soils
LIMITED

Factual Report

at

Lock Keepers Cottage Sites:

Sandford Lock House, Sandford on Thames, Oxford, Oxfordshire OX4 4YD
Days Lock House, Little Wittenham, Abingdon, Oxford, Oxfordshire OX14 4RB
Romney Lock House, Windsor, Berkshire SL4 6HU
Pinkhill Lock House, Eynsham, Witney, Oxfordshire OX2 9PA

for

Environment Agency

Reference: 16823/FR
May 2018

Control Document

Project

Lock Keepers Cottage Sites:
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This is not a valid document for use in the design of the project unless it is titled Final in the document status box.

Current regulations and good practice were used in the preparation of this report. The recommendations given in this report must be reviewed by an appropriately qualified person at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

Commission

Soils Limited was commissioned by the Environment Agency to undertake a foundation exposure investigation on four Lock Keepers Cottage sites. The four sites comprised:

Sandford Lock House (OX1 5RP)
Days Lock House (OX14 4RA)
Romney Lock House (SL4 6HU)
Pinkhill Lock House (OX2 9PA).

The scope of the investigation was outlined in the Soils Limited quotation reference Q19580, dated 11th January 2018.

This document comprises the Factual Report and incorporates the results to this intrusive works.

No Phase I Desk Studies of the respective sites or laboratory testing was commissioned by the client.

Standards

The site works and soil descriptions were undertaken in accordance with the following standards:

- BS 5930:2015
- BS EN ISO 14688-1:2002+A1:2013
- BS EN ISO 14688-2:2004+A1:2013

Trial hole is a generic term used to describe a method of direct investigation. The term trial pit, borehole or window sample borehole implies the specific technique used to produce a trial hole.

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Section 1 Introduction

1.1 Objective of Investigation

Soils Limited was commissioned by the Environment Agency to undertake a foundation exposure investigation at 4No. sites to supply the client and their designers with information regarding ground conditions and depth of the existing foundations of the original lock keeper buildings, where extensions erected in circa 1990s were failing due to potentially inadequate foundation design.

The investigation was to be undertaken to provide comment on the existing foundations. The investigation was to be made by means of hand excavated and machine excavated, where possible, foundation exposures, exposing the foundations of the original lock keeper buildings.

No Phase I Desk Studies for the respective sites or laboratory testing were commissioned by the client.

1.2 Location

The Lock Keepers Cottages sites comprised four seperate locations. The sites were located as follows:

1. Sandford Lock House, Sandford on Thames, Oxford, Oxfordshire OX1 5RP. OS Grid Ref. SP 530 013
2. Days Lock House, Little Wittenham, Abingdon, Oxford, Oxfordshire OX14 4RA. OS Grid Ref. SU 568 934
3. Romney Lock House, Windsor, Berkshire SL4 6HU. OS Grid Ref. SU 969 777
4. Pinkhill Lock House, Eynsham, Witney, Oxfordshire OX2 9PA. OS Grid Ref. SP 440 071

Site location plans are given in Figure 1 to Figure 4.

1.3 Site Description

Each Lock House building was located off the River Thames adjacent to the canalised section serving as access to the lock, providing residence for the designated lock keeper.

Each property comprised a two-storey detached building of traditional load bearing masonry construction originally erected circa early 1900s by the Thames Conservancy. Each property had single and/or two-storey extensions constructed in circa 1990s, which were constructed on foundations placed at a shallower depth than those of the original building and were experiencing subsidence.

1.4 Anticipated Geology

1:50,000 BGS maps showed the following underlying geology for each site.

1.4.1 Sandford Lock House Geology

Sandford Lock House was shown to be situated on bedrock of the West Walton Formation with overlying superficial deposits of Alluvium over Northmoor Sand and Gravel Member.

1.4.2 Days Lock House Geology

Days Lock House was shown to be situated on bedrock of the Gault Formation with overlying superficial deposits of Alluvium over Northmoor Sand and Gravel Member.

1.4.3 Romney Lock House Geology

Romney Lock House was shown to be situated on bedrock of undifferentiated Seaford Chalk Formation and Newhaven Chalk Formation, with overlying superficial deposits of Alluvium over Shepperton Gravel Member.

1.4.4 Pinkhill Lock House Geology

Pinkhill Lock House was shown to be situated on bedrock of the Oxford Clay Formation with overlying superficial deposits of Alluvium over Northmoor Sand and Gravel Member.

1.4.5 Alluvium

Alluvium is the most recent river or estuarine deposit and generally comprises silty clays usually with an appreciable organic content. Lenses of sand and gravel are also commonly found, as are pockets of peat.

1.4.6 Northmoor Sand and Gravel Member

The Northmoor Sand and Gravel Member is sands and gravels dominated by clasts of Middle Jurassic limestone and varying proportions of quarts and flint.

1.4.7 Shepperton Gravel Member

The Shepperton Gravel Member comprises gravel with clay and sand

1.4.8 West Walton Formation

The West Walton Formation comprises calcareous mudstone and silty mudstone and siltstone, with subordinate fine grained sandstones and argillaceous limestone or siltstone nodules.

1.4.9 Gault Formation

The Gault Formation consists of dark bluish grey to pale grey soft mudstones and silty mudstones which often weather to yellow and brown clays. The basal few feet of the formation are commonly silty or sandy and, at other levels, the clays are generally glauconitic or calcareous.

1.4.10 Undifferentiated Seaford Chalk Formation and Newhaven Chalk Formation

Seaford Chalk Formation can be described as firm white chalk with conspicuous semi-continuous nodular and tabular flint seams. Hardgrounds and thin marls are known from the lowest beds. Some flint nodules are large to very large.

At various levels clay sized material occurs as marl seams and partings. Close to the surface the upper few metres are invariably discoloured brown, due to leaching from the overlying strata. The interface with any overlying stratum is invariably extremely irregular as a result of localised weathering and general solution. Weathering by frost action may extend to a depth of several metres.

Occasional erosional features, such as pipes, swallow holes and solution cavities, usually in-filled with drift deposits, are found in the chalk. The features sometimes manifest themselves at the surface as shallow circular depressions. Solution features may be reactivated by the concentrated ingress of water from leaking drains or soakaways. Reactivation may lead to surface collapse.

1.4.11 Oxford Clay Formation

The Oxford Clay comprises for the most part blue grey and light grey silty clays turing to brown on weathering. Selenite and iron-pyrites are found in abundance throughout the series. The clays become very stiff and shaley with depth.

1.5 Limitations and Disclaimers

This Factual Report relates to the site located at four separate Lock Keepers Cottages and was prepared for the sole benefit of Environment Agency (The “Client”). The report was prepared solely for the brief described in Section 1.1 of this report.

Soils Limited disclaims any responsibility to the Client and others in respect of any matters outside the scope of the above.

This report has been prepared by Soils Limited, with all reasonable skill, care and diligence within the terms of the Contract with the Client, incorporation of our General Conditions of Contract of Business and taking into account the resources devoted to us by agreement with the Client.

The report is personal and confidential to the Client and Soils Limited accept no responsibility of whatever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report wholly at its own risk.

The Client may not assign the benefit of the report or any part to any third party without the written consent of Soils Limited.

The ground is a product of continuing natural and artificial processes. As a result, the ground will exhibit a variety of characteristics that vary from place to place across a site,

and also with time. Whilst a ground investigation will mitigate to a greater or lesser degree against the resulting risk from variation, the risks cannot be eliminated.

The investigation, interpretations, and recommendations given in this report were prepared for the sole benefit of the client in accordance with their brief. As such these do not necessarily address all aspects of ground behaviour at the site.

Current regulations and good practice were used in the preparation of this report. An appropriately qualified person must review the recommendations given in this report at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

The depth to roots and/or of desiccation may vary from that found during the investigation. The client is responsible for establishing the depth to roots and/or of desiccation on a plot by plot basis prior to the construction of foundations. Supplied site surveys may not include substantial shrubs or bushes and is also unlikely to have data or any trees, bushes or shrubs removed prior to or following the site survey.

Where trees are mentioned in the text this means existing trees, substantial bushes or shrubs, recently removed trees (approximately 20 years to full recovery on cohesive soils) and those planned as part of the site landscaping).

Ownership of land brings with it onerous legal liabilities in respect of harm to the environment. “Contaminated Land” is defined in Section 57 of the Environment Act 1995 as:

“Land which is in such a condition by reason of substances in, on or under the land that significant harm is being caused or that there is a significant possibility of such harm being caused or that pollution of controlled waters is being, or is likely to be caused”.

The investigation, analysis or recommendations in respect of contamination are made solely in respect of the prevention of harm to vulnerable receptors, using where possible best practice at the date of preparation of the report. The investigation and report do not address, define or make recommendations in respect of environmental liabilities. A separate environmental audit and liaison with statutory authorities is required to address these issues.

Section 2 Site Works

2.1 Proposed Project Works

The proposed intrusive investigation was designed to provide information on the ground conditions and determine the foundation depth of the four original Lock Keepers Cottage buildings. The intended investigation, as outlined within the Soils Limited quotation (Q19580, dated 11th January 2018), was therefore to comprise the following items:

- 1No. foundation exposure at each Lock Keepers Cottage site, to a maximum depth of 3.00m below ground level (bgl) with shuttering.

2.1.1 Actual Project Works

The actual project works were undertaken between 23rd April 2018 and 4th May 2018 and comprised:

- 1No. foundation exposure at Sandford Lock House (TP1) to a maximum depth of 1.90m bgl;
- 1No. foundation exposure at Days Lock House (TP2) to a maximum depth of 2.10m bgl;
- 1No. foundation exposure at Romney Lock House (TP3) to a maximum depth of 2.00m bgl;
- 1No. foundation exposure at Pinkhill Lock House (TP4) to a maximum depth of 2.20m bgl.

All exposures were supported with Gripshore Vertishore shuttering.

All trial holes were backfilled with arisings upon completion.

2.2 Test Holes

The depth of the test pits and means of excavation, at each of the site locations are presented within this section:

Between 23rd and 24th April 2018, foundation exposure TP1 was machine excavated on the south elevation of Sandford Lock House, using 1.5t machine excavator, to a maximum depth of 1.90m bgl.

Between 24th and 25th April 2018, foundation exposure TP2 was machine excavated on the south elevation of Days Lock House, using 1.5t machine excavator, to a maximum depth of 2.00m bgl.

Between 26th and 27th April 2018, foundation exposure TP3 was hand excavated on the south elevation of Romney Lock House to a maximum depth of 2.00m bgl. A concrete obstruction was encountered at 0.60m bgl within TP3, which has been detailed in Romney Lock Trial Pit 3 plan view sketch. The excavation was

continued adjacent to the obstruction.

Between 2nd and 3rd May 2018, foundation exposure TP4 was hand excavated on the east elevation of Pinkhill Lock House to a maximum depth of 2.20m bgl.

All locations were selected by Soils Limited contingent with the prevailing conditions encountered onsite.

The maximum depths of trial holes have been included in Table 2.1.

All trial holes were scanned with a Cable Avoidance Tool (C.A.T.) and signal gererator (Genny) prior to excavation to ensure the health and safety of the operatives.

Table 2.1 Final Depth of Trial Holes

Trial Hole	Depth (m bgl)	Site
TP1	1.90	Sandford
TP2	2.10	Days
TP3	2.00	Romney
TP4	2.20	Pinkhill

2.3 Ground Conditions Encountered at Sandford Lock House

The ground conditions encountered in TP1 at Sandford Lock House have been described below in descending order. The succession of conditions was encountered as follows:

Made Ground (MG)
West Walton Formation (WWF)

The engineering logs are presented in Appendix A.1.

The ground conditions encountered in TP1 are summarised in Table 2.2.

Table 2.2 Ground Conditions at Sandford Lock House

Strata	Epoch	Depth Encountered (m bgl)		Typical Thickness (m)	Typical Description
		Top	Bottom		
MG	Anthropocene	0.00	1.45	1.45	Tarmac over orange and brown sandy GRAVEL sub-base over brown slightly sandy gravelly CLAY.
WWF	L. Jurassic	1.45	1.90[1]	Not proven[2]	Firm brown and grey CLAY.

Note: [1] Final depth of trial hole. [2] Base of strata not encountered. 0.00 refers to ground level.

2.3.1 Made Ground

Soil described as Made Ground was encountered in TP1 from ground level to a

depth of 1.45m bgl.

The Made Ground comprised orange and brown silty sandy GRAVEL sub-base to a depth of 0.35m bgl over brown slightly sandy gravelly CLAY comprising gravel sized fragments of flint, brick, sandstone/limestone and two limestone boulders up to 300mm in diameter.

2.3.2 West Walton Formation

Soil described as West Walton Formation was encountered in TP1 underlying the Made Ground from 1.45m bgl and persisted to the full extent of the exposure at 1.90m bgl. The West Walton Formation comprised firm brown and grey CLAY.

2.4 Ground Conditions Encountered at Days Lock House

The ground conditions encountered in TP2 at Days Lock House have been described below in descending order. The succession of conditions was encountered as follows:

Made Ground (MG)
Northmoor Sand and Gravel Member (NO)

The engineering logs are presented in Appendix A.1.

The ground conditions encountered in TP2 are summarised in Table 2.3.

Table 2.3 Ground Conditions at Days Lock House

Strata	Epoch	Depth Encountered (m bgl)		Typical Thickness (m)	Typical Description
		Top	Bottom		
MG	Anthropocene	0.00	1.85	1.85	Brick paving over dark grey and brown gravelly silty fine to coarse SAND with frequent rootlets and occasional calcareous shell fragments.
NO	E. Cretaceous	1.85	2.10[1]	Not proven[2]	Soft dark greenish brown slightly gravelly very sandy CLAY.

Note: [1] Final depth of trial hole. [2] Base of strata not encountered. 0.00 refers to ground level.

2.4.1 Made Ground

Soil described as Made Ground was encountered in TP2 from ground level to a depth of 1.85m bgl.

The Made Ground comprised dark grey and brown gravelly silty fine to coarse SAND with frequent rootlets. Gravel was fine to medium rounded clasts of flint and medium to coarse fragments of concrete, coal/charcoal and fine ash, and occasional calcareous shell fragments.

2.4.2 Northmoor Sand and Gravel Member

Soil described as Northmoor Sand and Gravel Member was encountered in TP2 underlying the Made Ground and persisted to the full extent of the exposure at 2.10m bgl.

The Northmoor Sand and Gravel Member comprised soft dark greenish brown slightly gravelly very sandy CLAY. Gravel was fine rounded clasts of flint and calcareous shell fragments. Sand was fine to medium. It should be noted that the composition of the soil sampled was not typical of the Northmoor Sand and Gravel Member, which would not be anticipated to have such a significant fraction of fines (silt/clay). Consideration could be made to another superficial deposit not identified on the BGS geology maps.

2.5 Ground Conditions Encountered at Romney Lock House

The ground conditions encountered in TP3 at Romney Lock House have been described below in descending order. The succession of conditions was encountered as follows:

Made Ground (MG)
Shepperton Gravel Member (SHGR)

The engineering logs are presented in Appendix A.1.

The ground conditions encountered in TP3 are summarised in Table 2.4.

Table 2.4 Ground Conditions at Romney Lock House

Strata	Epoch	Depth Encountered (m bgl)		Typical Thickness (m)	Typical Description
		Top	Bottom		
MG	Anthropocene	0.00	1.60	1.60	Brown and grey sandy medium to coarse angular GRAVEL to 0.70m bgl over brown slightly sandy gravelly CLAY. A concrete obstruction was encountered at 0.60m bgl.
SHGR	Holocene	1.60	2.00[1]	Not proven[2]	Soft orange and brown slightly gravelly sandy CLAY.

Note: [1] Final depth of trial hole. [2] Base of strata not encountered. 0.00 refers to ground level.

2.5.1 Made Ground

Soil described as Made Ground was encountered in TP3 from ground level to a depth of 1.60m bgl.

The Made Ground comprised brown and grey sandy medium to coarse angular GRAVEL comprising fragments of flint, brick, concrete and tile to 0.70m bgl, over brown slightly sandy gravelly CLAY. Gravel was fine to coarse fragments of brick, flint, concrete, chalk and calcareous shell. Frequent rootlets were observed to 0.70m bgl.

A concrete obstruction was encountered at 0.60m bgl. The obstruction has been detailed in Romney Lock Trial Pit 3 plan view sketch, presented in Appendix A.2.

2.5.2 Shepperton Gravel Member

Soil described as Shepperton Gravel Member was encountered underlying the Made Ground and persisted to the full extent of the exposure at 2.00m bgl.

The Shepperton Gravel Member comprised soft orange and brown slightly gravelly sandy CLAY. Gravel comprised fine subangular clasts of chalk. Sand was fine to medium.

It should be noted that the composition of the soil sampled is not typical of what would be expected of the Shepperton Gravel Member, which is typically a normally consolidated well graded sandy GRAVEL which can be commercially exploited. This bed could be attributed to another superficial deposit, such as Head, which was not recorded on BGS geology maps.

2.6 Ground Conditions Encountered at Pinkhill Lock House

The ground conditions encountered in TP4 at Pinkhill Lock House have been described below in descending order. The succession of conditions was encountered as follows:

Made Ground (MG)
Alluvium (ALV)
Northmoor Sand and Gravel Member (NO)

The engineering logs are presented in Appendix A.1.

The ground conditions encountered in TP4 are summarised in Table 2.5.

Table 2.5 Ground Conditions at Pinkhill Lock House

Strata	Epoch	Depth Encountered (m bgl)		Typical Thickness (m)	Typical Description
		Top	Bottom		
MG	Anthropocene	0.00	1.10	1.10	Orange and brown sandy GRAVEL over dark brownish grey slightly sandy gravelly CLAY with occasional rootlets.
ALV	Holocene	1.10	1.90	0.80	Dark grey mottled orange slightly gravelly CLAY with rare shell fragments.
NO	Pleistocene	1.90	2.20[1]	Not proven[2]	Soft light grey slightly gravelly very sandy CLAY

Note: [1] Final depth of trial hole. [2] Base of strata not encountered. 0.00 refers to ground level.

2.6.1 Made Ground

Soil described as Made Ground was encountered in TP4 from ground level to a depth of 1.10m bgl.

The Made Ground comprised orange and brown medium to coarse sandy fine to medium occasionally coarse subangular to subrounded flint GRAVEL to a depth of 0.50m bgl overlying dark brownish grey slightly sandy gravelly CLAY with occasional rootlets. Gravel was fine subrounded clasts of flint and black ash. Sand was coarse.

2.6.2 Alluvium

Soil described as Alluvium was encountered in TP4 underlying the Made Ground and persisted to a depth of 1.90m bgl.

The Alluvium comprised dark grey mottled orange slightly gravelly CLAY with rare fine gravel sized shell fragments. Gravel was fine subrounded clasts of flint and occasional black organic material.

2.6.3 Northmoor Sand and Gravel Member

Soil described as Northmoor Sand and Gravel Member was encountered in TP4 underlying the Alluvium and persisted to the full extent of the exposure at 2.20m bgl.

The Northmoor Sand and Gravel Member comprised soft light grey slightly gravelly very sandy CLAY. Gravel was fine subangular clasts of flint. Sand was fine to coarse. It should be noted that the composition of the soil sampled was not typical of the Northmoor Sand and Gravel Member, which would not be anticipated to have such a significant fraction of fines (silt/clay). Consideration could be made to another superficial deposit not identified on the BGS geology maps.

2.7 Groundwater

Groundwater was encountered within one of the four trial pits undertaken at the Lock Keepers Cottage sites.

Groundwater was encountered within TP4 at Pinkhill Lock House, struck at a depth of 1.90m bgl. It is considered that the canal is lined and therefore it is assumed the water level in the lock/canal would not influence the groundwater level.

Changes in groundwater level occur for a number of reasons including seasonal effects and variations in drainage. The investigation was conducted in April/May (2018), when groundwater levels should be fallng from their annual maximum (highest) elevation, which typically occurs around March/April.

Groundwater equilibrium conditions may only be conclusively established if a series of observations are made via groundwater monitoring wells.

2.8 Sandford Lock House Foundation Exposure

Foundation exposure TP1 was carried out at a location selected by Soils Limited contingent on conditions encountered onsite. The exposure was undertaken on the south elevation of Sandford Lock House.

A concrete foundation was encountered bearing at a depth of 1.82m bgl within firm brown and grey silty CLAY of the West Walton Formation. The concrete slab was 0.35m thick and extended out from the brickworks by 0.32m.

The full foundation sketch of TP1 is presented in Appendix A.2.

2.9 Days Lock House Foundation Exposure

Foundation exposure TP2 was carried out at a location selected by Soils Limited contingent on conditions encountered onsite.

The exposure was undertaken of the south elevation of Days Lock House. A concrete foundation was encountered founding at a depth of 2.04m bgl, founded within soft dark green and brown slightly gravelly very sandy CLAY of the Northmoor Sand and Gravel Member. The concrete slab was 0.35m thick and extended out from the brickworks by 0.40m bgl.

The full foundation sketch of TP2 is presented in Appendix A.2.

2.10 Romney Lock House Foundation Exposure

Foundation exposure TP3 was carried out at a location selected by Soils Limited contingent on conditions encountered onsite.

The exposure was undertaken on the south elevation of Romney Lock House. A concrete foundation slab was encountered founding at a depth of 1.85m bgl, founded within soft orange and brown slightly gravelly sandy CLAY of the Shepperton Gravel Member. The concrete was 0.30m thick and extended out from the brickworks by 0.15m.

The full foundation sketch of TP3 is presented in Appendix A.2.

2.11 Pinkhill Lock House Foundation Exposure

Foundation exposure TP4 was carried out at a location selected by Soils Limited contingent on conditions encountered onsite.

The exposure was undertaken of the east elevation of Pinkhill Lock House. A concrete foundation was encountered founding at a depth of 2.10m bgl, founded within medium dense slightly gravelly very clayey fine to medium SAND of the Northmoor Sand and

Gravel Member. The concrete slab was 1.00m thick and extended out from the brickworks by 0.23m.

The full foundation sketch of TP4 is presented in Appendix A.2.

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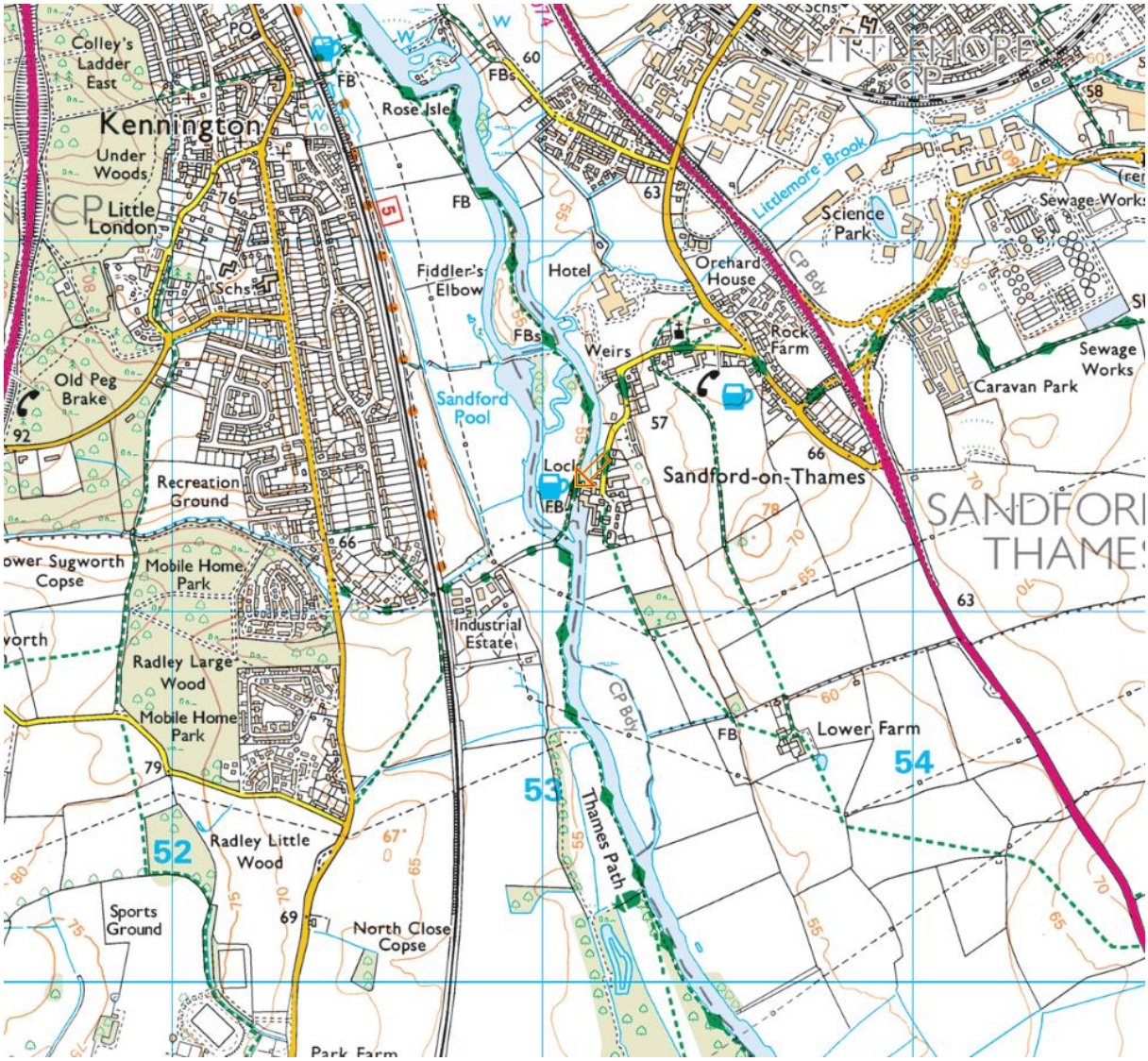

Figure 1 – Sandford Lock Site Location

Job Number 16823	**Project** Lock Keepers Cottages
Client Environment Agency	**Date** May 2018

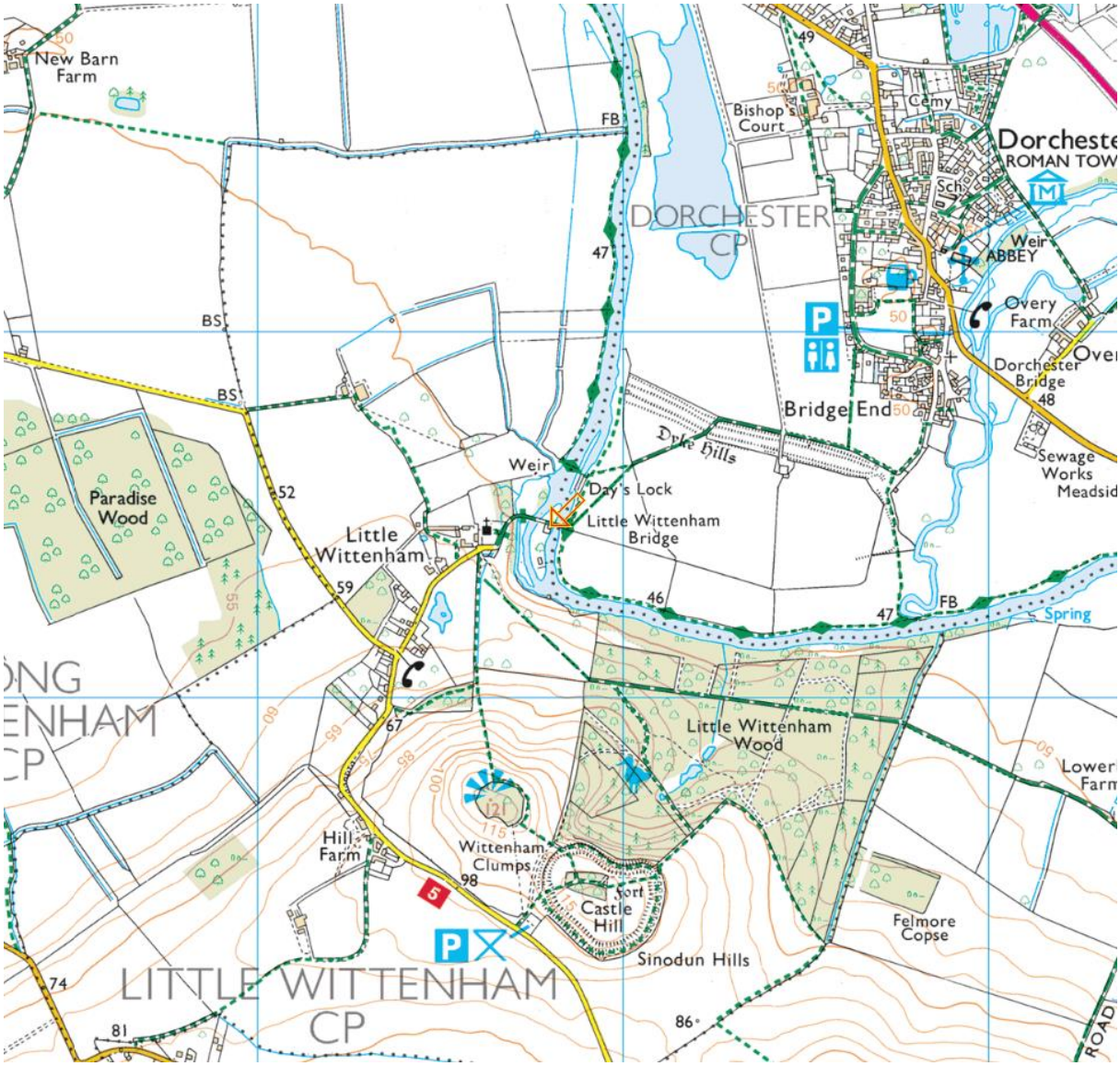

Figure 2 – Days Lock Site Location

Job Number 16823	**Project** Lock Keepers Cottages
Client Environment Agency	**Date** May 2018

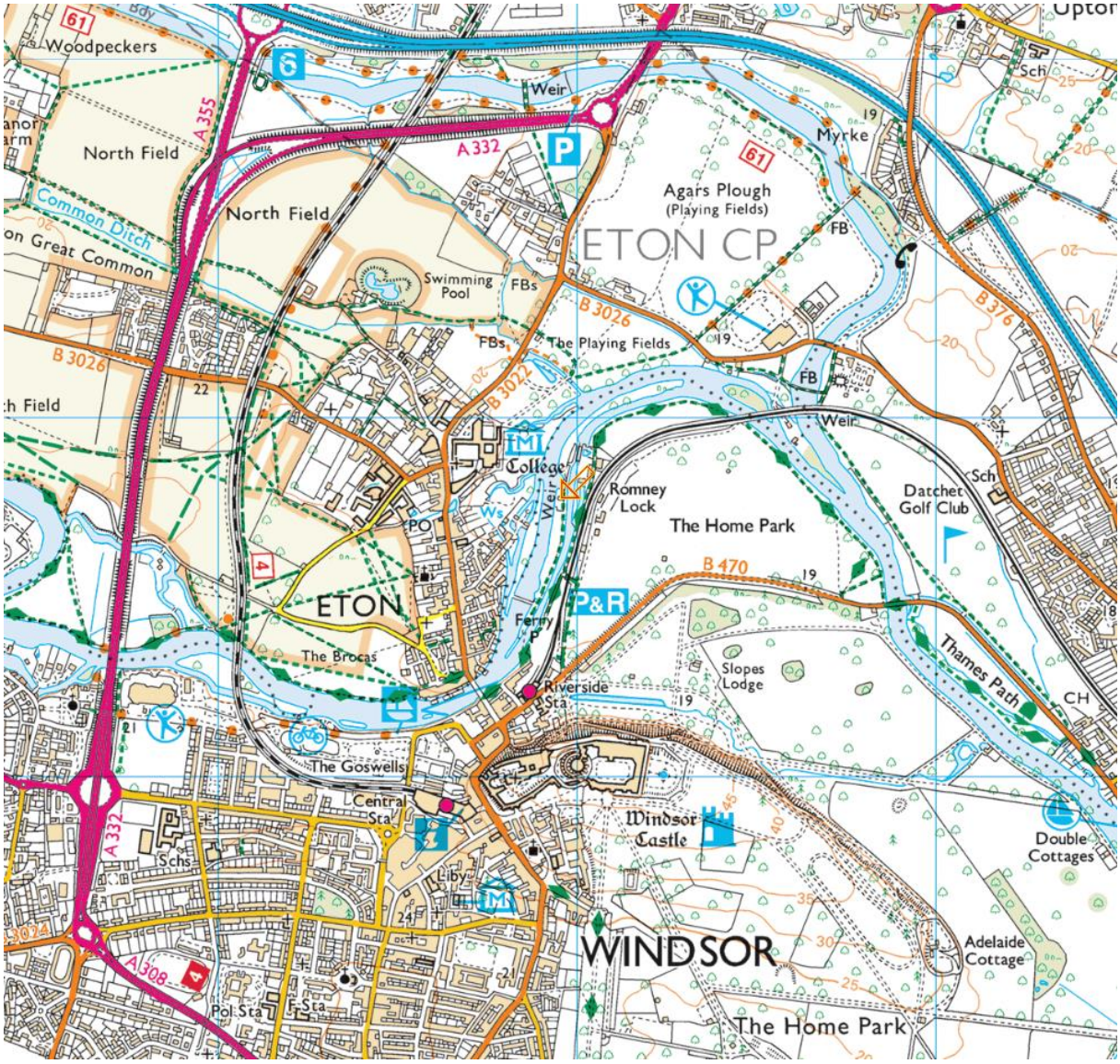

Figure 3 – Romney Lock Site Location

Job Number 16823	**Project** Lock Keepers Cottages
Client Environment Agency	**Date** May 2018

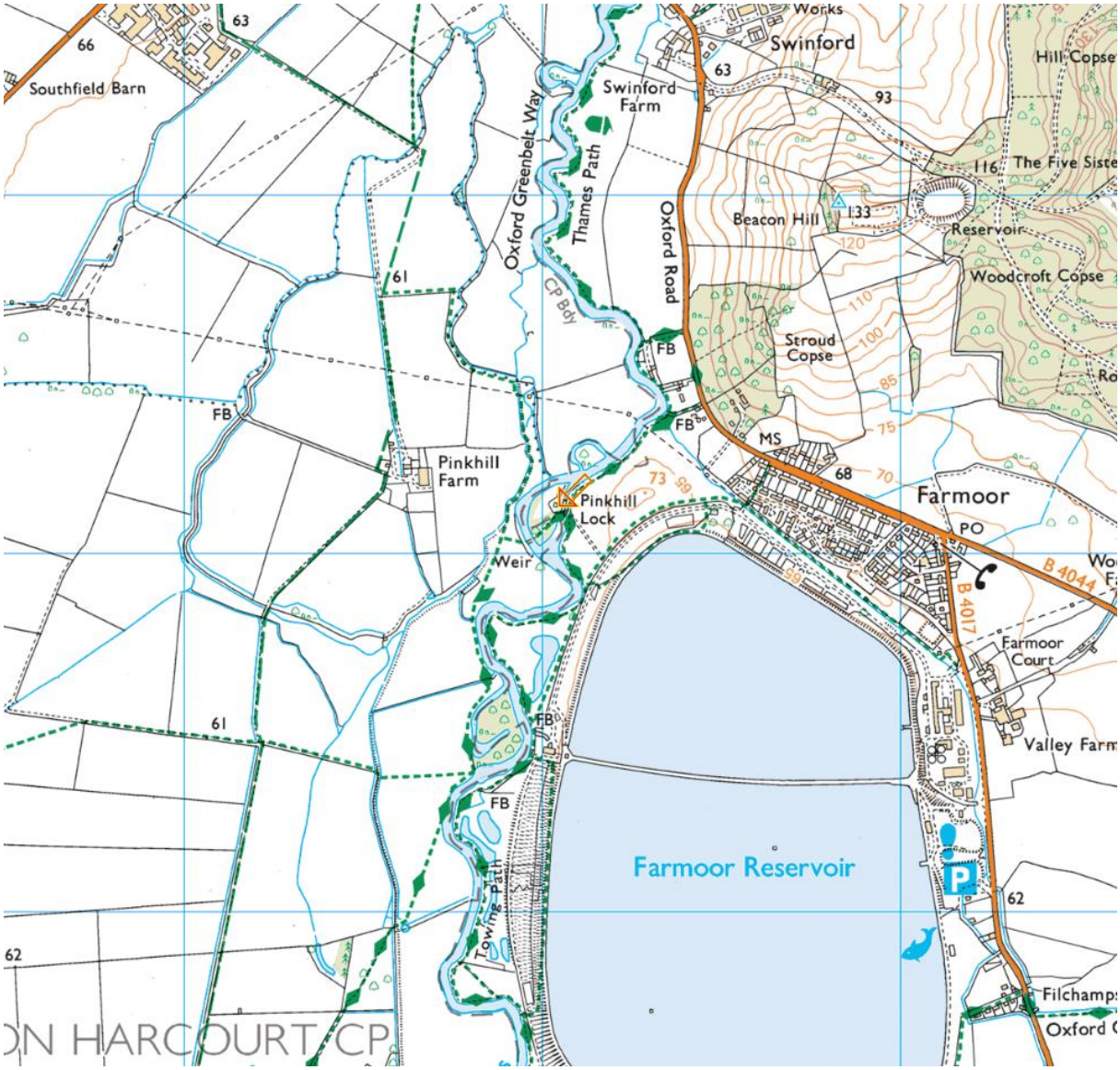

Figure 4 – Pinkhill Lock Site Location

Job Number 16823	**Project** Lock Keepers Cottages
Client Environment Agency	**Date** May 2018

Appendix A Field Work

Appendix A.1 Engineering Logs

Soils Limited
Newton House, Cross Road, Tadworth KT20 5SR
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Trial Pit Log

Trial Pit No.
TP1
Sheet 1 of 1

Project Name: Lock Keepers Cottages	Project No.: 16823	Method: Machine excavated	Hole Type TP
Location: Sandford Lock, Days Lock, Romney Lock & Pinkhill Lock		Plant:	
		Support: Gripshore	Scale 1:25
Client: Envrionment Agency	Trial Pit Length: 1.00m	Trial Pit Width: 1.00m	
Dates: 23-04-2018 - 24-04-2018	Level:	Co-ords:	Logged By

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.10			TARMAC
				0.35			Orange and brown silty sandy GRAVEL. Gravel is fine to coarse subangular clasts of flint. MADE GROUND
	0.50	D					Brown slightly sandy gravelly CLAY with two limestone boulders up to 300mm diameter. Gravel is fine to coarse fragments of flint, brick, sandstone/limestone. Sand is fine to coarse. MADE GROUND
	1.00	D					
	1.50	D		1.45			Firm brown and grey CLAY. WEST WALTON FORMATION
	1.90	D		1.90			End of Pit at 1.90m

General Remarks:

Groundwater Remarks:

Sample Type
D: Disturbed
B: Bulk
J: Jar
W: Water

Soils Limited
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Trial Pit Log

Trial Pit No.
TP2
Sheet 1 of 1

Project Name: Lock Keepers Cottages	Project No.: 16823	Method: Machine excavated	Hole Type TP
Location: Sandford Lock, Days Lock, Romney Lock & Pinkhill Lock		Plant:	
		Support:	Scale 1:25
Client: Envrionment Agency	Trial Pit Length: 1.00m	Trial Pit Width: 1.00m	
Dates: 24-04-2018 - 25-04-2018	Level:	Co-ords:	Logged By

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			PAVIORS
	0.50	D					Dark grey and brown gravelly silty fine to coarse SAND with frequent rootlets. Gravel was fine to medium rounded clasts of flint and medium to coarse fragments of concrete, coal/charcoal and fine ash, and occasional calcareous shell fragments. MADE GROUND
	1.00	D					
				1.85			Soft dark greenish brown slightly gravelly very sandy CLAY. Gravel was fine rounded clasts of flint and calcareous shell fragments. Sand was fine to medium. NORTHMOOR SAND & GRAVEL MEMBER
	2.00	D		2.10			End of Pit at 2.10m

1 2 3 4 5

General Remarks:

Groundwater Remarks:

Sample Type
D: Disturbed
B: Bulk
J: Jar
W: Water

Soils Limited
Newton House, Cross Road, Tadworth KT20 5SR
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Trial Pit Log

Trial Pit No. **TP3** Sheet 1 of 1

Project Name: Lock Keepers Cottages	Project No.: 16823	Method: Hand excavated	Hole Type TP
Location: Sandford Lock, Days Lock, Romney Lock & Pinkhill Lock		Plant:	
		Support:	Scale 1:25
Client: Envrionment Agency	Trial Pit Length: 1.00m	Trial Pit Width: 1.00m	
Dates: 26-04-2018 - 27-04-2018	Level:	Co-ords:	Logged By

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.10			CONCRETE
	0.50	D					Brown and grey fine to medium sandy medium to coarse GRAVEL, with frequent rootlets, comprising fragments of flint, brick, concrete and tile. MADE GROUND
				0.70			Brown slightly sandy gravelly CLAY. Gravel is fine to coarse fragments of brick, flint, concrete, chalk and calcareous shell. MADE GROUND
	1.50	D					
				1.60			Soft orange and brown slightly gravelly sandy CLAY. Gravel is fine subangular clasts of chalk. Sand is fine to medium. SHEPPERTON GRAVEL MEMBER
	2.00	D		2.00			End of Pit at 2.00m

1 2 3 4 5

General Remarks:

Groundwater Remarks:

Sample Type
D: Disturbed
B: Bulk
J: Jar
W: Water

Soils Limited
Newton House, Cross Road, Tadworth KT20 5SR
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Trial Pit Log

Trial Pit No. **TP4** Sheet 1 of 1

Project Name: Lock Keepers Cottages	Project No.: 16823	Method: Hand excavated	Hole Type TP
Location: Sandford Lock, Days Lock, Romney Lock & Pinkhill Lock		Plant:	
		Support:	Scale 1:25
Client: Envrionment Agency	Trial Pit Length: 1.00m	Trial Pit Width: 1.00m	
Dates: 02-05-2018 - 03-05-2018	Level:	Co-ords:	Logged By

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.10			TARMAC
	0.50	D		0.50			Orange and brown medium to coarse sandy fine to medium occasionally coarse subangular to subrounded flint GRAVEL. MADE GROUND
	1.00	D		1.10			Dark brownish grey slightly sandy gravelly CLAY with occasional rootlets. Gravel is fine subrounded clasts of flint and black ash. Sand is coarse. MADE GROUND
	1.50	D					Dark grey mottled orange slightly gravelly CLAY with rare fine gravel sized shell fragments. Gravel is fine subrounded clasts of flint and occasional black organics. ALLUVIUM
▼	2.00	D		1.90			Soft light grey slightly gravelly very sandy CLAY. Gravel is fine subangular clasts of flint. Sand is fine to coarse. NORTHMOOR SAND AND GRAVEL MEMBER
				2.20			End of Pit at 2.20m

1 2 3 4 5

General Remarks:
Groundwater encountered at 1.90m bgl.

Groundwater Remarks:

Sample Type
D: Disturbed
B: Bulk
J: Jar
W: Water

Appendix A.2 Foundation Exposure Sketches

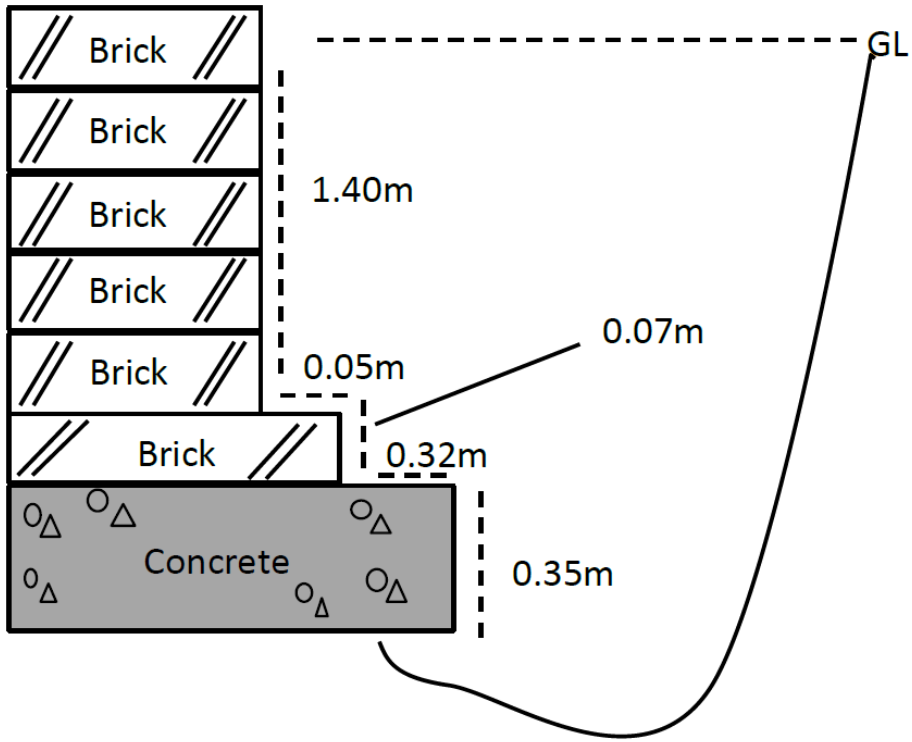
Sandford Lock – Trial Pit 1

Project
Lock Keepers Cottages (Sandford Lock)

Client
Environment Agency

Date
May 2018

Drawing Ref.
16916/TP1/01



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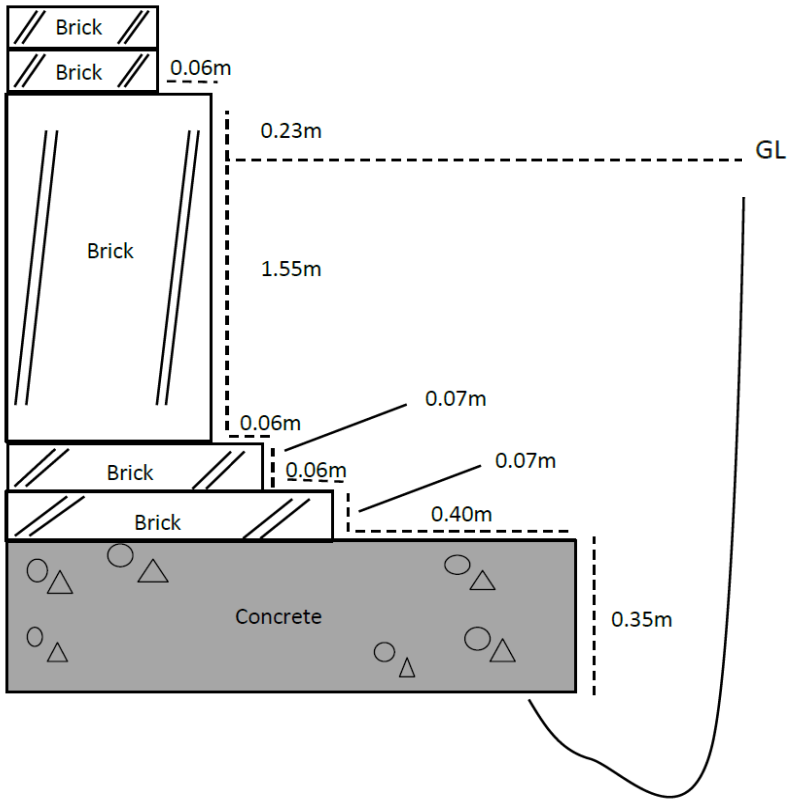
Days Lock – Trial Pit 2

Project
Lock Keepers Cottages (Days Lock)

Client
Environment Agency

Date
May 2018

Drawing Ref.
16916/TP2/01



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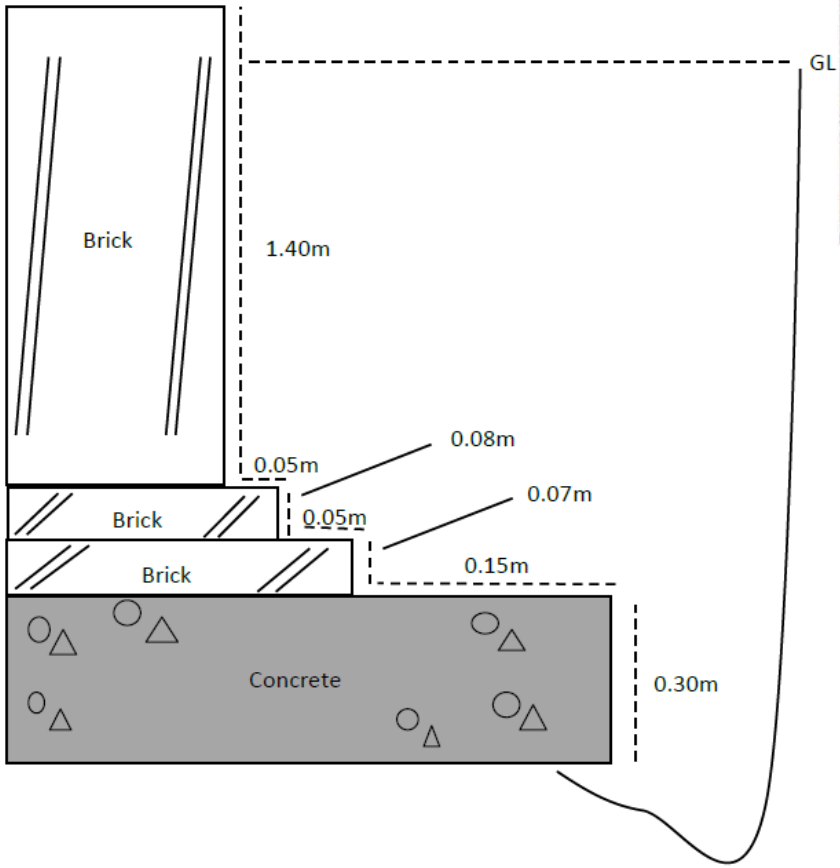
Romney Lock – Trial Pit 3

Project
Lock Keepers Cottages (Romney Lock)

Client
Environment Agency

Date
May 2018

Drawing Ref.
16916/TP3/01/A



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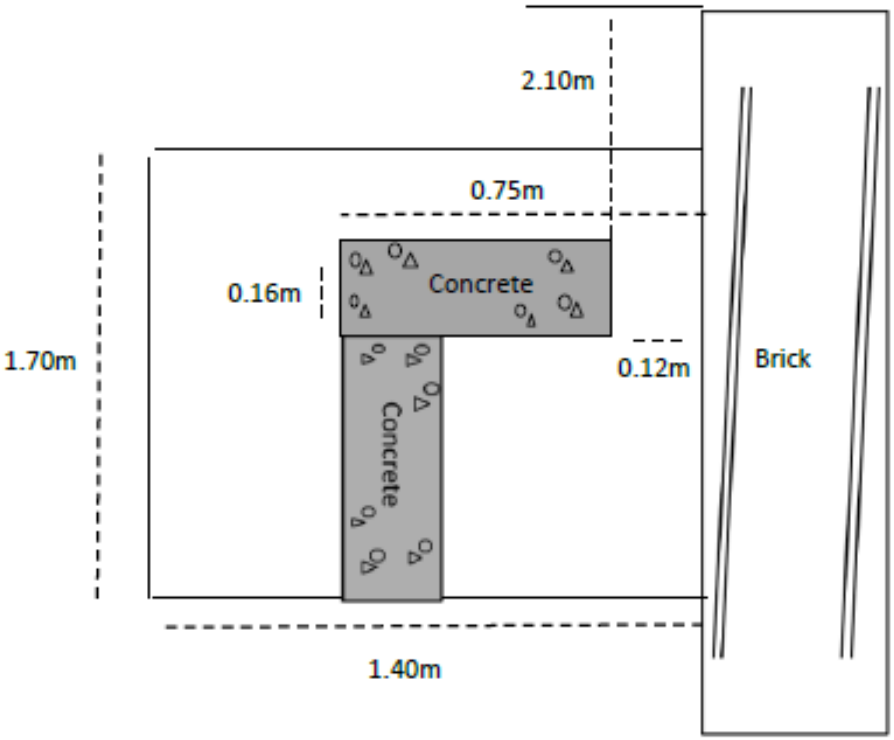
Romney Lock – Trial Pit 3- PLAN VIEW

Project
Lock Keepers Cottages (Romney Lock)

Client
Environment Agency

Date
May 2018

Drawing Ref.
16916/TP3/01/B



Note:

Concrete obstruction at 0.60 below ground level (0.25m thick- Lean mix from 0.10 to 0.25m

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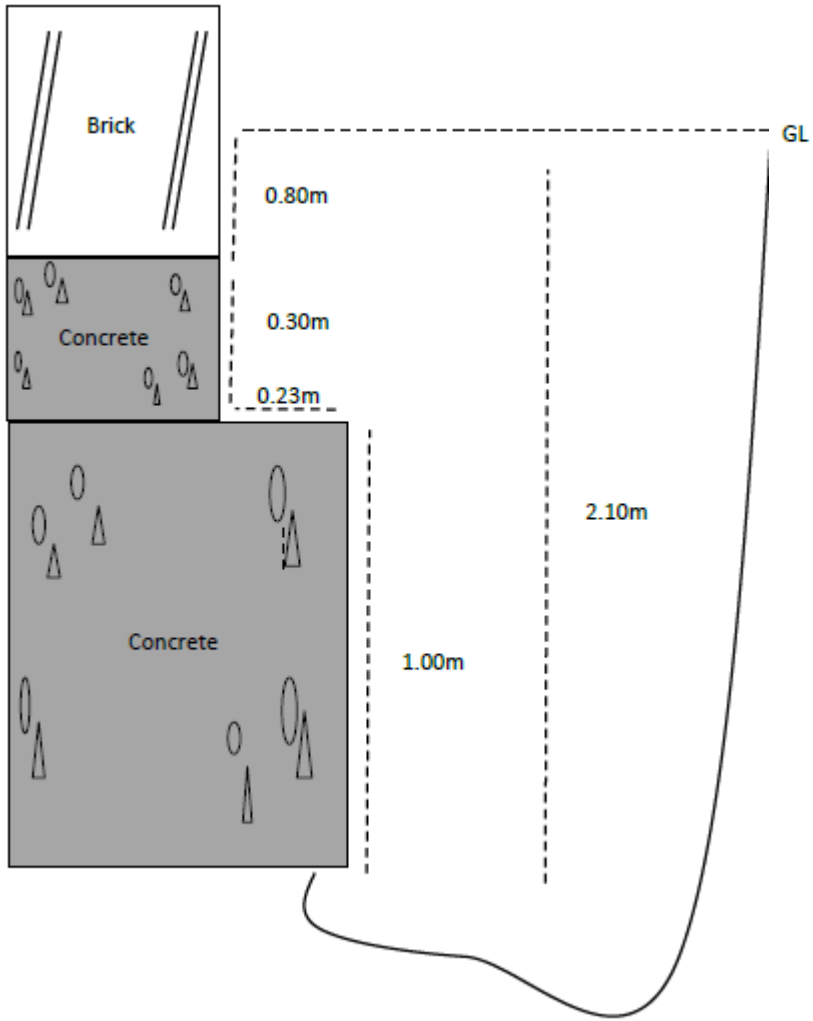
Pinkhill Lock – Trial Pit 4

Project
Lock Keepers Cottages (Pinkhill Lock)

Client
Environment Agency

Date
May 2018

Drawing Ref.
16916/TP4/01



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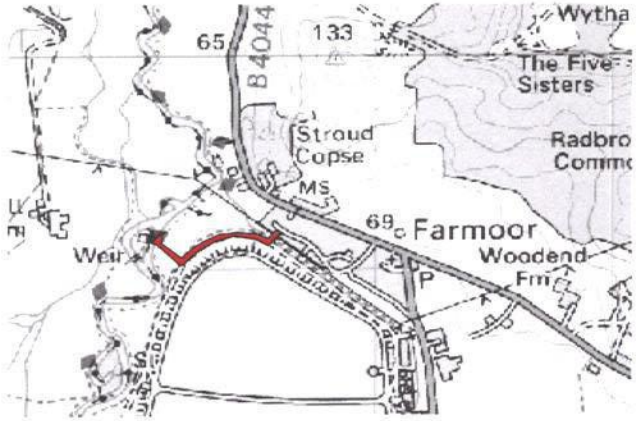
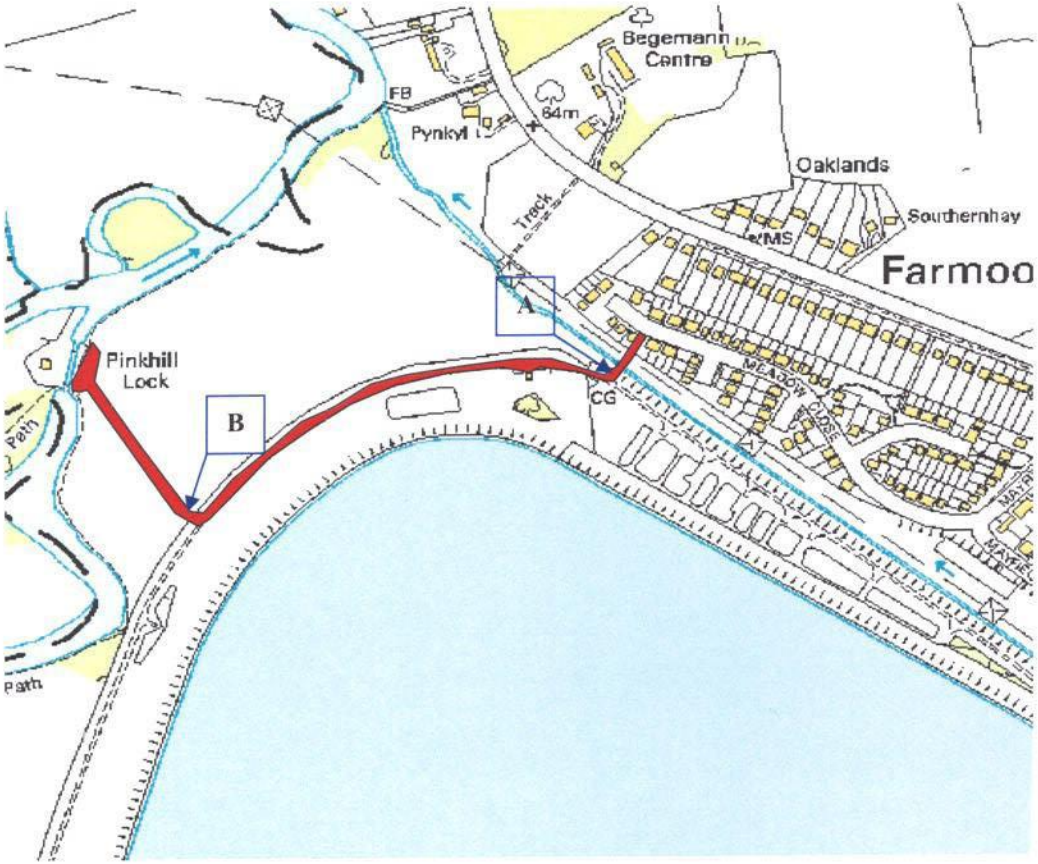
Appendix B Information Provided by the Client

Pinkhill Lock



Map Key:
Access Track Location



General Information

Location:	**Pinkhill Lock**
Lock Keeper:	**Tim Brown**
Contact Number:	**01865 881452**

Access Track Info Track Length: **717 meters**
Post Code OX2 9PA **BNG** 444040, 201632
Parking Facilities: Parking at Lock Site
Location: Take Oxford Road (**B4044**) towards **Farmoor** and **Eynsham**. On reaching **Farmoor** turn left down **Mayfield Road** and then take first right down **Meadow Close**. Access track is located on the left near the bottom of Meadow Close.

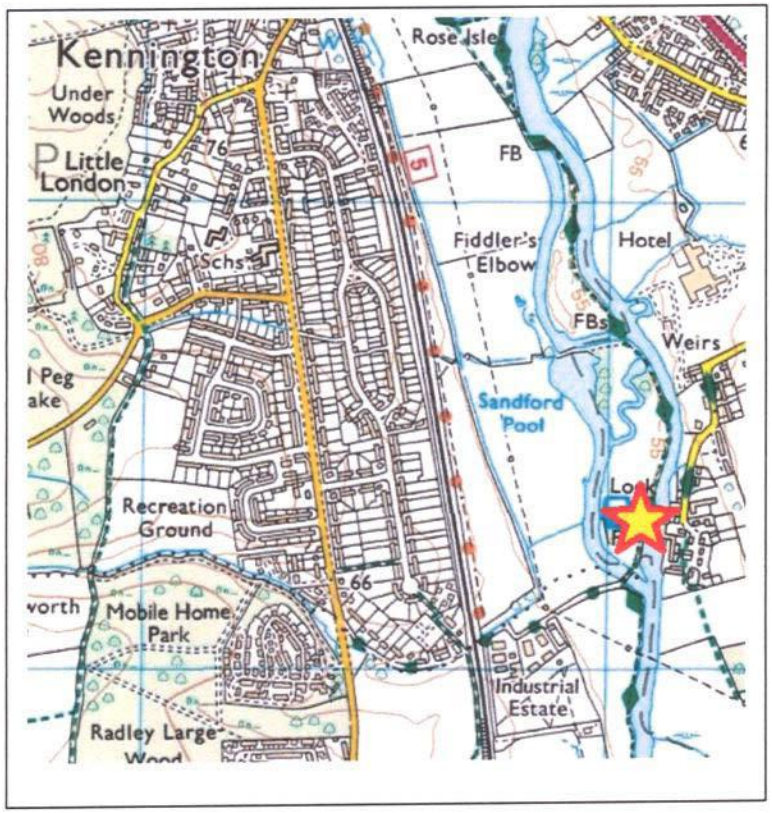
Access Restriction Information
Padlocked Gate at access track entrance. 16B key (or Thames Water key)
No other restrictions on site

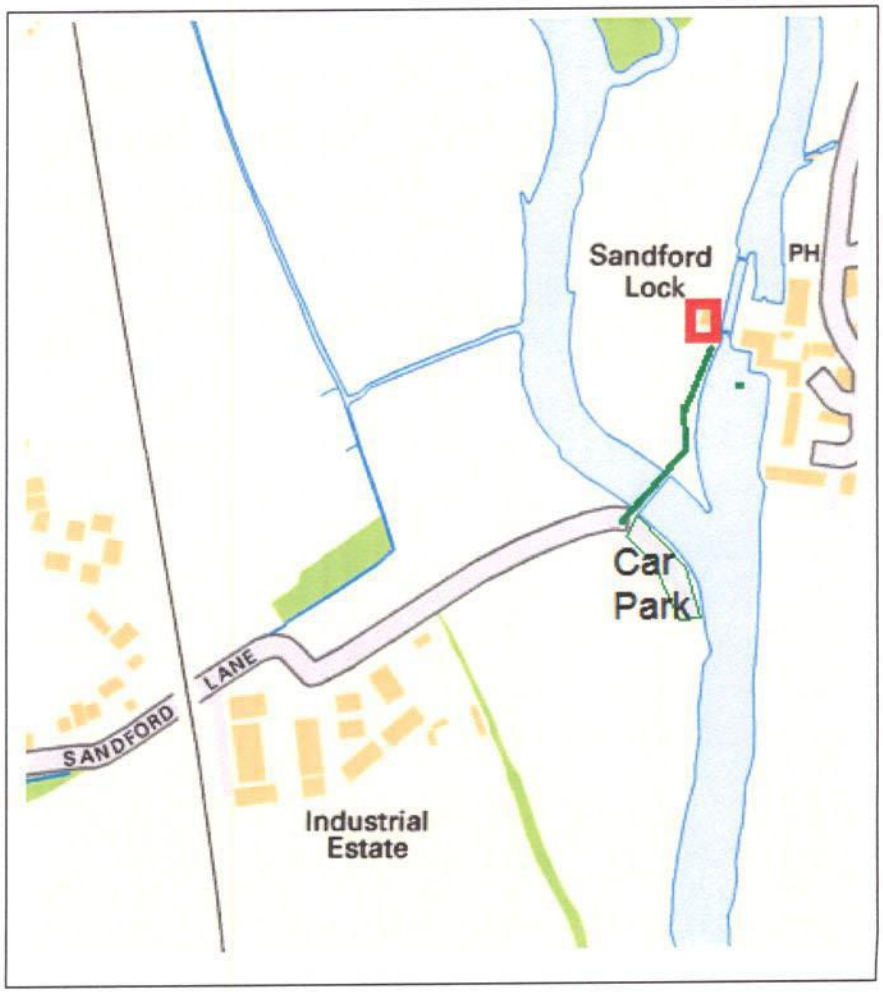
Track Ownership Information
Majority of access track on Thames Water property, from point A to B.
Contact on: 01865 862166
Rest of access track owned by Environment Agency
Bridge on access track owned by EA.

Directions to Sandford Lock House

Postcode for Sat Nav: OX1 5RP – Sandford Lane, Kennington

From Kennington, turn into Sandford Lane. Follow Sandford Lane all the way to the end and there is a public parking area. From there you can walk over the bridge to the lock. The lock house is on the left as you reach the lock. For vehicular access you will need a 16B key to open the gate at the bridge. Parking is beside the lock house.

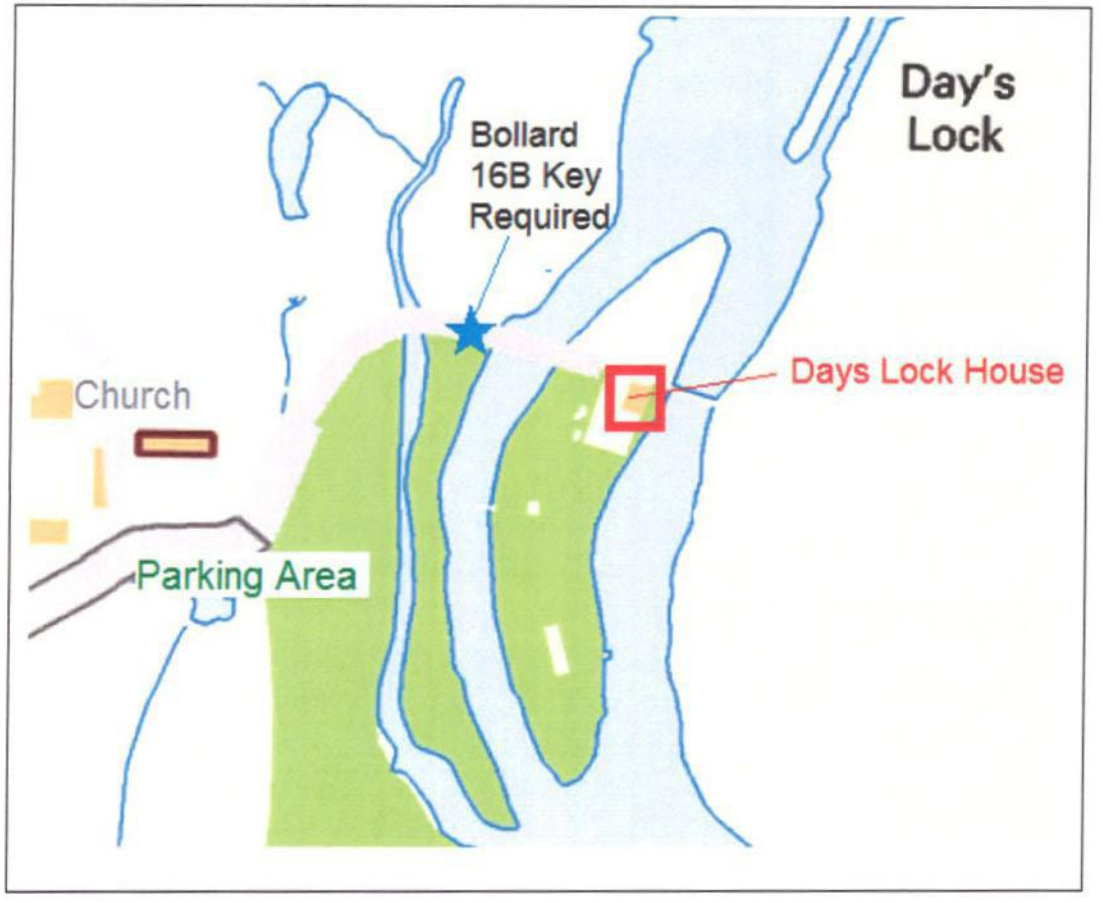


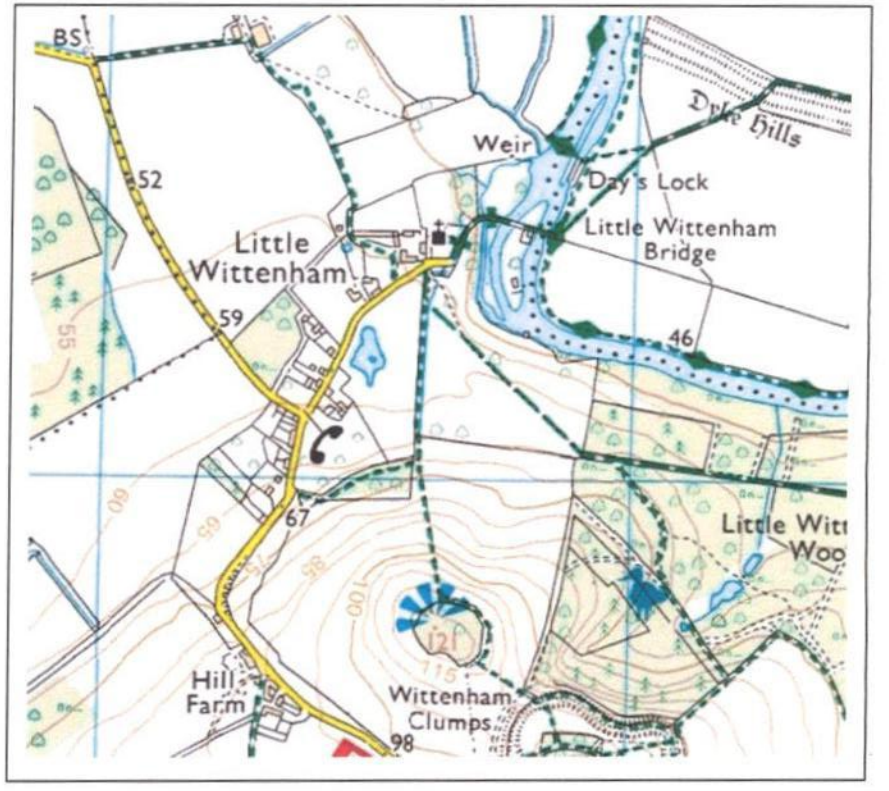


Directions to Days Lock House

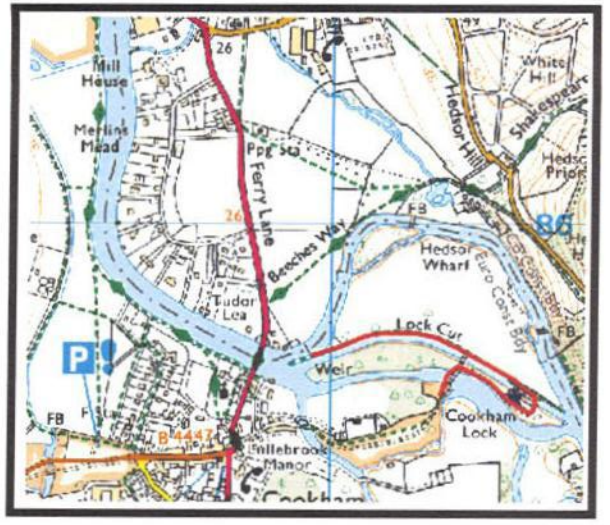
Postcode for Sat Nav: OX14 4RA

Arrive in Little Wittenham and proceed towards the church. Parking at Days Lock is very limited, so it is advisable to park at the church and walk down the lane to the lock house. The lock house is on the right side of the lane on the island. If driving, you will need a 16B key to open the bollard.

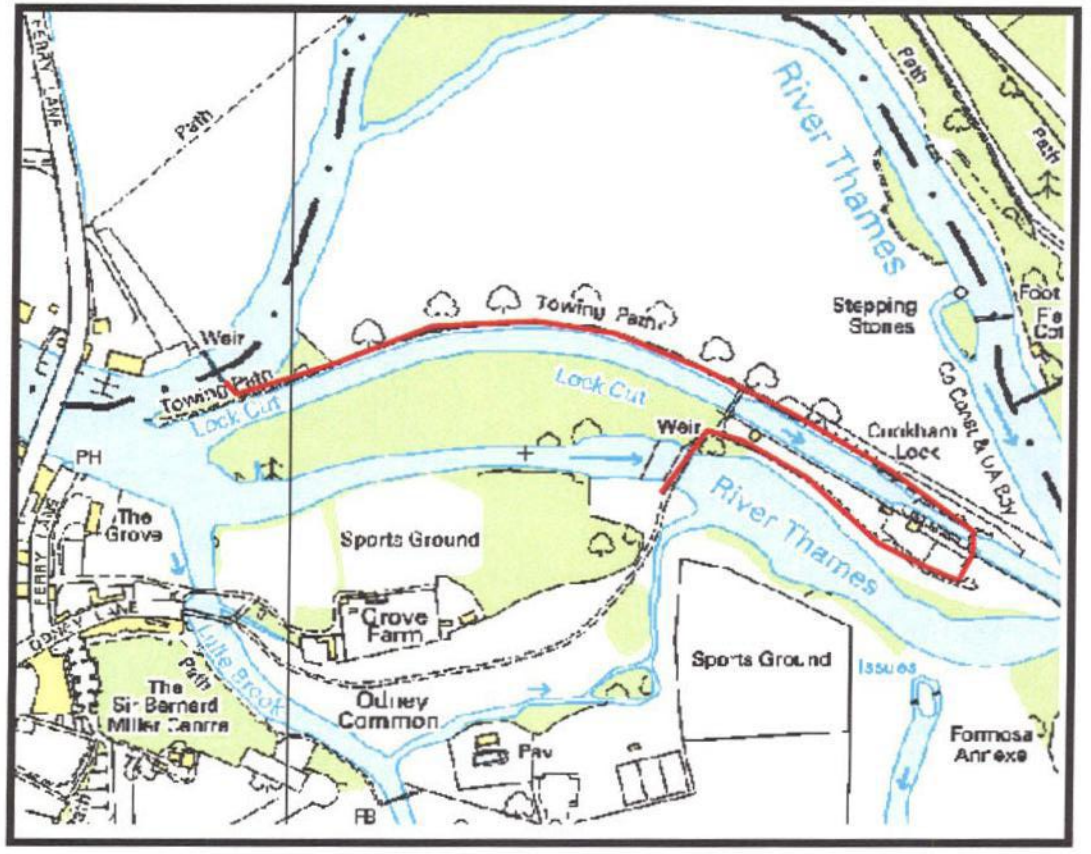




Cookham Lock



Map Key:
Access Track
Location



General Information
Lock Keeper: Adam Benge
Contact Number: 01628 520752 07901 517588

Access Track Information
Track Length: : Long
Parking Facilities:
Drive over bridge at Odney Lane across Odney Common and park up at Weir

Other Information:
Take the **M40**, exit **M40** (junction **4**) then at roundabout take 5th exit onto **A404**, branch left, at roundabout take 1st exit onto the **A4155**.
At roundabout take 2nd exit onto **A4094**.
Turn left onto Odney Lane.

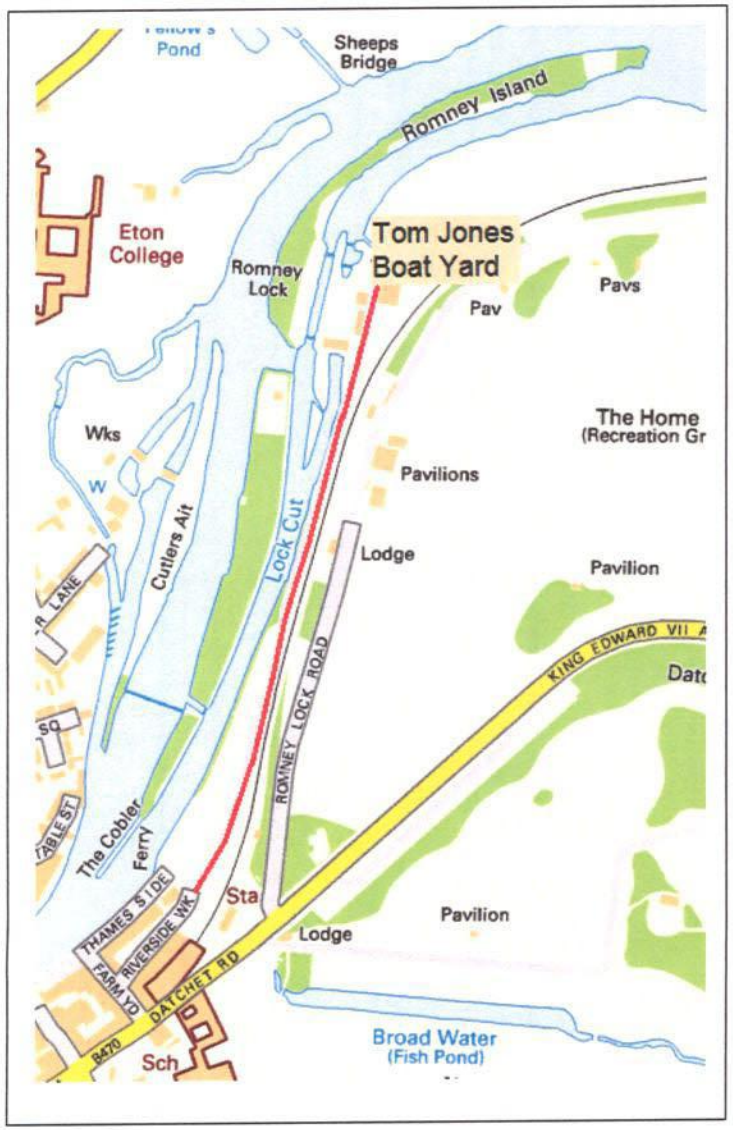
Access Restriction Information
16B key required

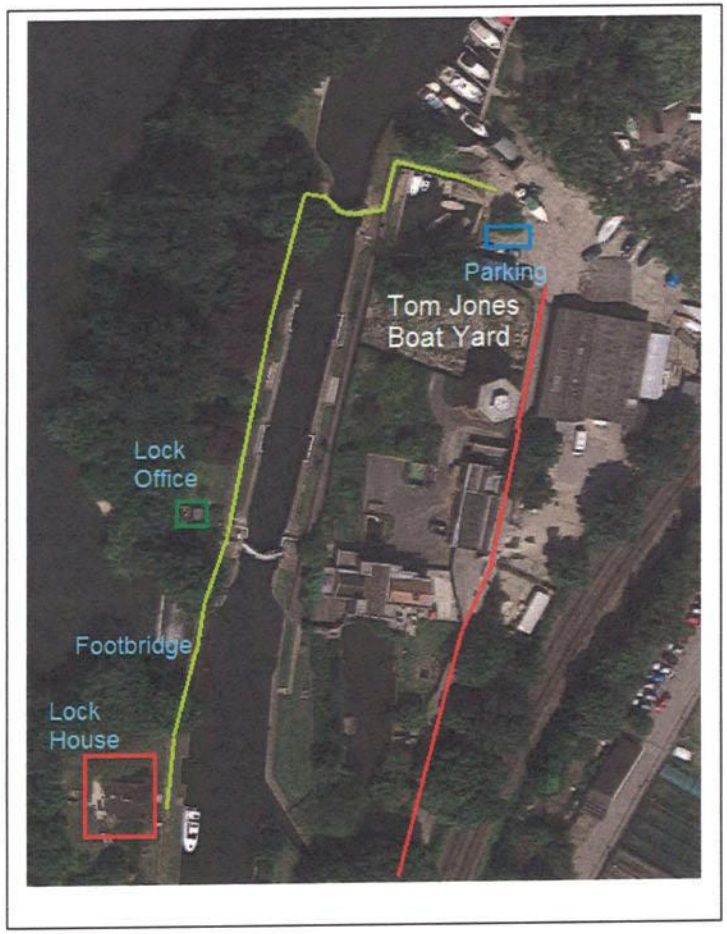
Track to Lock side
Lock Grid Ref: SL6 9QT SU 90550 85465
British National Grid: 490550, 185465

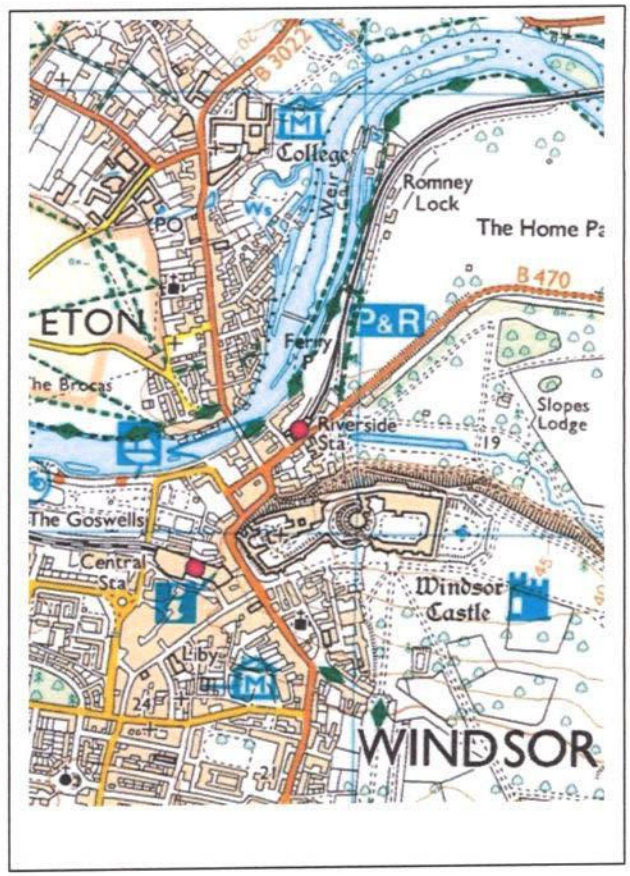
Car park Grid Ref: SL6 9SZ

Directions to Romney Lock

Postcode for Sat Nav: SL4 6HU From the B470 Datchet Road, Windsor – turn into Farm Yard, next to the Windsor & Eton Riverside train station. From Farm Yard, turn right into Riverside Walk and follow the track. Do not turn into the public car park, keep following the track between the car park and the railway and follow signs for the Tom Jones Boat Yard. On arrival at the boat yard you must ask the boat yard owners for permission to park. From the boat yard, proceed through the gate and over the pedestrian bridge to the lock. Cross over the lock gates, walk past the lock office and over the weir footbridge to get to Romney Lock House.







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