

ENGINEERING NOTES

- This drawing is to be read in conjunction with all relevant Architects, Engineers and Subcontractors drawings and details.
- This drawing is based on topographical survey by Clugston.
- All levels relate to levels given on survey drawing.
- Refer to Architects drawings for details of all paving types & patterns, soft landscaping, fences, gates & bollards.
- For lighting, service supplies & ducting requirements, refer to M&E drawings.
- All works to be carried out in accordance with Sewers for Adoption 7th Edition, BS EN 752 'Drain and sewer systems outside buildings' and the current edition of The Building Regulations 'Approved document H'.
- New drainage connections are to be made with appropriate lengths of rocker pipes & couplings.
- All manhole chamber covers to be installed parallel to final kerbs, edgings, paving joints or building lines as appropriate.
- This drawing details all below ground drainage up to finished floor level. For details of drainage above finished floor level, refer to Architects drawings.
- All stock connections under buildings to be minimum 100mm diameter solid PVC-U to BS EN 1401-1/BS4660 & laid at a minimum gradient of 1 in 40 unless otherwise noted. If the stock is greater than 100mm then the diameter of the connection is to be increased to match it.
- All RWP connections to be minimum 100mm diameter solid PVC-U to BS EN 1401-1/BS4660 & laid at a minimum gradient of 1 in 80 unless otherwise noted. If the RWP is greater than 100mm then the diameter of the connection is to be increased to match it.
- All private foul water pipework up to 150mm in diameter to be PVC-U to BS EN 1401-1/BS4660.
- All private surface water pipework up to 150mm in diameter to be solid PVC-U to BS EN 1401-1/BS4660. All private surface water pipework 225mm and above to be structured wall plastic sewer pipe complying with clause 518 of the specification for highway works.
- Plastic chambers shall comply with BS EN 1917 and BS 5911-3.
- All adoptable foul water and surface water pipework up to 225mm in diameter to be Kitemark certified Vitrified Clay (VC) with flexible spigot and socket joints and shall comply with the requirements of BS EN 295. All adoptable foul water and surface water pipework 300mm and above to be concrete sewer pipe with flexible spigot and socket joints and shall comply with the requirements of BS EN 1916 and BS 5911: Part 1.
- On completion of development all drainage shall be jet cleaned and CCTV surveyed.
- Sewers marked to be removed are to be dug out with manholes demolished & void filled with suitable engineering fill material.
- All road gully connections to be minimum 150mm diameter solid PVC-U pipework to BS EN 1401-1/BS4660 and laid at a minimum gradient of 1 in 150.
- All existing services shown are based on topographical survey by CLUGSTON. Location of all services in close proximity to works should be confirmed by means of trial pits under supervision of statutory undertaker & in accordance with HSE document 'Avoiding Danger from Underground Services' and 'Avoiding Danger from overhead power lines'.
- For manhole schedules refer to drawing 13174-08.

CONSTRUCTION WORK IN CLOSE PROXIMITY TO EXISTING FOUL WATER SEWER & EXISTING WATER MAINS. CONTRACTORS CONSTRUCTION HEALTH & SAFETY PLAN TO INCLUDE METHOD STATEMENT OUTLINING SAFE METHOD OF WORKING.

NEW FOUL WATER MANHOLE (TYPE 3) TO BE CONSTRUCTED ON THE EXISTING 225mm DIAMETER FOUL WATER SEWER. SUBJECT TO S106 APPROVAL FROM SOUTHERN WATER.

INVERT LEVEL HAS BEEN INTERPOLATED AND SHOULD BE CONFIRMED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF DRAINAGE WORKS.

DESIGNERS RESIDUAL RISK SCHEDULE

CONSTRUCTION

- EXISTING SEWERS / DRAINAGE / SERVICES / OVERHEAD CABLES:
 - REFER TO EXISTING SERVICES LAYOUT (REF: 13174-09) / TOPOGRAPHICAL SURVEY (REF: 3661/10/001 D) / STATUTORY UNDERTAKERS RECORDS FOR LOCATION OF EXISTING SEWERS / DRAINAGE / SERVICES / OVERHEAD CABLES.
 - WORKS IN CLOSE PROXIMITY TO EXISTING SEWERS / DRAINAGE / SERVICES / OVERHEAD CABLES. CONTRACTORS CONSTRUCTION HEALTH & SAFETY PLAN SHOULD INCLUDE METHOD STATEMENT OUTLINING SAFE METHOD OF WORKING AGREED WITH RELEVANT STATUTORY UNDERTAKER WHERE NECESSARY.
 - WORKS AFFECTED BY EXISTING SEWERS / DRAINAGE / SERVICES / OVERHEAD CABLES. CONTRACTOR SHOULD ARRANGE FOR DIVERSION / LOWERING / PROTECTION BY STATUTORY UNDERTAKER WHERE NECESSARY PRIOR TO COMMENCEMENT OF WORKS.
- GROUND CONDITIONS / SOIL CONTAMINATION / REMEDIATION
 - THE GROUND INVESTIGATION REPORT (REF: CRM.413.303.GE.R.001.A) IDENTIFIED ASBESTOS, DIBENZO(A,H)ANTHRACENE & ELEVATED LEVELS OF POLYCYCLIC AROMATIC HYDROCARBONS (PAH) & METHANE GAS IN UNDERLYING SOILS. SITE PERSONNEL SHOULD USE APPROPRIATE PPE WHEN CARRYING OUT EXCAVATIONS & CONTRACTORS CONSTRUCTION HEALTH & SAFETY PLAN SHOULD INCLUDE METHOD STATEMENT THAT ADOPTS BEST PRACTICE HEALTH AND SAFETY POLICIES FOR ALL SITE PERSONNEL THROUGHOUT THE DURATION OF THE CONSTRUCTION WORKS.
 - TO PROTECT FUTURE USERS OF THE SITE, CONTRACTOR SHOULD ENSURE AREAS OF PROPOSED SOFT LANDSCAPING ARE REMEDIATED BY PLACING A 300MM THICK COVER LAYER OF CERTIFIED CLEAN TOPSOIL OVER A SEPARATION GEOTEXTILE.
- EXCAVATIONS & EARTHWORKS
 - REFER TO GROUND INVESTIGATION REPORT (REF: CRM.413.303.GE.R.001.A) FOR DETAILS OF UNDERLYING SOILS. WHERE GROUND CONDITIONS ARE FOUND TO DEVIATE FROM THOSE REPORTED IN THE SITE INVESTIGATION REPORT, THE ENGINEER SHOULD BE CONTACTED IMMEDIATELY FOR ADVICE ON HOW TO PROCEED.
 - EXCAVATIONS WHERE ACCESS IS REQUIRED SHOULD BE TEMPORARY SUPPORTED WITH SLOPES BATTERED WELL BACK AND MAINTAINED AT A SAFE ANGLE.
 - CONTRACTORS CONSTRUCTION HEALTH & SAFETY PLAN SHOULD INCLUDE METHOD STATEMENT OUTLINING SAFE METHOD OF WORKING IN OR ADJACENT TO DEEP EXCAVATIONS ADJACENT TO BOUNDARIES / STRUCTURES / EMBANKMENTS / BULK EARTHWORKS.
 - GROUNDWATER MAY BE ENCOUNTERED IN EXCAVATIONS. CONTRACTORS CONSTRUCTION HEALTH & SAFETY PLAN SHOULD INCLUDE METHOD STATEMENT OUTLINING SAFE METHOD FOR DEWATERING EXCAVATIONS DURING GROUNDWORKS.
- WORKS ON OR ADJACENT TO HIGHWAY
 - CONTRACTOR SHOULD ENSURE SITE PERSONNEL HAVE APPROPRIATE TRAINING & USE APPROPRIATE PPE WHEN CARRYING OUT WORKS IN THE HIGHWAY AND THE CONSTRUCTION HEALTH & SAFETY PLAN SHOULD INCLUDE METHOD STATEMENT THAT ADOPTS BEST PRACTICE HEALTH AND SAFETY POLICIES FOR ALL SITE PERSONNEL THROUGHOUT THE DURATION OF THE WORKS ON / ADJACENT TO HIGHWAY.

A1

ARUN DISTRICT COUNCIL BE217100C

