

## Notes

- Do not scale from this drawing. All dimensions must be checked & verified on-site. If in doubt ask.
- The Contractor to check & verify all dimensions & levels before any work is started on-site.
- Existing site survey works have been carried out by others & no guarantee can be given by Baynham Meikle for their accuracy.
- Any discrepancies noted on-site are to be reported to Baynham Meikle immediately.
- This drawing is to be read in conjunction with all relevant Architects', Engineers' and other Specialists' drawings & specifications.
- For existing ground conditions, refer to Site Investigation reports.
- The drainage installation is to be compliant with Building Regs. (Part H).
- All adoptable drainage works shall comply with 'Water UK - Design and Construction Guide'.
- The following pipe strengths shall be adopted (unless noted otherwise):
  - Pipes up to and including 150mm Ø to be PVC-U to BS-EN 12201, or Clayware to BS-EN 205 Class 100.
  - Pipes 150mm Ø up to and including 225mm Ø to be Clayware to BS-EN 205 Class 100.
  - Pipes 300mm Ø to be Clay to BS-EN 295 Class 160 or Concrete to BS 5911 Class M.
  - All pipe runs to be laid with flexible joints.
- All pipes entering and exiting manholes are to be connected to pipe soffits unless levels noted otherwise.
- Pipe Bedding and surround to be as follows:

| Location:                  | Cover to Soffit        | Pipe Bedding: |
|----------------------------|------------------------|---------------|
| Roads:                     | Clay / Conc / Flexible |               |
|                            | >1.2m                  | >0.9m Class S |
|                            | <1.2m                  | <0.9m Class Z |
| Hard and Soft Landscaping: | >0.6m                  | Class S       |
|                            | <0.6m                  | Class Z       |
- The following Conc. mixes are to be used (in accordance with BS 8500):

| Location:                              | Mix Reference: |
|----------------------------------------|----------------|
| Concrete Surround to Pipes             | ST4            |
| Concrete Base and Surround to Manholes | ST4            |
- All precast-concrete products (i.e. pipes, manhole rings, etc.) shall be of suitable Concrete mix to cater for Class 2 Sulphates.
- Pre-formed channels are to be used in manholes where applicable.
- Granolithic Concrete benching to be steel trowelled to a dense smooth face neatly shaped and finished to all branch connections and laid in accordance with the Specification.
- All connections to be turned in direction of flow using pipe bends.
- Manhole covers and frames to be Ductile Iron Medium Duty grade B125 rectangular to BS-EN 124 positions outside vehicular-trafficked areas, and Heavy Duty grade D400 in vehicular-trafficked areas.
- Manhole covers and frames to be Ductile Iron Medium Duty grade A15 covers in Soft Landscaping.
- First flexible joint in pipe adjacent to a manhole shall be a maximum of 600mm from inside face of manhole, connecting to rocker pipe.
- The length of Rocker Pipe is as follows:

| Pipe Diameter: | Length of Rocker Pipe: |
|----------------|------------------------|
| 150mm - 600mm  | 600mm                  |
| 675mm - 750mm  | 1000mm                 |
| 825mm & Over   | 1250mm                 |
- Manholes with outgoing pipes greater than 600mm Ø shall be fitted with guard bars, safety chains or other safety devices.
- The Principle Contractor shall be responsible for checking the existing line and invert levels of any connection points for both the Foul and Surface Water systems, prior to undertaking installation of any new drainage works. Any deviation to the levels and positions indicated on the drawing should be brought to the attention of the Engineer.
- All invert levels specified are outgoing (except Backdrop connections).
- All Foul connections to be 150mm Ø laid at a minimum gradient of 1:40 unless noted otherwise. Surface Water pipe sizes are as indicated.
- Foul pipes to be externally vented (SVP) at head of run.
- For location of internal SVP, SS, etc., refer to Architect's latest layouts.
- Internal Foul drainage connections / positions and setting-out information to be confirmed by the M&E Consultant / Architect.

## LEGEND:

- STORM SEWER AND MH / IC
- FOUL SEWER AND MH / IC
- EXISTING FOUL SEWER AND MH (Heathrow / private asset)
- EXISTING STORM SEWER AND MH
- EXISTING STORM SEWER AND MH (Heathrow asset) (assumed to be abandoned)
- FOUL RISING MAIN
- CELLULAR ATTENUATION TANK
- POROUS BLOCK PAVING WITH TANKED POROUS SUB-BASE
- ESSO ASSET - FUEL PIPELINE
- BP ASSET - FUEL PIPELINE
- RED LINE BOUNDARY - TITLE NUMBER: AGL139847
- BLUE LINE BOUNDARY - TITLE NUMBER: AGL139847

**DISCHARGE RATES FOR SURFACE WATER NETWORK HAVE BEEN LIMITED TO Q-BAR GREENFIELD RATES. TOTAL SURFACE WATER DISCHARGE RATE FOR PROPOSED SITE = 4l/s**

**REDUNDANT DRAINAGE PIPE WORK TO BE REMOVED AS NECESSARY AND CUT OFF / CAPPED AT SUITABLE LOCATIONS.**

| Rev | Date       | Description                                                                             | By     | Chkd |
|-----|------------|-----------------------------------------------------------------------------------------|--------|------|
| P14 | 23/03/2024 | Updated to suit latest architect site layout.                                           | J.T.   | T.B. |
| P13 | 17/03/2024 | Updated to suit latest architect site layout.                                           | J.T.   | T.B. |
| P12 | 23/02/2024 | Pump positions moved.                                                                   | C.S.   | T.B. |
| P11 | 19/02/2024 | Details of foul drainage added.                                                         | C.S.   | T.B. |
| P10 | 05/02/2024 | Updated to suit latest expected foul outlet.                                            | C.S.   | T.B. |
| P9  | 05/02/2024 | Updated to suit latest expected foul outlet.                                            | C.S.   | T.B. |
| P8  | 08/01/2024 | Site Layout updated to suit.                                                            | A.S.B. | C.S. |
| P7  | 25/11/2023 | Updated to amended Q-bar rates. Storm outlet location treated for Hydrogen network.     | C.S.   | T.B. |
| P6  | 12/11/2023 | Updated to show latest proposals.                                                       | C.S.   | T.B. |
| P5  | 11/11/2023 | Updated to show latest proposals and updated site layout.                               | C.S.   | T.B. |
| P4  | 24/10/2023 | New layout inserted.                                                                    | C.S.   | T.B. |
| P3  | 14/10/2023 | Existing Thames Water sewer added to drawing.                                           | C.S.   | T.B. |
| P2  | 13/10/2023 | Further information added to drawing in line with the supporting drainage calculations. | C.S.   | T.B. |
| P1  | 10/10/2023 | First issue.                                                                            | C.S.   | T.B. |

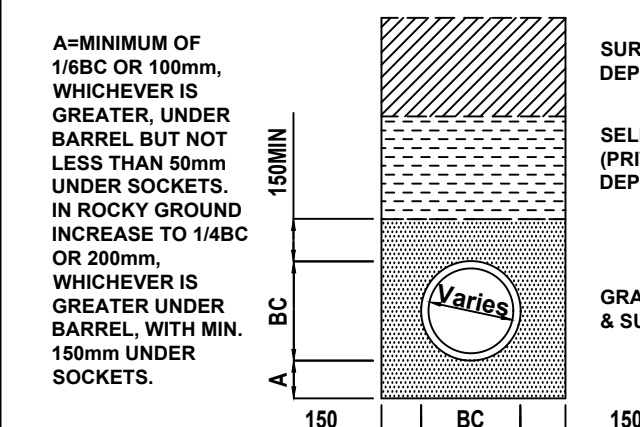
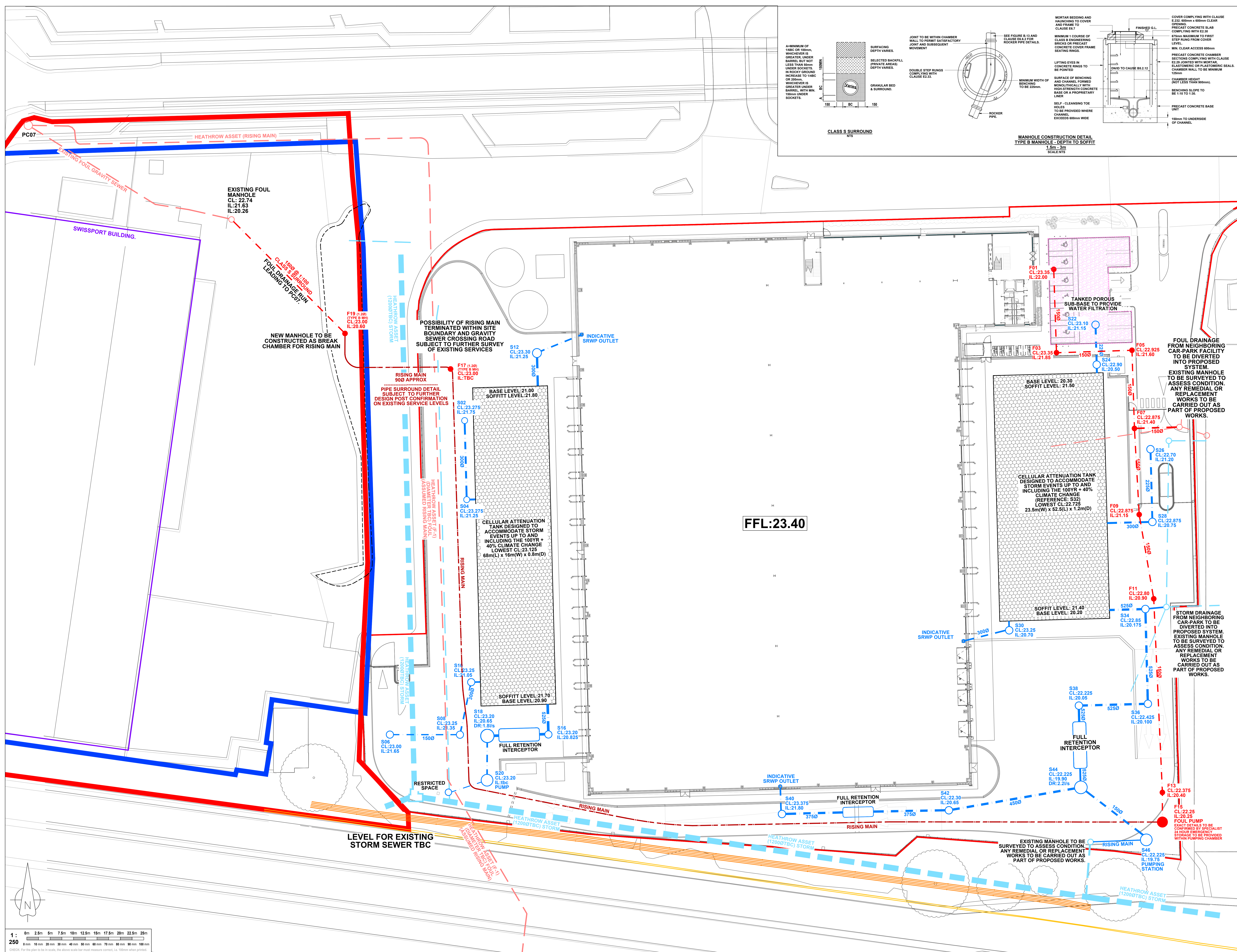
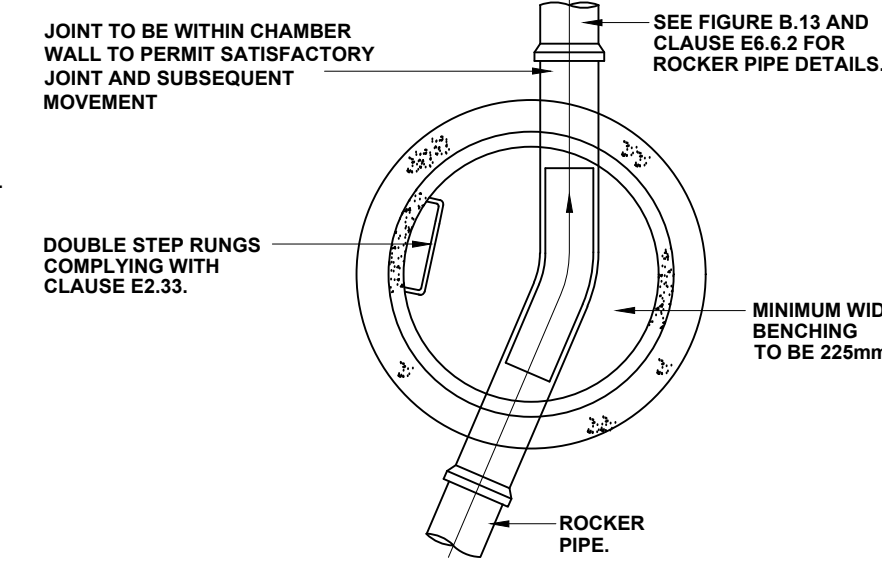
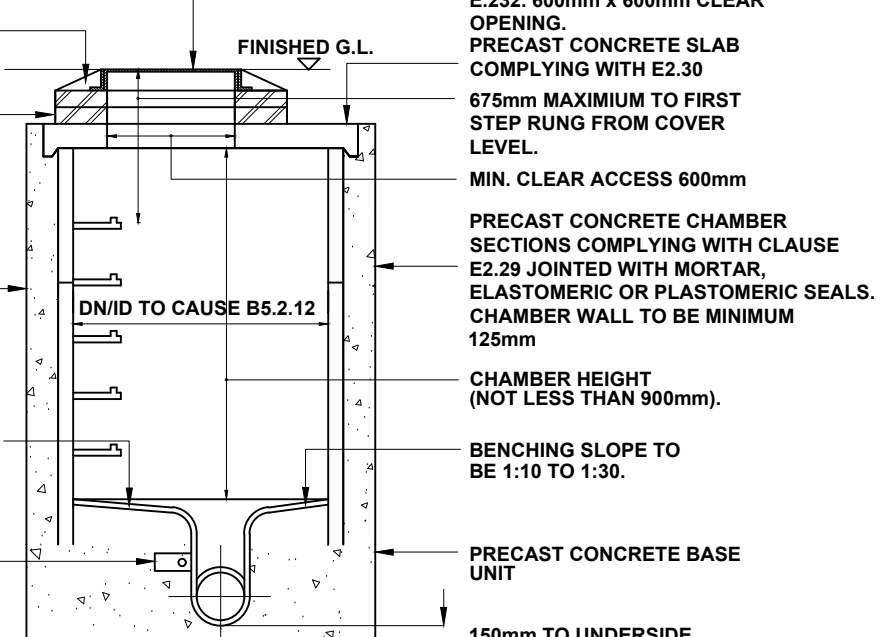
## Drawing Status

Preliminary

Project Regis,

Drawing Title  
Drainage Strategy PlanDrawing Number  
13822 - 200Revision  
P14

| Rev    | Date       | Drawn by | Checked by | Project Eng |
|--------|------------|----------|------------|-------------|
| RM Ref | Scale @ A0 | C.S.     | T.B.       | T.B.        |

Scale @ A0  
1 : 250Drawn by  
C.S.Checked by  
T.B.Project Eng  
T.B.BAYNHAM MEIKLE  
Consulting Civil & Structural Engineers0201 434 4000  
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www.baynhammeikle.co.ukCLASS S SURROUND  
N/AMANHOLE CONSTRUCTION DETAIL  
TYPE B MANHOLE - DEPTH TO SOFFIT  
1.5m - 3m  
SCALE: 1:50

COVER COMPLYING WITH CLAUSE E2.32. 600mm x 600mm CLEAR OPENING. PRECAST CONCRETE SLAB COMPLYING WITH E2.30. 675mm MAXIMUM TO FIRST STEP RUNS FROM COVER LEVEL. MIN. CLEAR ACCESS 600mm. PRECAST CONCRETE CHAMBER SECTIONS COMPLYING WITH CLAUSE E2.30. JOINTED WITH MORTAR ELASTOMERIC OR PLASTOMERIC SEALS. CHAMBER WALL TO BE MINIMUM 125mm. BENCHING SLOPE TO BE 1:10 TO 1:30. PRECAST CONCRETE BASE UNIT. 150mm TO UNDERSIDE OF CHANNEL.