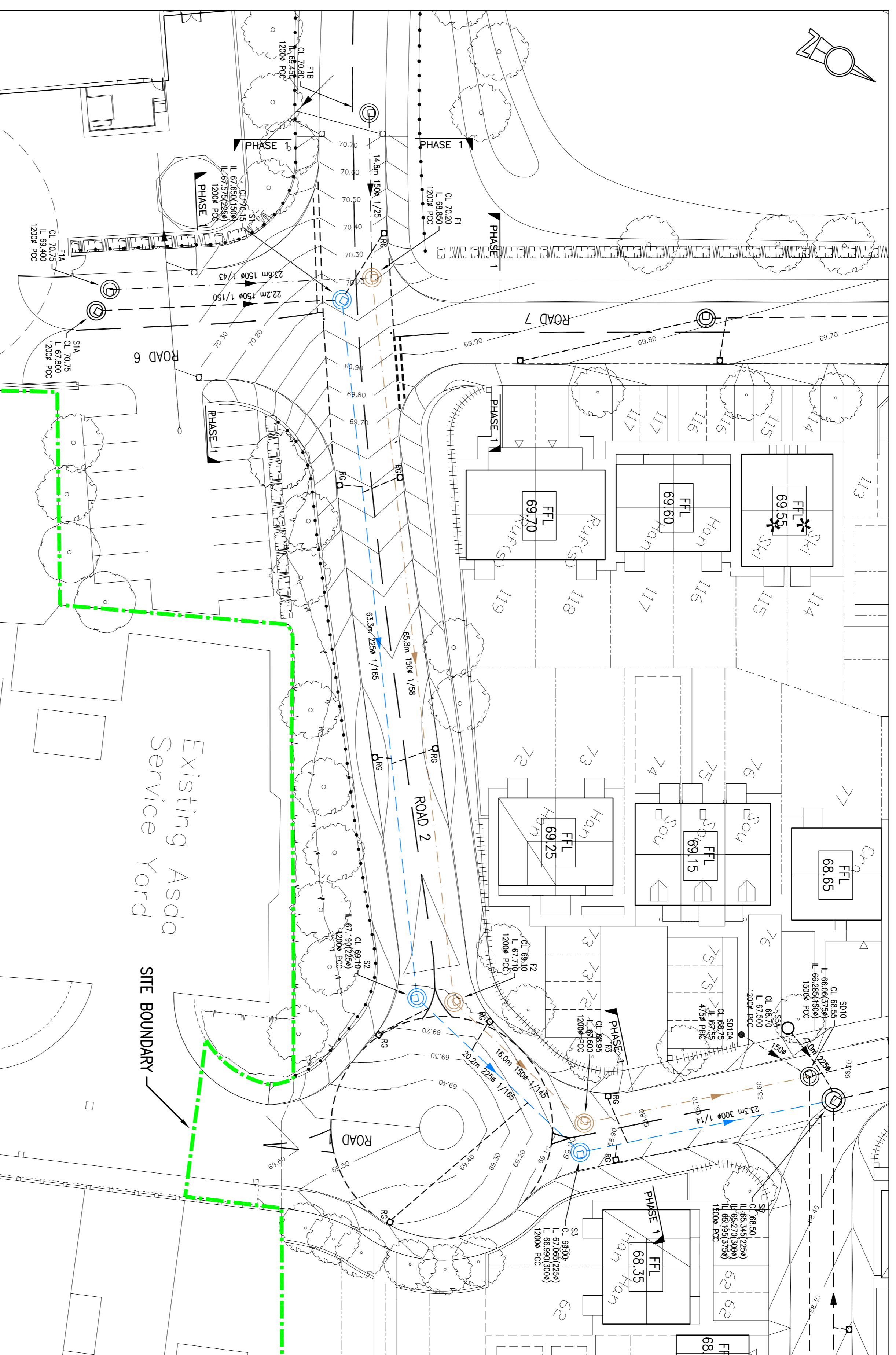


REFER TO DRAWING C1012
FOR DETAILS OF PHASE 3

REFER TO DRAWING C1011
FOR DETAILS OF PHASE 2



PROPOSED DRAINAGE LAYOUT – PHASE 1

(SCALE 1:250)

WHERE ADOPTED/ADAPTABLE DRAINAGE IS LOCATED IN CLOSE PROXIMITY TO EXISTING OR PROPOSED TREES THE EXISTING TREES ARE TO BE REMOVED WITHIN THE STANDOFF DISTANCES & NO PROPOSED TREES ARE TO BE PLANTED WITHIN THE STANDOFF DISTANCES STATED BELOW AS REQUIRED BY SEWERS FOR ADOPTION 6TH EDITION

1m FROM CENTRELINE OF SEWER
CLAY PAVE

3m FROM CENTRELINE OF SEWER
SHRUB BUSHES FOR SCREENING – BLACKTHORN, BROOM, COTONEASTER, ELDER, HAZEL, LAUREL, PRIVET, QUICKHORN, SNOWBERRY
MOST ORNAMENTAL FLOWERING SHRUBS – BLACKCURRANTS, RASPBERRIES, GOOSEBERRIES, CHRISTMAS TREES
CLEAR FILLED AT INTERVALS NOT EXCEEDING 7 YEARS

6m FROM CENTRELINE OF SEWER
ASH, BEECH, BIRCH, CONIFER, ELM, CHESTNUT, MAPLE, OAK, STOKMERE, APPLE, PEAR

12m FROM CENTRELINE OF SEWER
POPULAR, WILLOW

- KEY**
- EXISTING SEWER TO BE ABANDONED
 - PROPOSED SEWER DIMENSION (S185) (REFER TO DWG C1070)
 - PROPOSED ADAPTABLE SURFACE WATER DRAINAGE
 - PROPOSED ADAPTABLE SURFACE WATER MANHOLE
 - PROPOSED ADAPTABLE FOUL WATER DRAINAGE
 - PROPOSED ADAPTABLE FOUL WATER MANHOLE

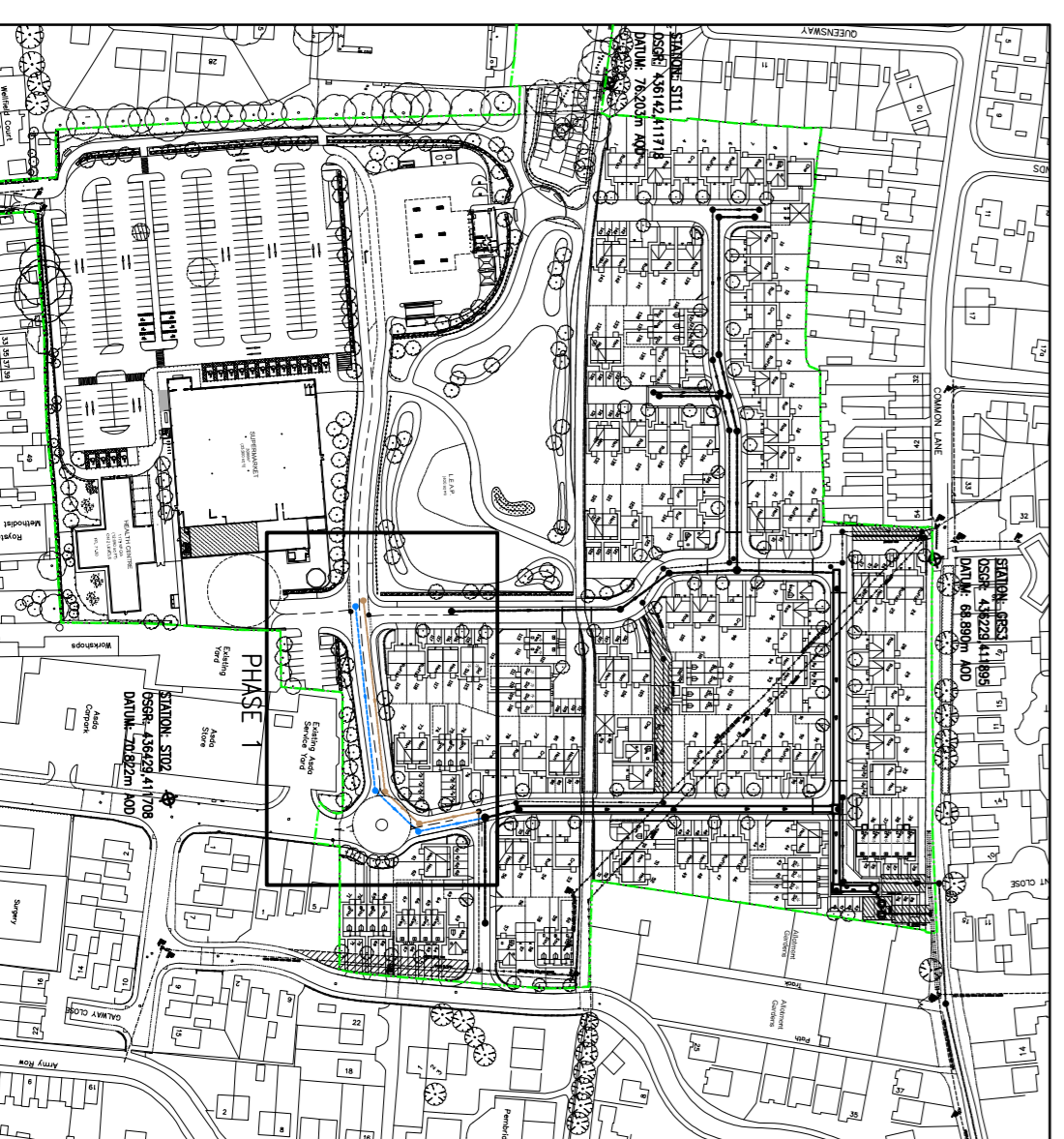
DO NOT SCALE.

NOTES – (CONT.)

16. ALL EXISTING GRASSES/PLANTINGS TO BE REMOVED SHALL BE BROKEN OUT AND REMOVED FROM SITE. THE EXCAVATION SHALL BE BACKFILLED WITH A SUITABLE GRANULAR MATERIAL TO THE REQUIRED LEVEL. ALTERNATIVELY, DEEP GRASSES MAY BE CLEANED AND GROUTED WITH A 1:10 CEMENTIOUS GROUT WITH GRANULAR FILL TO THE REQUIRED LEVEL.
17. FIELDED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION OF THE CONTRACTOR. ACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
18. UPON COMPLETION OF THE WORKS THE CONTRACTOR SHALL CLEAN ALL DRAINAGE TO ENTER THE EXISTING DRAINAGE SYSTEM. THE CONTRACTOR SHALL CLEAN OUT THE WORKS AND PROVIDE THE BARBER WITH TWO COPIES OF THE COPY ON CDRAW (PHASE 1 FORM) AND SEND IT TO THE BARBER.
19. GEOTECHNICAL DATA TO BE OBTAINED AROUND GRANULAR PIPE BEDDING WHERE SEWER WORKS ARE TO BE CARRIED OUT. THE CONTRACTOR SHALL PROVIDE THESE DATA TO THE LOCAL AUTHORITY. THE GEOTECHNICAL DATA IS TO BE OBTAINED UNDER THE MANHOLE BENCH.
20. WHERE UTILITIES AND DRAINAGE TRINCHES ETC CROSS OVER BRIDGE PROTECTORS, THE CONTRACTOR SHALL CONSIDER AN IMPROVED BRIDGE TO PREVENT GROUNDWATER INFILTRATING INTO THE DRAINAGE TRINCH.
21. MANHOLE COVERS AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN124. HAVE 600x600 CLEAR OPENINGS AND BE KITTED/RAISED. ALL COVERS TO BE LAMINATED WITH 150mm DEEP FRAMES.
22. COVER SLABS MUST CARRY THE 80 KN/MTKVA OR WILL BE REDUCED BY PRODUCT IS DIFFERENT TO THAT OF THE COVER AND FRAME. A LANDING BEARING SHALL BE PROVIDED TO THE COVER AND FRAME. THE CONTRACTOR SHALL PROVIDE 600mm x 600mm FOR THE YORKSHIRE WATER SPECIFIED COVER SIZE. PLEASE REFER TO CONCRETE PIPE SYSTEMS ASSOCIATION (CPSA) TECHNICAL BULLETIN ISSUED JULY 2004 FOR THE MANHOLE COVER SIZES. MANHOLE COVERS SHALL BE CLASS 2 OR CLASS 3 WITH 150mm DEEP FRAMES IN HIGHWAYS DRAIN TO BS EN124 WITH 150mm DEEP FRAMES IN HIGHWAYS.
23. SUITABLE RESISTANT GROUT (C20-22) AND PRECAST CONCRETE PRODUCTS SHALL BE USED FOR ALL MANHOLES AND TRINCHES. THE CONTRACTOR SHALL PROVIDE THE GROUT FROM ROAD PAVES AND SEWER DRAININGS.
24. THE APPROXIMATE SEWERS SHOULD BE A MINIMUM OF 1m AND MANHOLES 0.5m FROM ROAD PAVES AND SEWER DRAININGS.
25. SEWERS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HERDS. (PLEASE REFER TO THE DRAWING FOR THE EXISTING TREES AND HERDS). THE EXISTING TREES AND HERDS TO BE REMOVED SHALL BE BROKEN OUT AND REMOVED FROM SITE.
26. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM SHALL BE INCREASED TO ACCOMMODATE THE CONNECTIONS.
27. YORKSHIRE WATER POLICY IS NOT TO ACCEPT TYPE 'C' BUCK MANHOLES AND 'B' MANHOLE WITH 1200mm DIA OR 1500mm DIA RINGS. WITH THE OPENING SIZED OVER THE CHANNEL WHERE DEPTH OF COVER TO PIPE OFFSET IS 1-1.5m.
28. ALL WORKS ARE ASSIGNED TO BE WITHIN PUBLIC HIGHWAY OR WITHIN LAND OWNERS LANDS & NO WORKS ARE REQUIRED ON THIRD PARTY LAND OWNERS PROPERTY.
29. ALL DEPRECIATION CHARGERS TO BE 4754 RATED/PERMITS INSPECTION CHARGES (P/10) & ALL PRECAST CONCRETE CHARGERS ARE 12004 UNLESS NOTED OTHERWISE.
30. THE CONTRACTOR MUST ALLOW FOR ANY FEES REQUIRED FOR ROAD AND SEWER OPENING PERMITS.
31. THE CONTRACTOR MUST MAKE PUBLIC SEWER CONNECTION APPLICATION TO THE LOCAL AUTHORITY PRIOR TO WORKING COMMENCEMENT. WHEN REQUIRED, RELIANT WATER AUTHORITY FROM TO MAKE CONNECTIONS WHEN REQUIRED.
32. ALL MANHOLES LESS THAN 1.5m DEEP ARE CONSIDERED AS NONE LAM EXEMPT & SHALL BE MANHOLES FROM GROUND LEVEL.
33. YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILTER DRAIN/LAND DRAINAGE RUN-OFF INTO THE PUBLIC SEWER NETWORK OR ADAPTABLE DRAINAGE SYSTEM. DRAINAGE RUN-OFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIAISE WITH THE LOCAL AUTHORITY. LAND DRAINAGE SECTION WITH REDDERS TO THE DISPOSAL OF THE FILTER DRAIN/LAND DRAINAGE RUN-OFF.

SUBJECT TO THE APPROVAL OF
ALL RELEVANT AUTHORITIES

YORKSHIRE WATER REF:
H-3-262-898



PHASE LOCATION PLAN

(SCALE 1:2500)

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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. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT 3E ARCHITECTS' AND MAKE CONSULTANTS DRAWINGS AND PRODUCT SPECIFICATIONS.
2. ALL APPROXIMATE SEWER WORKS AND MATERIALS TO BE IN ACCORDANCE WITH 'SEWERS FOR ADOPTION 6TH EDITION'. THE RELEVANT BRITISH/GERMAN AND YORKSHIRE WATER STANDARDS/REQUIREMENTS/ADDENDUM AND 'KITTED/RAISED'.
3. THE LOCATION, SIZE AND DEPTH OF ALL EXISTING DRAININGS/SEWERS AND SERVICES SHALL BE ESTABLISHED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS ON SITE. ANY DISCREPANCIES FROM THE INFORMATION INDICATED ON THESE DRAWINGS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. SEWERS TO BE Laid IN CLASS '3' BEDDING (150mm GRANULAR BED AND SURROUND), WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2m. SEWERS TO BE Laid IN CLASS '2' BEDDING (150mm GRANULAR BED AND SURROUND), WHERE DEPTH OF COVER TO TOP OF THE SEWER IS MORE THAN 1.2m. SEWERS TO BE Laid IN CLASS '1' BEDDING (150mm GRANULAR BED AND SURROUND).
5. THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, REPAIR AND REPAIRMENT OF ALL EXISTING SERVICES TO THE SUBSTATION OF THE PUBLIC UTILITIES.
6. THE CONTRACTOR SHALL ALLOW FOR SERVICE WITH SERVICE WATER RUN-OFF INTO DE-WATERING AS APPROPRIATE. IN ORDER TO KEEP THE EXCAVATION AS REASONABLY DRY AS POSSIBLE DURING THE CONSTRUCTION OF THE WORKS.
7. THE CONTRACTOR SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS IN LINE WITH CURRENT LEGISLATION WHEN WORKING IN/NEAR CONTROLLED SPACES, DEEP EXCAVATIONS, TRENCHES AND VERGES FROM THE WORKING AREAS.
8. ALL PIPES SHALL BE Laid WITH SLOPES LEVEL AND ALL MANHOLE/INSPECTION CHAMBER INLET LEGS SHALL BE FOR THE OUTLET PIPE (UNLESS OTHERWISE SPECIFIED). ALL PIPES SHALL BE Laid WITH SLOPES AS SHOWN ON THE DRAWING. ALL PIPE GRADIENTS INDICATED ARE APPROXIMATE.
9. ALL REINFORCED PRECAST CONCRETE PRODUCTS SHALL COMPLY WITH CLASS BS1 PRECAST CONCRETE PRODUCTS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN124. ALL PRECAST CONCRETE CHARGERS SHALL BE CLASS 1, CONCRETE IN ADDRESSIVE GROUND (2007) PART 1: TABLE 2 SHALL BE CLASS 120.
10. ALL VERTICAL CLAY PIPES AND FITTINGS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN124. ALL FITTINGS SHALL BE CLASS 120.
11. ALL APPROXIMATE SEWER WORKS AND MATERIALS TO BE IN ACCORDANCE WITH 'SEWERS FOR ADOPTION 6TH EDITION'. THE RELEVANT BRITISH/GERMAN AND YORKSHIRE WATER STANDARDS/REQUIREMENTS/ADDENDUM AND 'KITTED/RAISED'.
12. SELECTED BACKFILL MATERIAL SHALL CONSIST OF UNBROKEN 50mm FREE ROOTS, STONES LARGER THAN 50mm, CLAY LUMPS LARGER THAN 50mm, FREE ROOTS, CONTAMINATED MATERIAL, SELECTED BACKFILL MATERIAL IS TO BE PLACED IN LAYERS NOT EXCEEDING 225mm. EACH LAYER COMPACTED TO 95% OF THE MATERIAL'S STABILITY. THEN A SUITABLE HARD GRANULAR MATERIAL SHALL BE USED.
13. GENERAL SPECIAL TO DRAINAGE TRENCHES IN UNUSUAL EXPOSED AREAS ABOVE THE PIPE BEDDING DETAIL SHALL BE SUITABLE SELECTED MATERIAL (IN ACCORDANCE WITH BS 8301 CLAUSE 5.7.1.1) AND BE PLACED IN LAYERS NOT EXCEEDING 225mm. EACH LAYER COMPACTED TO 95% OF THE MATERIAL'S STABILITY. THEN A HARD GRANULAR MATERIAL SHALL BE USED UP TO FORMATION LEVEL.
14. NO MECHANICAL PROTECTION OF FILL MATERIAL SHALL BE PERMITTED WITHIN 300mm ABOVE THE BARBER/CHAMBER OF THE PIPE.
15. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENT OF WATER RESISTANT PENETRATION (489-04 (REV. 04)).
16. ALL EXCAVATIONS IN AREAS OF HIGH WATER TABLES AND GRANULAR MATERIALS GEOTECHNICAL DATA TO BE OBTAINED AROUND GRANULAR PIPE BEDDING. THE CONTRACTOR SHALL PROVIDE THESE DATA TO THE LOCAL AUTHORITY. THE GEOTECHNICAL DATA IS TO BE OBTAINED UNDER THE MANHOLE BENCH.
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Client: **Kier Property Development Limited**

Project: **Midland Road, Royston**

Title: **Proposed Drainage Layout
Phase 1**

Scale: 1:250
Drawn: JM
Checked: RL
Date: April 13

Drawing Status: **Preliminary**

Job No: **11120**
Drawing No: **C1010**
Revision: **P4**

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Drawn By: