

RISK ASSESSMENT

EXISTING SERVICES

OPEN FIELD AREAS OVERHEAD SERVICES PRESENT - CLIENT TO PROVIDE INFORMATION FOR ANY EXISTING, INCLUDING OVERHEAD EXISTING DOMESTIC SERVICES TO EXISTING FARMS IN CENTRE AND EASTERN BOUNDARY

THE POTENTIAL AREA FOR CONFLICT IS THE CONSTRUCTION OF THE ROAD ACCESS AND OUTFALL SEWERS WHICH MAY INTERFERE WITH UTILITY PIPES- RISK OF ELECTROCUTION, RISK OF EXPLOSION, RISK OF FLOOD, ALSO HIGHWAY AND RESIDENTIAL ACCESS FOR WESTFIELDS FARM AND TRACT, OUTFALL SEWER WILL NEED TO CROSS A47, TRAFFIC MANAGEMENT AND EXISTING SERVICES TO BE CONSIDERED.

EXISTING GROUND CONDITIONS

SITE INVESTIGATION

SOFT TOPSOIL 0.260-4M
In general, the intrusive investigation has confirmed the geology comprising variable granular and cohesive materials interpreted as drift deposits across the site. Granular drift deposits were encountered centrally and in particular centrally in the south that could be interpreted as the Wolston Sand and Gravel. Further to this, granular materials were locally encountered in the north-east that could be interpreted as the Durston Gravel. However, the drift deposits were found to be variable in nature. Due to the difficulties in interpreting the materials encountered, all drift deposits have been interpreted as the Wolston Glacialic Formation. Please see report for details.

FROM REPORT - ASL Report No. 992-24-087-10

FURTHER TO THIS, COLLAPSE WAS RECORDED AT SEVERAL TRIAL HOLES AND WAS TYPICALLY RECORDED IN ASSOCIATION WITH GRANULAR MATERIALS AND THE PRESENCE OF GROUNDWATER. THE FINDINGS OF THE INVESTIGATION HAVE LOCALLY SHOWN THE SHALLOW GROUND CONDITIONS TO BE SUBJECT TO SPALLING AND COLLAPSE, PARTICULARLY IN ASSOCIATION WITH GRANULAR MATERIALS AND GROUNDWATER INFLOWS.

SHALLOW EXCAVATIONS SHOULD REMAIN STABLE IN THE SHORT TERM HOWEVER, DEEPER EXCAVATIONS MAY BE PRONE TO COLLAPSE, PARTICULARLY IN ASSOCIATION WITH INFLOWS OF WATER WITHIN GRANULAR SOILS. CONSEQUENTLY, TEMPORARY SUPPORT SHOULD BE CONSIDERED FOR ALL EXCAVATIONS WHERE COLLAPSE IS TO BE AVOIDED. PARTICULARLY WHERE EXCAVATIONS EXTEND BEYOND 1.20 M IN DEPTH IN ACCORDANCE WITH CURRENT HEALTH AND SAFETY REQUIREMENTS. SHORING OR BATTERING BACK OF EXCAVATIONS IS REQUIRED IN ALL CASES WHERE ACCESS FOR PERSONNEL IS REQUIRED TO ENTER THOSE EXCAVATIONS WHEREIN THE RISK OF COLLAPSE OF THE EXCAVATION COULD OCCUR. HEAVY DUTY CLOSED SHORING SHOULD BE PROVIDED FOR ANY EXCAVATION WHERE MAIN ENTRY IS NECESSARY, IN COMPLIANCE WITH STATUTORY REQUIREMENTS, TO ENSURE SAFE WORKING CONDITIONS.

GROUND WATER - DURING THE INTRUSIVE INVESTIGATION, GROUNDWATER WAS RECORDED AT APPROXIMATELY HALF OF THE EXPLORATORY LOCATIONS AT DEPTHS OF BETWEEN APPROXIMATELY 0.0M AND 1.1M BGL. GROUNDWATER WAS TYPICALLY RECORDED ASSOCIATED WITH GRANULAR MATERIALS OR GRANULAR ROCKS TO WITHIN TYPICALLY COHESIVE MATERIALS. DURING THE SUBSEQUENT MONITORING PROGRAMME, GROUNDWATER WAS RECORDED AT ALL OF THE MONITORING INSTALLATIONS AT DEPTHS BETWEEN APPROXIMATELY 0.44M AND 1.88M BGL AT WS116 AND WS102 RESPECTIVELY.

PERCHED WATER - Not known
GASING - BASED ON THE RESULTS OF THE GROUND GAS MONITORING, GAS PROTECTION MEASURES ARE NOT REQUIRED FOR THE PROPOSED DEVELOPMENT IN ACCORDANCE WITH BS 8485
TRENCH STABILITY - SEE ABOVE
CONTAMINATION - BASED ON THE RESULTS OF THE GROUND GAS MONITORING, GAS PROTECTION MEASURES ARE NOT REQUIRED FOR THE PROPOSED DEVELOPMENT IN ACCORDANCE WITH BS 8485

SITE WIDE ELEMENTS

THE SITE FALLS ON OPEN FIELDS TO THE NORTH OF NORMANDY WAY A47 IN HINCKLEY. THERE ARE NO SCHOOLS ADJACENT TO THE SITE, THOUGH NORMANDY WAY ARE ONE OF THE MAIN ROADS AROUND HINCKLEY. THERE ARE ADJACENT HOUSES, FARMS, BUSINESSES ADJACENT TO THE SITE.

SEWERS / DRAINS - PUBLIC SEWERS EXIST IN THE ROAD NETWORK SURROUNDING THE SITE. SOME LOCAL LAND DRAINAGE MAY BE ENCOUNTERED AND THERE ARE EXISTING SEWERS IN NORMANDY WAY. THE SITE IS CROSSED BY EXISTING LAND DRAINS.

HIGHWAYS - THERE IS ONE ACCESS POINT FOR THE SITE, A PROPOSED NEW S278 ROUNDABOUT ON NORMANDY WAY.

TOPOGRAPHY - THE SITE FALLS FROM EAST TO WEST.

FALL RISKS - THOSE DETAILED BELOW

RISK TO EXISTING STRUCTURES - NO KNOWN STRUCTURES WITHIN THE DEVELOPMENT SITE
ADDITIONAL RISKS - THE SITE HAS MANY LARGE MATURE HEDGEROWS AND SOME TREES ON THE BOUNDARIES WHICH COULD FORM POTENTIAL FALL HAZARDS IF THEIR ROOT SYSTEMS ARE INTERFERED WITH OR EXCAVATIONS REMOVE GROUND SUPPORT.

THE MAIN WATERCOURSE RUNS THROUGH THE SITE FROM SOUTH TO NORTH WITH ASSOCIATED DITCH COURSES AND THE RISK OF FALLS THERETO.

IDENTIFIED UNAVOIDABLE HAZARDS OR WORK SEQUENCES:

CONTACT WITH LIVE UTILITY SERVICES DURING ACCESS CONSTRUCTION AND OUTFALL SEWER CONSTRUCTION.

PLANT AND DELIVERY MOVEMENTS ON SITE AND WITHIN CONSTRAINED SITE ACCESS AREA.

THE TRAFFIC LEVEL ON THE ADJACENT ROADS SIGNIFICANTLY NORMANDY WAY, AND THE EXTENT TO WHICH TURNING CONSTRUCTION PLANT MAY CAUSE INCREASED ACCIDENT POTENTIAL.

ADVERSE TOPOGRAPHY- RISKS TO PLANT AND MATERIAL, STABILITY GENERAL 1:15 GRADIENT.

WATER INGRESS INTO EXCAVATIONS FROM PERCHED LENSES.

TRENCH SUPPORT ADEQUATE TO DEAL WITH EXCAVATIONS THROUGH MADE GROUND AND VARIABLE SOIL PROFILES, ABNORMALLY DEEP FOUL SEWERAGE CONSTRUCTION NEAR TO PUMP STATION.

TRENCH CONTROL, REQUIRED TO DEAL WITH WATER BEARING STRATA.

POSSIBLE UNKNOWN BASEMENTS CELLARS TROUGHS OR OTHER UNDERGROUND STRUCTURES, ASSOCIATED WITH FORMER BUILDINGS.

WORKING IN CONFINED SPACES, SPECIFIC RISKS IN ALL TRENCHES, AND ESPECIALLY WITHIN DEEP ON SITE SEWERS INCLUDING THE PUMP STATION WET WELL AND CONNECTIONS, RISK OF ELEVATED CO₂, RISK OF SUDDEN WATER OR FLOWING SOLIDS OR GASEOUS INGRESS.

WORKING IN PROXIMITY TO OR CROSSING EXISTING STRUCTURES, RISK OF PLANT INSTABILITY AND STRUCTURAL COLLAPSE.

DISEASE AND CONTAMINATION RISK ASSOCIATED WITH CONTACT WITH EXISTING SEWERAGE.

DISEASE RISK ASSOCIATED WITH WORKS ADJACENT TO WATERCOURSES (LEPTOSPIROSIS).

COSHH CONTROL MEASURES REQUIRED FOR ROAD AND SEWERAGE CONSTRUCTION RISK OF BURN, CHEMICAL BURN, CONTAMINATION, DISEASE, ASPHYXIATION, POISONING

Basin 1

Gross Ha - 1.400

Impermeable Ha - 0.910 (65%)

QBAR - 4.4 l/s/ha

Q = 5 l/s

Bank Slope 1:3

225mm Permanent water

Bed Level - 106.50 (337m²)

Crest Level - 107.70 (687m²) Twl

100yr+cc 107.440

Freeboard to lowest Plot FFL

1.76m

Basin 2

©Crown Copyright. All rights reserved.

Licence no. 100022432

GENERAL NOTES

1. THE CONTRACTOR SHALL CHECK ALL THE TINS FOR LINE AND LEVEL WITH EXISTING BEFORE COMMENCING ANY WORKS SHOULD ANY ERRORS BE FOUND, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY IN WRITING, IT IS ESSENTIAL THAT ALL PIPE CONNECTIONS ARE CHECKED FOR LINE, LEVEL AND DIAMETER PRIOR TO COMMENCING WORKS, AS DATA ON THESE PIPELINES HAS BEEN OBTAINED FROM A VARIETY OF SOURCES WHICH MAY NOT BE NECESSARILY ACCURATE OR COMPLETE.
2. THE DEPICTION OF ANY SERVICE APPARATUS ON THIS DRAWING HAS BEEN OBTAINED FROM THIRD PARTY SOURCES, AND IS NOT NECESSARILY ACCURATE OR COMPLETE. AT NO TIME DOES THE INFERRED POSITION ON THE DRAWING ABSOLVE THE CONTRACTOR FROM TAKING ALL NECESSARY STEPS TO LOCATE SERVICE PLANT IN ACCORDANCE WITH THE NETWORKS SUGGESTED BY THE RELEVANT AUTHORITY. STEPHEN DAYKIN CONSULTING LTD WILL ACCEPT NO CLAIMS WHATSOEVER IN RESPECT OF ANY LOSSES OR DAMAGE CAUSED IN RESPECT OF SUCH APPARATUS, HOWEVER CAUSED.
3. SEWERS TO BE CONSTRUCTED IN ACCORDANCE WITH THE W.S.A PUBLICATION DESIGN AND CONSTRUCTION GUIDANCE 2007 (DCG) AND RELEVANT WATER COMPANY ADVICE/CLAD.
4. ALL LATERAL DRAINAGE CONNECTIONS TO THE PUBLIC SEWER SHALL BE 150MM DIAMETER UNLESS OTHERWISE SPECIFIED.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXECUTE THE WORKS AT ALL TIMES IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE 1974 HEALTH AND SAFETY AT WORK ACT, AND THE 2015 CDM REGULATIONS. THE CONTRACTOR WILL BE DEEMED TO HAVE ALLOWED FOR FULL COMPLIANCE WITH THE SAME WITHIN HIS RATES, INCLUDING FULL LIAISON WITH THE PRINCIPAL DESIGNER.
6. FOR DETAILS OF CARRIAGEWAY CONSTRUCTION REFER TO THE 30 SERIES PROJECT DRAWINGS.
7. FOR DETAILS OF SEWER CONSTRUCTION REFER TO THE 40 SERIES PROJECT DRAWINGS.

DRAINAGE NOTES

1. ALL DRAINAGE OFFERED FOR ADOPTION HAS BEEN DESIGNED NOT TO ATTENUATE FLOWS IN EXCESS OF THE 1:50 YEAR RETURN STORM FLOOD.
2. A SECTION 106 CONNECTION APPLICATION WILL BE SOUGHT AND APPROVED PRIOR TO ANY CONNECTIONS TO THE PUBLIC NETWORK BEING MADE.
3. NO USE OF INFILL COVERS AND FRAMES IN ADOPTED BLOCK PAVED AREAS.
4. CATCHPITS SHALL NOT BE ADOPTED.
5. EASEMENTS SIZE DEPENDENT ON ADOPTING AUTHORITY, PIPE SIZE AND DEPTH. SEE S104/S38 PLANS FOR DETAILS.
6. PROTECTIVE CONCRETE COVER SLABS TO BE USED ON PIPES IN NON TRAFFIC AREAS WHICH DO NOT ACHIEVE 0.5M COVER LEVEL AND 1.2M/2.00M COVER IN TRAFFIC AREA.
7. WHERE PIPES ARE CROSSING, PLASTIC MEMBRANE TO BE USED FOR PROTECTION TO ELIMINATE ANY CHANCES OF CROSS CONTAMINATION.
8. ALL MANHOLE COVERS TO BE 670x760MM COVER AND FRAME TO MAINTAIN A 600x600MM CLEAR OPENING UNLESS OTHERWISE STATED. IN ACCORDANCE WITH BS EN 124 CLASS D400 AND EMBOSSED FW OR SW AS APPROPRIATE, WHERE APPLICABLE.
9. PRECAST CONCRETE MANHOLE RINGS WILL NOT BE CUT UNDER ANY CIRCUMSTANCES. OTHER OPTIONS ARE TO BUILD UP THE MANHOLE WITH CONCRETE OR BRICK WORK TO THE TOP OF THE PIPE.
10. ALL COVERS AND FRAMES TO BE KITEMARKED.
11. PIPES OF DIFFERENT DIAMETERS ENTERING MANHOLES SHOULD BE INSTALLED WITH SOFFITS AT THE SAME LEVEL.
12. THE OUTSIDE OF THE SEWER SHOULD BE IN THE CARRIAGEWAY (NOT THE FOOTWAY) AND BE AT LEAST 1M FROM THE KERB LINE. THE OUTSIDE EDGE OF THE MANHOLE SHOULD BE AT LEAST 0.5M FROM THE KERB LINE.
13. NON-DEGRADABLE MARKER PINS SHALL BE 100MM ABOVE TOP OF THE PIPE. RISING MAIN SHOULD BE LAID IN STRAIGHT LINES, WHERE BENDS ARE USED, THEY SHOULD BE PRE-FORMED AND SECURELY ANCHORED WITH THRUST BLOCKS, IF REQUIRED.

KEY:

- F1 ADAPTABLE SECTION 104 FOUL SEWER AND MANHOLE
- S1 ADAPTABLE SECTION 104 STORM SEWER AND MANHOLE
- S1 ADAPTABLE SECTION 38 HIGHWAY DRAIN AND MANHOLE
- STORM FIRST OFF MANHOLE DEPTH LESS THAN 2M 450MM DIAMETER PPIC NON-MAN ENTRY SYSTEM
- FOUL
- STORM FIRST OFF MANHOLE DEPTH GREATER THAN 2M CONCRETE MANHOLE DIMENSIONED AS 2015 BUILDING REGULATIONS PART 1 TABLE 12 MIN 1200 DIAMETER AS SUBSCRIPT NOTE 7
- FOUL
- PEDESTRIAN DROPPED CROSSING COMPRISING 2ND DROPPER KERBS AND 2ND DROPPED KERBS WITH TACTILE PAVING

PIPE MATERIAL NOTES

1. ALL ADAPTABLE SEWERS 300MM DIAMETER AND LESS SHALL BE HDPE PIPE SYSTEMS TO BS EN13476 AND BEDDED IN ACCORDANCE WITH BS EN 1295.
2. ALL ADAPTABLE SEWERS OVER 300MM DIAMETER SHALL BE CONCRETE PIPES CLASS 150, TO EN 1519/BS 5911-1:2002. ALL CONCRETE MANHOLES SHALL BE TO BS EN 1917 AND BS5911-3.
3. ALL PIPE BEDDING SHALL BE CLASS 5 COMPLETE GRANULAR SURROUND UNLESS OTHERWISE SPECIFIED. REFER TO SEWER STANDARD CONSTRUCTION DETAILS FOR CONFIRMATION OF ACCEPTABLE AGGREGATE SIZES.
4. ADAPTABLE PLASTIC SEWER PIPES SHOULD BE TO BSI KITEMARKED CERTIFIED TO W8-6-0101.
5. SHOULD THE CONTRACTOR WISH TO CHANGE ANY MATERIAL, THIS WILL REQUIRE THE APPROVAL FROM THE ADOPTING AUTHORITY IN WRITING AND ANY PROPOSED CHANGE SHOULD SEEK APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.

SDC dwg no. E970-71

Stephen Daykin Consulting Ltd

A design consultancy for the development industry

31A Langacre

Bingham

Nottinghamshire

NG13 8AF

Tel 01949 838831

mobile 07968 765381

steve@sdccivils.com

Managing Director

Stephen W Daykin I.Eng MICE MCIHT

S104 LAYOUT

A47_HINCKLEY

Dwg No. H0997-300-02 Rev. #
Scale 1:500 Date 18.03.26
Drawn by JW Checked by INITIAL

NORTH MIDLANDS
Design & Technical Department
2 Horizon Place, Nottingham Business Park
NOTTINGHAM NG8 6PY