

APPROX

RWP AND SVP/FOUL CONNECTIONS ARE SUBJECT TO FINAL CONFIRMATION BY ARCHITECT

26. YORKSHIRE WATER POLICY IS NOT TO ACCEPT TYPE 'C' BRICK MANHOLES AND 1050MM DIA MANHOLE RINGS. INSTEAD IT IS PREFERRED THAT YOU USE A TYPE 'B' MANHOLE WITH 1200MM DIA OR 1500MM DIA RINGS, WITH THE OPENING SITED OVER THE CHANNEL WHERE DEPTH OF COVER TO PIPE SOFFIT IS 1 - 1.5M.

27. ACRONYMS ON THIS DRAWING ARE TO BE READ AS FOLLOWS:

F MH - FOUL MANHOLE CHAMBER
SW MH - SURFACE WATER MANHOLE CHAMBER
FD - FOUL INSPECTION (DEMARCATON) CHAMBER
SMD - SURFACE WATER INSPECTION (DEMARCATON) CHAMBER

29. ALL DRAINS TO BE TESTED PRIOR TO BACKFILLING. AFTER BACKFILLING AND UPON COMPLETION OF HARD LANDSCAPING. IN ADDITION ALL DRAINS TO BE INSPECTED BY CCTV METHODS PRIOR TO HARD LANDSCAPING IF REQUIRED BY THE EMPLOYER.

21. SEWERS MUST HAVE 5m CLEARANCE FROM TREES AND HEDGES.

22. YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILTER DRAIN/LAND DRAINAGE RUN-OFF INTO THE PUBLIC SEWER NETWORK OR ADOPTABLE DRAINAGE SYSTEM (DIRECTLY OR INDIRECTLY). AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE RUN-OFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIAISE WITH THE LOCAL AUTHORITY. LAND DRAINAGE SECTION WITH REGARD TO THE DISPOSAL OF THE FILTER DRAIN/LAND DRAINAGE RUN-OFF.

23. ALL ADOPTABLE SEWER WORKS AND MATERIAL TO BE IN ACCORDANCE WITH 'SEWERS FOR ADOPTION' 6TH EDITION, THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATER'S STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND KITEMARKED.

24. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENT OF WATER INDUSTRY SPECIFICATION 4-08-02 (TABLE A2).

25. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.

26. ALL CONCRETE PIPES TO BE CLASS 120 CONCRETE TO EN 1916 / BS 5911-1 : 2002

15. THE FOLLOWING CONCRETE MIXES ARE TO BE USED (IN ACCORDANCE WITH BS5528). THEY ARE SELECTED FOR BRE 363 CLASS 1 SULPHATES:

STANDARD MIX	STRENGTH CLASS OF CONCRETE	DETAILS (WHERE APPLICABLE)
GEN3	C20	ALL OTHER APPLICATIONS

16. GRANULITIC 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.

17. MANHOLE COVERS AND FRAMES TO BE DUCTILE IRON HEAVY DUTY GRADE D400 DOUBLE TRIANGULAR TO BS EN124 AND ARE TO BE GRADE A STANDARD IN VEHICULAR TRAFFICKED AREAS.

18. FIRST FLEXIBLE JOINT IN PIPES ADJACENT TO A MANHOLE SHALL BE A MAXIMUM OF 600mm FROM INSIDE THE FACE OF THE MANHOLE, CONNECTING TO A ROCKER PIPE. THE LENGTH OF THE ROCKER PIPE IS TO BE SUBJECT TO FOLLOWING TABLE:

PIPE DIAMETER	LENGTH OF ROCKER PIPE
150mm-600mm	600mm
675mm-750mm	1000mm
825mm +	1250mm

19. THE PRINCIPLE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE EXISTING LINE AND INVERT LEVELS OF ANY CONNECTION POINT 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 IMMEDIATE ATTENTION OF THE PROJECT ENGINEER.

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DO NOT SCALE OFF THIS DRAWING

Notes:

1. This drawing is to be read in conjunction with all relevant architect's and engineer's drawings.

2. It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.

Key:

- Site Boundary
- Adoptable SW Sewer and Manhole
- Adoptable FW Sewer and Manhole
- Adoptable FW Rising Main
- Existing Foul Sewer
- Diverted Land Drain
- Existing Land Drain to be removed
- Existing Land Drain to remain

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.

2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL LEVELS IN METRES UNLESS NOTED OTHERWISE.

3. ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

4. REFER TO DRAWINGS 18005-C-63 FOR S104 LONGSECTIONS. REFER TO DRAWINGS 18005-C-67 FOR MANHOLE SCHEDULES. REFER TO DRAWING 18005-C-66 FOR STANDARD DETAILS AND DRAINAGE NOTES.

5. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.

6. THE ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1M AND MANHOLES 0.5M FROM KERB FACES AND SERVICE MARGINS.

7. 'SEWERS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HEDGES (PLEASE ALSO REFER TO FIGURE 2.3 ON PAGE 33 IN 'SEWERS FOR ADOPTION' 6TH EDITION FOR RESTRICTIONS ON TREE PLANTING ADJACENT TO SEWERS)'.
8. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.

9. ALL HIGHWAY AND DRAINAGE DETAILS ARE SUBJECT TO THE APPROVAL OF THE RELEVANT AUTHORITIES PRIOR TO CONSTRUCTION.

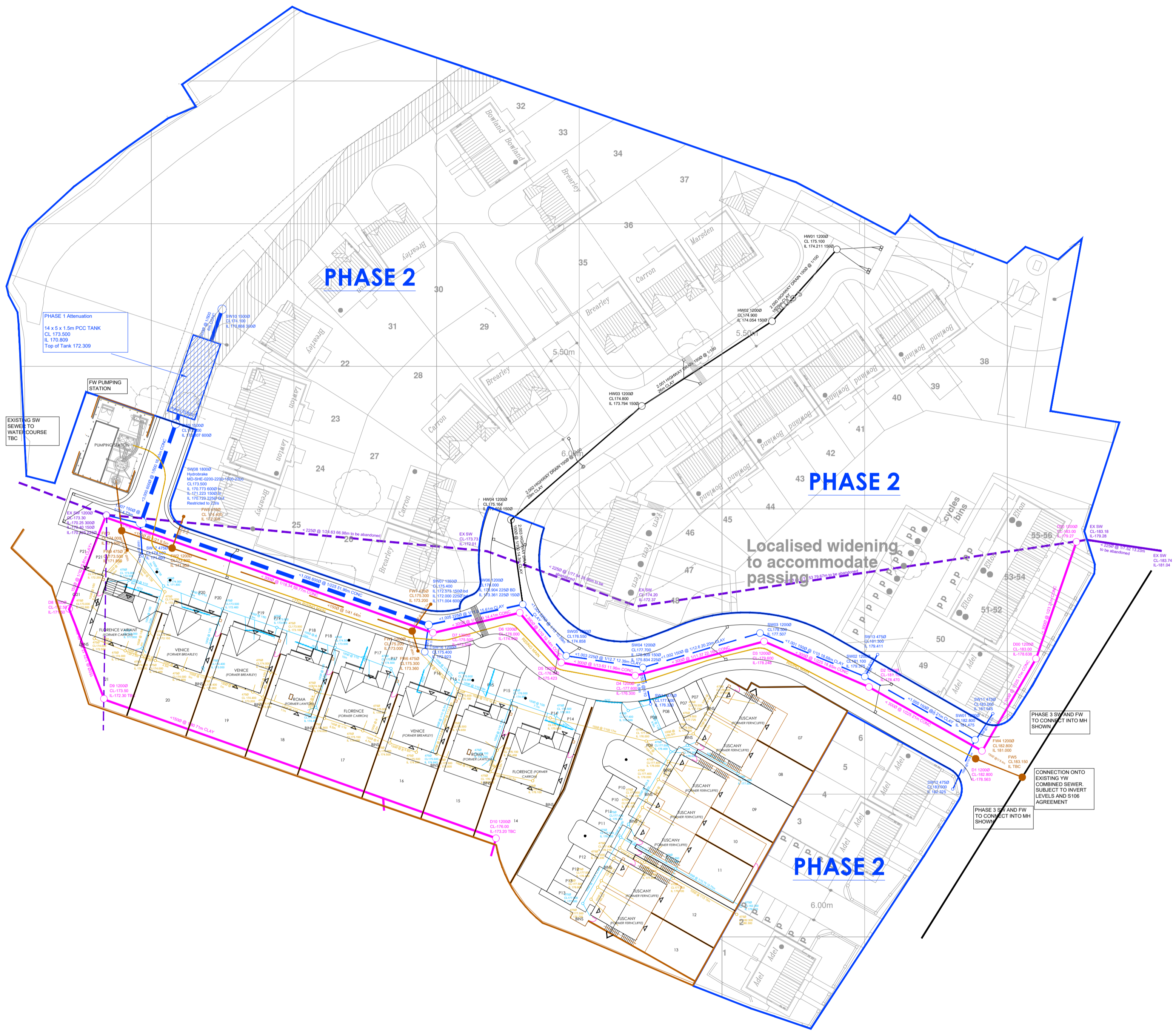
10. COVER SLABS MUST CARRY THE BSI KITEMARK OR WILL BE REJECTED BY YORKSHIRE WATER INSPECTOR. WHERE THE CLEAR OPENING OF THE KITEMARKED PRODUCT IS DIFFERENT TO THAT OF THE COVER AND FRAME, A LOADING BEARING SLAB SHOULD BE FITTED ABOVE THE COVER SLAB TO BRING THE SIZE DOWN TO 600MM X 600MM FOR THE YORKSHIRE WATER SPECIFIED COVER SIZE. PLEASE REFER TO CONCRETE PIPE SYSTEMS ASSOCIATION (CPSA), 'TECHNICAL BULLETIN' ISSUED AUTUMN 2004 FOR KITEMARKED COVER SLAB OPENING SIZES.

11. SEWERS TO BE LAID IN CLASS 'S' BEDDING (150MM GRANULAR BED AND SURROUND), WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2M IN HIGHWAYS AND VERGES (OR LESS THAN 900MM IN NONE VEHICULAR ACCESS THEN A CONCRETE SLAB SHOULD BE PROVIDED ABOVE GRANULAR BED AND SURROUND).

12. MANHOLE COVERS SHALL HAVE A CLEAR OPENING OF 600MM AND SHALL BE CLASS D400 TO BS EN 124 WITH 150MM DEEP FRAMES IN HIGHWAYS.

13. WHERE A B125 COVER AND FRAME HAS BEEN APPROVED, THIS MUST NOT BE COATED IN PLASTIC AND MUST HAVE LIFTING EYES SUITABLY SIZED TO ACCOMMODATE STANDARD LIFTING KEYS. SCREW DOWN COVERS ARE NOT ACCEPTABLE.

14. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.



P4	DRAWING AMENDED	29.06.20	RT
P3	DIVERTED DRAIN ADDED FROM GLEN VIEW	11.06.20	RT
P2	HIGHWAY DRAIN ADDED	11.05.20	RT

No.	Revision	Date	Drwn

Status Preliminary

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Project NEW MILL ROAD, HOLMFIRTH

Drawing title S104 DRAINAGE DESIGN

Drawn	RT	Chkd	AD	Date	March 20	Scale	1/500
Contract No.	19539	Drw No.	DR-C-0111	Revision	P4		