



- NOTES:**
- Dimensions must not be scaled from this drawing.
 - The topographical information was taken from EDI Surveys Ltd drawing number 17940/T/01-01 Rev A, dated May 2019.
 - Thames Water asset information was taken from asset record ref ALS/ALS Standard/2022_4737453, dated 20 October 2022.
 - The site layout was taken from Artefact Studio's drawing 111 Rev B for Upper Ground Floor and drawing 110 Rev B for Lower Ground Floor, both dated 03 December 2021.
 - CCTV information was taken from Intergrum Site Services Ltd report reference 1483, dated 26 July 2023.
 - The existing drainage network route for the Thames Water network was interpreted from asset records, topographical survey and CCTV survey.
 - The existing site layout areas were estimated from the topographical survey.
 - The information presented in this drawing is for planning purposes only.
 - Refer to the utilities asset information for the locations of the other utilities.
 - If it is proposed that the surface water from the site is discharged via the existing Thames Water combined water network located in Wildwood Grove.
 - Based on the existing information it is assumed that gravity connection is possible for surface and foul water drainage. If levels are proven to be too shallow during any further investigation for a gravity connection, pumping may be required.
 - Reduced cover levels are proposed for the drainage network to achieve gravity connections.
 - Further survey works will be required to establish the locations of the existing sewers and the levels and any offsite connection.
 - Access via the neighboring property is required to access the Thames Water sewer in Wildwood Grove. This property is owned by the developer.
 - It is assumed that the total area within the redline boundary will remain private.
 - All surface water drains to be minimum 150Ø at 1:80 gradient unless noted otherwise.
 - All foul water drains to be minimum 150Ø at 1:40 gradient unless noted otherwise.
 - The cover and invert levels provided are indicative and subject to review at the next design stage.
 - Water butts can be incorporated to the design; locations to be agreed at the next design stage when the landscape strategy is further developed.
 - Some of the attenuation storage may be provided in an above ground tank. The footprint of the belowground tank may be reduced if some of the storage can be provided in an upstanding tank. This is to be further reviewed at the next design stage.
 - In the event of storm in excess of the design rainfall event, evacuation route available to the North End Road, which is at a higher level, via the internal stairs.

KEY

- SITE REDLINE BOUNDARY
- EXISTING COMBINED SEWER
- EXISTING SURFACE WATER DRAINAGE
- EXISTING FOUL WATER DRAINAGE
- PROPOSED COMBINED WATER DRAINAGE
- PROPOSED SURFACE WATER DRAINAGE
- PROPOSED FOUL WATER DRAINAGE
- PROPOSED CWC/MH
- PROPOSED SW/C/MH
- PROPOSED FW/C/MH
- ▲ RISK ITEM
- PROPOSED IMPERMEABLE AREAS
- OVERLAND FLOW PATH
- REVISIONS

REV.	DATE	DESCRIPTION	DRAWN	CHECKED
P06	25/07/24	Notes added following Fairhurst meeting	CA	TM
P05	05/07/24	Note added about external levels	CA	TM
P04	11/06/24	Filter drains & earth bund amended	CA	TM
P03	21/03/24	Filter drains & earth bund amended	CA	TM
P02	19/09/23	Redline boundary updated	CA	TM
P01	08/09/23	First issue	CA	TM

CHATHOM

CLIENT:
ARTEFACT STUDIO

PROJECT:
17 NORTH END

TITLE:
SURFACE WATER DRAINAGE STRATEGY

STAGE:
PRELIMINARY

SCALE:
1:100 @A1

2023-0025- CHA - XX - XX - DR - C - 1000 P06

PROJECT NO. ORIGINATOR ZONE LEVEL TYPE DISCIPLINE DRAWING NO. REV

Combined sewer connection via the adjacent property owned by the developer. This is a new formal drainage outfall for the development. The site currently does not contain any formal drainage arrangements.

Landscaping in this area will be altered to allow any overflow from development to drain to the north.

Brick wall to the boundary with minimum height of 109.20 mAOD. Existing garden wall extended as required to create a barrier to stop surface water from entering adjacent property to the west. External levels to fall away from the boundary, towards the filter drain.

2No. 100mmØ weep holes will be provided at 108.65 mAOD to allow surface water flow through the wall in storm event in excess of the design rainfall. At 1:50 gradient, each of these pipes will be capable of discharging 5.4 l/s (10.8 l/s in total) which is considered sufficient to allow the overflow from the site in an extreme rainfall event as the existing brownfield rate estimated for the site area is 6.9 l/s for a 1 in 100-yr storm.

Based on the latest Environment Agency mapping, the site is only affected by low risk surface water ponding (<30cm and 0.1% each year) in the lower central area where the new attenuation tank is located. The introduction of the garden wall will prevent any flooding from the site entering the property to the west. The proposed FFLs have been raised as well to further mitigate against any ponded surface water entering the proposed property. The filter drain along the boundary will direct the water towards the combined drain serving the development. Any water that is unable to escape via this route will be collected in the central area away from the building to drain away over a longer period of time. The external levels in the clouded area will be reduced to 108.40 m AOD to allow onsite storage of surface water for storms in excess of design rainfall event. An additional drainage feature (a gully or a channel drain) will be introduced as required to provide drainage to this area for design rainfall events. Location of drainage feature to be confirmed at the next design stage when the landscaping is further developed.

Unable to CCTV survey downstream of EXMH2 due to anti-flood valve in chamber. Line dye traced to main sewer manhole EXMHA in Wildwood Grove.

SW5 Tank
CL 108.62
IL 107.45
0.4m deep tank, 9m³ storage

FW3
CL 108.62
IL 107.65

SW4
CL 108.62
IL 107.49

SW1
CL 111.62
IL 110.32

CWMH1
With anti-flood valve
CL 108.68
IL 107.354

FW1
CL 108.62
IL 107.94

FW2
CL 108.62
IL 107.83

SW2
CL 108.62
IL 107.56

SW6 Flow control
CL 108.62
IL 107.40
Discharge restricted to 2l/s for all rainfall events up to 1 in 100-yr storm

Filter drain to the upper courtyard area

Filter drain to the lower courtyard area