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	Link Road, Huyton, Liverpool				1676-25	
	Calcs for				Start page no./Revision	
	1 in 2 Year 15 Minute - Existing Design Rainfall				1	
	Calcs by	Calcs date	Checked by	Checked date	Approved by	Approved date
	M	01/09/2025				

DESIGN RAINFALL

In accordance with the Wallingford Procedure

Tedds calculation version 2.0.02

Design rainfall intensity

Location of catchment area	Liverpool
Storm duration	D = 15 min
Return period	Period = 2 yr
Ratio 60 min to 2 day rainfall of 5 yr return period	r = 0.400
5-year return period rainfall of 60 minutes duration	M5_60min = 19.0 mm
Increase of rainfall intensity due to global warming	p _{climate} = 0 %
Factor Z1 (Wallingford procedure)	Z1 = 0.63
Rainfall for 15min storm with 5 year return period	M5_15min _i = Z1 × M5_60min = 12.0 mm
Factor Z2 (Wallingford procedure)	Z2 = 0.79
Rainfall for 15min storm with 2 year return period	M2_15min = Z2 × M5_15min _i = 9.6 mm
Design rainfall intensity	I _{max} = M2_15min / D = 38.2 mm/hr

Maximum surface water runoff

Catchment area	A _{catch} = 4548 m ²
Percentage of area that is impermeable	p = 100 %
Maximum surface water runoff	Q _{max} = A _{catch} × p × I _{max} = 48.3 l/s