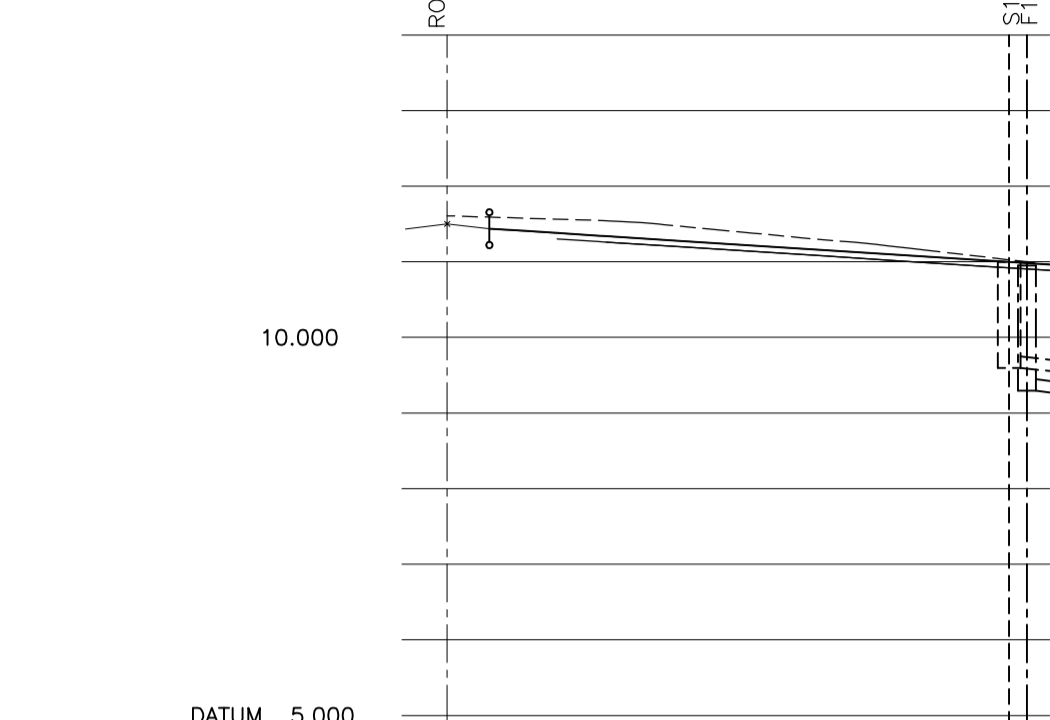
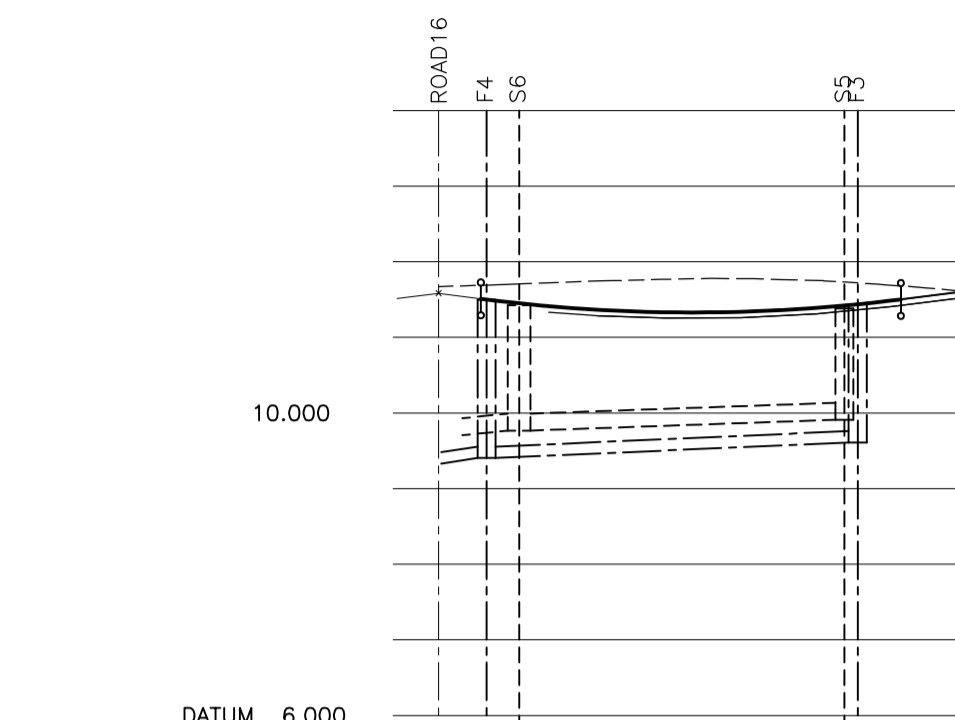


ROAD18 DATUM 6.000	
CHAINAGE	0.000 2.150 5.000 7.270 10.000 10.501 15.000 20.000 20.036 25.000 30.000 35.000 39.216 40.533 45.000 48.500
EXISTING GROUND LEVEL	11.183 10.936 10.884 10.803 10.771 10.770 10.788 10.829 10.871 10.913 10.954 10.996 11.025
ALIGNMENT LEVEL	11.183 10.936 10.884 10.803 10.771 10.770 10.788 10.829 10.871 10.913 10.954 10.996 11.025
VERTICAL ALIGNMENT	KF = 5.10 L = 17.243 G = 0.833% 1: 120.0
HORIZONTAL ALIGNMENT	
LEFT HAND CHANNEL	10.719 10.692 10.709 10.751 10.792 10.834 10.876 10.917 10.946
RIGHT HAND CHANNEL	10.763 10.724 10.692 10.709 10.751 10.792 10.834 10.876 10.917 10.946
STORMWATER COVER LEVEL	10.987
STORMWATER INVERT	8.933
STORMWATER DETAILS	Pipe 2,000 Dia 225 Circular CLAY 1 in 75
STORMWATER LENGTHS	37.941
FOULWATER COVER LEVEL	
FOULWATER INVERT	9.140
FOULWATER DETAILS	Pipe 2,000 Dia 150 Circular CLAY 1 in 37
FOULWATER LENGTHS	41.699



ROAD19 DATUM 5.000	
CHAINAGE	0.000 2.150 5.000 7.270 10.000 10.501 15.000 20.000 20.036 25.000 30.000 35.000 39.216 40.533 45.000 48.500
EXISTING GROUND LEVEL	11.608 11.438 11.410 11.346 11.282 11.218 11.154 11.090 11.026 10.964
ALIGNMENT LEVEL	11.608 11.438 11.410 11.346 11.282 11.218 11.154 11.090 11.026 10.964
VERTICAL ALIGNMENT	G = -1.278% 1: -78.2
HORIZONTAL ALIGNMENT	
LEFT HAND CHANNEL	11.260 11.203 11.139 11.075 11.011 10.947 10.885
RIGHT HAND CHANNEL	11.302 11.260 11.203 11.139 11.075 11.011 10.947 10.885
STORMWATER COVER LEVEL	
STORMWATER INVERT	
STORMWATER DETAILS	
STORMWATER LENGTHS	
FOULWATER COVER LEVEL	
FOULWATER INVERT	10.951
FOULWATER DETAILS	
FOULWATER LENGTHS	



ROAD20 DATUM 6.000	
CHAINAGE	0.000 2.150 5.000 7.270 10.000 10.501 15.000 20.000 20.036 25.000 30.000 35.000 39.216 40.533 45.000 48.500
EXISTING GROUND LEVEL	11.672 11.509 11.457 11.372 11.333 11.330 11.339 11.391 11.489 11.606
ALIGNMENT LEVEL	11.672 11.509 11.457 11.372 11.333 11.330 11.339 11.391 11.489 11.606
VERTICAL ALIGNMENT	KF = 5.50 L = 27.780 G = 2.500% 1: 40.0
HORIZONTAL ALIGNMENT	
LEFT HAND CHANNEL	11.288 11.254 11.260 11.312 11.409 11.527
RIGHT HAND CHANNEL	11.334 11.284 11.254 11.260 11.312 11.409 11.527
STORMWATER COVER LEVEL	11.427
STORMWATER INVERT	9.767
STORMWATER DETAILS	Pipe 3,000 Dia 225 Circular CLAY 1 in 150
STORMWATER LENGTHS	21.514
FOULWATER COVER LEVEL	11.499
FOULWATER INVERT	9.405
FOULWATER DETAILS	Pipe 3,000 Dia 150 Circular CLAY 1 in 120
FOULWATER LENGTHS	24.545

NOTES (cont)

25. 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.

26. CONTRACTOR TO APPLY FOR SEWER PERMITS AND ROAD OPENING PERMITS AS NECESSARY FROM THE APPROPRIATE AUTHORITIES, PRIOR TO COMMENCING WORKS.

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 NMI APPROVED CONTRACTOR ONLY.

5. CONTRACTOR TO MAKE OPERATIVES AWARE OF ASSOCIATED DANGERS TO HEALTH SUCH AS LEPTOSPIROSIS (WELLS 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.

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Contractors should refer to the residual risks contained in the CDM Pre Construction Information before carrying out any site operations and should not issue parts of this drawing without including the CDM notes and references. This information will include details of the SIGNIFICANT risks which 3E have considered beyond that which a competent contractor should be aware.

- NOTES**
1. DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE WATER SERVICES ASSOCIATION "SEWERS FOR ADOPTION" - 7TH EDITION AND ADOPTING WATER AUTHORITY/SEWERAGE AGENCY REQUIREMENTS AND SPECIFICATIONS.
 2. ALL PRIVATE DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BUILDING REGULATIONS 2002 EDITION.
 3. CONTRACTOR TO ESTABLISH POSITION SIZE AND DEPTH OF ALL EXISTING SEWERS AND SERVICES PRIOR TO COMMENCEMENT OF 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 DOWNSINKS AS APPROPRIATE. THE POINT AND METHOD OF DISCHARGE TO BE AGREED WITH THE DRAINAGE AUTHORITY.
 7. PIPES UP TO AND INCLUDING 300mmØ TO BE UNPLASTICISED PVC. PIPES 375mmØ AND GREATER TO BE CONCRETE CLASS H.
 8. ALL PIPEWORK TO BE 100mm DIAMETER UNLESS NOTED OTHERWISE.
 9. IN SITU AND PRECAST CONCRETE UNITS SHALL HAVE SULPHATE RESISTING PORTLAND CEMENT TO BS 4027, UNLESS AGREED OTHERWISE WITH THE ADOPTING AUTHORITY.
 10. PRECAST CONCRETE PRODUCTS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS 5911 AND BE KITEMARKED. CONCRETE PIPES TO BE CLASS H UNLESS NOTED OTHERWISE.
 11. MANHOLE COVERS AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN124, HAVE MINIMUM 675 x 675 CLEAR OPENINGS WITH 150 DEEP FRAMES UNLESS OTHERWISE SPECIFIED. MANHOLE COVERS AND FRAMES TO BE OF A NON-ROCKING DESIGN WITHOUT CUSHION INSERTS AND BE KITEMARKED. LOAD CLASS D400 IN VEHICULAR TRAFFICKED AREAS AND LOAD CLASS B125 IN FOOTWAYS AND PEDESTRIAN AREAS.
 12. 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 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.
 13. CLASS 2 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 AREAS OF DEEP ROOTING VEGETATION.
 14. WHERE CLASS 2 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 COMPRESSIBLE FILLER.
 15. SELECTED BACKFILL MATERIAL SHALL CONSIST OF UNIFORM MATERIAL FREE FROM STONES LARGER THAN 40mm, CLAY LUMPS LARGER THAN 75mm, TREE ROOTS, ORGANIC MATTER AND FROZEN SOIL. SELECTED BACKFILL MATERIAL SHALL BE PLACED IN LAYER NOT EXCEEDING 225mm, EACH LAYER COMPACTED TO FORM A STABLE TRENCH BACKFILL.
 16. GENERAL BACKFILL MATERIAL TO BE FREE FROM STONES LARGER THAN 40mm. GENERAL BACKFILL MATERIAL IS TO BE PLACED IN LAYERS NOT EXCEEDING 150mm THICKNESS AND EACH LAYER COMPACTED BY HAND. NO MECHANICAL COMPACTION OF FILL MATERIAL SHALL BE PERMITTED WITHIN 300mm ABOVE THE CROWN/BARREL OF THE PIPE.
 17. 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, 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.
 18. BACKFILL TO DRAINAGE TRENCHES IN HARD PAVED AREAS SHALL BE G.S.B. TYPE 1.
 19. ALL ROAD GULLIES ARE TO BE TRAPPED GULLIES.
 20. ALL GULLY LEADS TO BE 150mm DIAMETER.
 21. ALL REDUNDANT EXISTING DRAINAGE TO BE GRUBBED UP OR GROUTED. ANY EXISTING LINE DRAINAGE SHOULD BE REPORTED TO THE ENGINEER AND RECONNECTED.
 22. ALL ROAD GULLIES & LEADS TO BE CLEARED OF DEBRIS UPON COMPLETION OF WORKS.
 23. ANY EXISTING DRAINAGE WHICH BECOMES UNDER TRAFFICKED AREAS IN THE NEW SCHEME SHOULD BE SUBJECT TO THE FOLLOWING REMEDIALS/REVISIONS. WHERE DEPTH OF COVER IS LESS THAN 1200mm, THE EXISTING PIPEWORK SHALL BE EXPOSED & SURROUNDED WITH 150MM CONCRETE AS CLASS 7" BEDDING. WHERE THE EXISTING MANHOLE COVER & FRAME IS NOT AS MANHOLE DETAIL A OR B, OR TO BS497 GRADE A, OR EN124 CLASS D, THEN IT SHOULD BE CHANGED FOR SUCH.
 24. 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.

19/02/13	DRAINAGE AMENDED	MP	P2
15/02/13	TENDER ISSUE	MP	P1
Date	Revisions	Drawn	Rev.

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Project: **TRINITY SOUTH SOUTH SHIELDS**

Title: **PROPOSED ROAD LONGITUDINAL SECTIONS SHEET 7**

Scale	Drawn	Checked	Date
H1:500 V1:100	MP	SH	JAN 2013

Drawing Status: **TENDER**

Job No.	Drawing No.	Revision
11547	C0010	P2

South Tyneside Council
Planning Group
Received 04/04/13
ST/0081/13/FUL

DO NOT SCALE.