## Site Details

10,380m² / 1.038ha : Development area

8,140m² / 0.814ha : Existing impermeable area

4,682m² / 0.462ha : Proposed impermeable area

114.9 l/s : Existing Q1 storm discharge rate to sewer

255.4 l/s : Existing Q30 storm discharge rate to sewer

346.6 l/s : Existing Q100 storm discharge rate to sewer

57.5 l/s : Proposed Q100+30% climate change storm discharge rate to sewer

Development impermeable areas to be drained into the storm sewers via cellular tanks with minimum SUDs treatment to Ciria753, via gravity sewers.

**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**

**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.**

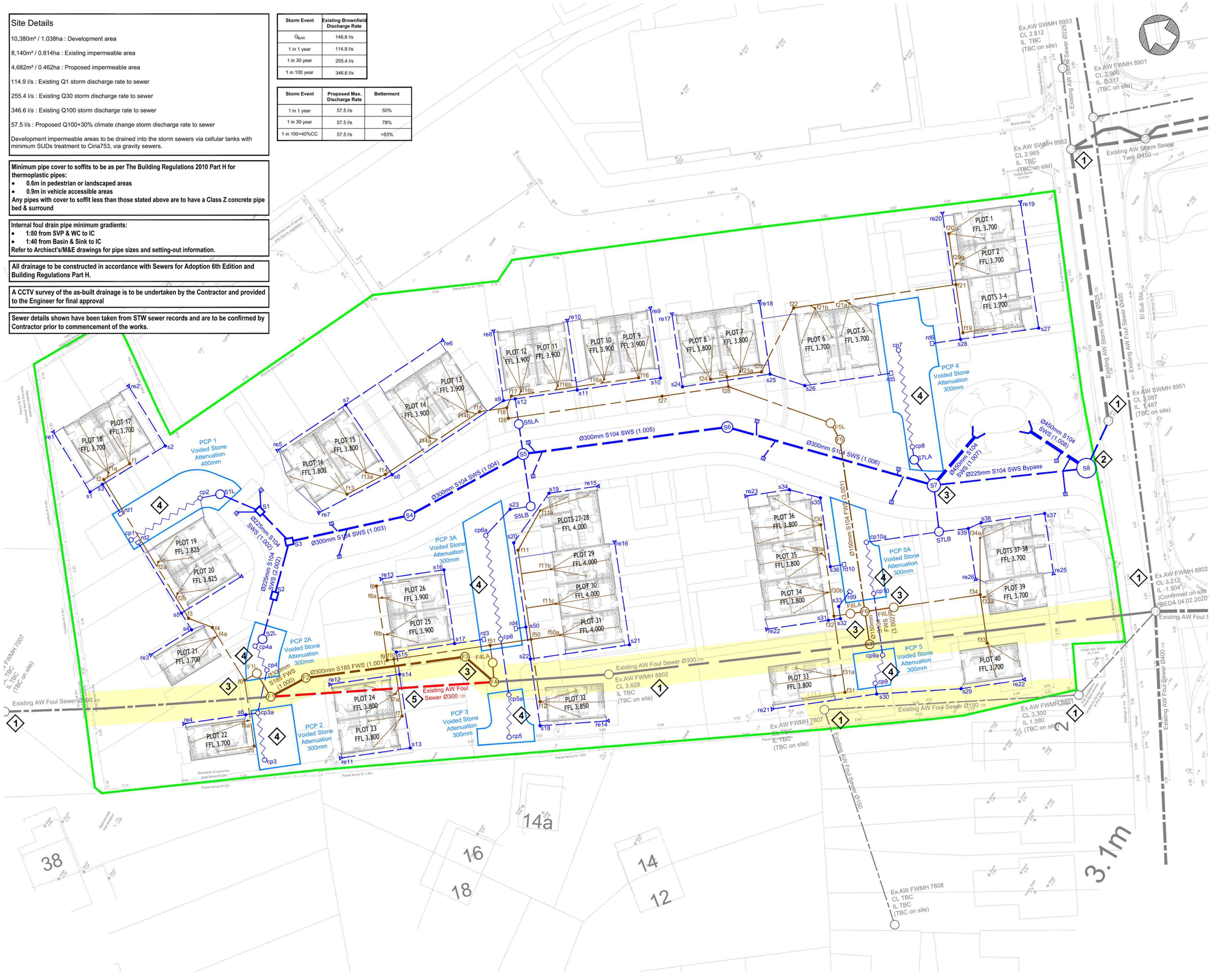
**All drainage to be constructed in accordance with Sewers for Adoption 6th Edition and Building Regulations Part H.**

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

**Sewer details shown have been taken from STW sewer records and are to be confirmed by Contractor prior to commencement of the works.**

| Storm Event | Existing Brownfield Discharge Rate |
|---|---|
| $Q_{BAR}$ | 148.8 l/s |
| 1 in 1 year | 114.9 l/s |
| 1 in 30 year | 255.4 l/s |
| 1 in 100 year | 346.6 l/s |

| Storm Event | Proposed Max. Discharge Rate | Betterment |
|---|---|---|
| 1 in 1 year | 57.5 l/s | 50% |
| 1 in 30 year | 57.5 l/s | 78% |
| 1 in 100+40%CC | 57.5 l/s | >83% |




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 Approval purposes only and is not to be used for Construction.
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 Contractors temporary works requirements.
6. All connections to road gullies and channels shall be 150mm nominal bore pipework.
7. All pipework to be U-PVC type in accordance with WIS 4-35-01 unless otherwise noted.
8. All pipes connecting to adopted manholes up to and including 300mm dia. to be Wavin Ultrarib or similar approved.
9. All pipes connecting to adopted manholes greater than 300mm dia. to be Concrete or approved U-PVC.
10. All pipework entering and exiting manholes to be connected with pipe soffits level.
11. All works are to be to the satisfaction of the Engineer, Building Officer, Severn Trent Water, local authority Highway & Flood Planning Officer.
12. All insitu services and drainage networks are to be located and protected as necessary by the Contractor prior to the commencement of the works.

## LEGEND

- Boundary of Site Ownership
- 300mm dia. IC Max Depth 0.9m
- 450mm dia. IC Max Depth 3.0m
- 1200mm dia. IC
- 1500mm dia. IC
- 1800mm dia. IC
- Rodding eye (storm only)
- 600mm dia. Catchpit
- Collector drain - Ø100mm Plastic plastic pipe
- PCP — Voided stone below shared parking (Depth Varies)
- 5m Sewer Easement

## NOTES

1. Existing Sewers
   Size, invert and direction of existing drains to be confirmed on site prior to commencements of drainage works
   Flow Control Chamber
2. Proposed Flow Control Chamber restricting the discharge rate to 5 l/s for a 1in100 year storm + 30%.Connection to combined chamber fitted with 'U' water trap downstream.
   Hydro-Brake CTL-SHE-0101-5000-1325-5000
   Mesh Screening
3. Mesh screen to be placed over the outlet pipe of chambers F1L, F3LA, F6LA, F6LB and S7 during site construction works and removed immediately prior to the first occupancy of the dwellings served by the sewers
   Collection Trench
4. Stone trenches to allow runoff from diffusers to enter collection pipe. Minimum gradient within trench to be 1:150
   Existing Sewer
5. Existing Sewer to be divested and diverted. Subject to Section 185 approval from Anglian Water

| Rev | Description of updates | Drawn | Check'd | App'd | Date |
|---|---|---|---|---|---|
| A2 | Drawing updated to suit latest S185 plans and updated site layout. | CB | OP | JD | 07.10.20 |
| A1 | Issued for For Approval | JD | CB | DM | 30.07.19 |

Revision Schedule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**FOR APPROVAL**

Client: GEDA Construction Ltd.

Project: Station Road, Long Sutton

Title: Alternative Drainage Strategy

| Drawn: | Checked: | Approved: | Date: | Scale: |
|---|---|---|---|---|
| CB | DM | JD | July 2019 | 1:250 @ A1 |

Drawing No. **FW1733-D-495** Revision: **A2**