Flood Risk Assessment

For 123 Temple Lane, Copmanthorpe, York YO23 3TE
Applicant: Michael Arnold

The following should be read in conjunction with drawings supplied with the Planning application to City of York Council.

The proposal is to replace a detached bungalow with a new build 2 storey pitched roof detached house with a single storey pitched roof kitchen/dining room to the rear.

The applicants' dwelling and curtilage are covered by Environment Agency Flood Zones 1, 2 and 3.
The buildings that are the subject of this application appear to fall within Zone 3.

The NPPF, at paragraph 164, provides that some minor developments and changes of use should not be subject to the sequential or exception tests but should still meet the requirements of site-specific flood risk assessments as set out at paragraph 163 of the NPPF.

The proposed change of use falls within this category. The NPPF policy is echoed by Policy EN4: Flood Risk of the 2018 Draft Plan.

The application buildings are located close to the edge of the area shown as liable to flooding on the relevant Environment Agency Flood Map for Planning. The possibility of flooding appears to be related to The Foss, a watercourse some 100m to the east of the site which flows generally from north to south, originating some 2 km to the north of the site and flowing into the Wharfe at Nun Appleton to the south. No known flooding from The Foss has been recorded as affecting the site.

Environment Agency information has been obtained to show the predicted flood levels up to the 1 in a 100 year + 30% climate change event.
Copy correspondence with the Agency on this point is included with the application. It will be noted that the site is not expected to flood.

The following will be incorporated into the conversion works:

- There will be no significant change in ground levels because of the development.
- Floor levels will be 300mm above the highest recorded flood level on the site.
- All permanent electrical connections and equipment will be located at least 600mm above floor level.
- Solid floor construction.
- Electricity supply cables to enter building from roof level and wired downwards.
- Flood sensitive equipment raised 600mm above floor level.
- Anti-flood valves on internal building drainage.
- Water-tight external door construction to a minimum of 600mm above proposed floor level.
- Water resilient ground floor coverings to be used e.g. clay tiles.

The footprint of the new build property is 156m^2
If percolation tests show that it is not feasible to provide soakaways for the Surface Water drainage, it is suggested that the discharge into the existing combined drainage network is attenuated.
The discharge would be controlled with Attenuation cells and a hydro-brake limiting the discharge flow to 0.5l/s. The Preliminary sizing of this system is attached.
Using this construction, there is no significant potential for increased impact on other land through displaced flood water because of the proposal.

Foul drainage will be taken to the existing combined system at the rear of the property.

Any new areas of hardstanding will be of permeable construction. It should be noted that the additional run-off because of the proposed development will be insignificant. There will be no adverse impact on the surface water disposal regime.

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
YO23 3TE	**457890/445962**	**20 Feb 2024 15:01**

Your selected location is in flood zone 3, an area with a high probability of flooding.

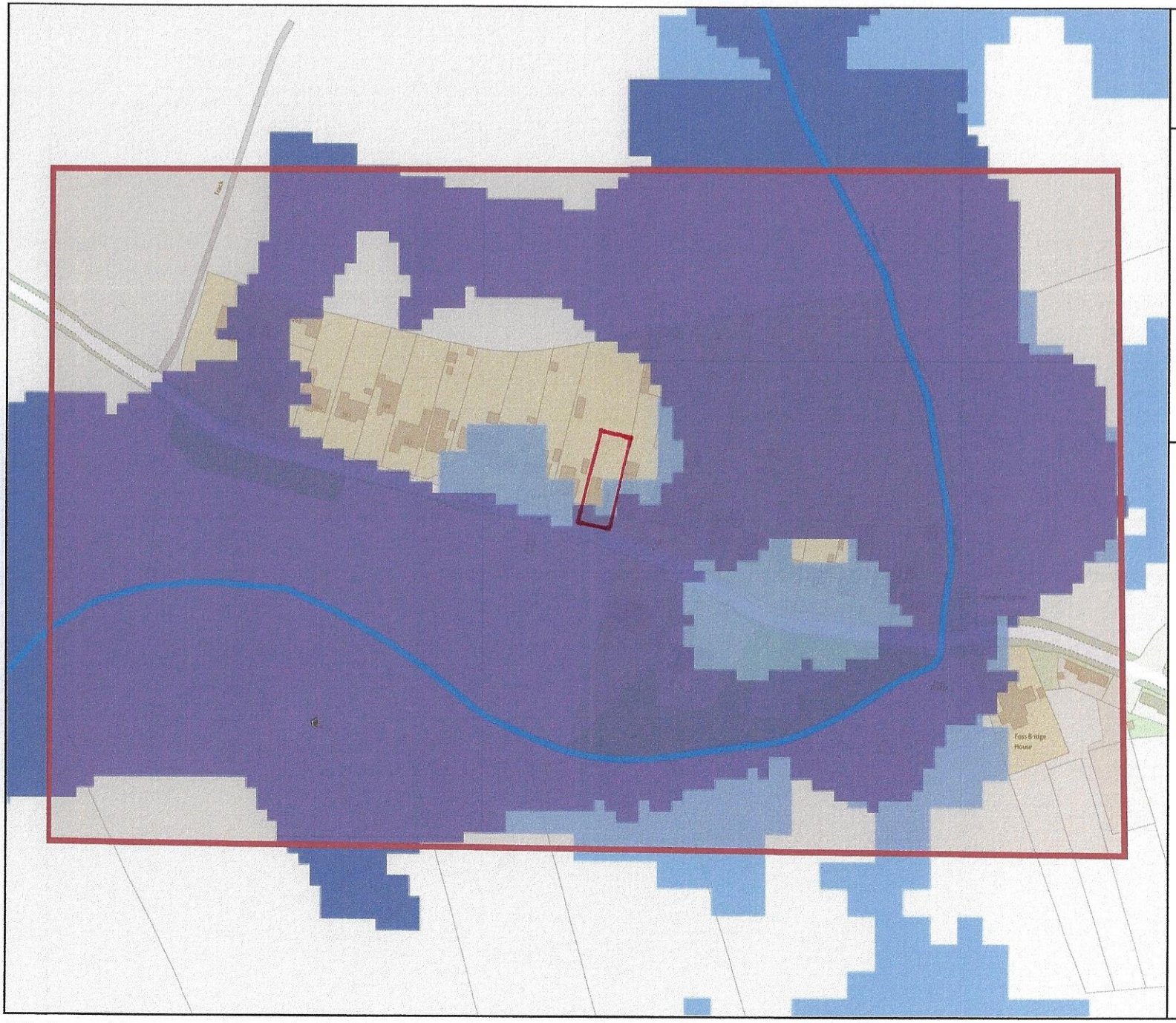
This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see www.gov.uk/guidance/flood-risk-assessment-standing-advice)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.



Environment Agency

Flood map for planning

Your reference
YO23 3TE

Location (easting/northing)
457890/445962

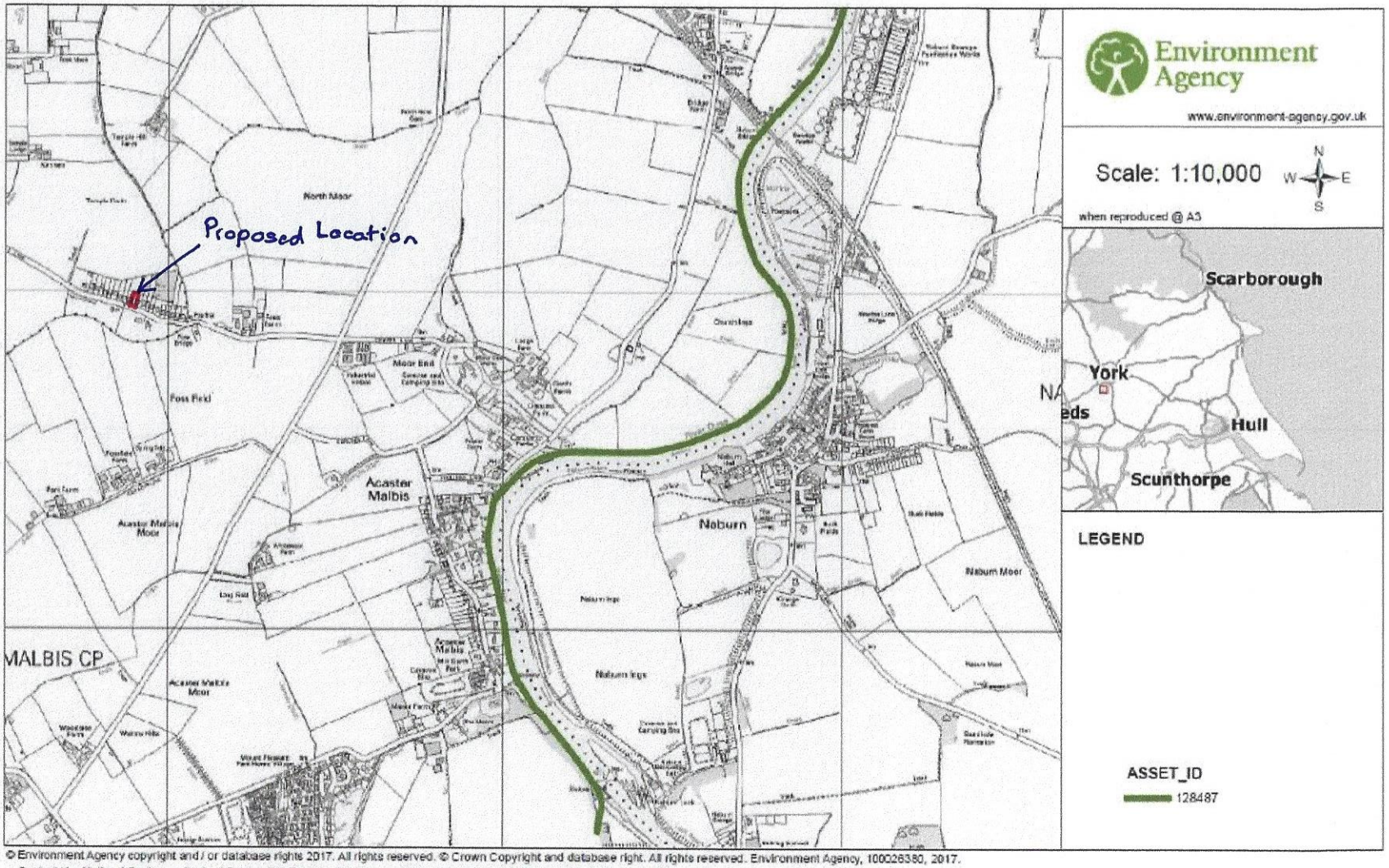
Scale
1:2500

Created
20 Feb 2024 15:01

- Selected area
- Flood zone 3
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Water storage area

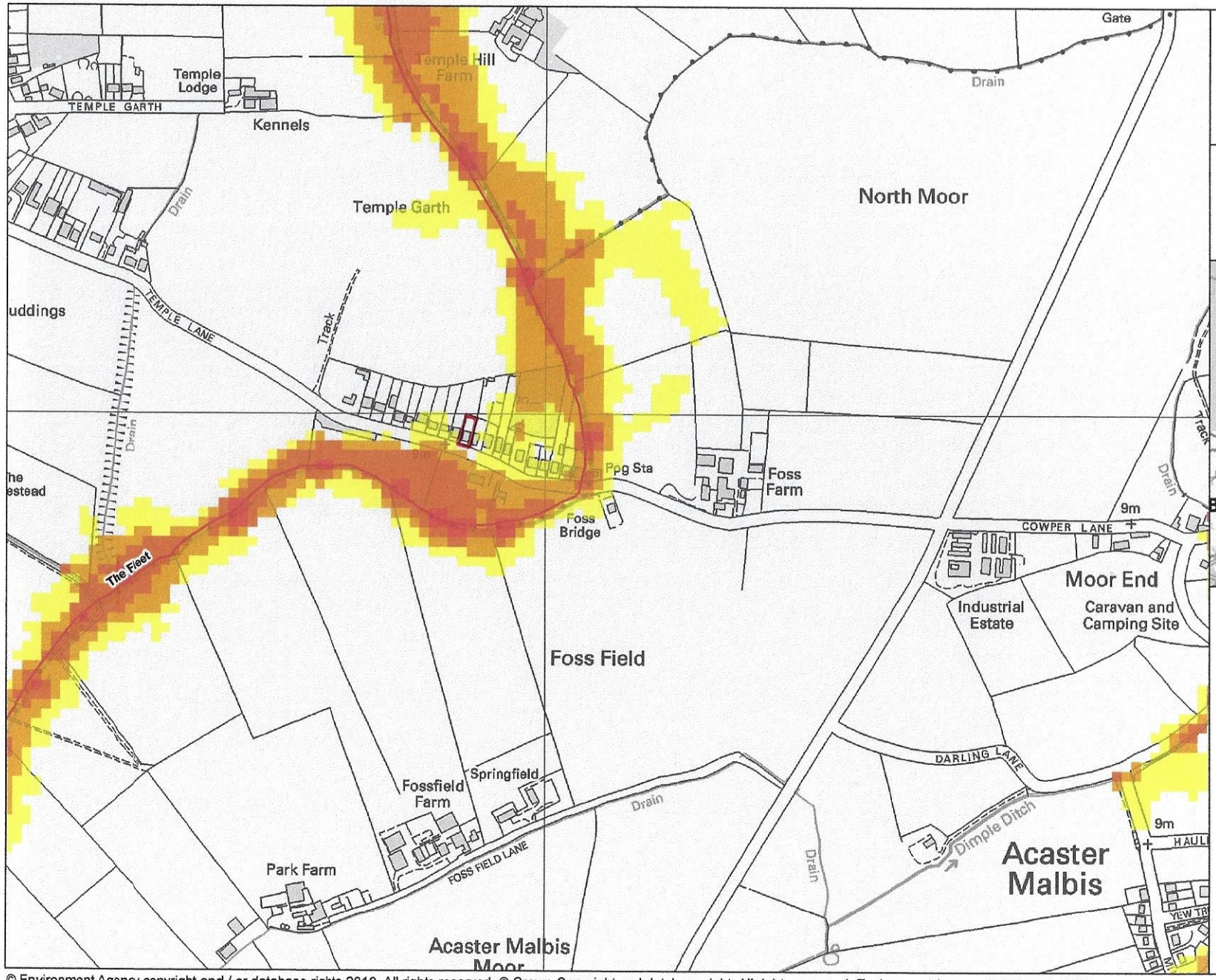
0 20 40 60m

RFI/193318 **Flood Defence Asset Location Map**



Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 08708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

2018 Lower Ouse Defended Depth Grid Map (m above ground) for the 1% AEP (1 in 100 year) +30% Climate Change event (merged),.



www.environment-agency.gov.uk

Scale: 1:5,000

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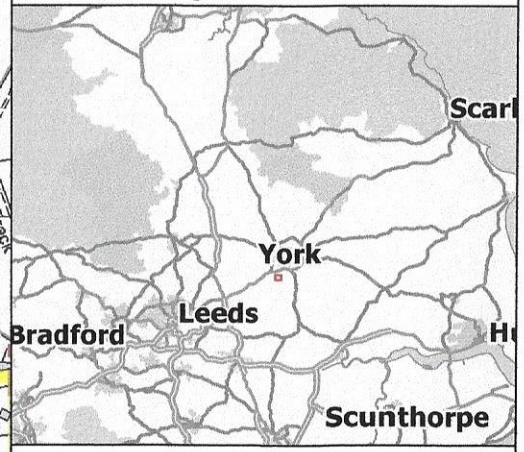

LEGEND

Main River

Q100CC3(30%)Merged (m)

- 0 - 0.25
- 0.25 - 0.5
- 0.5 - 1.00
- 1.00 - 2.00
- >2.00

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Wavin Stormwater Management

Project Details

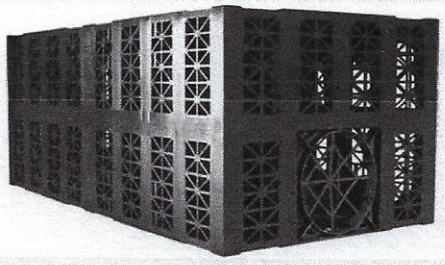
Project Name	123 Temple Lane	**Produced By**	Kevin Bristowe
Client Name	Michael Arnold		
Site Address	123 Temple Lane, YO23 3TD	**Date**	16/02/2024

Modular Units and Tank Details - Proposed Attenuation

Length	4m	4 units	**Void**	95%
Width	2m	4 units	**Cover Depth**	0.3m
Depth	0.8m	2 units	**Installation Depth**	1.1m
Total Number of Units		**32 units**		

Recommended Unit

Wavin recommend using the following unit for your installation.



AquaCell Core R

Product Number: 6LB150
AquaCell Core R has been designed for use in deep applications, subject to both regular and heavy traffic loadings, such as cars and HGV's (for vehicles up to 44 tonnes).

Other Unit(s)

The following unit(s) can also be used with, or in place of the recommended unit.

Drainage Details

Area	156m^2	**Allowable Discharge**	0.5 ltr/sec
Catchment Type	Roof + Hardstanding	**Climate Change**	30%
Area Reduction Factor	0.9	**Effective Area**	182.52m^2
Soil Type	Silty sandy clay	**Factor of Safety**	1

Rainfall Data

R Value	0.40	**Storm Return Period**	1 in 100 years
M5-60	18	**County**	North Yorkshire

Time	Z1 Value	y mm	Z2 Value	p mm	Inflow	Outflow	Storage Volume
5min	0.38	6.84	1.81	12.38	2.26	0.15	2.11
10min	0.52	9.36	1.89	17.69	3.23	0.3	2.93
15min	0.63	11.34	1.91	21.66	3.95	0.45	3.5
30min	0.8	14.4	1.91	27.5	5.02	0.9	4.12
1hr	1	18	1.99	35.82	6.54	1.8	4.74
2hr	1.19	21.42	2.03	43.48	7.94	3.6	4.34
4hr	1.44	25.92	2.01	52.1	9.51	7.2	2.31
6hr	1.59	28.62	2.01	57.53	10.5	10.8	-0.3
10hr	1.81	32.58	1.97	64.18	11.71	18	-6.29
24hr	2.35	42.3	1.89	79.95	14.59	43.2	-28.61
48hr	2.69	48.42	1.89	91.51	16.7	86.4	-69.7

Critical storm duration (hrs)	1hr
Required Storage Height	4.74m
Volume from Dimensions	6.08m^3

UNIT OF MEASUREMENT

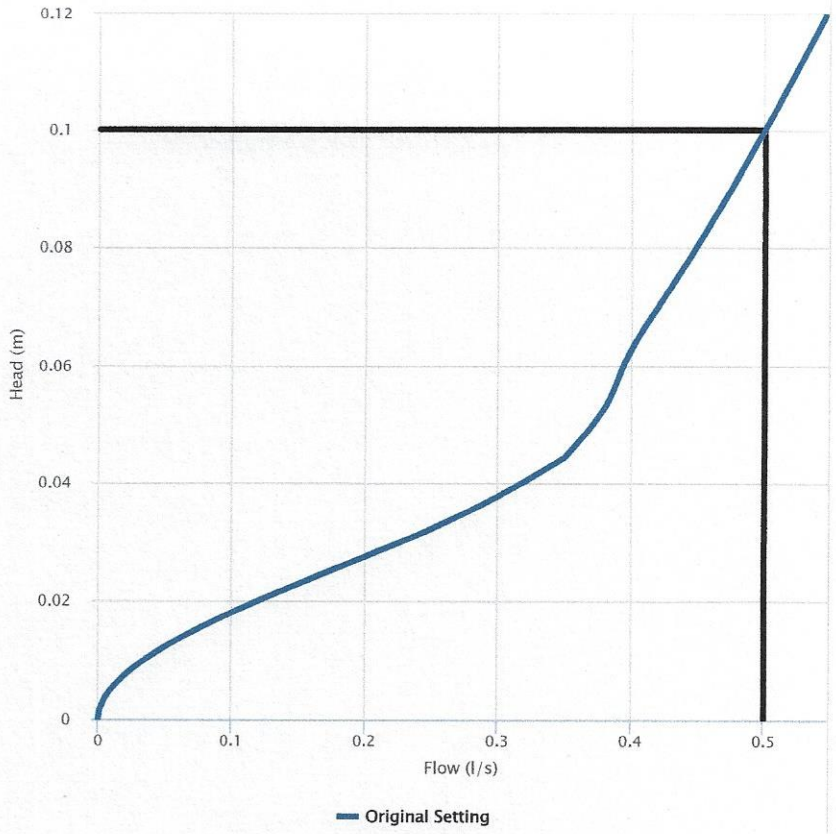
METRIC • Settings

Site Specific Design Please contact us for site specific drawings.

PRODUCT DETAILS

Product	Hydro-Brake® Optimum
	Visit Product Page
Unit Reference	CCU-0039-5000-0100-5000

HYDRAULIC CHARACTERISTICS



CONTROL POINTS

	Head (m)	Flow (l/s)
Primary Design Point	0.100	0.500
Flush-Flo™	0.070	0.420
Kick-Flo™	0.070	0.420

PERFORMANCE FLOW

Mean Flow Over Head Range (l/s)	0.306

Reference No.

123/TEM

Site Name

123 Temple Lane

PRIMARY DESIGN POINT

Design Head (m) *

0.1

Design Flow (l/s) *

0.5

CUSTOMISED HYDRAULIC RESPONSE

Objective *

(CU) Linear discharge

Flush-Flo™ (l/s)

SITE OPTIONS

Water Type *

Surface Water Only

Sump Available *

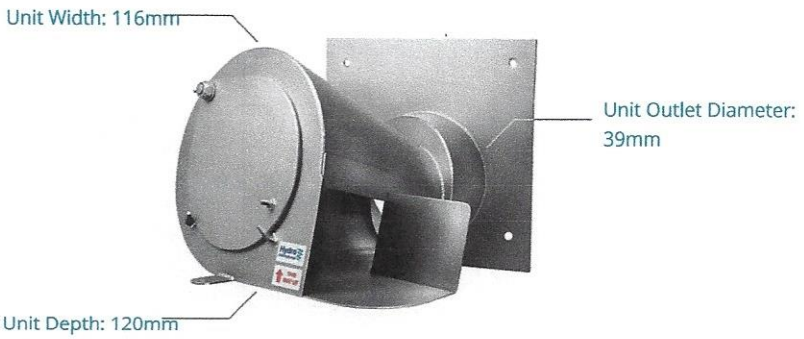
Yes (Default)

MECHANICAL BUILD OPTIONS

Mounting Style *

Flat Mounting Plate

Design



UNIT DIMENSIONS

(B) Unit Outlet Diameter (mm)	39
Internal Clearance (m^2)	0.0012
(C) Unit Depth (mm)	120
(A) Unit Width (mm)	116
Unit Height (mm)	67
Unit Span (mm)	Site Specific Design
Material Thickness (mm)	3

INSTALLATION DIMENSIONS

Minimum Outlet Pipe Diameter (mm)	75
Suggested Manhole Diameter (mm)	1,200
Minimum Sump Depth (mm)	N/A
Minimum Sump Width (mm)	N/A
Minimum Mounting Block Width (mm)	N/A
Minimum Mounting Block Height (mm)	Site Specific Design