawing revision – A Date – 28/03/24
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	28/03/24 LT BD A PRELIMINARY ISSUE
	DATE. DRWN. CHKD. REV. NOTES.
	PROJECT MANAGER:- JAN CLARK PROJECT ENGINEER:- LEILA THOMPSON
	DRAWN DATE:- MARCH 2024
	SCALE & SHEET SIZE:- 1:100 @ A1
	PRELIMINARY
	Engineering & Development Solutions
	Flood Risk Assessment SuDS and Surface Water Foul and Sewage Treatment EDS, Unit E4, Threemilestone Industrial Estate, Threemilestone, Truro, Cornwall TR4 9LD (01872) 306311 (Mob) 07973816457 Email: jan@eadsolutions.co.uk www.eadsolutions.co.uk CLIENT
	COMMUNITY ROOTS PORTHTOWAN
	<u>project</u> COMMUNITY ROOTS PROJECT
	DRAWING TITLE
TBC	drawing title SITE DRAINAGE PLAN
TBC	