

Reading Civic Centre RBCO24 Geoarchaeological Watching Brief 30/10/2024 to 04/11/2024

A geoarchaeological watching brief was conducted on boreholes drilled at planned pile locations for assessment of asbestos contaminations. The site is located on Bridge Street Reading, Berkshire, RG1 2LR (NGR: SU 71448 73150).

Three boreholes were drilled instead of the proposed six due to problems with the rig accessing pile locations and ground conditions on site, namely an unrecorded concrete slab present within the 1.20 m service inspection pit at each drilled borehole location. This required coring and slowed progress. The deposits were recorded using standard geoarchaeological criteria (such as colour, texture and inclusions). The works were carried out using appropriate PPE and RPE due to the high risk of asbestos in made ground deposits on the site.



Figure 1: Working shot of BH203

Site wide the sequence comprised a modern brick surface underlain by a concrete slab measuring 0.40 m thick. The upper made ground deposits largely consisted of sands and flint gravels, with red and pink brick, sandy mortar, glass, plastic, and asbestos containing materials. The lower made ground deposits consisted of coarse sands and flint and chalk gravels with granular to fine red brick fragments.

The basal deposit (4.80-5.00 m below ground level) in BH201 was a soft dark reddish brown slightly organic silty clay with root fibers and a mixed structure. This deposit likely represents an area of trample forming prior to the dumping of made ground at the interface with the river terrace gravels.

The river terrace deposits consisted of compact light yellow brown coarse sand with fine to medium coarse subangular to subrounded gravels. The full sequence of logged deposits are provided below.

Past work on the flood plan of the River Kennet during the development of the Oracle in the 1990's has shown that the early Holocene environment in the flood plain of the River Kennet involved a network of braided streams, with deep channels, sand banks and islands. These boreholes show that the Reading Civic Centre site is situated on what would have been on an area of higher ground (Figure 4).

The transect shown in Figure 5 shows the truncation from the construction of the brewery in the 19th century. The construction of the Reading Civic Centre truncated deeper than the Early Holocene surface as shown by the green line in Figure 5. This Early Holocene surface was the ground level at the beginning of the Holocene; prior to global relative sea level rise after the last Ice Age. This low lying land was later reclaimed in the medieval period via a series of revetments and dumping episodes to raise the ground level and reduce flooding. The boreholes indicate that the current Reading Civic Centre basement (c.5m bgl+) has truncated any remaining alluvial geoarchaeology, medieval water front, or medieval and post-medieval archaeology.



Figure 2: BH201 4.80-5.00m bgl putative mixed organic clay trample



Figure 3: Remains of a redeposited brick footing in made ground. 2.00-2.48m bgl

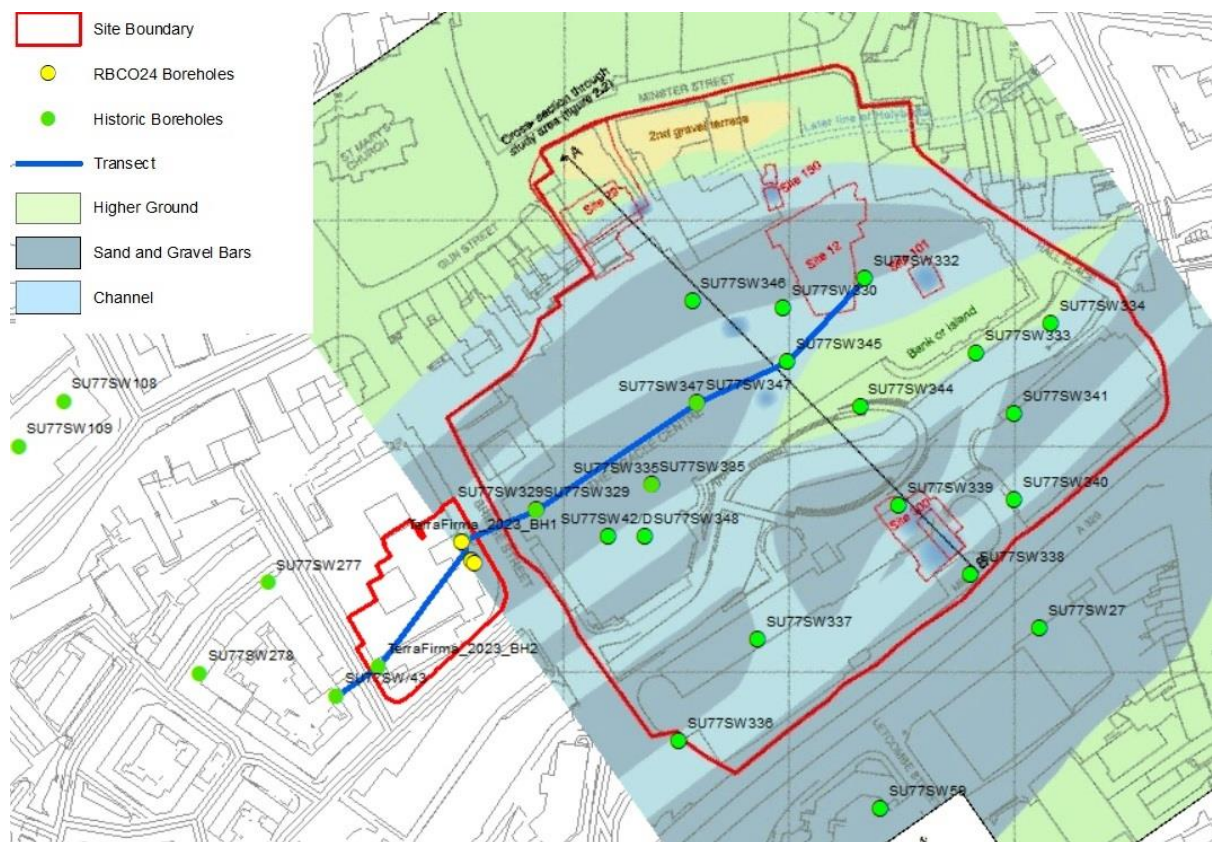


Figure 4: Borehole assets on a map from the Oracle development (Ford et al 2013) showing deep channels and areas of higher ground.

Reading Civic Centre (V.E x10)

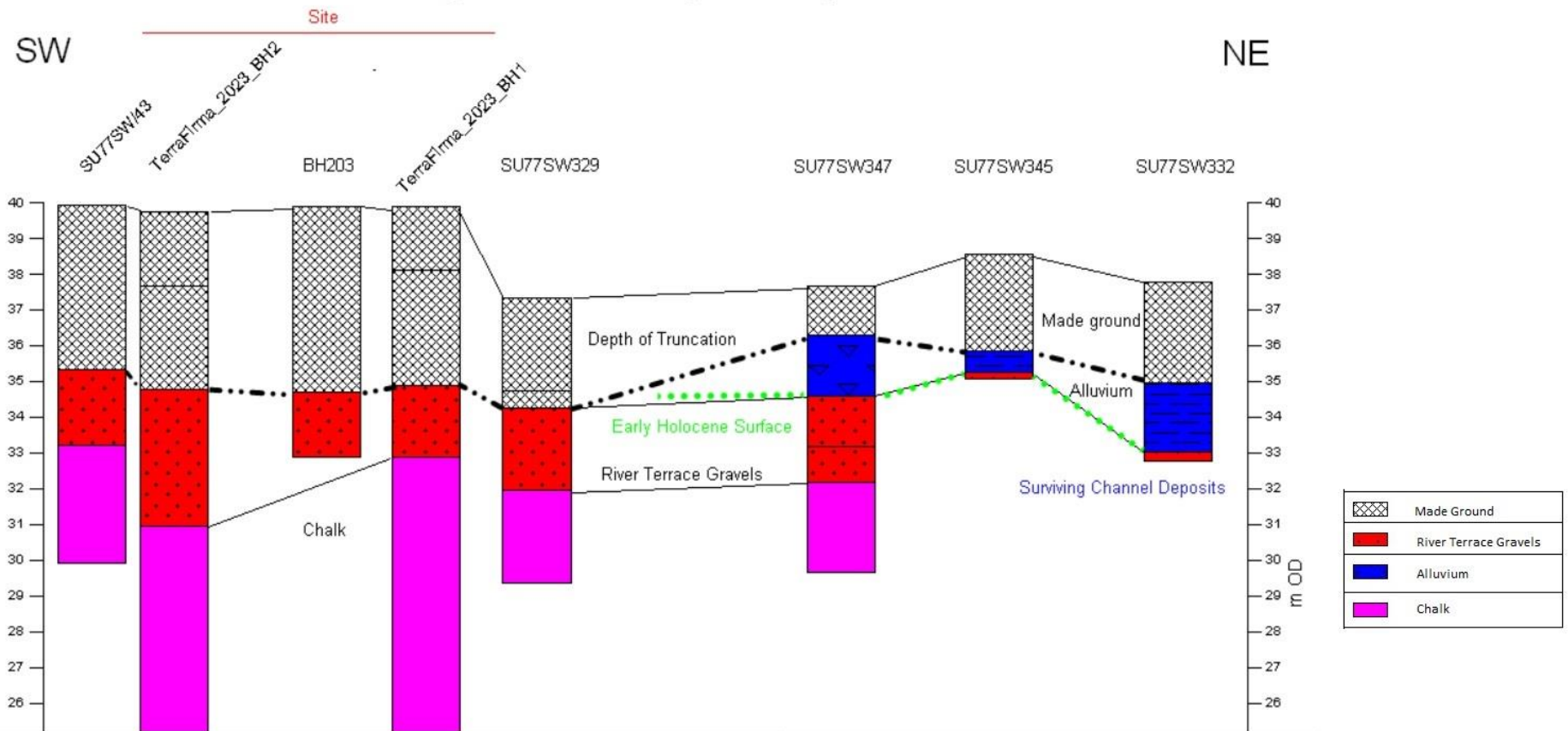


Figure 5: Transect across the site showing levels of truncation and the early Holocene surface

Borehole Logs

Site Code		BH Ref		Co-ordinates		Level (m aOD)
RBCO24		BH201		E 471,460.01	N 173,149.75	39.90
Top (m bgl)	Base (m bgl)	Top (mOD)	Base (mOD)	Description	Interpretation	Facies
0	0.05	22.04	21.96	Brick surface	Modern surface	-
0.05	0.45	21.96	21.46	Concrete slab	Subbase for brick surface	-
0.45	1.2	21.46	20.86	Firm mid grey brown slightly clayey gravelly fine medium and coarse sand with fine to medium flint gravels, mortar fragments light pinkish red brick and mid orange red brick fragments. Asbestos lagging	Made ground	-
1.2	2	20.59	20.53	Prominently fine and medium dark orange red brick fragments subrounded to subangular in a mid-grey brown slightly clayey sand matrix, glass mortar asbestos largely sand and gravel	Made ground	-
2	3	20.53	20.04	Firm mid grey brown clayey medium coarse sand with frequent brick and mortar 15% frags. Fine, medium and coarse flint gravels 5%	Made ground	-
3	3.3	20.04	19.98	VOID	-	-
3.3	3.4	19.98	19.59	Firm mid grey brow clayey sand with fine brick fragments, fine medium flint and chalk gravel	Made ground	-

3.4	3.45	19.59	19.04	Compact fine to medium sandy gravels. gravel is fine subangular flint 5% Subrounded to rounded.	Made ground	-
3.45	3.55	19.04	18.72	Compact fine medium sand with 20% fine-medium gravel rare fine granular CBM fragments	Made ground	-
3.55	3.75	18.72	18.56	Compact medium to coarse flint gravels in filled with 20% fine-medium sand	Made ground	-
3.75	3.95	18.56	18.45	Compact fine granular sand and fine to medium subangular to subrounded flint gravel	Redeposited gravel	-
3.9	4	18.45	18.27	Compact light-yellow grey medium to coarse sand with fine to medium coarse flint gravels	Redeposited gravel	-
4	4.45	18.27	18.04	Disturbed by CPT. Brick introduced by CPT	-	-
4.45	4.8	18.04	17.54	Soft dark blue grey fine sandy silty clay with 10% golden fine medium sand subrounded flint gravels	Dumped deposit, ground raising. Made ground	-
3	5	17.54	16.04	Soft dark reddish brown slightly organic feeling silty clay with root fibres. Stable sweepings?	Trample deposit at base of made ground?	-

Site Code		BH Ref		Co-ordinates		Level (m aOD)
RBCO24		BH202		E 471,460.85	N 173,148.18	39.90
Top (m bgl)	Base (m bgl)	Top (mOD)	Base (mOD)	Description	Interpretation	Facies
0.00	0.03	39.90	39.87	Brick	Modern surface	-
0.03	0.23	39.87	39.67	Concrete slab	Subbase for brick surface	-

0.27	2.00	39.63	37.90	Firm mid grey brown slightly clayey gravelly fine medium and coarse sand with fine to medium flint gravels, mortar fragments light pinkish red brick and mid orange red brick fragments. Asbestos lagging	Modern made ground	-
2.00	2.48	37.90	37.42	Redeposited brick footing - dark reddish pink brick with a sandy shelly grey mortar with brick fragments within and black bricks	Modern made ground – demolition make up	-
2.48	3.00	37.42	36.90	Core loss due to water flush	-	-
3.00	3.30	36.90	36.60	VOID - Compression	-	-
3.30	3.80	36.60	36.10	Firm mid brownish grey clayey medium to coarse sand with 5% fine to coarse flint gravels subangular to subrounded with brick, glass, and chalk gravels fine and medium in size	Made ground	-
3.80	4.00	36.10	35.90	Firm black clayey medium to coarse sand	Made ground - gravel dumping, make up	-
4.00	4.80	35.90	35.10	Firm mid brownish yellow clayey medium to coarse sandy gravel with granular to fine red brick, fine medium and coarse subangular to subrounded flint gravels and fine to medium subrounded chalk inclusions	Made ground	-
4.80	5.00	35.10	34.90	Firm black clayey medium to coarse sand with brick, glass, and chalk	Made ground	-

Site Code		BH Ref		Co-ordinates		Level (m aOD)
RBCO24		BH203		E 471,455.51	N 173,157.49	39.90
Top (m bgl)	Base (m bgl)	Top (mOD)	Base (mOD)	Description	Interpretation	Facies
0.00	0.05	22.04	21.96	Brick surface	Modern surface	-
0.05	0.25	21.96	21.46	Concrete slab	Subbase for brick surface	-
0.25	0.38	21.96	21.46	firm mid greyish brown fine, medium and coarse clayey sand with angular to subrounded fine, medium and coarse flint gravel	Subbase for concrete slab	-
0.38	0.70	21.46	20.86	Mid brownish grey very slightly clayey coarse sand with fine and medium gravels cerement cobble from 0.40 m bgl	Modern made ground	-
0.70	0.90	20.86	20.76	Mid grey brown very slightly clayey coarse sand with fine to medium gravels. Plastic sheeting and polystyrene inclusions from 0.50 m, rare slate shingle and wire mesh. Boulder of bricks and cobbles up to 0.30 m in size.	Modern made ground	-
0.90	1.40	20.76	20.59	Mid grey brown very slightly clayey coarse sand with fine to medium gravels with charcoal flecks and granular to fine red brick fragments	Modern made ground	-
1.40	1.53	20.59	20.53	Concrete slab	Modern made ground	-
1.53	2.00	20.53	20.04	Fine grained deposit washed out - no recovery	No recovery	-

2.00	3.40	20.04	19.98	Soft mid grey brownish clayey fine, medium and coarse sand with fine to coarse 5% flint subangular and subrounded, glass, red brick fragments, asbestos, concrete fragments, charcoal flecks (2.80-2.90 m)	Modern made ground	-
3.40	3.80	19.59	19.04	Firm mid brownish grey clayey sand with medium to coarse 5% flint subangular and subrounded with glass, brick, and flint gravels	Modern made ground	-
3.80	4.00	19.04	18.72	Firm yellowish brown clayey subangular to subrounded granular to coarse gravelly medium to coarse sand. Gravel is flint and chalk	Made ground, redeposited gravels	-
4.00	4.80	18.72	18.56	Firm mid yellow clayey gravelly medium to coarse sand	Made ground, redeposited gravels	-
4.80	5.00	18.56	18.45	Firm black lightly clayey medium to coarse sandy gravels with granular to medium brick, glass, and chalk inclusions	Made ground, redeposited gravels	-
5.00	5.20	18.45	18.27	Coarse flint gravels and cobbles, sand largely washed away and brick pushed down by CTP test	Backfill	-
5.20	5.45	18.27	18.04	Compact light yellowish brown slightly silty angular to subrounded flint gravel fine to coarse in size with matrix of fine, medium, coarse sand	River terrace gravels	-
5.45	6.00	18.04	17.54	Compact light-yellow brown coarse sand with fine to medium coarse subangular to subrounded gravels 5-55 mm in size	River terrace gravels	-

6.00	7.00	17.54	16.04	VOID	-	-
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