

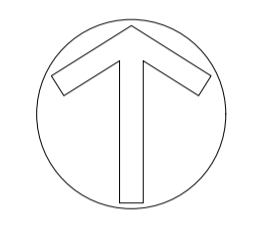
The hazards noted are in addition to the normal hazards and risks faced by a competent contractor when dealing with the type of works detailed on this drawing.

- CONSTRUCTION RISKS:**
1. Confined spaces entry and hazardous waste materials / gas.
 2. Deep manholes / excavations
 3. Contractor to locate services prior to excavating.
 4. Asbestos may be present.
 5. Drainage connection requires deep excavation temp works required.
 6. Existing drains to be protected and bridged over where required.
 7. Works adjacent to busy road and river. Watercourse / ditch levels may rise rapidly following prolonged periods of rainfall.
 8. Soft ground during construction works particularly in wet weather.

- MAINTENANCE/CLEANING RISKS:**
1. Pavement deformations to be monitored to ensure that designed pavement falls are maintained. If significant deformation is allowed to propagate then localised flooding could occur.
 2. Silt traps, drainage channels, permeable pavements and inspection chambers require the standard periodic inspection regime and cleaning routine to ensure continued performance and reduce the risk of flooding.
 3. Works adjacent to Watercourse / ditch. Watercourse / ditch levels will vary during heavy rainfall events.
 4. Potential for soft spots within existing ground after heavy rainfall.
 5. Existing live services and utilities.
 6. Deep manholes / excavations - appropriate entry equipment required.
 7. Soft ground during construction works particularly in wet weather.

- DEMOLITION / ADAPTION RISKS:**
1. Apparatus located in landscaped areas has not been designed to support heavy vehicle loading.
 2. The surface water drainage apparatus has been designed to accommodate the designed catchment area. no additional areas of handstanding can be connection into the system without risk of localised flooding on site.
 3. Hazardous waste materials / dust and debris released into the air.
 4. Deep manholes / excavations - appropriate entry equipment required.
 5. Works adjacent to river. Watercourse / ditch levels will vary during heavy rainfall events.
 6. Unknown ground conditions during / after heavy rainfall.
 7. Soft ground during construction works particularly in wet weather.

PRELIMINARY DRAWING:
This drawing is for preliminary purposes only and must not be read as a construction issue.
The design is not fixed and design changes are likely.



Permeable Paving
Area 422.8m²
Depth of sub-base 0.35m
Porosity 0.30
Total Volume 44.4m³
Designed for all storm events up to and including the 1 in 100 year event plus 45% climate change

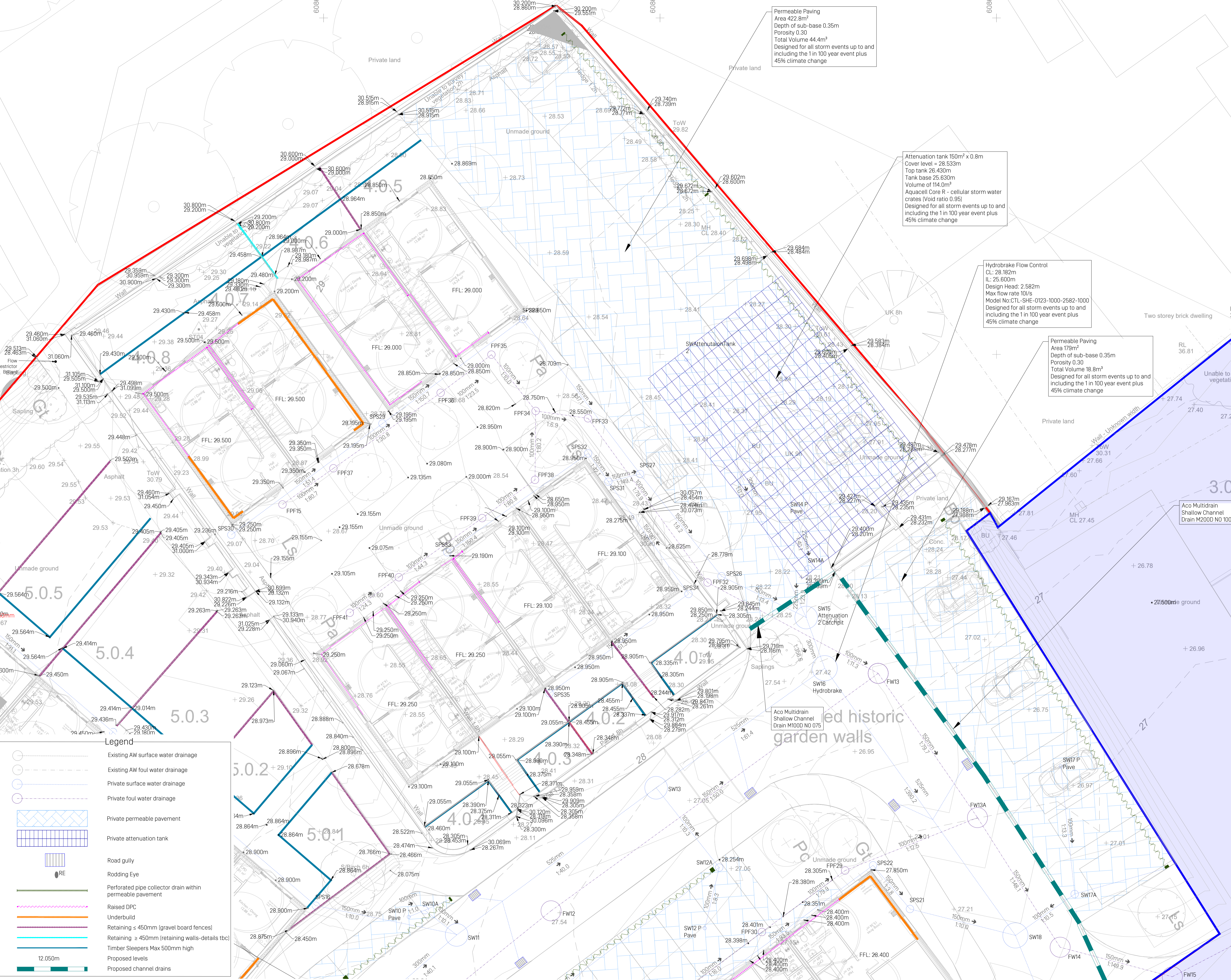
Attenuation tank 150m² x 0.8m
Cover level = 28.533m
Top tank 26.430m
Tank base 25.630m
Volume of 114.0m³
Aquacell Core R - cellular storm water crates (Void ratio 0.95)
Designed for all storm events up to and including the 1 in 100 year event plus 45% climate change

Hydrobrake Flow Control
CL: 28.182m
IL: 25.600m
Design Head: 2.582m
Max flow rate 10l/s
Model No: CTL-SHE-0123-1000-2582-1000
Designed for all storm events up to and including the 1 in 100 year event plus 45% climate change

Permeable Paving
Area 179m²
Depth of sub-base 0.35m
Porosity 0.30
Total Volume 18.8m³
Designed for all storm events up to and including the 1 in 100 year event plus 45% climate change

Aco Multidrain
Shallow Channel
Drain M200D NO 100

Aco Multidrain
Shallow Channel
Drain M100D NO 075



Legend

- Existing AW surface water drainage
- Existing AW foul water drainage
- Private surface water drainage
- Private foul water drainage
- Private permeable pavement
- Private attenuation tank
- Road gully
- Rodding Eye
- Perforated pipe collector drain within permeable pavement
- Raised DPC
- Underbuild
- Retaining ≤ 450mm (gravel board fences)
- Retaining ≥ 450mm (retaining walls-details tbc)
- Timber Sleepers Max 500mm high
- Proposed levels
- Proposed channel drains

Rev	Date	Description	By	Check
P1	28/07/23	Preliminary	RB	PP

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All dimensions are in metres unless stated otherwise.
Do not turn on layers that have been turned off.
Do not show layers that have been frozen.

Client Cockledge Building Contractors			
Project Barrett's Lane, Needham Market Suffolk IP68DL			
Title Engineering Layout Sheet 3			
Scale @ A1 1:100	Status Preliminary		
Date July 2023	Job Number 0304	By RB	Checked By JRS
Drawing No. C408		Revision P1	

