FRON DEG, NANTYR ROAD, GLYN CEIRIOG, LL20 7NW

PERCOLATION TEST

STANDARD PERCOLATION TEST METHOD:

THESE TESTS WERE CARRIED OUT WITHIN AN AREA REPRESENTATIVE OF THE PROPOSED INFILTRATION AREA AND WERE AT LEAST 5M FROM THE INTENDED BUILDING AND ANY BOUNDARY.

TWO PERCOLATION HOLES WERE EXCAVATED, NOT LESS THAN 5M APART, 300MM SQUARE TO A DEPTH OF 300MM BELOW THE PROPOSED INVERT LEVEL OF THE EFFLUENT DISTRIBUTION PIPES. DEEP HOLES WERE NECESSARY; THUS THE HOLE CONFORMED TO THIS SHAPE AT THE BOTTOM BUT WAS ENLARGED ABOVE THE 300MM LEVEL TO ENABLE SAFE EXCAVATION TO BE CARRIED OUT.

THE 300MM SQUARE SECTION OF THE HOLES WAS FILLED TO A DEPTH OF AT LEAST 300MM WITH WATER AND ALLOWED TO SEEP AWAY OVERNIGHT. THE SOIL WAS SATURATED SURROUNDING THE TEST HOLE TO SIMULATE DAY TO DAY CONDITIONS IN AN OPERATING DRAINAGE FIELD.

THE NEXT DAY, THE TEST SECTIONS WERE FILLED TO A DEPTH OF AT LEAST 300MM AND OBSERVE THE TIME (T) IN SECONDS FOR THE WATER TO SEEP AWAY FROM 75% (225MM) TO 25% (0.75MM) FULL LEVEL. THIS WAS REPEATED THREE TIMES FOR EACH TEST PIT IN ORDER TO CALCULATE AN AVERAGE PERCOLATION TIME.

EXTREME WEATHER CONDITIONS WERE AVOIDED WHEN TESTING.

SITE LOCATION: **GARDENS TO REAR OF FRON DEG, NANTYR ROAD, GLYN CEIRIOG, LL20 7NW**

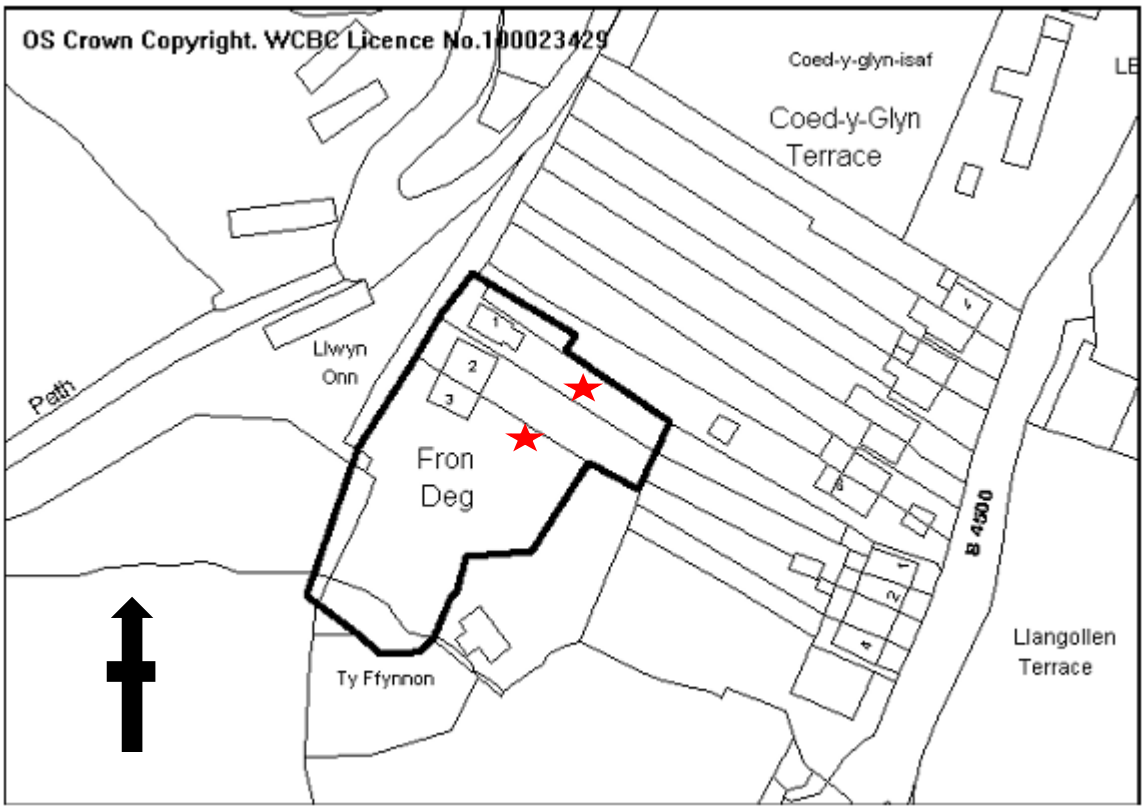


Figure 1: Location Plan – stars denote approximate locations of test pits (see below)

TEST PIT LOCATIONS (GPS to 2m accuracy)

TEST PIT 1: SJ20002 37028

TEST PIT 2: SJ20018 37034

DATE CARRIED OUT: TP 1: 2025-02-09 & 2025-02-11

TP 2: 2025-02-19 & 2025-02-25

CONDITIONS WERE COOL (5-8◦C), BUT THERE WAS NO ACTIVE PRECIPITATION SURING THE PERIODS OF TESTING.

FALL OF LAND

THE LAND SLOPES AWAY FROM THE PROPERTY IN A SOUTH-EAST DIRECTION.

DESCRIPTION OF VEGETATION

THE PITS WERE LOCATED WITHIN A NEGLECTED GARDEN AREA. VEGETATION COMPRISED MIXED HERBACEOUS SPECIES SUCH AS NETTLE, BUTTERCUP, HOGWEED AND BRAMBLE.

SOIL PROFILE DESCRIPTION

TEST PIT 1:

0.0M TO 0.30-0.50M – DARK BLACKISH-GREY TOP SOIL.

0.30-0.50M TO 1M - ORANGE-BROWN CLAY-SILT WITH INCREASING STONY COMPONENT WITH DEPTH OF ANGULAR SLATE INCLUSIONS.

TEST PIT 2:

0.0M TO 0.25-0.30M – DARK BLACKISH-GREY TOP SOIL.

0.25-0.30M TO 1M – ORANGE-BROWN CLAY-SILT WITH INCREASING STONY COMPONENT WITH DEPTH OF ANGULAR SLATE INCLUSIONS.

RESULTS

TEST PIT (TP)	**DEPTH OF WATER 300MM MIN**	**TIME BETWEEN 75% AND 25% SECONDS (T)**	**PERCOLATION VALUE VP= T / 150 (VP)**	**OCCUPANT CAPACITY (P)**	**MINIMUM AREA A=P X VP X 0.25 (A)**	**MINIMUM AREA (WITH SECONDARY TREATMENT*) A=P X VP X 0.2 (A)**
1	300	7980	53.2	8	106.4	85.12
	300	9360	62.4	8	124.8	99.84
	300	8160	54.4	8	108.8	87.04
2	300	6300	42.0	8	84.0	67.2
	300	6360	42.4	8	84.8	67.84
	300	7920	52.8	8	105.6	84.48
		AVERAGE VP	**51.2**	**AVERAGE AREA**	**102.4**	**81.92**

*NB: FOR WASTEWATER THAT HAS RECEIVED SECONDARY TREATMENT FOLLOWED BY SETTLEMENT, THE AREA MAY BE REDUCED BY 20 % IE A = P X VP X 0.2

NAME OF PERSON CARRYING OUT THE TEST: **DR FIONA GRANT**

THE WATER TABLE LEVEL IS MORE THAN 1M BELOW THE BOTTOM OF THE DISTRIBUTION PIPES AND I FURTHER CONFIRM THERE ARE NO SPRINGS WELLS OR BOREHOLES OR WATER ABSTRACTION POINTS WITHIN 100M OF THE PROPOSED INFILTRATION AREA.

SIGNED: FIONA GRANT fr.grant@btinternet.com

PHOTOGRAPHIC RECORD (TIME/DATE STAMPED)

(NB: PHOTOGRAPHS TAKEN AS SOON AS PRACTICABLE AFTER TIMING STOPPED, USUALLY WITHIN ONE MINUTE)



Test Pit 1



Test Pit 1



Test Pit 1: Test (i) 225mm



Test Pit 1: Test (i) 75mm



Test Pit 1: Test (ii) 225mm



Test Pit 1: Test (ii) 75mm



Test Pit 1: Test (iii) 225mm



Test Pit 1: Test (iii) 75mm



Test Pit 2



Test Pit 2



Test Pit 2: Test (i) 225mm



Test Pit 2: Test (i) 75mm



Test Pit 2: Test (ii) 225mm



Test Pit 2: Test (ii) 75mm



Test Pit 2: Test (iii) 225mm



Test Pit 2: Test (iii) 75mm