



- BELOW GROUND DRAINAGE NOTES
- THE LOCATION AND LEVEL OF EXISTING DRAINAGE CONNECTIONS AND EXISTING SERVICES IS TO BE CHECKED PRIOR TO COMMENCEMENT OF DRAINAGE WORKS. ANY VARIANCE TO THE DETAILS ON THIS DRAWING AND THE SCHEDULE IS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
  - THE DESIGN IS BASED ON THE INFORMATION AVAILABLE ON THE DATE OF ISSUE FROM OTHER PARTIES (EG. ARCHITECT AND M & E ENGINEER). IT IS SUBJECT TO CHANGE RESULTING FROM UPDATES TO THE AVAILABLE INFORMATION FROM OTHERS.
  - THE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE NBS SPECIFICATIONS, ASSOCIATED MANHOLE SCHEDULE AND STANDARD DRAINAGE DETAIL DRAWINGS WHERE APPLICABLE.
  - THE POSITIONS OF FOUL AND SURFACE WATER DRAINAGE POINTS ARE INDICATIVE ONLY. REFER TO THE ARCHITECTS AND M&E ENGINEERS DRAWINGS FOR SETTING OUT DETAILS.
  - PRIVATE FOUL AND SURFACE WATER DRAINAGE IS TO BE CONSTRUCTED IN ACCORDANCE WITH BUILDING REGULATIONS PART H, BS EN752 AND BS EN12056.
  - DRAINS AT BASEMENT LEVEL ARE TO BE CONSTRUCTED USING CAST IRON (EN518 OR EQUIVALENT) AND FLEXIBLY JOINTED TO BS 437.
  - DRAINS AT GROUND LEVEL ARE TO BE CONSTRUCTED USING VITRIFIED CLAY PIPES TO BS EN 285-4 SUPER STRENGTH SPECIFICATION (HEPWORTH SUPERLEVEL) OR SIMILAR APPROVED.
  - ALL SOIL CONNECTIONS UNDER BUILDINGS TO BE 100mm DIA LAID AT A MINIMUM GRADIENT OF 1:40 UNLESS NOTED OTHERWISE.
  - ALL SURFACE WATER CONNECTIONS TO BE 150mm DIAMETER AND TO BE LAID AT A MINIMUM GRADIENT OF 1:80 UNLESS NOTED OTHERWISE.
  - ALL SOIL CONNECTIONS AND RAINWATER PIPES SHOULD BE RODDABLE FROM GROUND LEVEL.
  - IN CASES OF IN SITU CONCRETE FLOOR SLABS, DRAINS ARE TO BE CAST INTEGRAL WITH THE SLAB WHERE PIPE COVER TO THE CROWN IS LESS THAN 300mm - NOTE SPECIAL PROVISIONS APPLY TO BASEMENT FLOOR SLABS - SEE DETAILED DRAINAGE AND STRUCTURAL DRAWINGS. CONCRETE ENCASEMENT TO BE REINFORCED AS PER DRAINAGE DETAIL.
  - IN CASES OF SUSPENDED FLOORS WHERE A VOID OF 300mm OR MORE EXISTS BELOW FLOOR DRAINS ARE TO BE SUSPENDED USING A PROPRIETARY HANGER SYSTEM OR CAST INTEGRAL WITH THE FLOOR.
  - WHERE DRAINS PASS THROUGH FOUNDATIONS OR OTHER RIGID STRUCTURES A LINTEL OR SLEEVE IS TO BE USED AND PROVISION FOR FLEXIBILITY IS TO BE MADE USING ROCKER PIPES.
  - BACKFILLING OF DRAIN TRENCHES ADJACENT TO BUILDING OR OTHER STRUCTURES IS TO BE IN ACCORDANCE WITH DIAGRAM 8 OF THE BUILDING REGULATIONS.
  - ANY PIPE OR GULLY OR OTHER FITTING OR DUCT PENETRATING THE BASEMENT SLAB OR WALL IS TO BE WATERPROOFED USING HYDROPHILIC STRIPS OR PUDDLE FLANGES TO ENSURE A WATER TIGHT JOINT. CONCRETE SURROUND TO DRAINAGE PIPES AND FITTINGS MAY BE REQUIRED IN CERTAIN CASES - REFER TO DETAILED DRAINAGE DRAWINGS AND RELEVANT STRUCTURAL DETAILS.
  - EXISTING FOUNDATIONS AND RETAINING WALLS MUST NOT BE UNDERMINED BY NEW DRAINAGE RUNS UNLESS AGREED IN WRITING WITH THE STRUCTURAL ENGINEER. CONTRACTOR TO SUBMIT METHOD STATEMENTS AND TEMPORARY WORKS PROPOSALS TO THE STRUCTURAL ENGINEER FOR COMMENT PRIOR TO COMMENCEMENT OF WORKS.
  - ALL DRAINAGE EXCAVATIONS SHOULD BE RISK ASSESSED BY THE CONTRACTOR TO ENSURE TRENCH SAFETY / STABILISATION MEASURES ARE CONSIDERED DURING THE CONSTRUCTION PERIOD. ANY EXCAVATIONS LEFT EXPOSED SHOULD BE INSPECTED BY A COMPETENT PERSON ON A DAILY BASIS. GROUND CONDITIONS SHOULD BE MONITORED AND TOOL BOX TALKS SHOULD INCLUDE SITE INVESTIGATION INFORMATION TO AID THE CONTRACTORS ONGOING RISK ASSESSMENT AND METHOD OF EXCAVATION. ALL EXCAVATIONS SHOULD BE ASSESSED BY A COMPETENT PERSON FOR CONFINED SPACES REQUIREMENTS.
  - THE CONTRACTOR IS TO CONSIDER PHASING OF THE DRAINAGE INSTALLATION AND ARE TO PROVIDE TEMPORARY DRAINAGE MEASURES THEY DETERMINE ARE REQUIRED.
  - SUDS ARE TO BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS MADE WITHIN THE CIRIA SUDS MANUAL C753 (WITH PARTICULAR ATTENTION DRAWN TO CHAPTER 31) AND CIRIA GUIDANCE ON THE CONSTRUCTION OF SUDS C788. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSIDER CONSTRUCTION PROGRAMME OF SUDS.
  - DETAILED DESIGN OF GEOCELLULAR ATTENUATION CRATES IS A CDP ITEM AND SHOULD BE BASED ON LEVEL, LAYOUT AND VOLUME DETAILS SHOWN. DETAILED DESIGN INFORMATION SHOULD BE PROVIDED TO THE CIVIL ENGINEER TO PASS COMMENT..
  - MANHOLES LOCATED WITHIN PAVED AREAS ARE TO BE FITTED WITH RECESSED FRAME AND COVERS. COVERS IN ASPHALT AND LANDSCAPED AREAS ARE TO BE FITTED WITH A SOLID FRAME AND COVER.
  - FOR DETAILS OF PERMEABLE PAVING CONSTRUCTION AND LEVELS, REFER TO ELLIOTT WOOD DOCUMENT 2180501-EWP-ZZ-XX-SH-C-0001
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This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

Do not scale from this drawing.

**LEGEND**

- FOUL WATER MANHOLE
- SURFACE WATER MANHOLE
- PROPOSED FOUL WATER
- PROPOSED SURFACE WATER
- PROPOSED BUILDING
- SITE BOUNDARY
- NORTH PARK BOUNDARY
- MAIN RESORT BOUNDARY
- EXISTING POND - TYPICAL EXTENT OF PERMANENT WATER
- PROPOSED POND - TYPICAL EXTENT OF PERMANENT WATER

- MAX POND WATERLINE
- 4/20 CGA UNDER FOOTPATH TO PROVIDE CONTINUATION OF OVERLAND FLOW
- LOCALISED EARTHWORKS TO PROVIDE A 150mm DEPRESSION OVERLAND FLOW ROUTE

NOT FOR CONSTRUCTION

P4	S2	01.07.22	HHu	PDa	RIBA 4 Issue
P3	S2	17.06.22	HHu	PDa	Planning Condition Discharge
P2	S2	30.03.22	HHu	PDa	RIBA 3 Issue
P1	S2	18.02.22	HHu	PDa	RIBA 3 Part 1 Issue
rev	sc	date	by	chk	description

Drawing title  
Proposed Below Ground Drainage  
Sheet 4 of 23

scale (s)	date	drawn
1:200@ A1; 1:400@A3	February 2022	HHu

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Project  
Proposed Great Wolf Lodge,  
Chesterton, Bicester,  
Oxfordshire

Drawing status	Status	Revision
Preliminary	S2	P4

Project no. Originator Zone Level Type Role dng no.  
2180501-EWP-Z4-EX-DR-C-1003