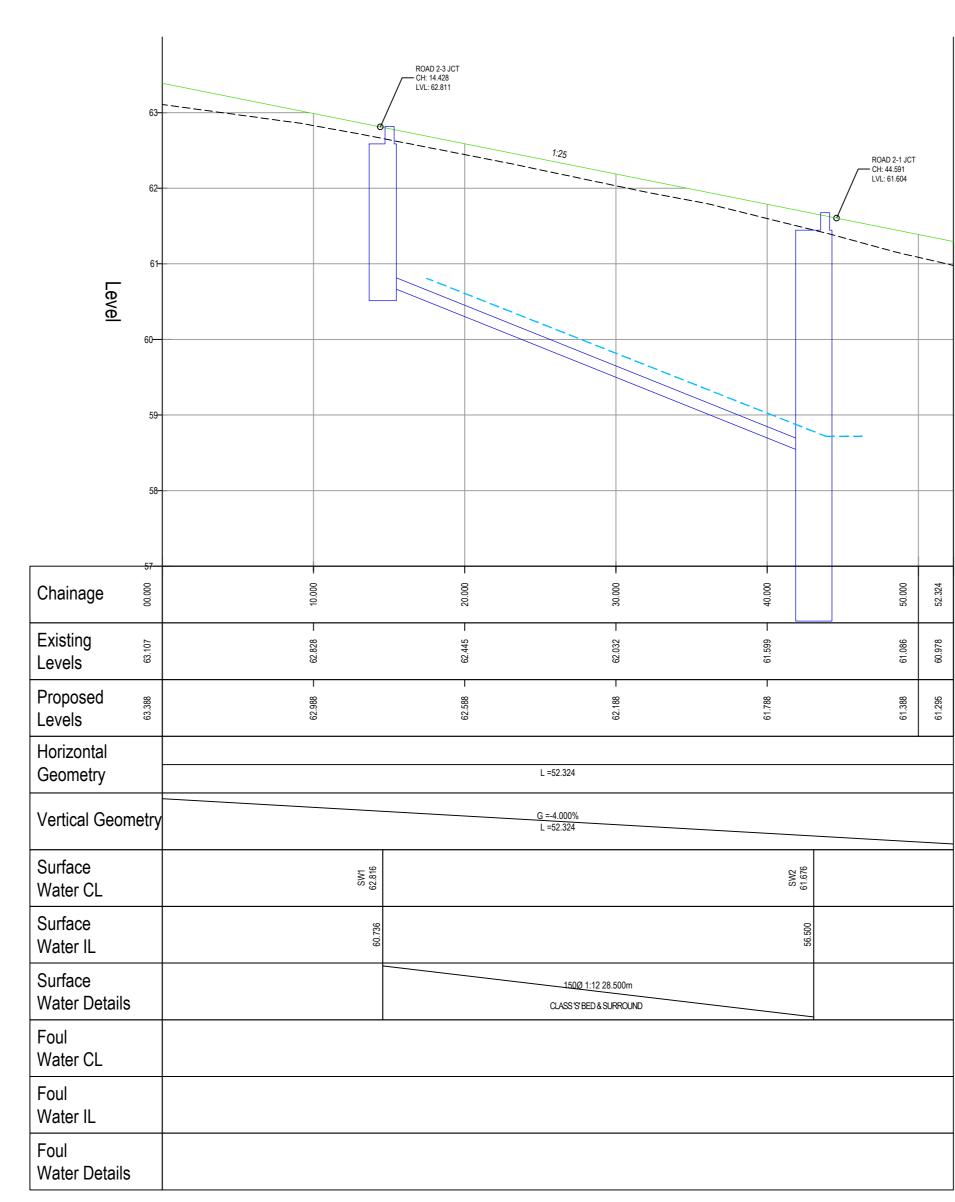
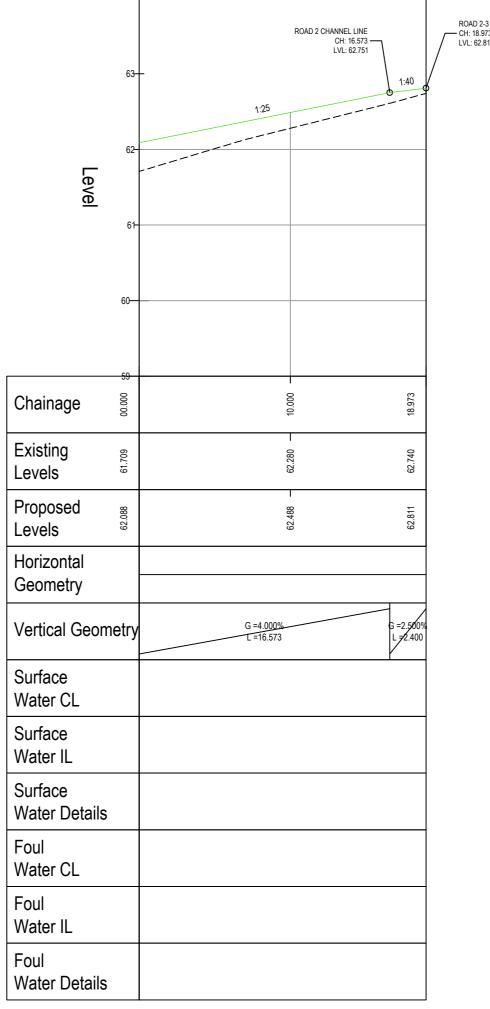


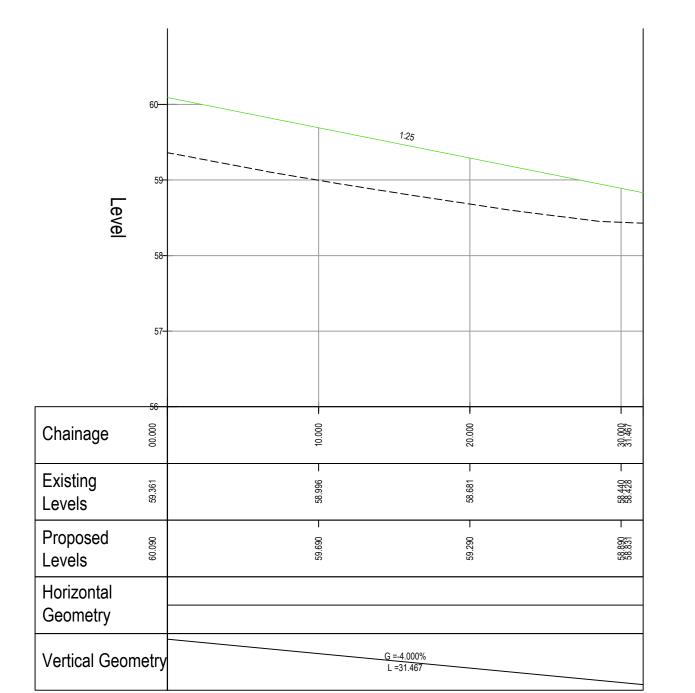
ROAD 1 - LONGSECTION SCALE: H 1:250,V 1:50. DATUM: 55.000



ROAD 2 - LONGSECTION SCALE: H 1:250,V 1:50. DATUM: 57.000



ROAD 3 - LONGSECTION SCALE: H 1:250,V 1:50. DATUM: 59.000



SD 1 - LONGSECTION SCALE: H 1:250,V 1:50. DATUM: 56.000

. ALL WORKS TO COMPLY WITH CURRENT VERSION OF THE FOLLOWING DOCUMENTS: DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB)
SPECIFICATION FOR HIGHWAY WORKS (SHW) LOCAL AUTHORITY DESIGN GUIDE AND SPECIFICATION PRIOR TO COMMENCING WORKS THE CONTRACTOR SHOULD INVESTIGATE AND LOCATE AS NECESSARY ANY STATUTORY UNDERTAKERS EQUIPMENT WITHIN THE NEW ACCESS AND DISCUSS REQUIREMENTS FOR LOWERING/DIVERSION AND PROTECTION WITH THE RELEVANT UNDERTAKER. . ALL WORKS WITHIN THE PUBLIC HIGHWAY TO MEET LOCAL AUTHORITY REQUIREMENTS. CONTRACTOR TO APPLY FOR ROAD OPENING NOTICES ETC AS REQUIRED. CBR VALUE NOT AVAILABLE. ROAD CONSTRUCTION DETAIL SUBJECT TO CONFIRMATION OF CBR VALUES. CONTRACTOR TO ALLOW FOR LAB TESTS TO BE UNDERTAKEN IN AGREEMENT WITH LOCAL AUTHORITY HIGHWAY ENGINEER PRIOR TO WORKS COMMENCING. PROPOSED LEVELS HAVE BEEN BASED ON THE EXISTING TOPOGRAPHICAL SURVEY NUMBER A109609 REVISION B BY WYG RECEIVED JANUARY 2019. PROPOSED DRAWING BASED ON LATEST ARCHITECTURAL LAYOUT RECEIVED. SLOPES GREATER THAN 1 IN 6 MAY REQUIRE STABILISATION. GEOTECHNICAL ENGINEER TO BE CONTACTED TO CONFIRM REQUIREMENTS DRAINAGE NOTES: ALL PIPES 100Ø UNLESS OTHERWISE STATED. ALL PRIVATE TO ADOPTABLE CONNECTIONS 150Ø UNLESS OTHERWISE STATED. ALL PPIC'S IN TRAFFICKED AREAS TO HAVE D400 COVERS & CONCRETE SURROUND. ALL INTERNAL PLOT DRAINAGE REQUIRES CONFIRMATION PRIOR TO CONSTRUCTION. CONTRACTOR TO CONFIRM MH COVER & INVERT LEVEL OF PROPOSED CONNECTION POINT PRIOR TO CONSTRUCTION. ANY VARIATION TO BE REPORTED TO ENGINEER. THE INVERT LEVEL OF THE EXISTING SEWERS ARE TO BE VERIFIED PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS. ANY DISCREPANCY MUST BE NOTIFIED TO THE ENGINEER. EXISTING MANHOLES TO BE MODIFIED TO ACCOMMODATE THE PROPOSED LATERAL CONNECTIONS. CONTRACTOR TO APPLY TO THE WATER AUTHORITY FOR THE SECTION 106 APPROVAL TO MAKE THE CONNECTIONS. PIPES ARE TO BE LAID WITH COMMON INVERT LEVELS. . ALL STUB PIPES ARE TO BE CAPPED. ALL PIPES CONNECTIONS TO BE SOFFIT TO SOFFIT UNLESS STATED OTHERWISE. REFER TO MANHOLE SCHEDULE FOR FURTHER INFORMATION.
0. STONE FILLED LAND DRAINS REQUIRED IN BACK GARDENS WHERE FALLING TOWARDS PROPERTY

HEALTH & SAFETY:

1. CONTRACTOR SHOULD BE AWARE OF GENERAL CONSTRUCTION RISKS TO PREVENT SLIPS, TRIPS AND

ROADS & DRAINAGE

2. CONTRACTOR TO PROVIDE TRENCH SUPPORTS AS APPROPRIATE AND ENSURE THAT PLANT REMAINS A

LEPTOSPIROSIS (WEILS DISEASE) AND RECOMMENDED PRECAUTIONS. ADEQUATE WELFARE FACILITIES

3. THE TIME THAT EXCAVATIONS ARE OPEN ON SITE SHOULD BE KEPT TO A MINIMUM AND ALL TRENCHES

6. UNFINISHED MANHOLES MUST BE COVERED WITH LOAD BEARING MATERIALS AND SURROUNDED WITH

 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

9. CONTRACTOR TO ENSURE RELEVANT MEASURES ARE TAKEN TO KEEP PLANT AND PEOPLE A SAFE

10. CONTRACTOR TO ENSURE THAT PROCEDURES ARE IN PLACE TO KEEP PEOPLE A SAFE DISTANCE FROM

STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND

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

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

8. "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 9. 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 AREAS) THEN A CONCRETE SLAB SHOULD BE PROVIDE ABOVE GRANULAR BED 10. CLASS Z BEDDING DETAIL SHALL BE PROVIDED WHERE COVER TO THE PIPE BARREL IS LESS THAN 1.2M IN VEHICULAR TRAFFICKED AREAS AND 0.9M ELSEWHERE, TO ALL ROAD GULLY CONNECTIONS AND WITHIN

11. WHERE CLASS Z TRENCH BEDDING DETAIL IS USED, THE CONCRETE BED AND SURROUND SHALL BE DISCONTINUED AT EACH PIPE JOINT OVER THE FULL CROSS SECTION BY MEANS OF A SHAPED

12. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENT OF WATER INDUSTRY

INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.

AND METHOD OF DISCHARGE TO BE AGREED WITH THE DRAINAGE AUTHORITY.

KITEMARKED. CONCRETE PIPES TO BE CLASS 120 UNLESS NOTED OTHERWISE.

AND SERVICE YARD AREAS. CLASS C250 TO BE USED IN CAR PARKING AREAS.

1992, BOTH UNDER SECTION 71 OF THE NEW ROADS AND STREET WORKS ACT 1991. 25. ALL TRADITIONAL RAINWATER PIPE DOWN COMERS TO DISCHARGE TO TRAPPED GULLIES. 26. ALL SIPHONIC DRAINAGE DOWN COMERS TO MANUFACTURER SPECIFICATION.

30. ALL ROAD GULLIES & LEADS TO BE CLEARED OF DEBRIS UPON COMPLETION OF WORKS.

---- EXISTING LEVELS

- - - - - - - - - - - - - - - - - 30 YEAR WATER LEVEL

PROPOSED LEVELS

PROPOSED ADOPTED SW

PROPOSED ADOPTED FW

EQUIVALENT BS EN295 PIPE CRUSHING STRENGTH.

SUBJECT TO ADOPTING AUTHORITY APPROVAL.

27. ALL ROAD GULLIES ARE TO BE TRAPPED GULLIES.

SHOULD BE REPORTED TO THE ENGINEER AND RECONNECTED.

APPROPRIATE AUTHORITIES, PRIOR TO COMMENCING WORKS.

28. ALL GULLY LEADS TO BE 150mm DIAMETER.

BREATHING APPARATUS AS REQUIRED.

OPERATIONAL NEED TO LAY LONGER LENGTHS.

AND REPORT ARE REQUIRED PRIOR TO APPROVAL.

13. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE

14. ALL PRIVATE DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BUILDING REGULATIONS 2002 EDITION.
15. CONTRACTOR TO ESTABLISH POSITION SIZE AND DEPTH OF ALL EXISTING SEWERS AND SERVICES PRIOR

TO COMMENCEMENT ON SITE.

16. THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT, AND TEMPORARY AND PERMANENT DIVERSION WORKS, AS NECESSARY TO ALL EXISTING SERVICES. 17. THE CONTRACTOR SHALL ALLOW FOR ALL TRAFFIC MANAGEMENT IN CONNECTION WITH ROAD AND 18. 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

 FOR PIPE SPECIFICATION PLEASE REFER TO ADDITIONAL NOTES.
 VITRIFIED CLAY PIPES AND FITTINGS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN295 AND BS 65 RESPECTIVELY AND BE KITEMARKED. ALL PIPES SHALL BE EXTRA STRENGTH TO BS 65 OR

21. STRUCTURED WALL PLASTIC PIPES TO WIS 4-35-01 MAY BE USED FOR FOUL & SURFACE WATER DRAINAGE,

22. PRECAST CONCRETE PRODUCTS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS 5911 AND BE

23. 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 KITEMARKED. LOAD CLASS D400 FOR ROADS

24. BACKFILLING AND REINSTATEMENT TO TRENCHES IN PUBLIC HIGHWAYS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE ADOPTING AUTHORITY, OR, IN THE ABSENCE OF SUCH,

29. ALL REDUNDANT EXISTING DRAINAGE TO BE GRUBBED UP OR GROUTED, ANY EXISTING LIVE DRAINAGE

31. 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

32. 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

33. CONTRACTOR TO APPLY FOR SEWER PERMITS AND ROAD OPENING PERMITS AS NECESSARY FROM THE

34. ADOPTABLE PLASTIC SEWER PIPES TO BE LAID IN MAXIMUM 3m LENGTHS UNLESS THERE IS A SPECIFIC

35. WHERE PLASTIC PIPES ARE INSTALLED PRIOR TO GETTING APPROVAL THEN A LIGHT LINE CCTV SURVEY

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

11. CONTRACTOR TO REFER TO GROUND INVESTIGATION REPORT FOR CONTAMINATION TESTS AND TO PROVIDE ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING AS REQUIRED.

DRAINAGE SPECIFICATIONS

1. ALL ADOPTABLE DRAINAGE WORKS AND MATERIALS TO BE IN ACCORDANCE WITH "SEWERS FOR ADOPTION" 6TH EDITION, THE RELEVANT BRITISH/EUROPEAN AND THE WATER AUTHORITIES

THE MECHANICAL AND ELECTRICAL SPECIFICATION AND THE MECHANICAL SPECIFICAT

2. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT. 3. ALL ADOPTABLE SEWERS TO BE KITEMARKED (CERTIFIED TO WIS 4-35-01 AND BS/EN13476). 4. PLASTIC CHANNEL SECTIONS IN MANHOLES ARE NOT ACCEPTABLE AND THE WATER AUTHORITY PREFER CLAYWARE CHANNEL IN MANHOLES. PLASTIC CHANNELS ARE DIFFICULT TO SET IN CONCRETE BECAUSE THEY FLOAT AND A SATISFACTORY FINISH CANNOT BE OBTAINED ON THE BENCHING. 5. THE WATER AUTHORITY IS NOT OBLIGED TO ACCEPT FILTER DRAIN/LAND DRAINAGE RUN-OFF INTO THE PUBLIC SEWER NETWORK OR ADOPTABLE DRAINAGE SYSTEM (DIRECTLY OR IN-DIRECTLY). 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

FALLS AND TAKE NECESSARY PRECAUTIONS WITHOUT SPECIAL INSTRUCTION.

4. CONNECTIONS TO EXISTING SEWERS TO BE MADE BY APPROVED CONTRACTOR ONLY. 5. CONTRACTOR TO MAKE OPERATIVES AWARE OF ASSOCIATED DANGERS TO HEALTH SUCH AS

PIPES & CABLES

7. CONTRACTOR TO OBTAIN ALL SERVICE RECORDS PRIOR TO WORKS COMMENCING.

SAFE DISTANCE FROM TRENCHES PRIOR TO INSTALLING DRAINAGE

AND PROTECTIVE CLOTHING TO BE PROVIDED AS REQUIRED.

DISTANCE FROM STEEP SLOPES DURING THE WORKS.

THE DISPOSAL OF THE FILTER DRAIN/LAND DRAINAGE RUN-OFF.

WORKING PLANT WHERE NECESSARY.

AREAS OF DEEP ROOTING VEGETATION.

COMPRESSIBLE FILLER.

SPECIFICATION 4-08-02 (TABLE A2).

SHOULD BE SURROUNDED BY A BARRIER.

150-225Ø: UPVC PIPES TO BE BSI KITEMARKED AND CERTIFIED TO WIS 4-35-01 & BS/EN13476. 300-825Ø: CONCRETE PIPES TO BE BSI KITEMARKED, CLASS 120 CONCRETE & CERTIFIED TO 900Ø-ONWARDS: COMPOSITE STEEL REINFORCED PIPE (AQUASPIRA) TO BE BSI KITEMARKED & CERTIFIED TO BS/EN13476.

SUBJECT TO LOCAL AUTHORITY & WATER AUTHORITY APPROVAL

