



SIGNIFICANT DESIGNER'S IDENTIFIED HAZARDS	
HAZ001	STRIKING BURIED SERVICES
HAZ002	EXCESSIVE WATER INGRESS
HAZ003	UNKNOWN GROUND CONDITIONS
HAZ004	STABILITY OF EXCAVATIONS
HAZ005	DAMAGE TO EXISTING STRUCTURES DUE TO EXISTING DEFECTS
HAZ006	FAILURE OF SHAFT DUE TO LUBRICATION DURING CAISSON CONSTRUCTION
HAZ007	FAILURE OF SHAFT DUE TO FLOTATION
HAZ008	EXCESSIVE LOADING OF COLLAR LEADING TO SETTLEMENT RESULTING IN DAMAGE TO THE STEEL DOWEL CONNECTION
HAZ009	DRILLING JACKING COLLAR DOWELS -WORKING AT HEIGHT
HAZ010	ENCOUNTERING UNEXPLODED ORDNANCE
HAZ011	INJURY DUE TO LIFTING OPERATIONS
HAZ012	STRUCTURAL FAILURE OF THE COVER SLAB DUE TO OVERLOADING

- FOR MORE DETAILED INFORMATION ON THE HIGHLIGHTED HAZARDS, REFER TO COWI UK LIMITED DESIGNER'S RISK ASSESSMENT FOR THIS PROJECT.

- 'EVERYDAY' LOW RISK HAZARDS AND THOSE HAZARDS WHICH SHOULD BE OBVIOUS TO A COMPETENT CONTRACTOR HAVE NOT BEEN INDICATED ON THIS DRAWING.

- SHOULD ANY ADDITIONAL HAZARDS BE IDENTIFIED DURING THE COURSE OF THE WORKS, THE CONTRACTOR SHALL NOTIFY ALL RELEVANT MEMBERS OF THE PROJECT TEAM.

DO NOT SCALE - IF IN DOUBT ASK

eight₂O CLEARWATER COURT VASTERN ROAD READING RG1 8DB

Barhale THE COACH HOUSE, TYTENHANGER PARK, COURSERS ROAD, ST ALBANS, HERTFORDSHIRE, AL4 0PF

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- ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES RELATING TO ORDNANCE DATUM UNLESS SHOWN OTHERWISE
- DO NOT SCALE FROM THIS DRAWING. DO NOT TAKE DIGITAL DIMENSIONS OFF THIS DRAWING WORK TO FIGURED DIMENSIONS ONLY - IF IN DOUBT ASK!
- ALL WORKS CARRIED OUT IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS:-
 - AM-DES-CIV-C01-SEC1 CIVIL DESIGN STANDARD, THAMES WATER UTILITIES LTD.
 - AM-DES-CIV-C03-SEC1 TUNNELLING DESIGN STANDARD, THAMES WATER UTILITIES LTD.
 - AM-DES-CIV-C04-SEC1 TUNNELLING SPECIFICATION, THAMES WATER UTILITIES LTD.
 - THE SPECIFICATION FOR TUNNELLING BTS & ICE 2015
 - BS 6164 : 2011 : CODE OF PRACTICE FOR HEALTH & SAFETY IN TUNNELLING IN THE CONSTRUCTION INDUSTRY
 - CESWI 7th EDITION
 - THE REQUIREMENTS OF SEWERS FOR ADOPTION, 7TH EDITION
- FOR CONSTRUCTION METHODOLOGY, REFER TO THE CONTRACTOR'S SPECIFIC METHOD STATEMENT FOR THE WORKS
- THE CONTRACTOR IS TO CONFIRM ALL LEVELS AND SETTING OUT PRIOR TO COMMENCEMENT OF THE WORKS
- TOPOGRAPHICAL SURVEY INFORMATION WAS BASED ON LIDAR DATA COURTESY OF THE ENVIRONMENT AGENCY AND A PROPOSED GROUND MODEL PROVIDED BY STANTEC.
- THE UNDERGROUND SERVICES INFORMATION HAS BEEN PROVIDED BY STANTEC. THE DERIVATION OF THIS INFORMATION IS UNKNOWN AT THIS TIME. COWI ACCEPTS NO LIABILITY WITH REGARDS TO THE ACCURACY OF THE INFORMATION. CONTRACTOR TO VERIFY THIS INFORMATION PRIOR TO COMMENCEMENT OF WORKS
- TRIAL EXCAVATIONS ARE TO BE UNDERTAKEN TO VERIFY AND ESTABLISH THE ACTUAL POSITIONS OF SERVICES AND OTHER APPARATUS ON SITE. SAFE DIGGING PRACTICES ARE TO BE USED TO VERIFY LOCATIONS BEFORE ANY MECHANICAL PLANT IS USED
- CONSTRUCTION TOLERANCES IN ACCORDANCE WITH THE 'SPECIFICATION FOR TUNNELLING' BTS & ICE 2010, TABLE 15, SECTION 328, TOLERANCES FOR TUNNELS, SHAFTS AND UNDERGROUND WORKS
- ALL PROPRIETARY PRODUCTS TO BE USED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION
- TEMPORARY ACCESS ARRANGEMENTS, TEMPORARY PROTECTIVE BARRIERS AND TEMPORARY PLATFORMS DESIGNED BY OTHERS
- SERVICE DIVERSIONS ARE THE RESPONSIBILITY OF OTHERS
- BENCHING AND HANDRAIL DESIGNS TO BE CONFIRMED AND AGREED WITH OPERATIONS
- DEPTH OF COVER SLAB TO BE CONFIRMED WITH RESPECT TO EXISTING WATER COURSE (SW DRAIN) AND ALLOTMENT FENCE - 600mm DEPTH PROPOSED

Scale 1:50

FOR APPROVAL

CURRENT REVISION INFORMATION

Revision	Status	Submittal Description	Author	Checked	Reviewed	Date
P05	S3	FOR INFORMATION	RPB	CB	SR	29.04.20
P04	S3	FOR APPROVAL	NEML	KEMS	KEMS	11.3.20
P03	S3	FOR APPROVAL	DEMCM	KEMS	MNRE	24.01.20
P02	S3	FOR APPROVAL	DEMCM	KEMS	AJKI	17.12.19
P01	S1	FOR APPROVAL	DEMCM	KEMS	AJKI	25.11.19

Thames Water Utilities

Location Code: TS001304	OS Reference: TQ0787	Security Reference: UBR
Project Group: WW1	Sub Process: N/A	
Location/Town: THE GREENWAY, ICKENHAM, UXBRIDGE, UB10 8LS.		
Site Name: TS001304 - RUISLIP_BR_TS001		
Project Name: H582_05 - GREENWAY		
Drawing Title: DIVERSION SEWER SHAFT 03 - DOWELLED OPTION 6m I.D. SHAFT GENERAL ARRANGEMENT		
Scale: AS SHOWN	Sheet Size: A1	Status: S3
Drawing Number: H582_05-HI-TS001304-101-DR-C_0122	Revision: P05	