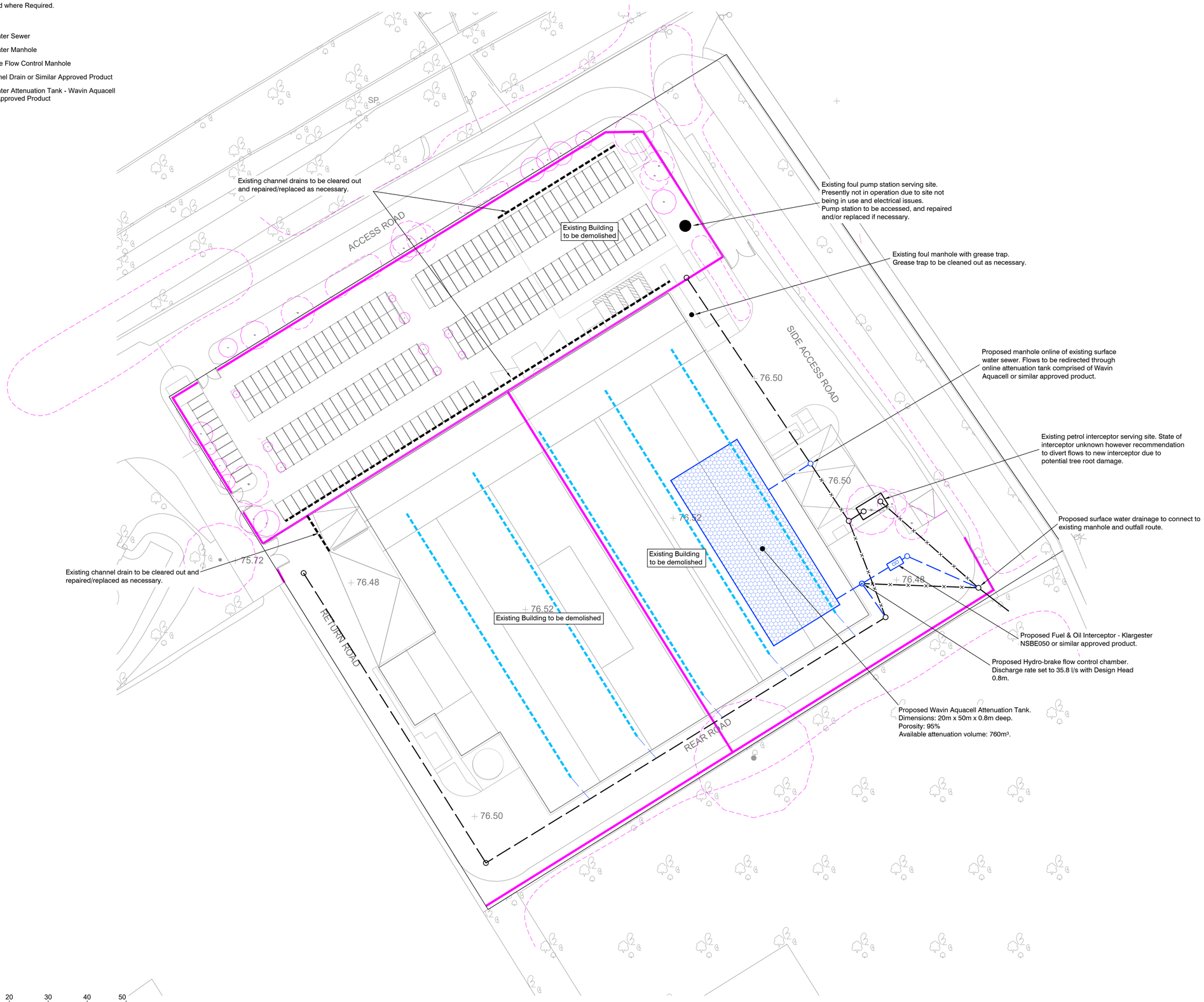
Key:

Existing

- Foul Water Sewer
- Surface Water Sewer
- Channel Drain to be repaired/replaced as required
- Sewer to be Capped, Abandoned and Left in Situ or Removed where Required.

Proposed

- Surface Water Sewer
- Surface Water Manhole
- Hydro-brake Flow Control Manhole
- ACO Channel Drain or Similar Approved Product
- Surface Water Attenuation Tank - Wavin Aquacell or Similar Approved Product



0m 10 20 30 40 50

SCALE 1 : 500

DO NOT SCALE this drawing. Use figured dimensions only.
The Contractor must check & verify all dimensions on site.
Any discrepancies must be reported immediately to the Engineer for clarification before proceeding.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

Refer to the relevant Construction (Design and Management) documentation where applicable.
It is assumed that all works on this drawing will be carried out by a competent contractor, working where appropriate to an approved method statement.

Drainage Notes

1. All private drainage shall be in accordance with BS8301 and relevant sections of Approved Document H of the Building Regulations.
2. The contractor is to check the level of existing sewers being used as outfalls or crossing proposed drainage runs PRIOR to laying any pipes. Any discrepencies are to be reported to the Engineer
3. For private drains where cover to pipes is less than 900mm in vehicular areas or 600mm in other areas protection in the form of a 100mm thick concrete pad shall be provided over the pipe granular surround.
4. Where drains do not exceed 600mm deep, plastic or clay access fittings minimum diameter 225mm shall be used. Elsewhere proprietary plastic or precast concrete inspection chambers shall be used. Unless shown otherwise FW inspection chambers are to be 750mm below dpc level and SW chambers and rodding eyes to be 600mm below dpc.
5. All gullies and rainwater downpipes connected directly to drains are to be roddable.
6. All drainage shall be laid upstream and each run between manholes shall be laid complete prior to backfilling. Where this is not practical trial holes or other means of identifying the line and level of services shall be carried out prior to works commencing.
7. All branch drains, or connections, are to discharge to the collectors obliquely, and in the direction of the main flow.

Drainage Calculations:

Existing Impermeable Area: 2.28Ha

Brownfield runoff using the Rational Method:

Q = CiA

Q = 2.78 x 50 x 2.28

Q = 316.9 l/s

Greenfield using IH124 via Causeway Flow:

Q1Yr	-	8.3 l/s
Q30Yr	-	19.1 l/s
Q100Yr	-	24.2 l/s
QBar	**-**	**9.8 l/s**

Brownfield using Causeway Flow:

Q1Yr	-	314.0 l/s
Q30Yr	-	763.0 l/s
Q100Yr	-	990.5 l/s

Betterment at 40%:

Q1Yr	-	188.4 l/s
Q30Yr	-	457.8 l/s
Q100Yr	-	594.3 l/s

Betterment at 50%:

Q1Yr	-	157.0 l/s
Q30Yr	-	381.5 l/s
Q100Yr	-	495.2 l/s

Based on the assumption that the existing 300Ø outfall pipe is laid at flattest grade to achieve self cleanse (1:238) this only enables discharge of **71.6 l/s.**

If limited to 50% of the 300Ø pipe discharge rate assumed above, **35.8l/s**, Flow requires:

1000m² x 0.8m deep attenuation tank.

Rev	Date	Description	By
P01	20.03.24	First issue for discussion	NT

Client

Charterhouse

Project

UYS Oxford, Garsington Road, OX4 2BW

Title

Proposed Drainage Strategy

Drawing Status

PRELIMINARY

Drawn	Checked	Approved	Date	Scale @ A1
NT	GW	NT	Mar 2024	1:500

Project No.	Drawing No.	Revision
120131	MSL-120131-XX-DR-C-3000	P01

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