Drainage Outfall Plan

Scale 1:200

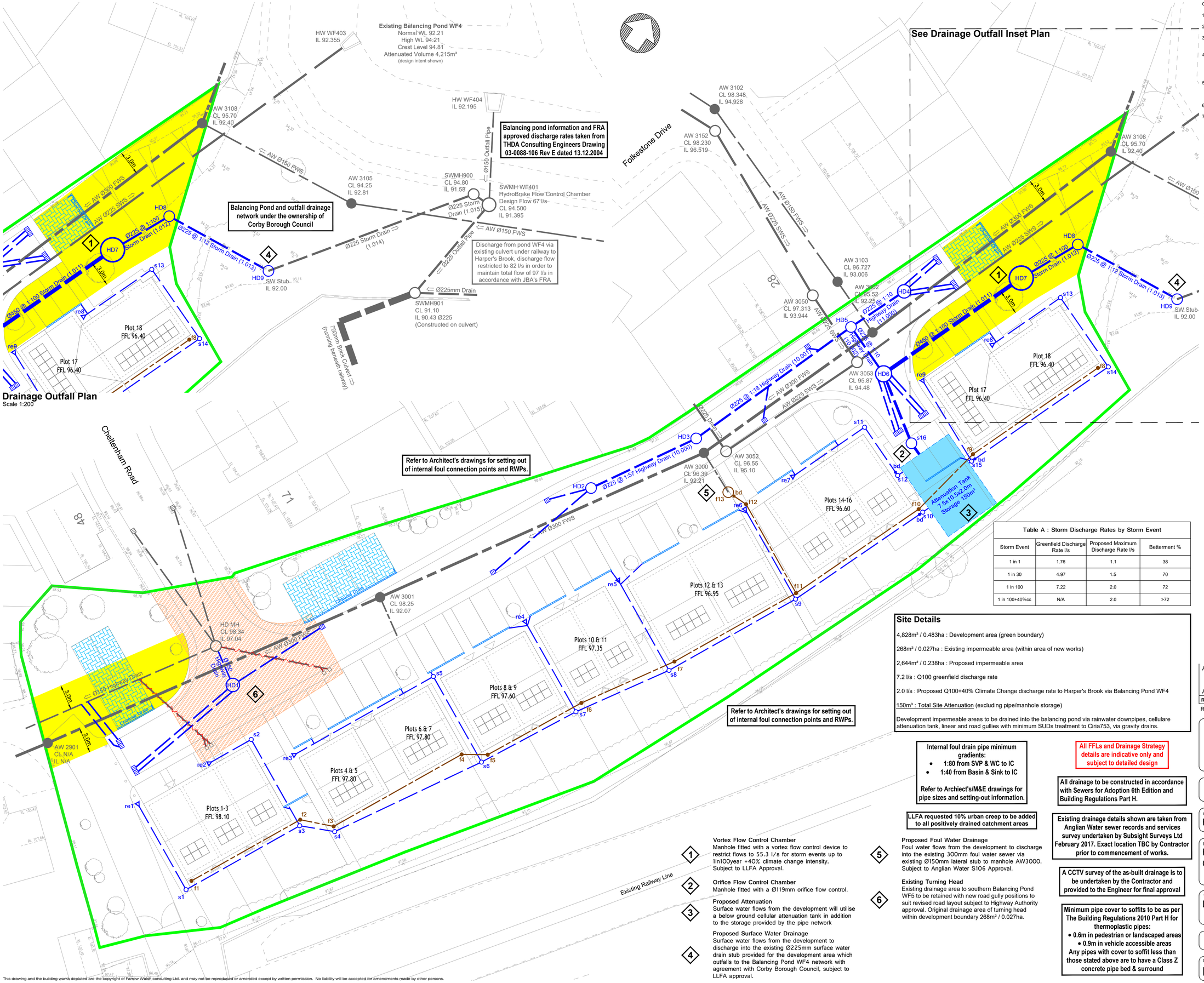

Table A : Storm Discharge Rates by Storm Event

Storm Event	Greenfield Discharge Rate l/s	Proposed Maximum Discharge Rate l/s	Betterment %
1 in 1	1.76	1.1	38
1 in 30	4.97	1.5	70
1 in 100	7.22	2.0	72
1 in 100+40%cc	N/A	2.0	>72

Site Details

4,828m² / 0.483ha : Development area (green boundary)

268m² / 0.027ha : Existing impermeable area (within area of new works)

2,644m² / 0.238ha : Proposed impermeable area

7.2 l/s : Q100 greenfield discharge rate

2.0 l/s : Proposed Q100+40% Climate Change discharge rate to Harper's Brook via Balancing Pond WF4

150m³ : Total Site Attenuation (excluding pipe/manhole storage)

Development impermeable areas to be drained into the balancing pond via rainwater downpipes, cellulare attenuation tank, linear and road gullies with minimum SUDs treatment to Ciria753, via gravity drains.

Refer to Architect's drawings for setting out of internal foul connection points and RWPs.

Internal foul drain pipe minimum gradients:
- **1:80 from SVP & WC to IC**
- **1:40 from Basin & Sink to IC**

Refer to Archiect's/M&E drawings for pipe sizes and setting-out information.

LLFA requested 10% urban creep to be added to all positively drained catchment areas

All FFLs and Drainage Strategy details are indicative only and subject to detailed design

All drainage to be constructed in accordance with Sewers for Adoption 6th Edition and Building Regulations Part H.

Existing drainage details shown are taken from Anglian Water sewer records and services survey undertaken by Subsight Surveys Ltd February 2017. Exact location TBC by Contractor prior to commencement of works.

A CCTV survey of the as-built drainage is to be undertaken by the Contractor and provided to the Engineer for final approval

Minimum pipe cover to soffits to be as per The Building Regulations 2010 Part H for thermoplastic pipes:
- **0.6m in pedestrian or landscaped areas**
- **0.9m in vehicle accessible areas**

Any pipes with cover to soffit less than those stated above are to have a Class Z concrete pipe bed & surround

1. **Vortex Flow Control Chamber**
Manhole fitted with a vortex flow control device to restrict flows to 55.3 l/s for storm events up to 1in100year +40% climate change intensity. Subject to LLFA Approval.

2. **Orifice Flow Control Chamber**
Manhole fitted with a Ø119mm orifice flow control.

3. **Proposed Attenuation**
Surface water flows from the development will utilise a below ground cellular attenuation tank in addition to the storage provided by the pipe network

4. **Proposed Surface Water Drainage**
Surface water flows from the development to discharge into the existing Ø225mm surface water drain stub provided for the development area which outfalls to the Balancing Pond WF4 network with agreement with Corby Borough Council, subject to LLFA approval.

5. **Proposed Foul Water Drainage**
Foul water flows from the development to discharge into the existing 300mm foul water sewer via existing Ø150mm lateral stub to manhole AW3000. Subject to Anglian Water S106 Approval.

6. **Existing Turning Head**
Existing drainage area to southern Balancing Pond WF5 to be retained with new road gully positions to suit revised road layout subject to Highway Authority approval. Original drainage area of turning head within development boundary 268m² / 0.027ha.

General Notes

1. DO NOT SCALE.
2. This drawing is to be read in conjunction with all other relevant drawings and details.
3. Should there be any conflict between the details indicated on this drawing and those on other drawings the Engineer should be informed PRIOR to construction on site.
4. Until technical approval has been obtained from the relevant Authority, it should be understood that all drawings issued are Preliminary and NOT for construction. Should the Contractor commence site work prior to such approval being given it is entirely at their own risk.
5. Sketch proposals are for illustrative purposes only and as such are subject to detailed site investigation including ground conditions / contaminants, drainage, design and planning / density negotiations.
6. All dimensions are in millimetres unless otherwise stated.
7. The Farrow Walsh Consulting Designers Risk Assessments for this project must be reviewed PRIOR to the commencement of any works on site.

NOTES

1. This drawing is for Planning purposes only and is subject to detailed design.
2. This drawing to be read in conjunction with all other relevant Engineers and Architect's details.
3. All work is to be carried out in accordance with the current British Standards, codes of practice, building regulations and with Sewers for Adoption 6th Edition guidance.
4. The exact position, level, size and use of existing sewers to be confirmed on site. Any discrepancies to be reported to the engineer prior to commencement of works.
5. All uncovered and shallow pipework to be protected against construction traffic as part of the Contractor's temporary works requirements.
6. Cover levels shown are approximate only, subject to the Architect's external works and landscaping scheme.
7. All connections to road gullies and channels shall be 150mm nominal bore pipework.
8. All pipework to be U-PVC type in accordance with WIS 4-35-01 unless otherwise noted.
9. All pipework entering and exiting manholes to be connected with pipe soffits level.

LEGEND

- Development Boundary
- Storm drain
- Rodding eye (storm only)
- Backdrop
- Linear drain/channel with B125 Grade grating
- S38 road gully
- Foul drain
- Permeable block paving infiltrating to ground
- Sewer / Highway Drain Easement (existing and proposed)
- Extent of existing adopted turning head 268m²
- Existing road gully and connection pipes to be fully removed

Rev	Description of updates	Drawn	Checked	Appvd	Date
A2	Strategy revised to suit LLFA comments dated 17.10.2018 and the updated development layout.	DM	BM	JD	16.11.18
A1	Issued for Approval.	LK	CB	JD	26.06.18

Revision Schedule

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FOR APPROVAL

Client: RG+P

Project: Residential Development Cheltenham Road, Corby

Title: Drainage Strategy

Drawn:	Checked:	Approved:	Date:	Scale:
LK	CB	JD	May 2018	1:200 @ A1

Drawing No. **FW1543-D-400** Revision: **A3**