

NOTES(Cont)

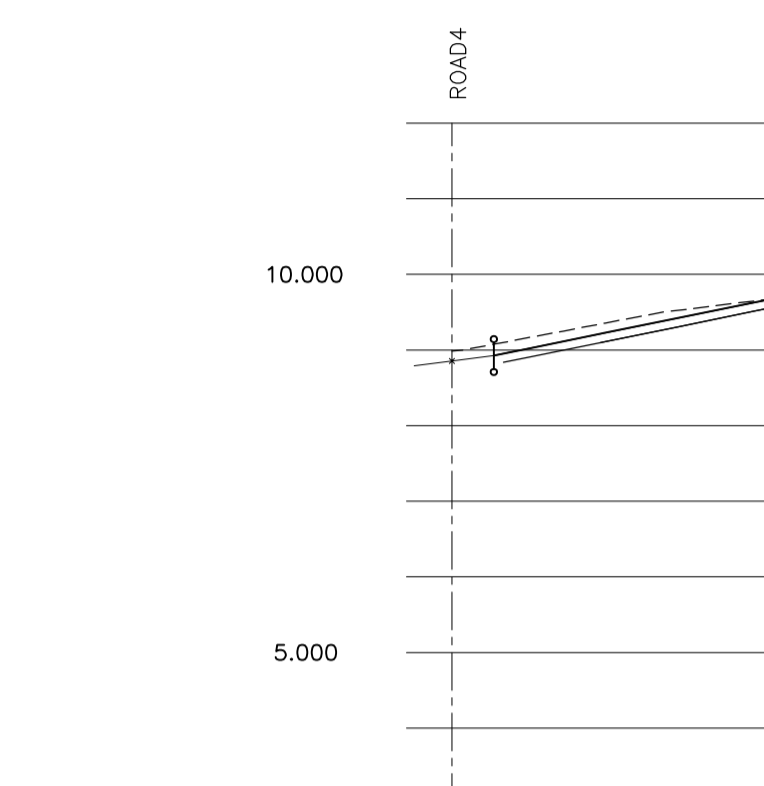
- 25. CONTRACTOR TO TAKE MEASURES TO PROTECT HIS OPERATIVES WITH RESPECT TO THE PRESENCE OF GAS IN SEWER TRENCHES AND MANHOLES THROUGH THE USE OF GAS MONITORING EQUIPMENT AND BREATHING APPARATUS AS REQUIRED.
 - 26. CONTRACTOR TO APPLY FOR SEWER PERMITS AND ROAD OPENING PERMITS AS NECESSARY FROM THE APPROPRIATE 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.
 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 NML 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.
 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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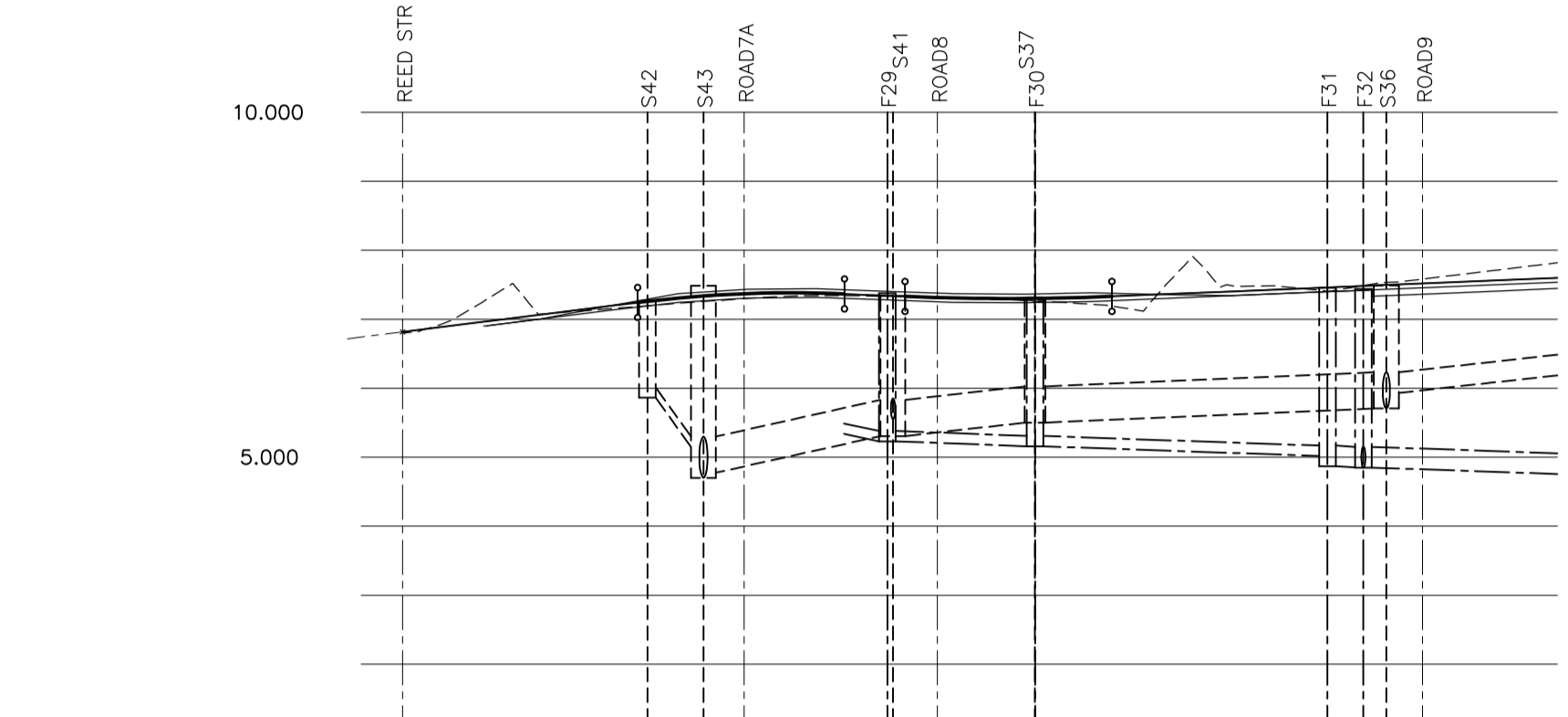
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Contractors should refer to the residual risks contained in the CDM Pre Construction Information before carrying out any site operations and should not issue parts of this drawing without including the CDM notes and references. This information will include details of the SIGNIFICANT RISKS which 3E have considered beyond that which a competent contractor should be aware.

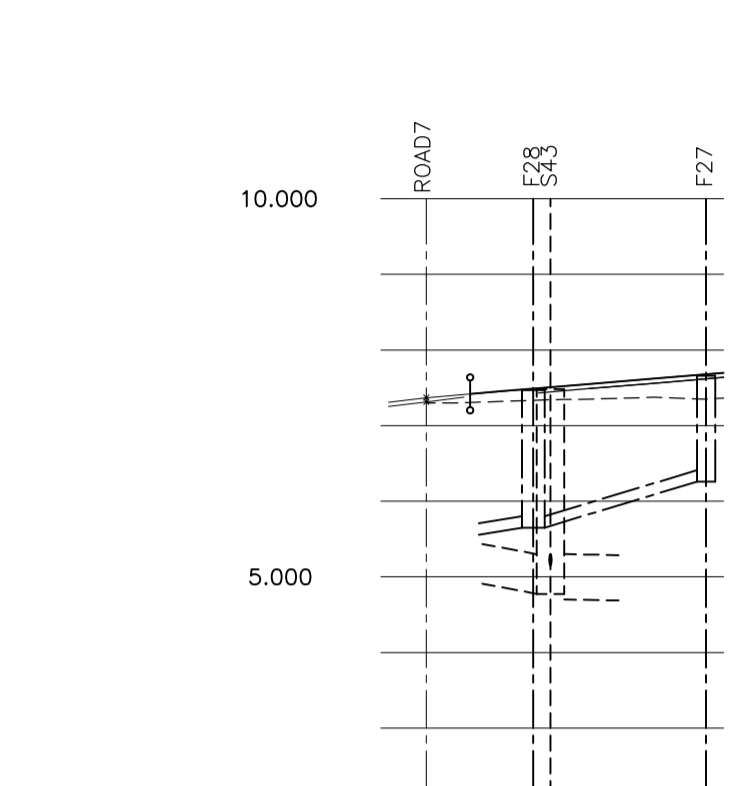
- NOTES**
1. ALL DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE WATER SERVICES ASSOCIATION "SEWERS FOR ADOPTION" - 7TH EDITION AND ADOPTING WATER AUTHORITY/SEWERAGE AGENCY REQUIREMENTS AND SPECIFICATIONS.
 2. ALL PRIVATE DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BUILDING REGULATIONS 2002 EDITION.
 3. CONTRACTOR TO ESTABLISH POSITION SIZE AND DEPTH OF ALL EXISTING SEWERS AND SERVICES PRIOR TO COMMENCEMENT 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 DEMATERING AS APPROPRIATE. THE POINT AND METHOD OF DISCHARGE TO BE AGREED WITH THE DRAINAGE AUTHORITY.
 7. PIPES UP TO AND INCLUDING 300mm# TO BE UNPLASTICISED PVC. PIPES 375mm# 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 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 AREAS OF DEEP ROOTING VEGETATION.
 14. 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 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 IS 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 1982" 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 LIVE 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 1500MM, THE EXISTING POSITION SHALL BE EXPOSED & SURROUNDED WITH 150MM CONCRETE AS CLASS "Z" 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.



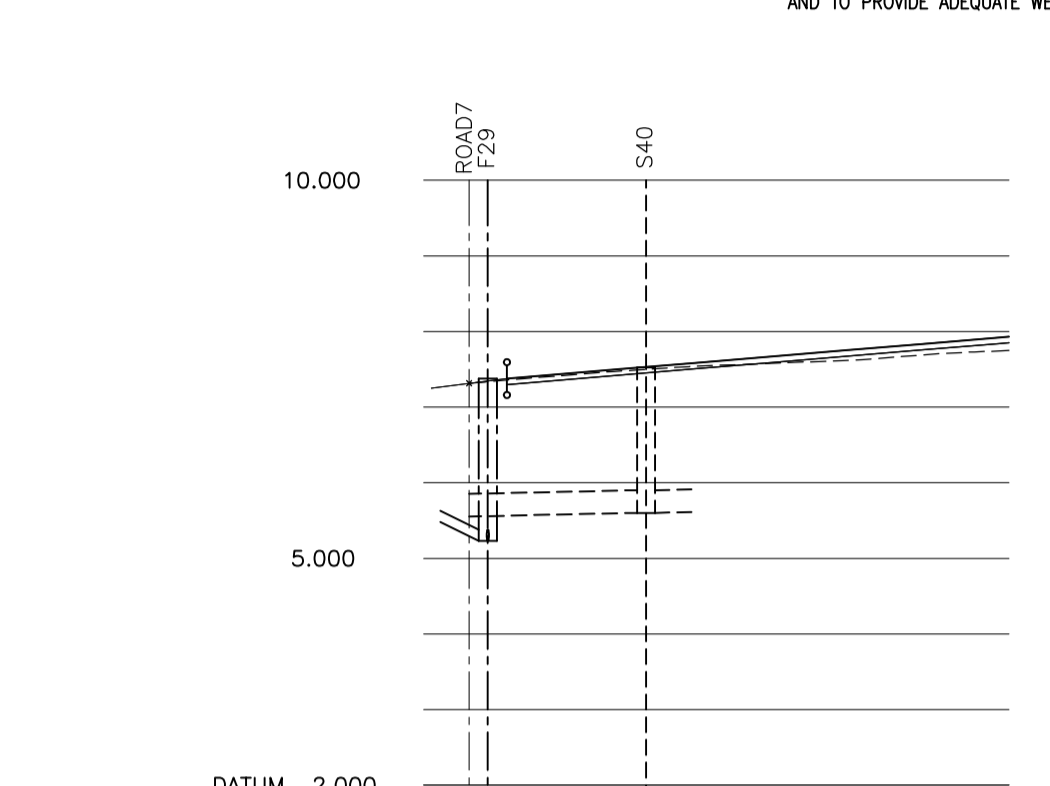
ROAD6 DATUM 3.000	
CHAINAGE	0.000 3.476 5.000
EXISTING GROUND LEVEL	8.984 8.926 9.016 9.221 9.350 9.425 9.629 9.648 20.000
ALIGNMENT LEVEL	
VERTICAL ALIGNMENT	G = 4.085% 1: 24.5
HORIZONTAL ALIGNMENT	
LEFT HAND CHANNEL	
RIGHT HAND CHANNEL	8.836 8.901 9.097 9.105 9.105 9.309 9.513 9.513
STORMWATER COVER LEVEL	
STORMWATER INVERT	
STORMWATER DETAILS	
STORMWATER LENGTHS	
FOULWATER COVER LEVEL	
FOULWATER INVERT	
FOULWATER DETAILS	
FOULWATER LENGTHS	



ROAD7 DATUM 1.000	
CHAINAGE	0.000 5.889 6.117 7.066 7.151 7.231 7.307 7.371 7.392 7.458 20.000 25.000 28.294 31.303 32.843 33.213
EXISTING GROUND LEVEL	6.816 6.941 7.153 7.066 7.151 7.231 7.307 7.371 7.392 7.458 20.000 25.000 28.294 31.303 32.843 33.213
ALIGNMENT LEVEL	
VERTICAL ALIGNMENT	G = 2.500% 1: 40.0 L = 15.000 KF = -4.50005 0.8333 1: 120.0 KF = 9.00198 L = 15.000 G = 0.8333% 1: 120.0
HORIZONTAL ALIGNMENT	R = 8.000 R = 40.000 R = 20.000 R = 80.000 R = 22.500
LEFT HAND CHANNEL	6.907 6.901 7.004 7.129 7.195 7.244 7.369 7.434 7.309 7.442 7.317 7.442 7.280 7.405 7.338 5.307 7.371 7.246 7.371 7.238 7.363 7.258 7.382 7.298 7.360 7.340 7.340 7.381 7.381 7.426 7.488 7.465 7.372 7.506 7.414 7.537 7.445
RIGHT HAND CHANNEL	
STORMWATER COVER LEVEL	
STORMWATER INVERT	5.863 5.150 4.775 5.307 5.307 5.501 5.501 5.706 5.831
STORMWATER DETAILS	Pipe 11.000 Dia 150 Circular CLAY 1 in 12 Pipe 1.019 Dia 525 Circular CONC 1 in 35 Pipe 1.018 Dia 525 Circular CONC 1 in 53 Pipe 1.017 Dia 525 Circular CONC 1 in 125 Pipe 6.004 Dia 300 Circular CLAY 1 in 48
STORMWATER LENGTHS	8.838 18.428 10.216 25.628 31.502
FOULWATER COVER LEVEL	
FOULWATER INVERT	5.231 5.158 5.158 5.018 4.866 4.850
FOULWATER DETAILS	Pipe 7.002 Dia 150 Circular CLAY 1 in 150 Pipe 7.003 Dia 150 Circular CLAY 1 in 150 Pipe 7.004 Dia 300 Circular CLAY 1 in 150 Pipe 1.016 Dia 300 Circular CLAY 1 in 150
FOULWATER LENGTHS	10.948 21.053 2.606 34.398



ROAD7A DATUM 2.000	
CHAINAGE	0.000 2.898 3.300 5.000 7.072 7.347 10.000 10.776 11.345 18.501 19.862
EXISTING GROUND LEVEL	7.299 7.377 7.419 7.455 7.320 7.472 7.538 7.447 7.622 7.576 15.000 15.000
ALIGNMENT LEVEL	
VERTICAL ALIGNMENT	G = 1.667% 1: 60.0
HORIZONTAL ALIGNMENT	R = 22.500
LEFT HAND CHANNEL	
RIGHT HAND CHANNEL	7.483 7.433 7.476 7.489 7.559 7.559 7.637 7.637
STORMWATER COVER LEVEL	
STORMWATER INVERT	7.483 7.483 7.489 7.559 7.559 7.637 7.637
STORMWATER DETAILS	
STORMWATER LENGTHS	
FOULWATER COVER LEVEL	7.470 7.660
FOULWATER INVERT	5.650 6.260
FOULWATER DETAILS	Pipe 7.000 Dia 150 Circular CLAY 1 in 18
FOULWATER LENGTHS	11.090



ROAD8 DATUM 2.000	
CHAINAGE	0.000 1.430 1.430 5.000 9.597 10.000 11.783 12.752 15.000 20.000 25.000 30.000 35.000
EXISTING GROUND LEVEL	7.315 7.377 7.419 7.502 7.476 7.540 7.565 7.540 7.669 7.579 7.618 7.689 7.748
ALIGNMENT LEVEL	
VERTICAL ALIGNMENT	G = 1.667% 1: 60.0
HORIZONTAL ALIGNMENT	R = 10.000
LEFT HAND CHANNEL	7.340 7.423 7.507 7.590 7.673 7.757 7.840 7.852
RIGHT HAND CHANNEL	
STORMWATER COVER LEVEL	
STORMWATER INVERT	6.601 7.526
STORMWATER DETAILS	Pipe 10.002 Dia 300 Circular CLAY 1 in 250
STORMWATER LENGTHS	12.118
FOULWATER COVER LEVEL	7.377
FOULWATER INVERT	
FOULWATER DETAILS	
FOULWATER LENGTHS	

19/02/13 DRAINAGE AMENDED	MP	P2
15/02/13 TENDER ISSUE	MP	F1
Date	Revisions	Drawn Rev.

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Client: KEEPMOAT HOMES

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Title: PROPOSED ROAD LONGITUDINAL SECTIONS SHEET 3

Scale: H:1:500 V:1:100	Drawn: MP	Checked: SH	Date: JAN 2013
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Planning Group
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