ExSW Road Gully
CL 88.59
IL 87.89 (100Ø)

Existing surface water pipe to connect into proposed manhole SW MH01. Existing pipe invert level TBC on site.

Proposed 100mmØ RWP to connect to existing surface drainage network via existing external ground connection in soft landscaping area. Existing ground connection to be replaced with proposed RWP connection detail shown in drawing ref: 10568-GCA-XX-XX-DR-D-4304.

Existing foul water inspection chambers

Proposed 100mmØ RWP, to connect between existing chute and existing ground pop-up connection, to run along eastern wall of ladies toilet block at a fall no shallower than 1 in 300 above ladies toilet entrance. Refer to Elevation A-A.

Existing RWP chute to be retained

Existing RWP

Diameter of existing RWP TBC. Existing RWP to be removed and at the discretion of National Trust, if of suitable diameter and condition to be re-used as the proposed RWP above the flat roof of the disabled toilets.

At the completion of the proposed works there will remain 3 no. existing surface water gully connections to the foul drainage network that will continue to discharge to and be treated by the on-site sewage treatment plant. These gully connections are located in the toilet courtyard, outside the ladies toilet southern access and outside the man's toilet southern access.

Pipe diameter and invert level of existing drain downstream of Yard Gully 1 currently unknown and to be confirmed on site. Engineer to be informed of existing drain diameter and invert level when known to confirm whether existing drain will clash with proposed drain.

Existing chute and 75mmØ RWP. Strainer to be added to existing chute.

Entire length of existing guttering to be cleared of debris.

Proposed 100mmØ RWP with no strainer to discharge onto existing flat roof above disabled toilets. Material and style to match existing and to be approved by National Trust prior to installation. Existing gutter to be realigned by introducing a new low point at this RWP location. Realigned gutter to have a fall of 1 in 300.

ExSW IC.1
CL 88.34
IL 87.37

Relocate existing 75mmØ RWP from southeast corner of men's toilet block. Connection materials and style to be approved by National Trust prior to installation. For RWP ground connection detail refer to drawing ref: 10568-XX-XX-DR-D-4304

Existing eastern rainwater gutter to be re-graded by introducing a new high point at the southern end. Realigned gutter to have a fall of 1 in 300. From this point the gutter is to fall to the north to discharge into the proposed RWP located to the north.

Entire length of existing guttering to be cleared of debris.

Existing southern rainwater gutter to be re-graded by introducing a new high point at the eastern end, where existing RWP is to be removed. Realigned gutter to have a fall of 1 in 300. From this point the gutter is to fall to the west to discharge into the existing upsized RWP located to the west.

Existing 75mmØ RWP to be removed and reused for proposed RWP on eastern wall of men's toilet block.

Entire length of existing guttering to be cleared of debris.

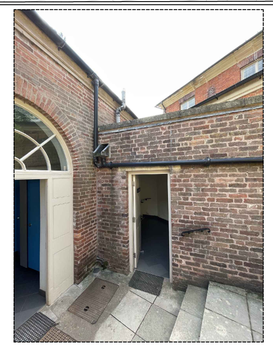
1 no. existing 100mmØ high level down pipe stub and 1 no. proposed high level 150mmØ down pipe stub connections from higher gutters to up-sized hopper below. Material and style of proposed stub to match existing and to be approved by National Trust prior to installation. Proposed stub diameter to be agreed with Building Control. Calculations have shown that discharge rates from the existing 100mmØ stub outlet is 5.80 l/s and from the proposed 150mmØ down pipe stub is 0.71 l/s. The capacity of the existing 100mmØ RWP is 10.71 l/s. The existing 100mmØ RWP has sufficient capacity to accommodate the combined flows from the 2 no. stub outlets.

Existing 100mmØ RWP to be retained and existing hopper to be replaced with proposed up-sized hopper (sized to accommodate existing 100mmØ down pipe stub and 1 no. proposed 150mmØ down pipe stub connections). Material and style to match existing and to be approved by National Trust prior to installation.

Existing grate to ground floor surface water pop up connection beneath 100mmØ RWP to be retained.

Gutter sizing calculations assumes that existing gutters (which are to be re-used and re-graded) are half round gutter types with a width/diameter of 125mm and a depth of 50mm based on site measurements communicated to the Engineer.

All Dimensions in Metres unless stated otherwise. Do not scale Dimensions from this drawing



Previous Elevation A-A of Western Wall of Courtyard (N.T.S)

Proposed 100mmØ down pipe to connect to existing rainwater drainage chute and to run above ladies toilet entrance before discharging into existing ground pop-up connection within soft landscaping area as shown. Gradient of RWP across entrance to be no shallower than 1 in 300. For RWP ground connection detail refer to drawing Ref: 10568-XX-XX-DR-D-4304.
For reference this solution will return the RWP arrangement to match a previous configuration that pre-dated recent alterations (refer to photo inset above)

Existing appliances and lighting fixture attached to external wall to be relocated to accommodate proposed RWP run.

Extractor fan outlet to be relocated to accommodate proposed RWP alignment, if required.

Existing rainwater pipe and connecting stub pipe to be removed and connection into ground to be capped off



Proposed Elevation A-A of Western Wall of Courtyard (N.T.S)

RESIDUAL RISKS

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following

1 Cross Site Services - Contractor to locate & demark all cross site services prior to start on site.

NOT FOR CONSTRUCTION UNLESS STATED BELOW

NOTES

1. DO NOT SCALE FROM DRAWINGS. If in doubt - ask.
2. All dimensions in millimeters unless stated otherwise.
3. All levels in meters unless stated otherwise.
4. This drawing set is to be printed in colour.
5. To be read in conjunction with all other relevant GCA drawings, Specification Document, design notes & Designer's Risk Assessment.
6. All GCA design information to be read in conjunction with Architect's drawings & specifications.
7. All works to be carried out in accordance with the current Building Regulations, British Standards & NHBC standards.
8. The Contractor is responsible for the design, support & erection of all temporary works.
9. All dimensions & setting out to be confirmed by the Architect.
10. No changes should be made to the design without verification by the designer.
11. Invert levels taken from topo survey info and AquaRod drainage CCTV survey report dated 06/02/2025.
12. All propriety products and supplier designed items to be installed in strict accordance with manufacturer's instructions unless noted otherwise.
13. Existing surface water connections to foul drainage network identified in AQUAROD drainage CCTV survey dated 10/07/2024.

Drawing Key

- Existing Private Surface Water Drain — ExSW MH# D400, 1200Ø PCC, CL ##, IL ## (150Ø), 150Ø @ 1:100
- Existing Private Foul Water Drain — ExFW MH# D400, 1200Ø PCC, CL ##, IL ## (150Ø), 150Ø @ 1:100
- Existing Private Combined Water Drain — ExCW MH# D400, 1200Ø PCC, CL ##, IL ## (150Ø), 150Ø @ 1:100
- Proposed Private Surface Water Drain — SW MH# D400, 1200Ø PCC, CL ##, IL ## (150Ø), 150Ø @ 1:100
- Proposed Gutter Flow Direction

Rev	Description	Date	Drawn	Chk'd
P08	Capacity of 100mm Dia RWP Updated	25/06/25	SH	SH
P07	Updated To Client Comments	17/06/25	SH	SH
P06	Updated To Client Comments	13/06/25	SH	SH
P05	Updated To Client Comments	09/06/25	SH	SH
P04	Updated To Client Comments	09/06/25	SH	SH
P03	Updated To Client Comments	05/06/25	SH	SH
P02	Updated To Client Comments	09/05/25	EL	SH
P01	First Issue	30/04/25	EL	SH

GCA
CONSULTING CIVIL, STRUCTURAL, HIGHWAY AND TRANSPORTATION ENGINEERS
OFFICES AT DERBY, LEICESTER & WARWICK
GCA (UK) Ltd, ST HELEN'S HOUSE, KING STREET, DERBY DE1 3EE.
TEL 01332 362411. E-MAIL derby@gca-consulting.com

Client: National Trust

Project: Kedleston Hall Drainage

Title: Proposed Drainage Layout

Document Reference: 10568 - GCA - XX - XX - DR - C - 4101 - S3 - P08
(Project No - Origin - Zone - Level - Type - Role - Dwg No - Status - Rev)

GCA Project No: 10568 | Scale: 1:50 @ A1

Purpose: DETAILED DESIGN - RIBA STAGE 4