ARCHAEOLOGICAL OBSERVATION

WESTON-SUPER-MARE WATER MAINS REPLACEMENT SCHEME
WESTON-SUPER-MARE
NORTH SOMERSET

NGR ST 3260 6140
JOB N^{O}: BA1231BWWSM

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Frontispiece: Open cut trench in Locking Road, View W.

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1. Executive Summary

This report details the results of a programme of archaeological works undertaken by Border Archaeology during ground-works associated with the Weston-Super Mare water mains renewal scheme.

A number of residential streets were affected by the work, comprising an area (centred on NGR ST 3260 6140) defined by Ashcombe Road to the east, Locking Road to the south, Jubilee Road to the west and Baker St to the north. Trenching was opened in Locking Road but elsewhere the main was slip-lined by means of access pits.

The work revealed clays and sands of alluvial and tidal origin, associated with the silting of a coastal inlet, which was in existence until the post-medieval period. A number of small palaeochannels, indicating watercourses open during the time when silting was taking place, were also identified.

Development during the 19th century took place on a coastal, intertidal landscape of silts and clays, together with beach sand.

While no features of archaeological significance were observed during the intrusive ground-works, on the N part of the site a possible relict land surface was revealed. Its proximity to Montpelier, where prehistoric funerary remains were discovered during the 19th century could indicate the potential survival of archaeologically significant deposits in this area. All natural layers observed during the course of the work had been heavily truncated during installation and maintenance of existing services.

2. Introduction

Border Archaeology was instructed by Bristol Water plc to carry out a programme of Archaeological Observation during water mains replacement work in the E part of the urban area of Weston-Super-Mare.

The area affected by the work was bordered by Ashcombe Road to the E, Locking Road to the S, Jubilee Road to the W, and Baker St to the N. With the exception of Locking Road, where open cut trenching was used, the scheme involved the excavation of access pits for slip lining along residential streets.

The aim of the Archaeological Observation was to locate and record any archaeological finds, features or deposits within the ground-works area and to confirm that no impact on the archaeological resource occurred during the course of the ground-works. Work was carried out by Border Archaeology in compliance with Bristol Water's *Code of Conduct*

Site work took place between 19th October 2012 and 24th April 2013.

Copies of this report will be supplied to Bristol Water, to Vince Russett Esq, County Archaeologist, North Somerset Council and to the North Somerset Historic Environment Record.

2.1 Soils & Geology

The urban area of Weston-Super-Mare is classed as Unsurveyed in the Soil Survey of England and Wales, however the predominant soil type in the area immediately E of the study area consists of pelo-calcareous alluvial gley soils of the NEWCHURCH 2 (814 c) series comprising deep stoneless mainly calcareous clayey soils, while the underlying drift geology consists of marine alluvium (SSEW, 1983).

Fig.1a: Site location plan (N part of scheme)

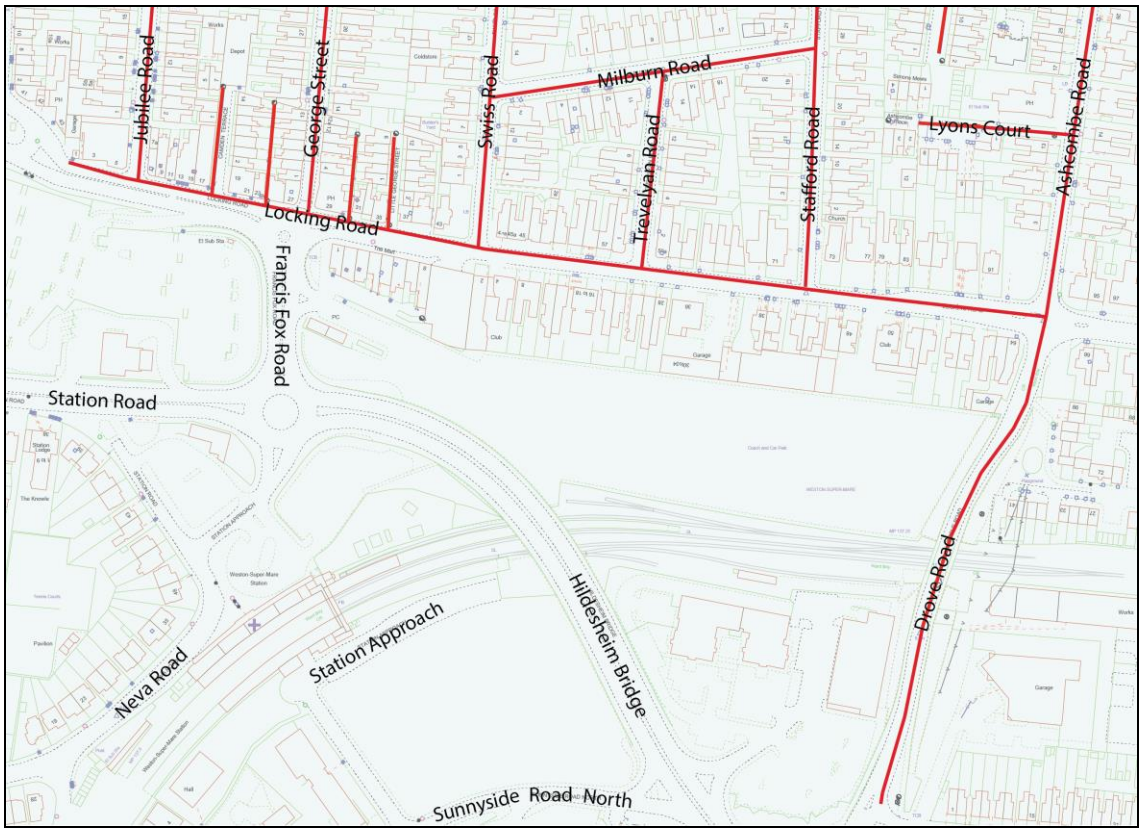

Fig 1b: Site Location plan S

3. Historical & archaeological background

The western half of the area, comprising Jubilee Road, George Street, Swiss Road, Beaufort Road, Stafford Road, Gordon Road and part of Clarendon Road lies in the vicinity of a former coastal inlet which existed during the prehistoric, Roman and medieval periods but had largely disappeared by the early to mid-19th century. There is some evidence that parts of the area were settled before the 19th century with the boundary of the moorland Watersill Road, which became Locking Road (La Trobe-Bateman 1999, 27). From the last quarter of the 19th century onwards the existing residential streets were laid out as part of the expansion of Weston-Super-Mare from a humble fishing village into a fashionable holiday resort.

The entirety of the area lies within the 'Northmarsh', an extensive tract of intertidal marshland. Archaeological work on the eastern outskirts of Weston-Super-Mare has indicated the potential for well-preserved waterlogged remains to survive relating to prehistoric and Roman occupation and salt-making activity within the 'Northmarsh', which could occur in places at a very shallow depth.

Several cremation and inhumation burials of prehistoric date have been recorded immediately to the NW of Baker Street, on the immediate northern periphery of the study area.

However, the pipeline route lay within the existing roads, which have been further impacted by modern service trenching, and, as a consequence, the likelihood of encountering undisturbed archaeological deposits, features or remains was greatly reduced.

4. Methodology

The archaeological programme of work detailed herein was carried out in accordance with recognised sources of professional guidance including *Standard and Guidance for an archaeological watching brief* (IfA 2008) and *Management of Research Projects in the Historic Environment* (*MoRPHE*) (EH 2006). Border Archaeology adheres to the IfA *Code of conduct* (2013) and *Code of approved practice for the regulation of contractual arrangements in field archaeology* (2008). Work was carried out in compliance with Bristol Water's *Code of Conduct*.

All ground-works were carried out by machine with toothless bucket wherever possible, under archaeological supervision. With the exception of Locking Road, mains replacement took place using slip lining. Access pits were excavated to an average depth of c.1m with the open trench on Locking Road (Area 3) reaching a depth of some 1.30m. Access pits were numbered for reference during the course of the work.

Full written and photographic records were made in accordance with Border Archaeology's Field Recording Manual (BA 2012). The written record comprised detailed stratigraphic recording using a context numbering system. The photographic record was made using a high-resolution (12 MPX) digital camera, comprising photographs of all excavated contexts and archaeological features and structures. Included in each photograph are appropriate

scales and all photographic records have been indexed and cross-referenced to written site records. Details concerning subject and direction of view were maintained in a photographic register, indexed by frame number.

Sections were produced on gridded, archivally stable polyester film at a scale of 1:10. All drawings were numbered and listed in a drawing register, these drawing numbers being cross-referenced to written site records.

5. Results

Detailed archaeological observations were undertaken in sixteen (16) separate geographic locations during work to upgrade the water main. To assist with understanding the results from the extensive area covered by these observations they have been presented on a street by street basis ordered as per the table below. Each location has an introductory descriptive narrative followed by a table detailing the archaeological record.

Each new geographic location or 'Area' was issued with a unique series of context recording numbers as detailed in the table below:

Context Numbers	Location
1000	Stafford Road
2000	George Street
3000	Locking Road
4000	Clarendon Road
5000	Beaufort Road
6000	Swiss Road
7000	Camden Terrace
8000	Little George Street
9000	Gordon Road
10000	Ashcombe Road
11000	Trevelyan Road
12000	The Mart
13000	Milburn Road
14000	Stanley Road including Stanley Grove
15000	Lyons Court
16000	Jubilee Road

STAFFORD ROAD

Stafford Road was situated to the E side of scheme; it was orientated generally N to S and was bounded at its southerly extent by Locking Road and at its northern extent by Baker Street. It had junctions with several other roads which were also archaeologically observed in the scheme; from S to N they were, on the W Milburn Road and Gordon Road, and a crossroad junction with Beaufort Road and Clarendon Road near its northern end.

A total of 39 access pits were excavated by Bristol Water in Stafford Road, those which were located directly outside houses have been shown with the pit and house number in the table below. To assist with locating their approximate position in Stafford Road, Pit 2 was located in the road directly opposite Milburn Road; Pit 15 was at its junction with Gordon Road and Pit 28 at the cross-road junction with Beaufort Road and Clarendon Road.

Evidence from contemporary maps shows that Stafford Road was probably developed in two separate stages, the southerly end of Stafford Road first appears on an OS map dating to 1887, with the N extent not appearing on maps prior to 1903.

The archaeology revealed a sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent repair.

Immediately underlying the road foundation deposit (1001) was a >0.40m deep deposit of light bluish-grey tidal clays (1002) which contained a singular highly eroded small piece of wood (1003) (see *Plate 1* below). Although no dating evidence was recovered from either deposit (1002) or (1003) the deposition of the wood probably marked a late post-medieval flooding event and illustrated the extent of tidal incursion prior to development in this area.

Plate 1: W-facing section showing wood (1003) within clay (1002)

Location	Pit o/s House	Description	Interpretation
Stafford Road	**1 o/s 24 5 o/s 30 6 o/s 32 7 o/s 34 8 o/s 36 9 o/s 36 10 o/s 40 11 o/s 50 13 o/s 54 16 o/s 56 18 o/s 58 20 o/s 60 23 o/s 64 30 o/s 66 31 o/s 68 32 o/s 70 35 o/s 72 37 o/s 74 39 o/s 76**	(1000) Limestone and bitumen c.0.10m deep above (1001)	*Existing tarmac road surface*
		(1001) Limestone aggregate 0.24m deep. Above (1004)	*Foundation for existing road surface*
		(1002) Firm to compact light blue grey clay silt >0.40m deep. Cut by [1005]	*Post-medieval Tidal clay*
		(1003) Fragment of wood found within (1002)	*Post-medieval wood*
		(1004) Loose mid yellow sand; fills [1005]	*Fill of mains water trench; 19th century*
		[1005] Linear cut 0.65m wide x 0.66m deep; aligned E/W. Filled by (1004) (1006) (1008)	*Cut for mains water trench*
		(1006) Loose dark red brown stony fill of mains water trench (1005)	*20th century fill for mains water trench*
		(1007) compact to friable lime mortar 0.50m wide x 0.30m deep	*Lime mortar at butt end of pipe trench*
		(1008) loose dark red brown clay silt with very angular limestone	*Aggregate sealing mains water trench*

GEORGE STREET

George Street was situated toward the W of the scheme, it was orientated N to S and was bounded on its southern extent by Locking Road and its northern extent by Baker Street; it had no other relationship with roads in the works area.

George Street was first shown on the 1st Edition Ordnance Survey (OS) map of 1887, although historical records shown initial development began in the 1870s. A Blue Commemorative plaque attached to No.33 shows that Albert Victor Alexander, 1st Earl Alexander of Hillsborough KG CH PC was born in the house on 1 May 1885. Later honoured with the title of Earl he was a British Labour Co-operative politician, he was three times First Lord of the Admiralty, including during the Second World War, and then Minister of Defence under Clement Attlee.

A total of 47 access pits were excavated by Bristol Water in George Street, to assist with their location a number of the pits which were located directly outside houses have been shown with the pit and house number in the table below. To further assist with isolating their position in George Street, Pit 1 was situated just N of its junction with Locking Road; Pit 23 approximately halfway along the road and Pit 47 at its northern end near the junction with Baker Street.

The archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further

significant levels of intrusion relating to installation of services, road construction and subsequent repair.

Underlying the hard-core foundation deposit for the modern road (2001) were two deposits of tidal clayey-sands (2002) and (2003), similar to deposits identified in Stafford Road they provide further evidence of the extent of the tidal incursion in this area across the low lying 'flats' situated close to the Severn Channel and as such are a repeated theme in the study area.

Location	Pit o/s House	Description	Interpretation
George Street	**4 o/s 1 5 o/s 15 9 o/s 21 10 o/s 23 11 o/s 23 15 o/s 27 16 o/s 29 18 o/s 31 19 o/s 33 21 o/s 35 22 o/s 37 23 o/s 39 24 o/s 43 26 o/s 45 27 o/s 47 32 o/s 56 36 o/s 65 40 o/s 70 47 o/s 80**	(2000) Limestone and bitumen 0.10m deep above (2001)	*Existing tarmac road surface*
		(2001) Loose to compact mid dark red clay sand grit with sandstone blocks. 0.24m deep. Above (2002)	*Foundation for existing road surface*
		(2002) Firm clean mid blue grey clay sand	*Tidal sand*
		(2003) Firm to compact mid grey green clay sand 0.20m thick. Below (2003).	*Tidal sand*

LOCKING ROAD

Locking Road, previously known as Watersill Road, was located to the S of study area, it was orientated generally W – E and had junctions with the following roads from the N: Jubilee Road, George Street, Swiss Road, Trevelyan Road, Stafford Road and Ashcombe Road.

Locking Road was the only location within the study area where open-cut trenching was undertaken; as such it provided a rare opportunity to the study in detail the stratigraphic sequence of the geological formation of tidal, sand dunes and silting deposits.

The trench was 400m in length by 0.50m wide.

The tables below show the stratigraphic sequence recorded at specific locations deemed of archaeological interest along the length of the open-trench. A total of thirteen (13) separate stratigraphic profiles were recorded, seven (7) of the profiles which showed variation in contextual sequence are shown in the tables below.

The archaeology identified an upper sequence of general disturbance relating to development of Locking Road for residential purposes in the late 19th to early 20th century with further significant levels of later intrusion relating to installation of utility services, road construction and subsequent repair. Underlying modern disturbance the archaeology

provided evidence for a coastal ecosystem in an upper coastal intertidal zone between land and open salt water or brackish water which was subject to regular flooding by tides including marine deposited clays, sand and halotolerant vegetation (*see appendix 1*).

From No. 1 Locking Road to the junction with Swiss Road to the E, a dark yellow to mid grey sand (3004) similar to that seen on Little George Street - context (8002), Camden Terrace, context (7002) and The Mart, context (12002) – was part of a fairly extensive area of sand dunes on the SW part of the site. Although glass, plastic and fragments of brick or tile were recovered from a sample taken from (3004) these were considered intrusive and as result of machining during trenching work, a number of seeds, including silverweed, were also found. They suggested land periodically inundated with either fresh or brackish water, consistent with an intertidal area. This area may have lain beyond the reach of all but the highest tides as snail shells from the sample were of freshwater and terrestrial species (*Appendix 1*).

From the junction with Swiss Road to the E a number of different incidents of flooding and tidal activity were indicated.

In the base of the trench a light brown, heavily iron stained clay silting layer (3012) was 0.50m deep. Above it, a loose coarse yellow grey sand, 0.20m deep (3011) was probably beach sand, re-deposited by water. A firm mid to dark grey silt clay, tidal in origin (3010) and 0.20m deep ran beneath the road surfaces.

Between No's 50 and 60 Locking Road, a compact and fairly clean brown silt (3009) 0.80m deep, was probably the fill of a palaeochannel. However, as a result of truncation from modern features its edges were not clearly established.

Outside No. 63 Locking Road a sandbank in a water channel (3013) 0.45m thick and 3m long, butted up to (3010) and (3012). It probably originated as a dune or beach sand and was subsequently re-deposited during episodes of flooding. On its E side was a layer (3014) of black sand which may have been the same as (3010) on the W side of the sandbank. Beneath it was a coarse yellow to dark grey sand (3015) similar in composition, though darker in colour than (3011) to the W. The firm grey clay (3016) beneath it was interpreted as marine clay.

It seems likely that a broadly similar sequence of tidal silts laid down at roughly the same time were cut through by water channels which subsequently filled with beach sand or silt re-deposited by running water.

From the junction of Swiss Road to the crossroads of Locking Road, Drove Road and Ashcombe Road, the layers showed the sequence of gradual tidal silting of the inlet (*fig. 2*).

In the base of the trench was a compact mid grey silt clay (3008) 0.20m deep thought to have been of tidal origin. Above it, a shallow (80mm) layer of very organic dark brown clay silt (3007) may have been the remains of a reed bed. A sample taken from it revealed evidence for plants of waterlogged conditions including sedges, crowfoots and water blinks (Appendix 1). It was sealed by compact, light grey silt clay (3006) waterborne or tidal in origin, suggesting inundation during a flooding episode and possible swamping of marshland or reed bed.

Above it (3005) was a compact mid to dark grey clay silt with black organic patches. It was 80mm thick and may indicate re-colonisation by reeds or sedges. It was 0.14m deep and lay immediately beneath the foundations for the existing road.

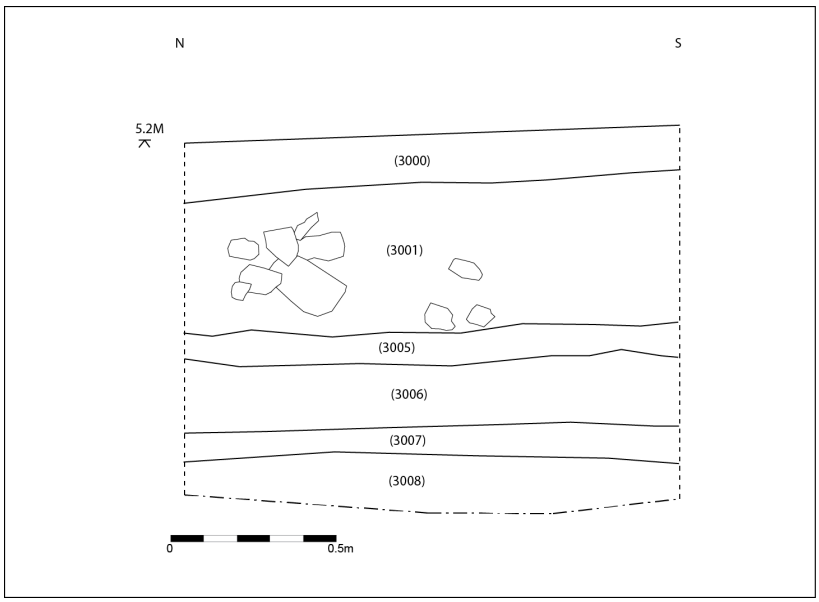

Fig. 2: Possible reed beds (3005) & (3007) at the junction of Locking Road and Ashcombe Road

Profiles 1-7

1. W facing profile Recorded LOCKING ROAD junction ASHCOMBE ROAD

Location	Pit o/s House	Description	Interpretation
Locking Road	As Above	(3000) Limestone and bitumen c.0.10m deep above (9001)	*Existing tarmac road surface*
		(3001) Light grey coarse grit 0.40m deep. Above (3002)	*Foundation for existing road surface*
		(3005) Compact mid to dark grey clayey-silt with light brown to blackish organic patches 0.08m deep	*Reed bed (?)*
		(3006) Compact light grey silty-clay. 0.14m deep	*Inter-tidal marine clays*
		(3007) Firm dark brown clayey-silt 0.09m deep	*Reed bed (?)*
		(3008) Compact mid-grey silty-clay 0.20m deep	*Inter-tidal marine clays*

2. Profile Recorded o/s No.38 LOCKING ROAD

Location	Pit o/s House	Description	Interpretation
Locking Road	**Section o/s 38**	(3000) Limestone and bitumen c.0.10m deep above (9001)	*Existing tarmac road surface*
		(3001) Light grey coarse grit 0.40m deep. Above (3002)	*Foundation for existing road surface*
		(3010) Firm mid to dark grey silty-clay with patches of iron staining 0.20m deep x trenchwide	*Inter-tidal marine clay*
		(3011) Loose yellowish-grey coarse sand 0.12m deep	*Dune or beach sand*
		(3012) Compact light-brown silty-clay 0.50m deep	*Inter-tidal clay build-up*

3. Profile Recorded from No.50 to 60 LOCKING ROAD

Location	Pit o/s House	Description	Interpretation
Locking Road	**Section from o/s 50 to o/s 60**	(3000) Limestone and bitumen c.0.10m deep above (9001)	*Existing tarmac road surface*
		(3001) Light grey coarse grit 0.40m deep. Above (3002)	*Foundation for existing road surface*
		(3009) Compact dark brownish-grey clayey-silt 0.80m – O/S No.60 Locking Rd.	*Silted palaeochannel*
		(3005) Compact mid to dark grey clayey-silt with light brown to blackish organic patches 0.08m deep	*Reed bed (?)*
		(3006) Compact light grey silty-clay. 0.14m deep	*Inter-tidal marine clays*
		(3007) Firm dark brown clayey-silt 0.09m deep	*Reed bed (?)*
		(3008) Compact mid-grey silty-clay 0.20m deep	*Inter-tidal marine clays*

4. Profile Recorded from No.54 to 60 LOCKING ROAD

Location	Pit o/s House	Description	Interpretation
Locking Road	**Extends from o/s 54 to o/s 60**	(3000) Limestone and bitumen c.0.10m deep above (9001)	*Existing tarmac road surface*
		(3001) Light grey coarse grit 0.40m deep. Above (3002)	*Foundation for existing road surface*
		(3002) Coarse grit with angular limestone	*Fill of main trench*
		(3003) Linear cut aligned NW/SE, 1.0m wide x 0.70m deep	*Service cut*
		(3004) Firm dark yellow-grey sand 0.50m deep	*Dune sand/beach deposit*

5. Profile Recorded from O/S No 61 LOCKING ROAD

Location	Pit o/s House	Description	Interpretation
Locking Road	**Section o/s 61**	(3000) Limestone and bitumen c.0.10m deep above (9001)	*Existing tarmac road surface*
		(3001) Light grey coarse grit 0.40m deep. Above (3002)	*Foundation for existing road surface*
		(3014) Firm dark greyish-black coarse sand 0.20m deep	*Tidal deposit (?)*
		(3015) Loose yellow to dark grey coarse sand 0.12m deep	*Tidal deposit (?)*
		(3016) Firm dark greyish-brown clayey-silt 0.32m deep	*Inter tidal clay deposit*

6. Profile Recorded o/s No.63 LOCKING ROAD

Location	Pit o/s House	Description	Interpretation
Locking Road	**Section o/s 63**	(3000) Limestone and bitumen c.0.10m deep above (9001)	*Existing tarmac road surface*
		(3001) Light grey coarse grit 0.40m deep. Above (3002)	*Foundation for existing road surface*
		(3013) Loose mid-yellow coarse sand 0.45m deep x 3.00m wide	*Sand bank or dune (?)*
		(3014) Firm dark greyish-black coarse sand 0.20m deep	*Tidal deposit (?)*
		(3015) Loose yellow to dark grey coarse sand 0.12m deep	*Tidal deposit (?)*
		(3016) Firm dark greyish-brown clayey-silt 0.32m deep	*Inter tidal clay deposit*

7. Profile Recorded o/s No.65 LOCKING ROAD

Location	Pit o/s House	Description	Interpretation
Locking Road	**Section o/s 65**	(3000) Limestone and bitumen c.0.10m deep above (9001)	*Existing tarmac road surface*
		(3001) Light grey coarse grit 0.40m deep. Above (3002)	*Foundation for existing road surface*
		(3013) Loose mid-yellow coarse sand 0.45m deep x 3.00m wide	*Sand bank or dune (?)*
		(3010) Firm mid to dark grey silty-clay with patches of iron staining 0.20m deep x trenchwide	*Inter-tidal marine deposit*
		(3011) Loose yellowish-grey coarse sand 0.12m deep	*Dune or beach sand*
		(3012) Compact light-brown silty-clay 0.50m deep	*Inter-tidal clay build-up*

CLARENDON ROAD

Clarendon Road was situated toward the N extent of the study area; it was orientated generally W to E being bounded to its W extent by Stafford Road and to its E extent by Ashcombe Road.

A total of 27 access pits were excavated by Bristol Water in Clarendon Road, those which were located directly outside houses have been shown with the pit and house number in the table below.

To assist further with locating the position of the pits in Clarendon Road the following applies: Pit 1 was located near the junction with Stafford Road outside No.1 Clarendon Road, Pit 17 was situated slightly W of the junction with Hill Road and Pit 27 at the junction of Clarendon Road with Ashcombe Road.

Historical records show that Clarendon Road was developed in the late 1860s.

The archaeology identified an upper sequence of general disturbance relating to development of Locking Road for residential purposes in the late 19th to early 20th century with further significant levels of later intrusion relating to installation of utility services, road construction and subsequent repair.

Profile Recorded o/s No.13 Clarendon Road. A similar stratigraphic sequence was recorded at Clarendon Road junction Hill Road

Location	Pit o/s House	Description	Interpretation
Clarendon Road	1-4 o/s 1 5 o/s 3 6 o/s 5 7-8 o/s 7 9 o/s 9 11 o/s 13 12 o/s 15 15 o/s 19 19 o/s 23 21 o/s 25 25 o/s 31&33 27 jct Ashc'be Road	(4000) Limestone and bitumen 0.10m deep Overlies (4001)	*Existing tarmac road surface*
		(4001) Loose to compact mid red yellow sandy grit with limestone blocks 0.30m deep. Overlies (4004)	*Foundation for existing road surface*
		(4004) loose light grey sand; fills & overlies [4003]	*Fill of mains water trench*
		[4003] Linear cut with straight and parallel edges, 0.64m wide and 0.30m deep. Filled by (4004) Overlies (4002)	*Trench cut for mains water*
		(4002) Firm clean mid blue grey clay silt. Underlies [4003]	*Marine clay*

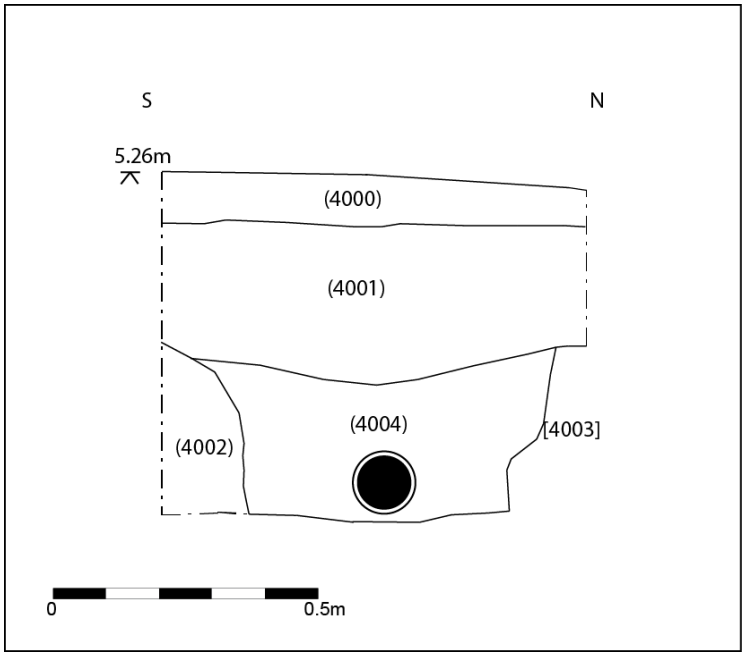

Fig.3: Marine clay beneath road surfaces in Clarendon Road

BEAUFORT ROAD

Beaufort Road was situated toward the N of the scheme, it was orientated generally in a W to E direction, was bounded to its W extent by Swiss Road and to the E it adjoined Stafford Road and Clarendon Road at a cross road junction.

On the 1st Edition (1887) Ordnance Survey (OS) map Beaufort Road is not named but appears to form the W extension of Clarendon Road with only the N side of the road being shown as developed. By the time of the 2nd Edition OS map was published in 1903 the name Beaufort Road was in use but the S side of the road was still shown as open ground.

A total of 15 access pits were excavated by Bristol Water in Beaufort Road, to assist with their location a number of the pits located directly outside houses have been shown with the pit and house number in the table below. Pit 1 was situated at the junction of Beaufort Road with Stafford Road and Pit 15 outside No.1 Beaufort Road immediately to the E of the junction with Swiss Road.

The archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair.

The uppermost recorded deposit was road surface (5000); underlying surface (5000) was the road foundation deposit (5001). Underlying (5001) was 0.27m deep deposit of firm dark grey-brown clayey-silt (5002) which was recorded along the entire W-E extent of Beaufort Road; it is possible (5002) indicates a period of long term tidal incursion or silting of one of the tributaries which formed part of the natural drainage of higher land situated to the W. Underlying (5002) was a 0.14m thick compact light brown clayey-silt (5003) which was also recorded along the entire length of Beaufort Road; it is possible (5003) formed a buried low lying marshy land surface or peninsula between naturally formed drainage tributaries. Although no dating evidence was recovered from either (5002) or (5003) it is possible they could have been associated with the prehistoric landscape known to exist to the N. Underlying (5003) was a >0.30m deposit of dark grey clayey-silt which would have accumulated over a long period as result of tidal action depositing silt from the waters of the Severn Channel.

Profile Recorded o/s No.1 Beaufort Road.

Location	Pit o/s House	Description	Interpretation
Beaufort Road	Pit 1 Jct Stafford Rd 4 o/s 13 5 o/s 9 9 o/s 7 15 o/s 1	(5000) Limestone and bitumen 0.10m deep above (4001)	*Existing tarmac road surface*
		(5001) Loose to compact dark brown clay sand with large poorly sorted angular limestone blocks. Above (5002), 0.34m deep	*Foundation for existing road surface*
		(5002) Firm dark grey brown clay silt with manganese. 0.27m deep, above (5003)	*Alluvium?*
		(5003) Compact light brown clay silt with occasional flecks of manganese; 0.40m thick and above (5004)	*Possible buried land surface or headland*
		(5004) Compact dark grey brown clay silt with flecks of manganese. Below (5003)	*Tidal clay*

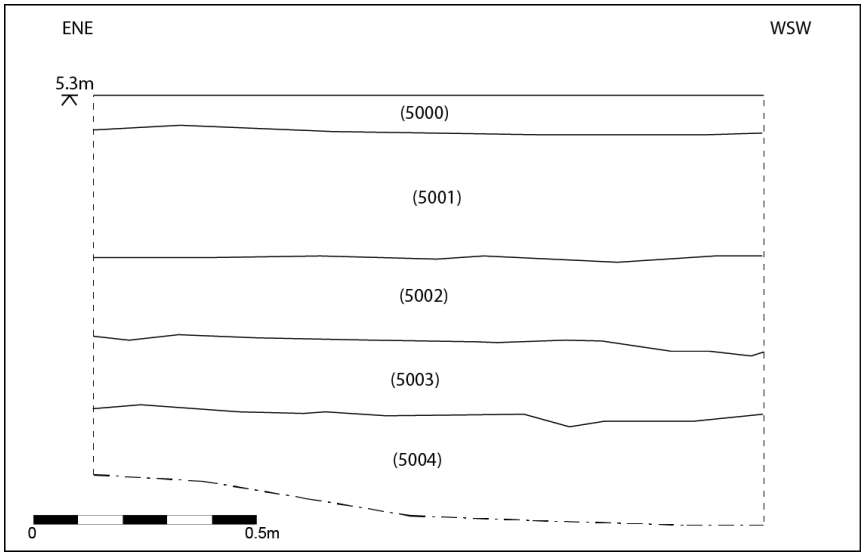

Fig. 4: O/S 1 Beaufort Road. Tidal deposits (5002) & (5004) with land surface (5003)in between.

SWISS ROAD

Swiss Road was situated toward the W of the scheme; it was orientated N to S, was bounded to the S by Locking Road, to its N extent by Baker Street and had junctions to the E with Milburn Road, Gordon Road and Beaufort Road.

Swiss Road was one of the latest streets of those involved in the scheme to be developed with the area around Swiss Villa still shown as open ground on the 1903 Ordnance Survey map.

A total of 47 access pits were excavated by Bristol Water along Swiss Road, to assist with the location of the pits those located directly outside houses have been shown with the pit and house number in the tables below. The following pits were located at or near junctions: Pit 1 with Baker Street, Pit 9 with Beaufort Road, Pit 22 Gordon Road and Pit 47 with Locking Road.

As identified in other roads within the scheme the archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair.

At the extreme N extent of Swiss Road in access pits 1-3 the archaeology revealed a 0.20m deep deposit of loose dark yellow coarse sand (6015)which provided evidence for the extant remains of a beach (*see Profile 1 below*). The fact that deposit (6015) was only seen in pits 1-3 and no further S in Swiss road suggests the beach would have been aligned on a W - E orientation with the deposit forming the probable S extent of the beach.

Slightly to the S access pits 6-16 displayed a similar stratigraphic sequence of modern road surface and its foundation being underlain by a 0.24m deep firm dark greyish-brown clayey-silt (6002) which was seen extending for a distance of over 30m to the S in Swiss Road. This deposit may be the same as (6003) which although of slightly different colouration was seen in Pit 17 immediately to the S.

Outside No.37B Swiss Road a large access pit (Pit 17) 5.00m long x 1.00m wide provided an opportunity to investigate the archaeology of the inter-tidal deposits within this part of the study area in detail. Underlying the modern road (6000) and foundation layer (6001) was a re-deposited layer of coarse sand (6010) which overlay modern service trench cut [6005] and fill (6006). Deposit (6010) also overlay a funnel shaped feature filled with dark brown clayey-silt (6011) which probably represented root disturbance or an animal burrow; this feature in turn cut a light bluish clayey-silt (6007 & 6012) which probably formed the infilling of a shallow palaeochannel. Also cutting (6007) was the extant evidence for a possible post-pipe cut ([6008] measuring 0.30m deep x 0.16m wide, it was filled with loose dark brownish-grey coarse sand (6009). A sample taken from (6009) contained seeds of elder, bramble and fumitory; together with the shells of land snails (*Appendix 1*) suggesting the area had been dry for a period of time. Deposits (6007 & 6012) overlay a similarly constituted clayey-silt (6003) to the N which probably had been deposited by an earlier phase of silting of the inter-tidal margins, It is possible these deposits had infilled a narrow shallow sided flat bottom palaeochannel (see *Plate 2 & 3* below). Underlying (6003) was a >0.10m thick deposit of firm mid-brownish grey clayey-silt (6004), which would have accumulated in a similar manner to overlying silts as a result of inter-tidal deposition. In a similar manner to deposits identified further to the N in Swiss Road the archaeology suggests this area originally formed a W to E aligned inter-tidal landscape crossed by tributaries and geochannels which slowly infilled with silt. The intertidal zone, also known as the foreshore or seashore is occasionally referred to as the littoral zone and is the area that is above water at low tide and under water at high tide.

The archaeology recorded in pits 18 – 46 revealed a generally similar and simple stratigraphic sequence with a single horizontal band of tidal deposited silt immediately underlying the modern road foundation deposit. The only exception to this sequence was at the junction of Swiss Road with Locking Road where re-deposited coarse sand (6010) was identified underlying the road foundation.

Plate 2: Runnel or cut [6008] and palaeochannel (6003 and (6007) in Swiss Road; facing W

1. Profile Recorded o/s No.61 Swiss Road.

Location	Pit o/s House	Description	Interpretation
Swiss Road	Pits 1-3 o/s 61	(6000) Limestone and bitumen c.0.10m deep above (6001)	*Existing tarmac road surface*
		(6001) compact dark grey sandy clay 0.30m deep with poorly sorted angular limestone. Above (6015)	*Foundation for existing road surface*
		(6015) Loose light-dark yellow coarse sand 0.20m deep x >6.30m	*Evidence for beach or dune*

2. Profile Recorded o/s No. 39-55 Swiss Road.

Location	Pit o/s House	Description	Interpretation
Swiss Road	Pits 6-16 o/s 39-55	(6000) Limestone and bitumen c.0.10m deep above (6001)	*Existing tarmac road surface*
		(6001) compact dark grey sandy clay 0.30m deep with poorly sorted angular limestone. Above (6002)	*Foundation for existing road surface*
		(6002) Firm dark greyish-brown clayey-silt 0.24m deep	*Inter-tidal surface*

3. Profile Recorded o/s No. 37B Swiss Road

Location	Pit o/s House	Description	Interpretation
Swiss Road	17 o/s 37B	(6000) Limestone and bitumen c.0.10m deep above (6001)	*Existing tarmac road surface*
		(6001) compact dark grey sandy clay 0.30m deep with poorly sorted angular limestone. Above (6010) & (6006)	*Foundation for existing road surface*
		(6003) Blue grey sandy clay 0.35m thick. Underlies [6005] (6007) Overlies (6004)	*Tidal clay*
		(6004) Firm mid brown clay silt with iron panning. Underlies (6003)	*Tidal clay*
		[6005] Linear cut 0.40m wide and 0.22m deep, with straight, parallel edges and a concave base. Aligned E/W. Filled by (6006) Underlies (6006) Overlies (6003)	*Cut for service trench*
		(6006)Blue grey clay sand. Fills [6005] Underlies (6010) Overlies [6005]	*Backfill for service trench*
		(6007) Firm light blue grey clay silt 1.0m wide and 0.50m deep. Truncated by existing services. Underlies [6008] (6011) Overlies (6003)	*Fill of palaeochannel*
		[6008] irregular cut with concave base. Probably water formed. 0.16m wide and 0.30m deep. Underlies (6009) Cuts & overlies (6007)	*Runnel or gully – probably natural*
		(6009) Loose dark red brown sand F/O [6008] Underlies (6010) Overlies [6008]	*Fill of post-pipe or post-hole*
		(6010) Dark yellow red coarse sand 0.15m deep.	*Windblown sand*
		(6011) Compact dark brown clay silt 0.25m wide x 0.40m deep. Underlies (6010) Overlies (6007) & (6012)	*Possible root or animal disturbance*
		(6012) Firm light blue grey silt clay 0.50m wide x <0.23m deep Underlies (6011) Overlies (6013)	*Fill of palaeochannel*
		(6013) Firm mid brown sand clay Underlies (6012)	*Possible S bank of palaeochannel*

4. Profile Recorded o/s No. 17-31 Swiss Road.

Location	Pit or House	Description	Interpretation
Swiss Road	Pits 23-33 o/s 17-31	(6000) Limestone and bitumen c.0.10m deep above (6001)	*Existing tarmac road surface*
		(6001) compact dark grey sandy clay 0.30m deep with poorly sorted angular limestone. Above (6015)	*Foundation for existing road surface*
		(6003) Blue grey sandy clay 0.35m thick.	*Tidal clay*

5. Profile Recorded o/s No.11 Swiss Road.

Location	Pit or House	Description	Interpretation
Swiss Road	36 o/s 11	(6000) Limestone and bitumen c.0.10m deep above (6001)	*Existing tarmac road surface*
		(6001) compact dark grey sandy clay 0.30m deep with poorly sorted angular limestone. Above (6004)	*Foundation for existing road surface*
		(6004) Firm mid brown clay silt with iron panning. Beneath (6001)	*Tidal clay*

6. Profile Recorded o/s No.6 Swiss Road

Location	Pit or House	Description	Interpretation
Swiss Road	43 o/s 6	(6000) Limestone and bitumen c.0.10m deep above (6001)	*Existing tarmac road surface*
		(6001) compact dark grey sandy clay 0.30m deep with poorly sorted angular limestone. Above (6004)	*Foundation for existing road surface*
		(6010) Dark yellow red coarse sand 0.15m deep.	*Windblown sand*

Plate 3: Bank of possible palaeochannel (6013); facing W

CAMDEN TERRACE

Camden Terrace was situated toward the W of the scheme, it was orientated generally in a N to S direction, it was a short no-through road situated off Locking Road. It was located slightly to the E of Jubilee Road.

A total of 4 access pits were excavated by Bristol Water in Camden Terrace

The archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair. Underlying the modern road (7000) surface and foundation (7001) was a 0.50m deep deposit of yellow-grey coarse sand (7002) which was probably a sand bank/beach which was levelled during construction of the terrace circa early 20th century.

Location	Pit o/s House	Description	Interpretation
Camden Terrace	**2 o/s 1 3 o/s 3 4 o/s 7**	(7000) Limestone and bitumen 0.10m deep above (7001)	*Existing tarmac road surface*
		(7001) Loose to compact dark brown sandy clay with poorly sorted angular sandstone, limestone and brick. Above (7002)	*Foundation for existing road surface*
		(7002) Loose yellow grey coarse sand 0.50m deep	*Beach sand levelled in the 19th century*

LITTLE ST. GEORGE STREET

Little St. George Street was situated toward the W of the scheme, it was orientated generally in a N to S direction, it was a short no-through road off Locking Road. It was located slightly to the W of Swiss Road.

A total of 12 access pits were excavated by Bristol Water in Little St. George Street.

The archaeology revealed a similar stratigraphic sequence as identified in Camden Terrace of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair. Underlying the modern road (8000) surface and foundation (8001) was a 0.50m deep deposit of yellow-grey coarse sand (8002) which was probably a sand bank/beach which was levelled during construction of the terrace circa early 20th century. (see *plate 4* below)

Location	Pit or House	Description	Interpretation
Little George Street	Pits 1-12	(8000) Limestone and bitumen 0.10m deep above (4001)	*Existing tarmac road surface*
		(8001) Loose to compact light red yellow coarse sand with limestone. Above (8002); 0.20m deep	*Foundation for existing road surface*
		(8002) Loose to firm light reddish yellow coarse sand 0.59m thick	*Marine clay*

Plate 4: Levelled sand dune (8002) beneath road surfaces in Little George Street

GORDON ROAD

Gordon Road was situated toward the N of the scheme; it was orientated W to E, was bounded to the W by Swiss Road, to the E by Stafford Road.

Gordon Road was one of the latest streets of those involved in the scheme to be developed.

A total of 24 access pits were excavated by Bristol Water along Gordon Road, to assist with the location of the pits a number have been shown with the pit and house number in the table below.

The archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair. Underlying the modern road (9000) surface and foundation (9001) was a 0.70m deep deposit of mid to dark grey silty-clay (9002), this deposit is almost certainly the same as other deposits seen at this latitude in the scheme i.e. 1003 and as such forms part of the same depositional intertidal event.

Location	Pit o/s House	Description	Interpretation
Gordon Road	**1 o/s 2 5 o/s 6 8 o/s 10 10 o/s 16 15 o/s 20 24 o/s 22B**	(9000) Limestone and bitumen 0.10m deep above (9001)	*Existing tarmac road surface*
		(9001) Loose to compact light brown sandy clay 0.30m deep with poorly sorted angular limestone. Above (9002)	*Foundation for existing road surface*
		(9002) Firm mid to dark grey silt clay with a lens of iron staining	*Marine clay*

ASHCOMBE ROAD

Ashcombe Road was situated to the E of the scheme; it was orientated N to S, its extent was bounded to the S by Locking Road and N by Milton Road, the following roads joined from the W Lyons Court, Stanley Road and Clarendon Road.

A total of 60 access pits were excavated by Bristol Water along Ashcombe Road, to assist with the location of the pits a number have been shown with the pit and adjacent house number in the table below.

The archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair. Five separate deposits were identified along the whole length of Ashcombe Road of which all were modern in origin except (10003).

Underlying the modern road (10000) surface and foundation (10001) was a 0.60m deep deposit of light grey silty-clay (10003); the extent of continuous deposition of this deposit further N than any previously recorded in the study area indicates this area was until reclamation in the 19th century a wide low lying inter-tidal zone or river 'Delta'.

Location	Pit or House	Description	Interpretation
Ashcombe Road	**1 o/s 200 8 o/s 205 13 o/s 215 21 o/s 223 32 o/s 47A 37 o/s 54 43 o/s 62 49 o/s 70 56 o/s 80 60 o/s 84**	(10000) Limestone and bitumen 0.10m deep above (10001)	*Existing tarmac road surface*
		(10001) Loose to compact light brown silty clay with angular limestone; 0.30m deep. Above (10002)	*Foundation for existing road surface*
		(10002) Loose light brown sandy grit with poorly sorted very angular limestone. Fills [1004]	*Fill of mains trench*
		(10003) Firm light grey clay silt with streaks of dark brown. Cut by [10004]	*Tidal deposit*
		[10004] Linear cut 0.60m deep and greater than 1.0m wide. Cuts (10003), filled by (10002)	*Cut for mains water trench*

TREVELYAN ROAD

Trevelyan Road was situated to the S of the scheme; it was orientated N to S, its extent was bounded to the S by Locking and N by Milburn Road.

A total of 15 access pits were excavated by Bristol Water along Trevelyan Road, to assist with the location of the pits a number have been shown with the pit and adjacent house number in the table below.

The archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair.

Underlying modern road surface and foundation make-up deposit was a 0.60m deep compact dark grey silty-clay (11002) which was recorded the entire length of the road, similar deposits were recorded in surrounding roads and form part of the same depositional inter-tidal action. Slightly to the S in Locking Road a palaeochannel was recorded.

Location	Pit o/s House	Description	Interpretation
Trevelyan Road	**1 Jct Locking Rd 5 o/s 6 9 o/s 12 15 o/s 14**	(11000) Limestone and bitumen c.0.10m deep above (9001)	*Existing tarmac road surface*
		(11001) compact to loose sandy clay 0.30m deep with poorly sorted angular limestone. Above (11002)	*Foundation for existing road surface*
		(11002) Compact clean dark grey silt clay; soft when squeezed	*Tidal clay*

THE MART

The Mart was a parade of small retail outlets which formed part of Locking Road.

A total of eight access pits were excavated by Bristol at this location.

The archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair.

Underlying the modern road and road foundation deposit was a 0.50m deposit of friable mid-grey coarse sand (12002). Although no similar deposit was identified at Locking Road (See *Contexts 3000+*) it is probable deposit (12002) which was recorded in all the pits and was over 50m in length formed a sand bank; its grey colour would imply it was affected by tidal silt deposition.

Location	Pit or House	Description	Interpretation
The Mart	Pits 1-8	(12000) Limestone and bitumen 0.10m deep above (9001)	*Existing tarmac road surface*
		(12001) compact to loose light brown sandy clay 0.25m deep with poorly sorted angular limestone. Above (12002)	*Foundation for existing road surface*
		(12002) Friable mid grey coarse sand 0.50m deep.	*Tidal deposit or remains of a dune*

MILBURN ROAD

Milburn Road was situated toward the S of the study area; it was orientated approximately W to E, was bounded to the W by Swiss Road and to the E by Stafford Road, Trevelyan Road joined Milburn Road about halfway along its length to the S.

A total of 24 access pits were excavated by Bristol Water in Milburn Road. The following pits were located at or near junctions: Pit 1 at Stafford Road, Pit 11 with Trevelyan Road and Pit 24 was 10.09m E of Swiss Road.

As identified in other roads within the study area the archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair.

Underlying the modern road surface and foundation deposit were three deposits which had been deposited as result of tidal or water action. The upper of these deposits was a mid-grey sandy-clay (13002) which overlay soft light grey clay (13003) which in turn overlay a soft light brown clayey-silt. A similar process of tidal deposition was recorded in surrounding roads.

Location	Pit or House	Description	Interpretation
Milburn Road	Pits 1-24	(13000) Limestone and bitumen c.0.10m deep above (9001)	*Existing tarmac road surface*
		(13001) compact to loose light brown sandy clay 0.30m deep with poorly sorted angular limestone. Above (11002)	*Foundation for existing road surface*
		(13002) Compact friable mid grey sandy clay 0.77m deep; above (13003)	*Tidal clay*
		(13003) Soft clean light grey clay sand 0.30m deep; above (13003).	*Tidal clay*
		(13004) Soft light brown clay silt 0.43m deep	*Water deposited clay*

STANLEY ROAD and STANLEY GROVE

Stanley Road & Stanley Grove was situated toward the E of the study area; they were orientated approximately W - E and N – S with the Grove forming 'T' junction with Stanley Road which was bounded to the E by Ashcombe Road.

A total of 16 access pits were excavated by Bristol Water at the location. The following pits were located at or near junctions: Pit 1 at Ashcombe Road, Pit 6 at the junction with the Grove and Pit 16 o/s No.2 Stanley Grove.

As identified in other roads within the study area the archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair.

Only one deposit of any archaeological significance was identified at this location, a compact dark grey silty tidal clay (14002) which was similar to those seen in Stafford Road and Ashcombe Road.

Location	Pit or House	Description	Interpretation
Stanley Road & Stanley Grove	Pits 1-25	(14000) Limestone and bitumen c.0.10m deep above (9001)	*Existing tarmac road surface*
		(11001) compact to loose sandy clay 0.30m deep with poorly sorted angular limestone. Above (11002)	*Foundation for existing road surface*
		(11002) Compact clean dark grey silt clay; soft when squeezed	*Tidal silt*

LYONS COURT

Lyons Court was situated toward the S of the study area; it was orientated approximately W to E, was bounded to the E by Ashcombe Court.

A total of 11 access pits were excavated by Bristol Water at the location.

As identified in other roads within the study area the archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair.

The tidal clayey-silt (15002) seen in Lyons Court was similar to that seen on Ashcombe Road and formed part of the same depositional processes.

Location	Pit or House	Description	Interpretation
Lyons Court	Pits 1-11	(15000) Limestone and bitumen c.0.10m deep above (15001)	*Existing tarmac road surface*
		(15001) compact to loose light brown sandy clay 0.27m deep with poorly sorted angular limestone. Above (15002)	*Foundation for existing road surface*
		(15002) Compact clean light grey clayey-silt 0.50m deep	*Tidal clay*

JUBILEE ROAD

Jubilee Road was situated at the extreme W of the study area; it was orientated N to S, was bounded to the S by Locking Road, to its N extent by Baker.

Jubilee Road was first shown on the 1903 2nd Edition OS map and marked the W extent of the area affected by the scheme.

A total of 53 access pits were excavated by Bristol Water along Jubilee Road, to assist with the location of pits discussed in the narrative refer to the tables below.

As identified in other roads within the scheme the archaeology revealed a simple sequence of general disturbance relating to development of the area for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair.

Underlying the modern road and foundation makeup deposit three slightly different profiles were identified and recorded in Jubilee Road. The archaeology in Profile 1 revealed a similar sequence of inter-tidal deposition identified elsewhere within the study area of dark yellow sand (16002) with mid-grey patches overlying dark grey sandy clay (16003). Although composition and colouration of the deposits varied slightly from location to location within the study area all are indicative of similar deposition over a long period of time within an active inter-tidal zone. The stratigraphical archaeological sequence shown in Profile 2 indicates the beach deposit (16002) discussed above did not extend very far N along Jubilee Road indicating it may have formed part of a sand bar or sand bank in the inter-tidal zone.

The archaeological sequence of deposits shown in Profile 3 is similar to that in Profile 1 except for deposit (16004). The deposit identified as a buried land surface (16004) is particularly significant in view of the fact that prehistoric inhumations have previously been discovered to the N of Baker Street and, should (16004) represent part of the same relict landscape, then it could indicate the potential survival of deposits of archaeological significance to the S of Baker Street. A similar buried surface was also identified on Beaufort Street

1. Profile: Pit 3 Jubilee Road

Location	Pit or House	Description	Interpretation
Jubilee Road	**Pit 3 11.15m N of Locking Rd**	(16000) Limestone and bitumen c.0.19m deep above (9001)	*Existing tarmac road surface*
		(16001) compact to loose light brown sandy clay 0.21m deep with poorly sorted angular limestone. Above (16002)	*Foundation for existing road surface*
		(16002) Firm dark yellow with patches of mid grey sand 0.27m deep.	*Sandy beach*
		(16003) Firm mid to dark grey sandy clay 0.27m deep. Above	*Tidal sand*

2. Profile: General stratigraphic sequence at Jubilee Road

Location	Pit or House	Description	Interpretation
Jubilee Road		(16000) Limestone and bitumen c.0.19m deep above (9001)	*Existing tarmac road surface*
		(16001) compact to loose light brown sandy clay 0.21m deep with poorly sorted angular limestone. Above (16002)	*Foundation for existing road surface*
		(16003) Firm mid to dark grey sandy clay 0.27m deep.	*Tidal sand*

3. Profile: Nos. 51-61 Jubilee Road

Location	Pit or House	Description	Interpretation
Jubilee Road	No.s 51-61	(16000) Limestone and bitumen c.0.19m deep above (9001)	*Existing tarmac road surface*
		(16001) compact to loose light brown sandy clay 0.21m deep with poorly sorted angular limestone. Above (16002)	*Foundation for existing road surface*
		(16002) Firm dark yellow with patches of mid grey sand 0.27m deep.	*Sand dune*
		(16003) Firm mid to dark grey sandy clay 0.27m deep. Above	*Tidal sand*
		(16004)Firm light brown clay silt 0.21m deep.	*Buried land surface*

6. Conclusions

As would be expected within an urban environment the archaeology revealed a sequence of general disturbance across the whole study area relating to its development for residential purposes in the late 19th to early 20th century with further significant levels of intrusion relating to installation of services, road construction and subsequent later repair.

The use of access pits and limited open trenching targeted on existing services, reduced opportunities for the discovery of isolated features or finds, as well as limiting the opportunity to study the geoarchaeological potential of the ancient coastal landscape and intertidal zone.

The archaeology showed that prior to reclamation the area consisted of a complex intertidal zone interlaced with palaeochannels, sandy beaches, possible dunes and wide mudflats. The intertidal zone, also known as the foreshore and seashore and sometimes referred to as the littoral zone, is the area that is above water at low tide and under water at high tide.

Although no features or finds of archaeological significance were revealed during the work, evidence for the silting of the coastal inlet which took place in the late medieval and post-medieval periods was recorded. In addition, a layer of light brown clay, (5003) and (16004) in Beaufort Road and Jubilee Road respectively, could represent a relict land surface. It may be significant that this surface was encountered only on the N part of the scheme; suggesting that it could be part of the same landscape as that associated with funerary and other prehistoric activity previously encountered to the N of Baker Street. In particular, Jubilee Road is very close to Montpelier, where a number of prehistoric inhumations were discovered in the 19th century.

Up to the post-medieval period the area affected by the mains replacement scheme was subject to weather and tides making it seem likely that earlier occupation would have been concentrated on higher ground to the N below Worlebury Hill. The possible buried surface was not seen at the N end of Ashcombe Road or on Stafford Road where tidal or marine clays were present. It may, therefore, not have been present on the E part of the site, with the majority of the area affected by the scheme being part of the inlet until the post-medieval period.

As already shown evidence gathered during the observation suggested a coastal landscape of sand dunes, marine clays and running water, impermanent and subject to inundation. Also seen were a number of palaeochannels, indicating flowing water while the silting process was taking place. There was no evidence for archaeologically significant stratified silts or waterlogging associated with the inlet.

On the SW part of the site, for example Camden Terrace and Little George Street, levelled sand dunes were present with silting and tidal deposits predominating to the E and NE. In the tidal area, however layers included what were thought to be sand dunes, washed away and subsequently re-deposited by water.

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9. Context Register

GRID REFERENCE	LOCATION	DESCRIPTION	INTERPRETATION
ST32676 61337 to ST 32619 61581	Pits 1-40 Stafford Rd	(1000) Bitumen and stone, 0.10m deep	Modern tarmac
		(1001) Angular medium limestone, 0.24m deep. Below (1000), above (1002)	Modern aggregate
ST32665 61421	Pit 11 No. 50 Stafford Rd (*Fig. 1)*	(1002) Firm to compact light bluish-grey clay silt. Below (1001) above (1004)	Marine clay
		(1003) Wood fragment, 0.10mx230mmx150mm; within (1002).	Wood within marine clay (washed in by tide?)
ST32616 61337 to ST32616 61581	Pits 1-41 Stafford Rd	(1004) Loose mid yellow sand	Backfill of pipe trench
ST32609 61495	Pits 28-29, junction of Stafford Rd, Beaufort Rd and Clarendon Rd (*Sect 2*)	[1005] Linear E/W cut, 0.65m wide x0.66m deep. Steep sides and flat base	Cut for existing main
		(1006) Scalpings	Backfill of pipe trench
		(1007)Light grey gritty sand with fragments of lime mortar. Cut by [1005]	19thc backfill of butt end of pipe trench
		(1008) Loose dark brownish-red clay silt, with poorly sorted and very angular inclusions 5mm to 6mm, 20cm depth, 66cm wide. Above (1006) underlies (1000).	Modern aggregate beneath tarmac
ST32445 61400 to ST32404 61401	Pits 1-47, Nos. 4-80 George St	(2000) Bitumen & stone, 0.10m deep	Modern tarmac
		(2001) Loose dark brownish-red clay silt, with poorly sorted and very angular inclusions 5mm to 6mm, 20cm depth, 66cm wide. Underlies (2000), above (2002).	Foundation for existing road surface
		(2002)Firm mid to dark bluish-grey clay sand, 0.24m deep, below (2001). Heavily truncated by existing services	Tidal layer
		(2003)Firm mid green grey clay sand, 0.20m deep. Beneath (2002), heavily	Tidal sand

		truncated by existing service trenches	
ST32727 61187 to ST32355 61271	Nos. 1-64 Locking Rd	(3000) Bitumen & stone, 0.13m deep. Above (3001)	Modern tarmac
		(3001) Compact pale grey coarse grit, 0.40m deep. Below (3000), above (3002)	Foundation for existing road surface
ST32355 61271	No. 1 Locking Rd.	(3002) Compact pale grey coarse grit, 01.0m wide, 0.70m deep. Fills [3003], below (3001).	Fill of existing pipe trench
		[3003] NW/SE-aligned cut, vertical sides and flat base, 1m wide and 0.70m deep. Cuts (3004)	Existing service trench
ST32727 61187	Junction Locking Rd. Ashcombe Rd (*Fig. 2)*	(3004) Firm dark yellow sand, with patches mid grey. Underlies (3001)	Part of beach.
		(3005) Compact grey clay silt with brown and black mottles, 80mm thick. Underlies (3001, above (3006)	Reed bed?
		(3006) Compact pale grey silt clay with mineral spots, 0.14m deep. Below (3005), above (3007)	Water or tidal silting
		(3007)Firm dark brown clay silt, organic, 90mm deep. Below (3006) above (3008)	Reed bed?
		(3008) Compact mid grey silt clay, 0.20m deep. Below (3007)	Tidal water deposit
ST32727 61187 to ST32722 61243	Between Nos. 50-60 Locking Rd	(3009) Compact dark greyish-brown clayey silt, 0.80m deep. Below (3001)	Fill of palaeochannel?
ST32722 61243 to ST32617 61227	Between Nos. 36-50 Locking Rd.	(3010)Firm mid to dark grey silt clay with patches of iron staining,.0.20m thick. Below (3001)	Tidal silting?
		(3011) Loose yellowish-grey coarse sand, 0.12m thick. Beneath (3010)	Tidal deposit?
		(3012)Compact light brown silty clay, 0.50m deep. Below (3011)	Water-deposited silt

ST32618 61245	Outside No. 63 Locking Rd.	(3013) Loose mid yellow coarse sand, 0.45m deep x 3m wide. Below (3001)	Sand bank in a channel or a sand dune
ST32618 61245 to ST32544 61253	Between Nos. 57-63 Locking Rd.	(3014) Firm dark grey/black coarse sand – possibly part of (3010), 0.20m deep. Below (3001)	Tidal deposit
	From No. 57 Locking Rd to corner of Swiss Rd.	(3015) Loose yellow to dark grey coarse sand, 0.12m deep. Below (3014)	Tidal deposit
		(3016) Firm dark grey brown clay silt with patches of iron staining, 0.32m thick. Below (3015)	Tidal silting
ST32636 61508 to ST23821 61486	Pits 1-27, Nos. 1-37 Clarendon Rd.	(4000) Bitumen & stone, 0.10m deep	Modern tarmac
		(4001) Loose to compact mid yellowish-red sandy grit, 0.30m thick. Below (4000)	Foundation for existing road surface
		(4002) Mid bluish-grey silt clay, 0.40m thick. Below (4001) cut by [4003]	Marine clay
ST32727 61501	Pit 18 Hill Rd. Clarendon Rd. junction (*Sect 3*)	[4003] Linear cut aligned E/W, 0.64m wide and 0.30m deep. Filled by (4004), cuts (4002)	Cut for existing pipe trench
		(4004) Loose grey white sand. Fills [4003]	Backfill of existing pipe trench
ST32578 61500 to ST32575 61523	Pits 1-15, Nos. 1-13 Beaufort Rd.	(5000) Layer of tarmac, 0.10m deep. Above (5001)	Existing road surface
		(5001) Loose to compact dark brown clay sand. Below (5000), above (5002)	Foundation for existing road surface.
ST32575 61500	Pit 14, No. 1 Beaufort Rd (*Sect 4*)	(5002) Firm dark greyish-brown clay silt with flecks of manganese, 0.27m thick, truncated by existing services. Below (5001), above (5003)	Possibly deposited by moving water. Same as (6002)
		(5003)Compact light brown clay silt, with manganese flecks, 0.14m thick. Below (5002), above (5004)	Buried land surface or headland?
		(5004) Dark greyish-brown silt clay with manganese flecks, 0.30m deep. Below (5003)	Tidal silting

ST32524 61291 to 32504 61528	Pits 1-47, Nos. 1-61 Swiss Rd.	(6000) Layer of tarmac, 0.10m deep. Above (6001)	Existing road surface
		(6001) Compact dark brown clay sand with limestone, 0.30m deep. Below (6000)	Foundation for existing road surface
		(6002) Firm dark greyish-brown silt clay, 0.24m thick. Below (6001)	Geological or water-deposited. Same as (5002)
ST32035 61378	Pit 17 No. 37-39 Swiss Rd (*Sect 5/6*)	(6003) firm mid bluish-grey sandy clay, 0.35m thick. Cut by [6005], below (6010), overlies (6004), abutted by (6007)	Tidal deposit?
		(6004) Firm mid brown clay silt with streaks of iron panning, >0.10m thick. Below (6003)	Tidal clay?
		[6005] Linear cut, aligned E/W, concave sides and base, 0.40m wide x 0.22m. Filled by (6006), cuts (6003)	Cut for existing gas main
		(6006) Compact mid bluish-grey clay sand with stone. Fills [6005]	Backfill for gas pipe trench
		(6007) Firm, clean light bluish-grey clay silt, 1m wide and 0.50m deep. Below (6010), cut by [6008]	Fill of palaeochannel?
		[6008] cut with vertical sides and a concave base, 0.16m x 0.30m deep. Cuts (6007), filled by (6009)	Post hole
		(6009) Loose dark brown grey coarse sand with fragments of shell. Fills [6008], below (6010)	Fill of posthole – comprises beach sand?
		(6010) Dark red/yellow coarse sand, 70-150mm deep. Below (6001), above (6012) (6009) (6011) (6012)	Windblown sand?
		(6011) Compact dark brown clay silt with iron staining, 0.25m wide x 0.40m? Cuts(6012)	Root or animal disturbance

		(6012) Firm light bluish-grey silt clay, 0.50m wide x 0.23m deep, deepening to the N. Below (6010), above (6013)	Possible fill of a palaeochannel
		(6013) Firm mid brown sandy clay, 0.90m wide. 0.45m deep at S, 0.15m to N. Below (6012)	Possible bank of palaeochannel
ST32495 61372	Pit 35 No. 13 Swiss Rd. (*Section 7*)	(6014) compact dark grey clay with dark brown patches, 0.50m deep. Cut by [6016], below (6001)	Mixed re-deposited layer
		(6015) Loose light to dark yellow coarse sand, trench wide and 0.20m deep. Below (6014)	Beach sand
		[6016] Linear E/W aligned cut, 0.40m wide x 0.20m deep. Cuts (6014), filled by (6017)	Cut for house water pipe
		(6017) Black clay sand. Fills [6016]	Fill
ST32035 61378	Pits 1-4 Nos. 1-7 Camden Terrace	(7000) Layer of tarmac, 0.10m deep. Above (7001)	Modern road surface
		(7001) Dark red clay with limestone and brick. Below (7000), above (7002)	Aggregate beneath (7000)
		(7002) Loose yellow coarse sand, 0.50m thick. Below (7001)	Beach or sand dune levelled in 19th c
ST32468 61284	Pits 1-12 Nos. 1-9 Little George St	(8000) Layer of tarmac, 0.10m deep. Above (8001)	Modern road surface
		(8001) Reddish-brown coarse sand with building rubble. Below (8000), above (8002)	Aggregate beneath Existing road surface
		(8002)Light yellowish-red coarse sand, 0.59m deep. Below (8001)	Levelled sand dune
ST32528 61409 to ST32620 61408	Pits 1-20, 2-22b Gordon Rd.	(9000) layer of tarmac, 0.10m deep. Above (9001)	Existing road surface
		(9001) Compact to loose light brown sand clay with rubble. Below (9000), above (9002)	Foundation for existing road surface
		(9002) Firm mid to darkdish-grey silt clay,	Marine clay, with lens of iron staining

		0.70m deep. Below (9001)	
ST32812 61250 to ST32873 61570	Pits 1-60, Nos. 4-84 Ashcombe Rd.	(10000) Layer of tarmac, 0.10m deep. Above (10001)	Existing road surface
		(10001)Light brown sandy clay with limestone, 0.30m thick. Below (10000), above (10002) (10003)	Foundation for existing road surface
		(10002)Loose light reddish-brown sand grit with limestone. Below (10001)	Back fill for pipe trench
		(10003)Firm light grey clay/ brown silt, 0.60m deep. Below (10001)	Tidal clay
		[10004] Vertical cut aligned N/S, >1.0m wide x 0.60m deep	Cut for existing mains trench
ST32568 61285	Pits 1-15, Nos. 2-14 Trevelyan Rd.	(11000) Layer of tarmac, 0.10m deep. Above (11000)	Existing road surface
		(11001) Loose sandy clay with limestone, 0.30m deep. Below (11000), above (11002)	Foundation for existing road surface
		(11002) Soft/compact dark grey silt clay, 0.60m deep. Below (11001)	Tidal silting
ST32455 61228	Pits 1-8, Nos. 1-8 The Mart	(12000) Layer of tarmac, 0.10m deep. Above (12001)	Existing road surface
		(12001) Loose sandy clay with limestone, 0.30m deep. Below (12000), above (12002)	Foundation for existing road surface
		(12002) Friable mid grey coarse sand. Below (12001)	Remains of sandbank or dune?
ST32641 61334 to ST32562 61329	Pits 1-18 Milburn Rd. - junction with Stafford Rd. to No.10 Milburn Rd.	(13000) Layer of tarmac, 0.10m deep. Above (13001)	Existing road surface
		(13001) Loose sandy clay with limestone, 0.30m deep. Below (13000), above (13002)	Foundation for existing road surface
		(13002) Compact/friable mid grey sandy clay, 0.77m deep. Below (13001), above (13003)	Tidal deposit
ST32562 61329 to ST32526 61323	Pits 19-24, No.10 Milburn Rd. to junction of Swiss Rd.	(13003) Clean soft light grey clayey sand, 0.30m deep. Below (13002),	Tidal deposit?

		above (13004)	
		(13004) Soft light brown clean clayey silt, 0.43m deep. Below (13003)	Waterborne deposit
ST32805 61384 to ST32737 61344 to ST32749 61435	Pits 2-25 Nos. 1-5 Stanley Rd.; Nos. 1-37 Stanley Grove	(14000). Layer of tarmac, 0.10m deep. Above (14001)	Existing road surface
		(14001) Loose sandy clay with limestone, 0.30m deep. Below (14000)	Foundation for existing road surface
		(14002) Firm light grey clay silt, 0.30m deep. Below (14001)	Tidal deposit - similar deposit seen in Stafford Rd. & Ashcombe Rd
ST32757 61299	Pits 1-6 Nos. 1-9 Lyons Court	(15000) Layer of tarmac, 0.10m deep. Above (15001)	Existing road surface
		(15001) Loose sandy clay with limestone, 0.30m deep. Below (15000), above (15002)	Foundation for existing road surface
		(15002) Firm light grey clayey silt, 0.50m deep. Below (15001)	Tidal deposit - similar to deposit in Ashcombe Rd
ST 32327 61319 to ST32344 61531	Pits 1-53, Nos. 3-61 Jubilee Rd.	(16000) Layer of tarmac, 0.19m deep. Above (16001)	Existing road surface
		(16001)) Loose sandy clay with limestone, 0.21m deep. Below (16000), above (16002), (16003)	Foundation for existing road surface
ST32358 61286 to ST32327 61319	Pits 1-6 Locking Rd./Jubilee Rd. junction to No. 3 Jubilee Rd.	(16002) Firm dark yellow with patches of mid grey sand, 0.27m deep. Underlies (16001); same as (3004)	Deposit of beach sand/sand dune - also seen in pits 1-6 on Locking Rd./Jubilee Rd. Junction
ST32324 61294 to ST32341 61488	Pits 7-42, Nos. 5-51 Jubilee Rd.	(16003)Firm mid to dark grey sandy clay, 0.27m deep. Below (16001)	Tidal sand deposit - also seen in pits 7-24 Jubilee Rd
ST32341 61488 ST32344 61531	Pits 43-53, Nos. 51-61 Jubilee Rd.	(16004) Firm light brown clayey silt, 0.21m deep. Beneath (16003)	Buried land surface

10. Appendix 1: Palaeoenvironmental Assessment

Archaeological Services Durham University

1. Summary

The project

1.1 This report presents the results of palaeoenvironmental assessment of three bulk samples taken during archaeological works at Weston-super-Mare Somerset.

1.2 The works were commissioned by Border Archaeology and conducted by Archaeological Services Durham University.

Results

1.3 The assessment provides little information concerning the age or nature of the fills due to the absence of charred palaeoenvironmental remains. Context (3007) provided some indication of waterlogged conditions. The samples comprised of low quantities of bone, clinker/cinder and freshwater/terrestrial snail shells.

Recommendations

1.4 No further analysis is recommended due to the absence of charred palaeoenvironmental remains. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.

1.5 The flots should be retained as part of the physical archive of the site. The residues were discarded following examination.

2. Project background

Location and background

2.1 Archaeological works were conducted by Border Archaeology at Weston-super-Mare, Somerset. This report presents the results of palaeoenvironmental assessment of three bulk samples comprising of a deposit of possible beach sand, possible reed bed remains and the fill of a possible post-medieval posthole.

Objective

2.2 The objective of the scheme of works was to assess the palaeoenvironmental potential of the samples, establish the presence of suitable radiocarbon dating material, and provide the client with appropriate recommendations.

Dates

2.3 Samples were received by Archaeological Services on 11th July 2013. Assessment and report preparation was conducted between 22nd July and 3rd September 2013.

Personnel

2.4 Assessment and report preparation was conducted by Dr Carrie Drew. Sample processing was by Stephanie Piper.

Archive

2.5 The site code is **BWWSM12**. The flots are currently held in the Environmental Laboratory at Archaeological Services Durham University awaiting collection. Finds were returned to Border Archaeology on 5th September 2013.

3. Methods

3.1 Bulk samples were manually floated and sieved through a 500μm mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification for charred and waterlogged botanical remains using a Leica MZ6 stereomicroscope. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classifications follow Preston *et al.* (2002).

3.2 The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in regional research agenda for South West England (Webster 2007).

4. Results

4.1 Two fragments of glass and fragments of plastic were recovered from context (3004) and a modern bitumen fragment from (3007). Very low quantities of CBM, coal and bone were also noted in the samples. A few land snails were present in context (6009), while a moderate assemblage of both freshwater and land snails was recorded in context (3004).

4.2 No charred plant macrofossils were identified. A range of waterlogged plant remains were present in context (3007), which included aquatic, ruderal and wetland species and a few shrubs/small trees. Uncharred seeds were also recorded in contexts (3004) and (6009), but in much lower numbers and diversity. No material suitable for radiocarbon dating was present in the samples. The results are presented in Appendix 1.

5. Discussion

5.1 The assessment provides little information concerning the age or nature of the fills due to the absence of charred palaeoenvironmental remains. The range of waterlogged plant remains in context (3007) indicates preservation in anoxic conditions. Crowfoots, sedges and blinks reflect the damp ground environment, and the numerous achenes of silverweed may indicate the presence of saltmarsh or land periodically inundated with fresh or brackish water (Preston *et al.* 2002). The assemblage of snails in context (3004) derives from both freshwater and terrestrial habitats, possibly reflecting flooding.

6. Recommendations

6.1 No further analysis is recommended due to the absence of charred palaeoenvironmental remains. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.

6.2 The flots should be retained as part of the physical archive of the site. The residues were discarded following examination.

7. Sources

Preston, C. D., Pearman, D A. & Dines, T D., 2002, *New Atlas of the British and Irish Flora.* Oxford

Stace, C., 1997, *New Flora of the British Isles*. Cambridge

Webster, C J., 2007, *The Archaeology of South West England: South West Archaeological Research Framework, Resource Assessment and Research Agenda*. Somerset County Council

Appendix 1: Data from palaeoenvironmental assessment

Sample		**1**	**2**	**3**
Context		**3004**	**6009**	**3007**
Feature		**possible beach sand**	**possible posthole**	**possible reed bed**
Material available for radiocarbon dating		-	-	-
Volume processed (l)		12	1	14.5
Volume of flot (ml)		35	10	35
Residue contents				
Bone (unburnt)	indet. frags	(+)	-	-
CBM		+	-	-
Coal		-	-	+
Glass (number of fragments)		2	-	-
Modern bitumen	frags	-	-	(+)
Snails	(freshwater / terrestrial)	+	+	-
Flot matrix				
Bone (unburnt)	indet. frags	(+)	-	(+)
Clinker / cinder		++	+	-
Coal / coal shale		-	++	-
Earthworm egg case		-	(+)	++
Snails	(freshwater / terrestrial)	++++	+	-
Plastic fragments		+	-	-
Uncharred vegetative material		-	-	++
Waterlogged remains (abundance)				
(a) *Fumaria* sp (Fumitories)	seed	-	1	-
(q) *Ranunculus* subgenus *Batrachium* (Crowfoot)	achene	-	-	2
(r) *Urtica dioica* (Common Nettle)	achene	2	-	3
(t) *Rubus fruticosus* agg. (Bramble)	fruitstone	1	-	2
(t) *Sambucus nigra* (Elder)	fruitstone	-	1	2
(w) *Carex* sp (Sedges)	trigonous nutlet	1	-	3
(w) Cyperaceae undiff. (Sedge family)	nutlet	-	-	2
(w) *Montia fontana* (Blinks)	seed	2	-	3
(x) Caryophyllaceae undiff. (Pink family)	seed	-	-	2
(x) *Chenopodium* sp (Goosefoots)	seed	3	1	-
(x) *Cirsium* / *Carduus* sp (Thistles)	achene	-	-	2
(x) *Potentilla anserina* (Silverweed)	achene	-	-	4
(x) *Stachys* sp (Woundworts)	nutlet	1	-	-

[a-arable; q-aquatic; r- ruderal; t-tree/shrub; w-wet/damp ground; x-wide niche
(+): trace; +: rare; ++: occasional; +++: common; ++++: abundant Waterlogged remains are scored from 1-5 where 1: 1-2; 2: 3-10; 3: 11-40; 4: 41-200; 5: >200]