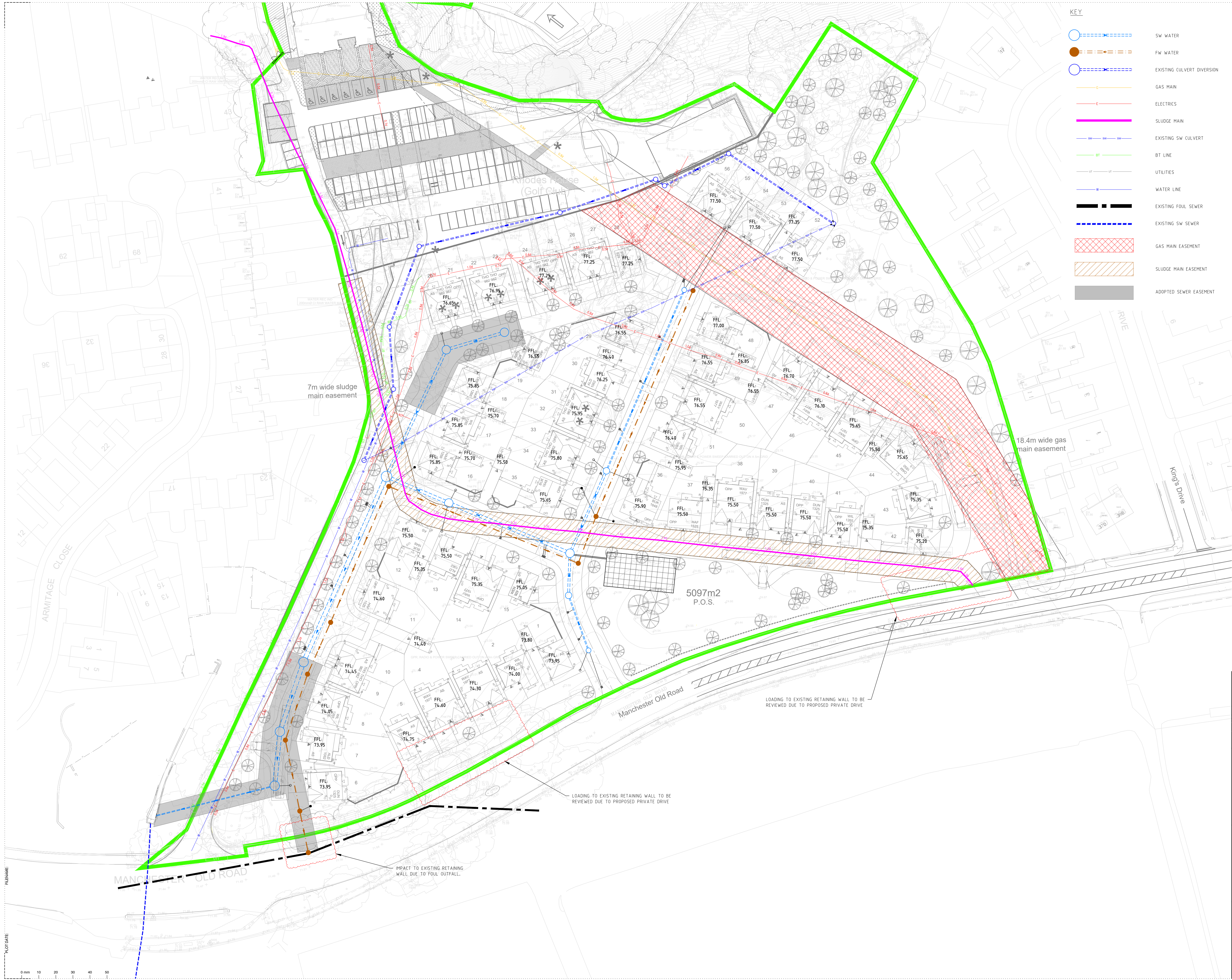
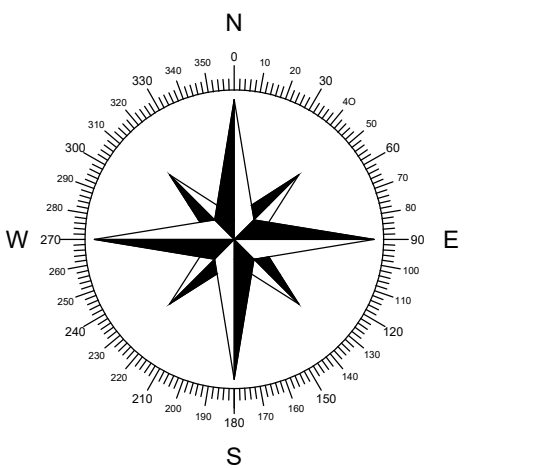




KEY

- SW WATER
- FW WATER
- EXISTING CULVERT DIVERSION
- GAS MAIN
- ELECTRICS
- SLUDGE MAIN
- EXISTING SW CULVERT
- BT LINE
- UTILITIES
- WATER LINE
- EXISTING FOUL SEWER
- EXISTING SW SEWER
- GAS MAIN EASEMENT
- SLUDGE MAIN EASEMENT
- ADOPTED SEWER EASEMENT



- NOTES:**
- ALL SEWERS ARE DESIGNED IN ACCORDANCE WITH DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS OFFERED FOR ADOPTION 2.1 VERSION AND UNITED UTILITIES GUIDELINES AND STANDARD DETAILS.
 - DRAWING IS SUBJECT TO APPROVAL BY UNITED UTILITIES UNDER A SECTION 104 AGREEMENT AND CONSTRUCTION WORKS UNDERTAKEN PRIOR TO TECHNICAL APPROVAL ARE AT THE DEVELOPERS RISK.
 - ALL CO-ORDINATES AND LEVELS SHOWN ARE RELATIVE TO THE TOPOGRAPHIC SURVEY DRAWING '02591/TOPO' BY GEOMATIC SURVEYS LTD.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR INVESTIGATING AND VERIFYING ALL THE EXISTING DRAINAGE CRITICAL TO THE PROPOSED SCHEME PRIOR TO COMMENCING ANY WORK AS FOLLOWS:
 - MANHOLE OUTFALL LOCATIONS
 - OUTFALL INVERT LEVELS
 - OUTFALL PIPE DIAMETERS
 - INTER-CONNECTION OF SEWERS
 - ANY INACCURACIES OR INCONSISTENCIES ON THE DRAWING RESULTING FROM THE FINDINGS SHALL BE REPORTED TO THE ENGINEER.
 - PRIOR TO THE COMMENCEMENT OF ANY ON SITE WORKS THE CONTRACTOR MUST CONTACT STATUTORY UNDERTAKER AND BE IN POSSESSION OF THE LATEST DRAWINGS SHOWING THEIR APPARATUS.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ALLOW FOR THE SUPERVISION OF THE CONSTRUCTION WORKS BY UNITED UTILITIES. THE CONTRACTOR WILL NOTIFY THE SUPERVISING OFFICER GIVING NOTICE WHICH WILL BE IN ACCORDANCE WITH THE AUTHORITIES REQUIREMENTS.
 - THE PROPOSED SEWERS WILL BE CLAY PIPE WORK AND SHALL BE EXTRA STRENGTH TO BS EN 295:1991 PART 1.
 - ANY PCC PIPE WORK WILL BE IN ACCORDANCE WITH BS EN 1916:2002.
 - THE CONTRACTOR MAY ELECT TO USE REINFORCED PVC PIPES COVERED BY BS EN 13476-2, B.S 4660:200 & B.S EN 1401-1. STRUCTURED WALL UPVC PIPES TO COMPLY WITH WIS 4-35-01 UP TO AND INCLUDING 300MM. MAX PIPE LENGTH TO BE 3.0M.
 - ALL MANHOLES AND CHAMBERS SHALL BE IN ACCORDANCE WITH BS EN 1917:2002.
 - ADAPTABLE SEWERS WITH COVER TO SOFFIT GREATER THAN 1.2M IN ROADS AND 0.9M IN FIELDS SHALL HAVE CLASS 5 GRANULAR BED AND SURROUND.
 - ANY SEWER FOR ADOPTION WITH A COVER OF LESS THAN 1.2M TO PIPE SOFFIT IN ROADS OR 0.9M TO PIPE SOFFIT IN FIELDS WILL HAVE A MINIMUM 500mm GEN 3 CONCRETE BED AND SURROUND WITH FLEXIBILITY MAINTAINED WITH FLEXCELL EXPANSION JOINT FILLER OR SIMILAR APPROVED AT EACH PIPE JOINT.
 - ALL PIPES BUILT INTO THE MANHOLE INVERTS SHALL BE INSTALLED WITH SOFFITS LEVEL. UNLESS SHOWN OTHERWISE.
 - THE CONNECTION TO THE ADAPTABLE SEWER SHALL BE MANUFACTURED JUNCTION PIPES. A SADDLE CONNECTION IS NOT PERMITTED UNLESS IT IS CLEARLY SPECIFIED.
 - CONNECTIONS TO THE EXISTING PUBLIC SEWER WILL BE IN ACCORDANCE WITH APPROVAL GRANTED BY THE STATUTORY UNDERTAKER.
 - PRIVATE DRAINAGE CONNECTIONS TO THE SEWER WILL BE 150MM DIAMETER AND LAID TO THE SPECIFIED INVERT.
 - THE INVERT LEVELS SPECIFIED AT THE DRAG OUT CHAMBER ARE INCOMING LEVELS.
 - A PROTECTIVE GEOTEXTILE/PLASTIC MEMBRANE IS TO BE APPLIED TO ALL FOUL SEWERS LAID ABOVE STORM SEWERS WITH LESS THAN 500MM OF COVER.
 - CENTRE OF MANHOLES MAY NOT BE AT THE SAME LOCATION AS PIPE INTERSECTION OR AS SHOWN IN THE LAYOUT. THE MANHOLE RINGS SHALL BE ADJUSTED OVER THE MANHOLE BASE TO SATISFY THE FOLLOWING REQUIREMENTS:
 - CLEARANCE FROM THE ADJACENT PIPE WORK
 - CLEARANCE FROM THE KERB LINE (THE BISCUIT OF THE MANHOLE SHALL NOT PROJECT UNDER THE ROAD CHANNEL LINE).
 - TO PROVIDE THE MINIMUM STANDING SPACE ON THE BENCHING AND THEREBY LOCATE THE MANHOLE COVER AND ENTRY ACCESS.
 - TO PROVIDE THE MINIMUM 250MM OF BEARING FOR THE MANHOLE RING OVER THE CAST IN STUB PIPES.
 - IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LIAISE WITH THE HIGHWAY AND SEWERAGE AUTHORITIES FOR APPROVALS, INTERIM INSPECTION, SNAGGING AND FINAL INSPECTIONS OF THEIR WORK TO ADAPTABLE STANDARDS.
 - AT THE CONCLUSION OF THE WORKS THE CONTRACTOR SHALL PROVIDE A MARKED UP DRAWING TO RECORD ANY AS BUILT VARIATIONS NOT SHOWN ON THE DRAWINGS.

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Rev	Date	Description

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DO NOT SCALE DRAWINGS. IF IN DOUBT, ASK!

Project Name
NORTH MANCHESTER GOLF CLUB

Client
DUCHY HOMES

Designed
R.A.

Drawn
H.S.

Checked
R.A.

Scale @ A1
1:500

Drawing Title
ENGINEERING LAYOUT

Project No.
210701

Drawing No.
210701-EDGE-P1-XX-DR-C-3005 P02

Revision
PRELIMINARY NOT FOR CONSTRUCTION