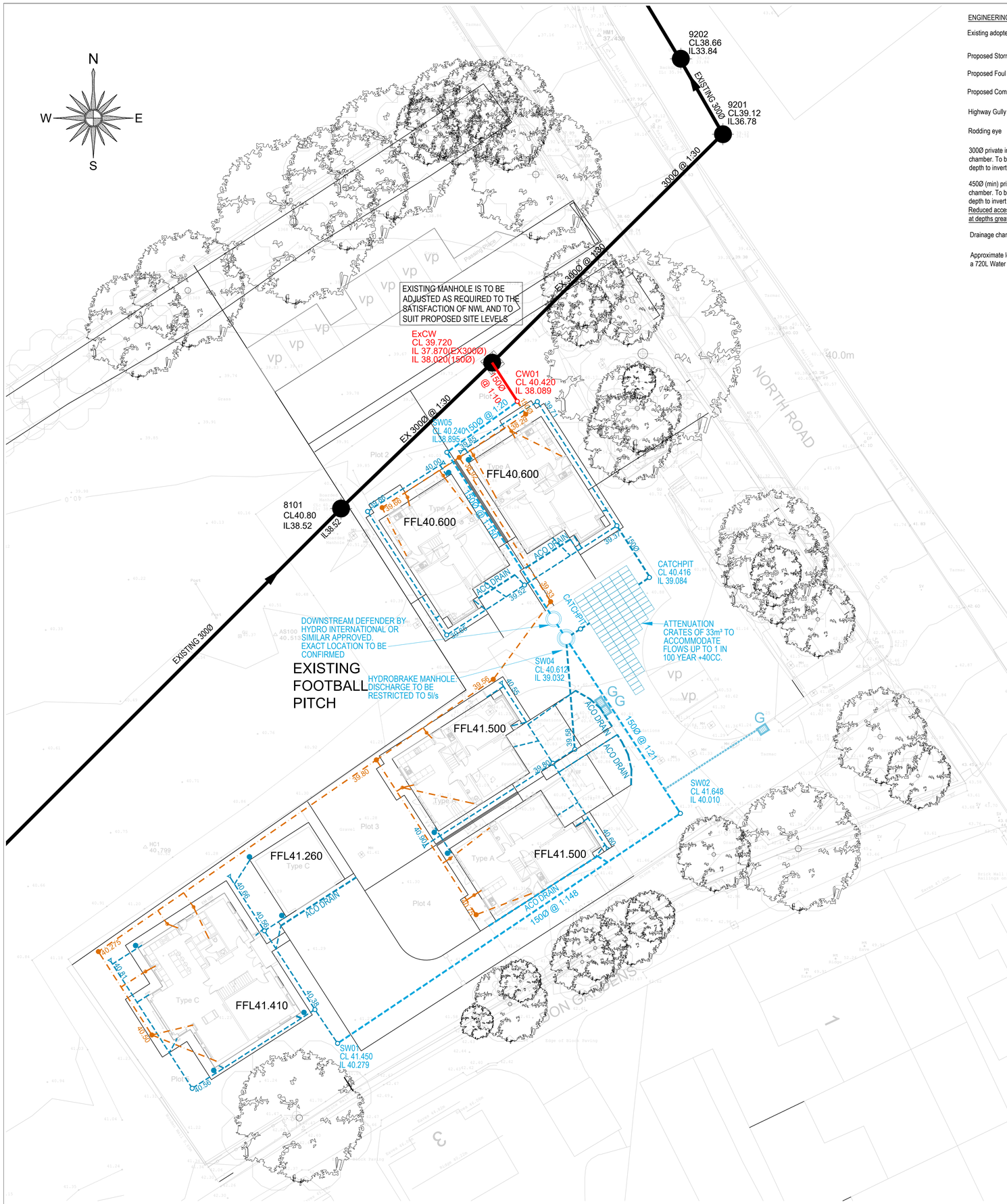



ENGINEERING LEGEND:

- Existing adopted Combined — ex. mh
- Proposed Storm
- Proposed Foul
- Proposed Combined
- Highway Gully — CG
- Rodding eye
- 300Ø private inspection chamber. To be used where depth to invert is 0.6m or less.
- 450Ø (min) private inspection chamber. To be used where depth to invert is 1.2m or less. Reduced access fitting required at depths greater than 1.2m
- Drainage channel — ACO DRAIN
- Approximate location of a 720L Water Butt

## MANHOLE SCHEDULE

| Manhole Number | Cover Level | Connections | Pipe | | | Manhole Size | Types | |
|---|---|---|---|---|---|---|---|---|
| Coordinates | Depth To Invert | | Code | Inverts | Diams Inv-soff | | Manhole | Cover |
| SW01 | 41.450 | | | | | 450 | PPIC | B125 |
| E. 434893.192 | 1.021 | | | | | | | |
| N. 561119.990 | | 0 | 1.000 | 40.279 | 150 | | | |
| SW02 | 41.648 | 1 | | | | 450 | PPIC | D400 |
| E. 434918.406 | 1.488 | | | | | | | |
| N. 561136.898 | | 0 | 1.001 | 40.010 | 150 | | | |
| SW04 | 40.612 | 2 | 1.001 | 39.032 | 150 | 1350 | E | D400 DOUBLE COVER |
| E. 434907.042 | 1.430 | 3 | 2.000 | 39.032 | 150 | | | |
| N. 561154.290 | | 0 | 1.002 | 39.032 | 150 | | | |
| SW05 | 40.240 | 1 | 1.002 | 38.895 | 150 | 450 | PPIC | B125 |
| E. 434895.846 | 1.195 | | | | | | | |
| N. 561171.761 | | 0 | 1.003 | 38.895 | 150 | | | |
| CW01 | 40.420 | 1 | 1.003 | 38.089 | 150 | 450 | PPIC | B125 |
| E. 434902.649 | 2.181 | | | | | | | |
| N. 561176.689 | | 0 | 1.004 | 38.089 | 150 | | | |

NOTES:

1. ALL EXCAVATIONS BELOW ADOPTED HIGHWAYS TO BE BACKFILLED WITH TYPE 1 AND COMPACTED IN LAYERS NOT EXCEEDING 150mm.
2. HIGHWAY AUTHORITY TO BE CONTACTED AS SOON AS CONTRACTOR IS ON SITE TO ENABLE EARLY DISCUSSIONS WITH THE CLERK OF WORKS.

GENERAL DRAINAGE

3. FIRST OFF LATERAL DRAINS ARE TO 150mm MINIMUM
4. ALL GULLIES TO BE TRAPPED AS SHOWN ON THE DETAILS DRAWINGS, LEADS TO BE MINIMUM 150mm.

ADOPTED DRAINAGE

5. POSITION AND LEVELS OF EXISTING MANHOLES AND SEWERS ARE TO BE CHECKED ON SITE BEFORE SITE ACTIVITIES COMMENCE.
6. THE SEWER CONNECTION IS TO BE CARRIED OUT BY AN NWL APPROVED CONTRACTOR.
7. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE REMAINING ENGINEERING DRAWINGS.
8. CONCRETE PROTECTION IS REQUIRED TO PROPOSED DRAINAGE PIPES WITH LESS THAN 900mm COVER IN AREAS NOT SUBJECT TO VEHICULAR LOADING AND LESS THAN 1200mm IN AREAS SUBJECT TO VEHICULAR LOADING.
9. ADOPTED DRAINAGE IS TO COMPLY WITH 'SEWERS FOR ADOPTION 6TH EDITION'.
10. PIPE SURROUND TO BE GRANULAR TYPE 'S' UNLESS NOTED OTHERWISE.

PRIVATE DRAINAGE

11. INSPECTION CHAMBER COVERS SHOULD BE SELECTED TO SUIT LOCATIONS
    - D400 PARKING/ACCESS AREAS
    - C250 PRIVATE DRIVES
    - B125 PAVEMENTS AND GARDENS
12. PRIVATE DRAINAGE IS TO COMPLY WITH ALL STATUTORY REQUIREMENTS AND ACCORD WITH BS EN 752 AND BUILDING REGULATIONS APPROVED DOCUMENT H.
13. BEDDING SHOULD BE GRANULAR MATERIAL TO BS 882 : PART 2 OF 10MM NOMINAL SINGLE SIZED AGGREGATE. RIGID PIPES OF NOMINAL SIZE 150mm AND 160mm FLEXIBLE PIPES SHOULD HAVE GRANULAR MATERIAL BEDDING TO BS 882 : PART 2 OF 10mm OR 14mm NOMINAL SIZED AGGREGATE OR 14mm TO 5mm GRADED
14. PIPE SIZES TO BE 100mm RIGID PIPE OR 110mm FLEXIBLE PIPE UNLESS OTHERWISE SHOWN. (ALL LATERAL DRAINS CONNECTING TO MAIN SEWER TO BE 150Ø MINIMUM)
15. FOR DRAINAGE PIPES TO BE CAST IN CONCRETE TO HAVE ROCKER PIPES EITHER SIDE OF CONCRETE.
16. WHERE 5 OR MORE PROPERTIES CONNECT TO THE SAME PRIVATE STORM RUN THE PIPE(S) SHOULD BE UPSIZED TO 150mm DIA. AFTER THE FIFTH PROPERTY. WHERE 10 OR MORE PROPERTIES CONNECT TO THE SAME PRIVATE FOUL RUN THE PIPES SHOULD BE UPSIZED TO 150Ø AFTER THE 10TH PROPERTY.

GENERAL

17. GARDEN BATTERS - THESE MUST BE CONSTRUCTED WITH NATURAL STIFF CLAYS AT NO STEEPER THAN SPECIFIED ON THE DRAWING. MATERIAL SHOULD BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 250mm. MINIMUM TOPSOIL LAYER TO SUIT TYPE OF PLANTING WHICH SHOULD BE SPECIFIED BY THE LANDSCAPE ARCHITECT. ALL LANDSCAPING WORKS MUST BE CARRIED OUT IN ACCORDANCE WITH NHBC GUIDANCE 10.2.9
18. GUARDING/FALL PROTECTION IS REQUIRED WHERE: RETAINING WALLS RETAINING LAND MORE THAN 600mm HIGH, PATHS ADJACENT TO GROUND SLOPING AT MORE THAN 30° FROM THE HORIZONTAL. A TOTAL RISE OF A FLIGHT OF STEPS EXCEEDS 600mm A HAND RAIL MUST BE PROVIDED. GUARDING TO COMPLY WITH NHBC GUIDANCE 10.2.5

| Rev. | Description | By | Chk | App | Date |
|---|---|---|---|---|---|
| K | Following comments from LLFA Water Butts added to plots | MA | SH | LB | 23/11/23 |
| J | Downstream Defender added to suit comments from the LLFA | MA | SH | LB | 09/11/23 |
| I | Drainage updated in front of plot 4 to suit comments from client | MA | SH | LB | 04/05/23 |
| H | SW01 adjusted and SW03 removed to suit comments from client regarding location. | MA | SH | LB | 03/05/23 |
| G | Additional SVP added to plot 5 and drainage review due to amended site layout | MA | SH | LB | 20/04/23 |
| F | Manhole SW06 deleted, Drainage levels amended, 225Ø drainage reduced to 150Ø. Manhole schedule added for main drainage. | MA | SH | LB | 13/03/23 |
| E | ACO drain lead adjusted following comments from client | MA | SH | LB | 10/03/23 |
| D | Attenuation crates arrangement and number adjusted, also PPIC manholes to replaced PCC chambers at the request of the client. | MA | SH | LB | 21/02/23 |
| C | Revised site layout added and private drainage added | MA | SH | LB | 14/02/23 |
| B | Updated to suit new layout | HA | SH | LB | 28/04/21 |
| A | Drainage revised to suit the NWL discharge rate | HA | SH | LB | 06/04/21 |
| Ø | Initial Issue | HA | SH | LB | 26/02/21 |


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Client: TELMAC Developements

Project: Proposed Residential Development at West Boldon Primary School

Drawing Title: Drainage Layout

| Scale | Sheet Size | | |
|---|---|---|---|
| 1:200 | A1 | | |
| Drawn By | Checked By | Approved By | Date |
| HA | SH | LB | 01/04/21 |

Drawing Status: Preliminary

| Project No. | Drawing No. | Revision |
|---|---|---|
| 2017021 | 002-01 | K |

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