YORKSHIRE WATER REF
X-X-XXX-XXX

1. ALL ADOPTABLE SEWER WORKS AND MATERIALS TO BE IN ACCORDANCE WITH SEWERAGE SECTOR GUIDANCE DESIGN AND CONSTRUCTION GUIDANCE (CODE FOR ADOPTION0, THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATER'S STANDARD/REQUIREMENTS/LOCAL PRACTICE FOR THE ADOPTION OF SMALL SUBMERSIBLE FOUL AND SW PUMPING STATIONS AND KITEMARKED.ADDENDUM TO THE MECHANICAL AND ELECTRICAL: SPECIFICATION AND KITE MARKED.
2. MANHOLE COVERS SHALL/MUST HAVE A CLEAR OPENING OF 600mm AND CLASS D400 TO BS EN 124 WITH A 150mm DEEP FRAME IN HIGHWAYS.
3. CONTRACTOR TO ESTABLISH POSITION SIZE AND DEPTH OF ALL EXISTING SEWERS AND SERVICES PRIOR TO COMMENCEMENT ON SITE.
4. THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT, AND TEMPORARY AND PERMANENT DIVERSION WORKS, AS NECESSARY TO ALL EXISTING SERVICES.
5. THE CONTRACTOR SHALL ALLOW FOR ALL TRAFFIC MANAGEMENT IN CONNECTION WITH ROAD AND SEWER WORKS.
6. THE CONTRACTOR SHALL ALLOW FOR KEEPING SEWER TRENCHES AND EXCAVATIONS AS DRY AS PRACTICABLE BY PUMPING FROM TEMPORARY SUMPS AND DE WATERING AS APPROPRIATE. THE POINT AND METHOD OF DISCHARGE TO BE AGREED WITH THE DRAINAGE AUTHORITY.
7. PIPES UP TO AND INCLUDING 300mmØ TO BE TWIN WALLED PLASTIC PIPES. PIPES 375mmØ AND GREATER TO BE CONCRETE CLASS H.
8. THE ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1m AND MANHOLES 0.5m FROM KERBS FACES AND SERVICE MARGINS.
9. SEWERS MUST HAVE 5 METERS CLEARANCE FROM TREES AND HEDGES OR THE WIDTH OF THE CANOPY AT MATURE HEIGHT.
10. ADOPTABLE PLASTIC SWER PIPES TO BE KITEMARKED (CERTIFIED TO WIS 4-35-01 AND BS EN 13476)
11. COVER SLABS MUST CARRY THE BSI KITE MARK OR WILL BE REJECTED BY YORKSHIRE WATER INSPECTOR. WHERE THE CLEAR OPENING OF THE KITE MARKED PRODUCT IS DIFFERENT TO THAT OF THE COVER AND FRAME A LOAD BEARING SLAB SHOULD BE FITTED ABOVE THE COVER SLAB TO BRING THE SIZE DOWN TO 600mmx600mm FOR THE YORKSHIRE WATER SPECIFIED COVER SIZE. PLEAS REFER TO CONCRETE PIPE SYSTEMS ASSOCIATIONS TECHNICAL BULLETIN ISSUED AUTUMN 2004 FOR KITE MARKED COVER SLAB OPENING SIZES.
12. SULPHATE RESISTING CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY..
13. GULLY GRATES AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN124 AND BE OF A NON-ROCKING DESIGN WITH CAPTIVE HINGE ACCESS AND BE KITE MARKED. LOAD CLASS D400 FOR ROADS REGULARLY CARRYING FAST MOVING HEAVY VEHICLES. CLASS C250 TO BE USED IN LESSER TRAFFICKED AREAS eg. ESTATE ROADS, CUL-DE-SACS, RESIDENTIAL CAR PARKING AREAS ETC.
14. SEWERS TO BE LAID IN CLASS 'S' BEDDING (150MM GRANULAR BED AND SURROUND WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THA1.2m IN HIGHWAYS AND VERGES (OR LESS THAN 0.9m IN NONE VEHICULAR ACCESS AREAS) THEN A CONCRETE SLAB SHALL BE PROVIDED ABOVE THE GRANULAR BED AND SURROUND
15. BACKFILLING AND REINSTATEMENT TO TRENCHES IN PUBLIC HIGHWAYS SHALL BE TYPE 1 GRANULAR MATERIAL IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE ADOPTING AUTHORITY, OR, IN THE ABSENCE OF SUCH, IN ACCORDANCE WITH THE REQUIREMENTS OF "THE STREET WORKS REGULATIONS 1992" AND RELEVANT PROVISIONS OF H.A.U.C. "SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN HIGHWAYS" JUNE 1992, BOTH UNDER SECTION 71 OF THE NEW ROADS AND STREET WORKS ACT 1991.
16. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF WATER INDUSTRY SPECIFICATION 4-08-02(TABLE A2)
17. ALL ROAD GULLIES ARE TO BE TRAPPED GULLIES. ALL GULLY LEADS TO BE 150mm DIAMETER.
18. ALL REDUNDANT EXISTING DRAINAGE TO BE GRUBBED UP OR GROUTED, ANY EXISTING LIVE DRAINAGE SHOULD BE REPORTED TO THE ENGINEER AND RECONNECTED.
19. ALL ROAD GULLIES & LEADS TO BE CLEARED OF DEBRIS UPON COMPLETION OF WORKS.
20. THE CONTRACTOR MUST ENSURE THAT ANY OF THE EXISTING DRAINAGE WHICH IS LIVE IS KEPT CLEAR OF DEBRIS AND SHOULD ALLOW FOR JETTING THROUGH THE NEW & EXISTING DRAINAGE UPON COMPLETION.
21. CONTRACTOR TO TAKE MEASURES TO PROTECT HIS OPERATIVES WITH RESPECT TO THE PRESENCE OF GAS IN SEWER TRENCHES AND MANHOLES THROUGH THE USE OF GAS MONITORING EQUIPMENT AND BREATHING APPARATUS AS REQUIRED.
22. CONTRACTOR TO APPLY FOR SEWER PERMITS AND ROAD OPENING PERMITS AS NECESSARY FROM THE APPROPRIATE AUTHORITIES, PRIOR TO COMMENCING WORKS.
23. YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILTER DRAIN/LAND DRAINAGE RUN OFF INTO THE PUBLIC SEWER NETWORK OR ADOPTABLE SYSTEM (DIRECTLY OR INDIRECTLY). AND 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 DISPOSAL OF THE FILTER/LAND DRAINAGE RUN OFF.
24. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
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. THERE MUST BE ENOUGH CLEARANCE AT CROSSOVER TO ACCOMMODATE BEDDING TO BOTH PIPES, APPROX 300mm. IF CROSSOVER IS NEAR THE ROCKER THEN THE CLEARANCE NEEDED MAY BE INCREASED.
27. YORKSHIRE WATER POLICY IS NOT TO ACCEPT TYPE C BRICK MANHOLES AND 1050mm DIAMETER MANHOLE RINGS. INSTEAD IT IS PREFERRED THAT YOU USE A TYPE B MANHOLE WITH 1200mm DIAMETER OR 1500mm DIAMETER RINGS WITH THE OPENING SITED OVER THE CHANNEL WHERE DEPTH OF COVER TO PIPE SOFFIT IS 1-1.5m.
28. 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.

UPVC PIPES TO BE CERTIFIED TO WIS 4-35-01 and BSEN13476

CLAY PIPE STRENGTH REQUIREMENTS
100mm DIA. MINIMUM CRUSHING STRENGTH = 40kN/m
150mm DIA. MINIMUM CRUSHING STRENGTH = 40kN/m
225mm DIA. MINIMUM CRUSHING STRENGTH = 45kN/m
300mm DIA. MINIMUM CRUSHING STRENGTH = 72kN/m

CONCRETE PIPE TO EN 1916/BS5911-1:202
STRENGTH REQUIREMENTS
ALL CONCRETE PIPES SHOULD BE CLASS 120 (TO EN 1916/BS5911-1 2002)

SW DRAINS & MANHOLES	TO BE MANAGED BY DEVELOPER UNTIL ADOPTED BY YORKSHIRE WATER	
MAINTENANCE SCHEDULE	REQUIRED ACTION	FREQUENCY
REGULAR MAINTENANCE	INSPECT AND IDENTIFY ANY AREAS THAT ARE NOT OPERATING CORRECTLY. IF REQUIRED TAKE REMEDIAL ACTION	MONTHLY FOR 3 MONTHS THEN ANNUALLY
OCCASIONAL MAINTENANCE	SURVEY INSIDE OF OUTLET PIPES TO CHECK FOR SEDIMENT BUILD UP AND REMOVE IF NECESSARY	EVERY 5 YEARS OR AS REQUIRED
REMEDIAL ACTIONS	REPAIR PHYSICAL DAMAGE IF NECESSARY	AS REQUIRED

● DENOTES LOCATION OF HYDROBRAKE FLOW RESTRICTION UNIT (MAINTAINED BY DEVELOPER UNTIL ADOPTED BY YORKSHIRE WATER)

HIGHWAY GULLIES	TO BE MAINTAINED BY DEVELOPER UNTIL ADOPTED BY KIRKLEES COUNTY COUNCIL HIGHWAYS	
MAINTENANCE SCHEDULE	REQUIRED ACTION	FREQUENCY
REGULAR MAINTENANCE	INSPECT ACCESS POINTS FOR SILT ACCUMULATION TO ESTABLISH SILT REMOVAL FREQUENCIES	MONTHLY FOR 3 MONTHS THEN ANNUALLY
	INSPECT FOR PONDING ON ROAD CHANNEL - MAY BE CAUSED BY OBSTRUCTION IN KERB DRAIN. REMOVE BY RODDING/JETTING FROM ACCESS POINT OR FROM KERB APERTURE	ANNUALLY OR AS REQUIRED
OCCASIONAL MAINTENANCE	SURVEY INSIDE OUTLET PIPES TO CHECK FOR SEDIMENT BUILD UP AND REMOVE IF NECESSARY	EVERY 5 YEARS OR AS REQUIRED
REMEDIAL ACTIONS	REPAIR PHYSICAL DAMAGE IF NECESSARY	AS REQUIRED

POROUS PAVING (ALL PRIVATE DRIVE WAYS	TO BE MAINTAINED BY PROPERTY OWNER. INITIAL INSPECTION TO INFORM FUTURE MAINTENANCE SCHEDULE AND FREQUENCY OF REQUIRED ACTIONS.	
MAINTENANCE SCHEDULE	REQUIRED ACTION	FREQUENCY
REGULAR MAINTENANCE	BRUSHING AND VACUUMING (STANDARD COSMETIC SWEEP OVER WHOLE SURFACE)	YEARLY, AFTER AUTUMN LEAF FALL
OCCASIONAL MAINTENANCE	STABILIZE AND MOW CONTRIBUTING AND ADJACENT AREAS.	AS REQUIRED
	REMOVAL/MANAGEMENT OF WEEDS USING GLYPHOSPATE APPLIED DIRECTLY INTO THE WEEDS BY AN APPLICATOR RATHER THAN SPRAYING	AS REQUIRED. ONCE PER YEAR ON INFREQUENTLY USED PAVEMENTS.
REMEDIAL ACTIONS	REMEDIATE ANY LANDSCAPING WHICH HAS BEEN RAISED TO WITHIN 50MM OF THE LEVEL OF THE PAVING.	AS REQUIRED
	REMEDIAL WORK TO ANY DEPRESSIONS, RUTTING AND CRACKED/BROKEN BLOCKS CONSIDERED DETRIMENTAL TO THE STRUCTURAL PERFORMANCE OR A HAZARD TO USERS AND REPLACE LOST JOINTING MATERIAL.	AS REQUIRED
	REHABILLITATION OF SURFACE AND UPPER SUBSTRUCTURE BY REMEDIAL SWEEPING	EVERY 10-15 YEARS OR AS REQUIRED.

Drainage & External Works Key

Adoptable Drainage

- Proposed adoptable Foul sewer and manhole
- Proposed adoptable Storm sewer and manhole
- Proposed road gully & connecting pipe work. 150Ø pipe unless noted otherwise (RG 150Ø)

All adoptable drainage to be installed in accordance with the relevant edition of Sewers For Adoption and any regional water authority variations.

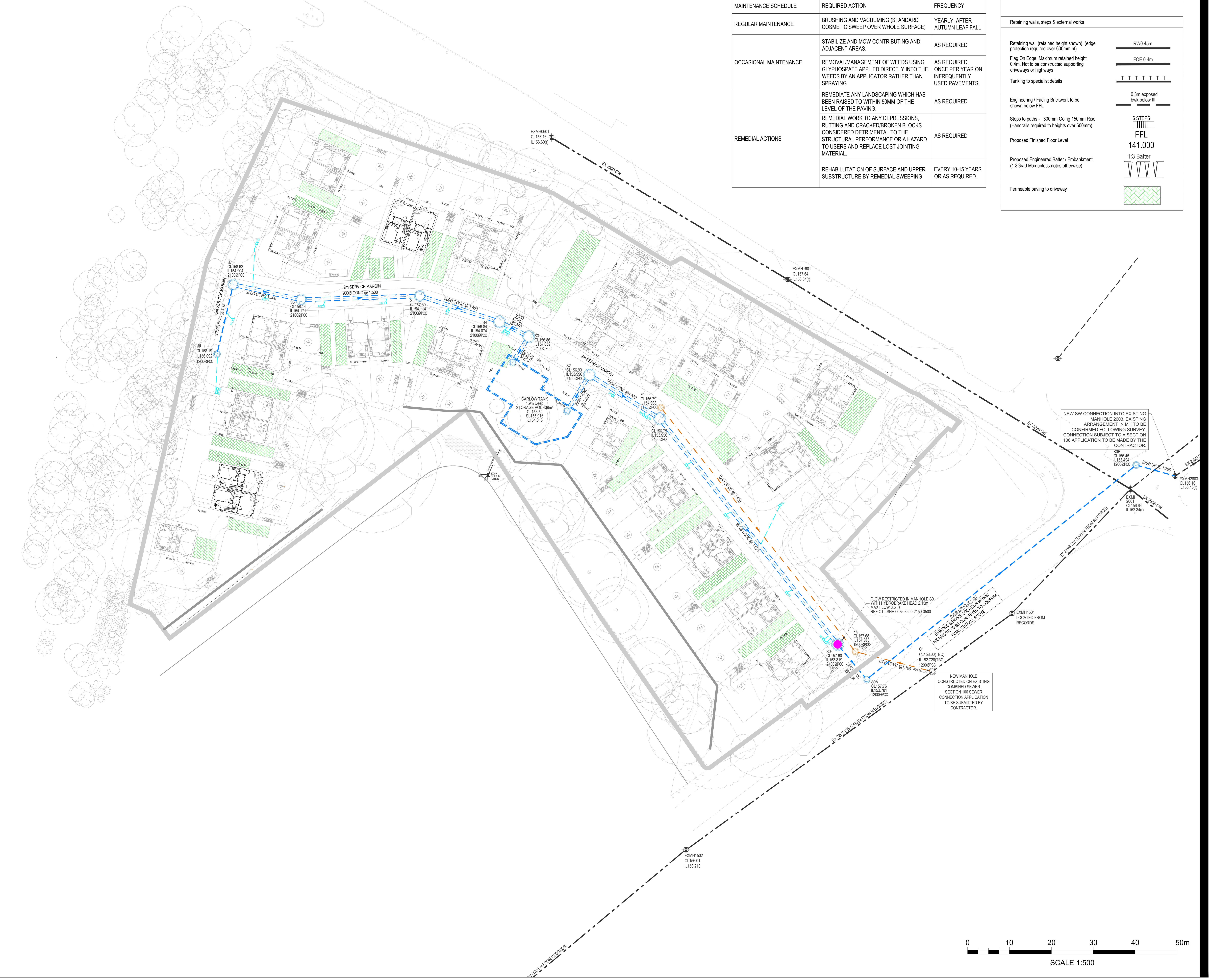
- Existing public Foul sewer and manhole (Ex FW Sewer)
- Existing public Storm sewer and manhole (Ex SW Sewer)
- Existing public Combined sewer and manhole (Ex CW Sewer)

Public Sewer Easements

- Proposed Public Sewer Easement Width to be Confirmed

Retaining walls, steps & external works

- Retaining wall (retained height shown). (edge protection required over 600mm ht) — RW0.45m
- Flag On Edge. Maximum retained height 0.4m. Not to be constructed supporting driveways or highways — FOE 0.4m
- Tanking to specialist details
- Engineering / Facing Brickwork to be shown below FFL — 0.3m exposed bwk below ffl
- Steps to paths - 300mm Going 150mm Rise (Handrails required to heights over 600mm) — 6 STEPS
- Proposed Finished Floor Level — FFL 141.000
- Proposed Engineered Batter / Embankment. (1:3Grad Max unless notes otherwise) — 1:3 Batter
- Permeable paving to driveway



0 10 20 30 40 50m
SCALE 1:500

Stantec

Stantec UK Limited
2 Esh Plaza, Sir Bobby Robson Way, Great Park, Newcastle upon Tyne
Newcastle upon Tyne
NE13 9BA
Tel. +44 (0)1912 302993
www.stantec.com/uk

Copyright Reserved
The Copyrights to all designs and drawings are the property of Hydrock Consultants Ltd. Reproduction or use for any purpose other than that authorised by Hydrock is forbidden.

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any errors or omissions shall be reported to Hydrock without delay.

Colour Disclaimer
This drawing has been documented in colour. This drawing is required to be printed in colour. Failure to do so may result in loss of information. Black and white printing may be used if specific black and white documents have been obtained from Stantec.

HEALTH & SAFETY
1. CONTRACTOR SHOULD BE AWARE OF GENERAL CONSTRUCTION RISKS TO PREVENT SLIPS, TRIPS AND FALLS AND TAKE NECESSARY PRECAUTIONS WITHOUT SPECIAL INSTRUCTION.

ROADS & DRAINAGE
2. CONTRACTOR TO PROVIDE TRENCH SUPPORTS AS APPROPRIATE AND ENSURE THAT PLANT REMAINS A SAFE DISTANCE FROM TRENCHES PRIOR TO INSTALLING DRAINAGE
3. THE TIME THAT EXCAVATIONS ARE OPEN ON SITE SHOULD BE KEPT TO A MINIMUM AND ALL TRENCHES SHOULD BE SURROUNDED BY A BARRIER.
4. CONNECTIONS TO EXISTING SEWERS TO BE MADE BY YORKSHIRE WATER APPROVED CONTRACTOR ONLY.
5. CONTRACTOR TO MAKE OPERATIVES AWARE OF ASSOCIATED DANGERS TO HEALTH SUCH AS LEPTOSPIROSIS (WEILS DISEASE) AND RECOMMENDED PRECAUTIONS. ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING TO BE PROVIDED AS REQUIRED.
6. UNFINISHED MANHOLES MUST BE COVERED WITH LOAD BEARING MATERIALS AND SURROUNDED WITH BARRIER.

PIPES & CABLES
7. SERVICE RECORDS TO BE REFERRED TO PRIOR TO WORK COMMENCING. CONTRACTOR TO PROCEED WITH CAUTION AND SERVICES TO BE LOCATED BY HAND DIG AND PROTECTED ACCORDINGLY.

EXCAVATION/FILL
8. CONTRACTOR TO ENSURE RELEVANT MEASURES ARE TAKEN TO KEEP PLANT AND PEOPLE A SAFE DISTANCE FROM STEEP SLOPES DURING THE WORKS.
9. CONTRACTOR TO ENSURE THAT PROCEDURES ARE IN PLACE TO KEEP PEOPLE A SAFE DISTANCE FROM WORKING PLANT WHERE NECESSARY.
10. CONTRACTOR TO REFER TO GROUND INVESTIGATION REPORT FOR CONTAMINATION TESTS AND TO PROVIDE ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING AS REQUIRED.

Issued/Revision		By	Appd	DD.MM.YYYY
P05	HIGHWAY LAYOUT UPDATED AND PLOTS 09-13 AMENDED	MP	--	12.09.2025
P04	UPDATED TO SUIT REVISED DRAINAGE LAYOUT	JF	AW	05.08.2025
P03	FFL TO PLOTS 9&29 AMENDED	MP	MP	20.05.2025
P02	LAYOUT UPDATED	MP	MP	22.04.2025
P01	PRELIMINARY ISSUE	MP	MP	18.03.2025

Dwn.	Dsgn.	Chkd.	DD.MM.YYYY
MP	MP	MP	18.03.2025

Issue Status

S2 - FOR INFORMATION

This document is suitable only for the purpose noted above.
Use of this document for any other purpose is not permitted.

Client/Project Logo

thirteen
Managing and building homes

Client/Project
THIRTEEN GROUP

HIGHMOOR LANE, CLECKHEATON

Title
IMPERMEABLE AREAS PLAN

Project No. 39134
A1 Scale 1:500
Revision **P05**
Drawing No. **BC0942-STA-XX-XX-D-C-0001**

Plotted: 17.09.2025 2025.09.17 4:50:40 PM By: Pearse, Martin
ORIGINAL SHEET - ISOA1 v:\3337\business_development\39134 - highmoor lane cleckheaton\01_wip\dr_drawing\c\working drawings\bc0942-sta-xx-xx-d-c-0001 drainage maintenanceplan