**Archaeological recording to test pits
dug at St. Catherine Lock, Godalming
Navigation, Artington, Surrey**

NGR: SU 9958 4772

**by
Christopher K Currie
BA (Hons), MPhil, MIFM, MIFA
CKC Archaeology**

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Summary statement

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Test pits excavated at St Catherine's Lock failed to come up with any evidence that the concrete sides acted as a facing for earlier brick sides. Substantial horizontal timbers were found behind the concrete suggesting that these were part of a bracing structure to help support an earlier timber revetment. A document in the Godalming Navigation records tells how the timber sides of the lock chamber were replaced by concrete in 1909. Previously interpretation of this record was that it was incomplete, and failed to mention that the concrete was merely a facing to a brick structure. This work has conclusively shown that this was not the case, and, at this particular lock, the conversion from timber lock chambers to concrete was direct, without any intervening brick stage. References to brickwork at this lock now seems certain to relate to the aprons and flooring of the lock, but not to the chamber sides.

Archaeological recording on test pits at St. Catherine Lock, Godalming Navigation, Artington, Surrey (NGR: SU 9958 4772)

This report has been written based on the format suggested by the Institute of Field Archaeologists' *Standard and guidance for archaeological watching briefs* (Birmingham, 1994). The ordering of information follows the guidelines given in this document, although alterations may have been made to fit in with the particular requirements of the work.

1.0 Introduction

Test pits were excavated behind the lock chamber walls at St. Catherine's Lock, Artington, near Guildford, Surrey (NGR: SU 9958 4772) in October 2001 by the National Trust. The lock is part of the Godalming Navigation, itself part of the River Wey Navigations, a National Trust property. The purpose of the test pits was to discover if the concrete concealed brick sides so that accurate reinstatement could be carried out. The work was carried out by C K Currie of CKC Archaeology.

2.0 Historical background

St. Catherine's Lock is within the parish of Artington, about 2km south of Guildford, in a rural location. It takes its name from the nearby St. Catherine's Hill, on which stand the ruins of a medieval chapel dedicated to that saint. It was the second lock, moving upstream from Guildford, on the Godalming Navigation. This artificial channel was constructed from 1760 to link Guildford with the market town of Godalming for river transport. In the 1650s a man-made navigation, the River Wey Navigation, had linked the River Thames with the town of Guildford, a distance of about 17 miles. The Godalming Navigation extended navigation on the Wey by a further four and a half miles. It utilised a mixture of natural channel with artificial cuttings. It had four locks on it at Millmead (Guildford), St. Catherine's, Unstead, and Catteshall. It is thought that the locks had been completed by 1764 (Currie 1996).

The Godalming Navigation declined in use over the later half of the 19th century, and was little used for commercial traffic after 1921. Commercial barges ceased visiting Godalming in the 1920s, and only outbreak of the Second World War helped maintain a minimal traffic into the 1940s. In 1968 the waterway was given to the National Trust, who maintain it mainly for the use of pleasure craft. St. Catherine's Lock has been much altered in the last 150 years. When filled with water, it appears to be a predominantly concrete structure with little early fabric visible.

The present fall of this lock is 3 feet (National Trust 1990, 24).

3.0 Strategy

The strategy for this work followed that laid down for previous archaeological investigations on the River Wey Navigations. These have been set out in Currie (1996; 1999), to which the reader is referred. These are based largely on the guidelines laid out in the Institute of Field Archaeologists *Standard and guidance for an archaeological watching brief* (1994) and

Standard and guidance for archaeological field evaluation (1994). They have been adopted by the author, who has often responded to the situations arising during routine maintenance on the River Wey Navigations.

In this case three small test pits were excavated behind the lock chamber walls. The purpose of these was to see if the concrete facings concealed a brick wall. If this was the case it was proposed to reinstate the walls in brick at the next round of scheduled maintenance for this lock. This had been successfully done at Millmead Lock, Guildford, the next lock downstream, in 2000 (Currie 2000). The pits were excavated by machine, with the archaeologist watching the procedure and directing the digging according to the discoveries made.

4.0 Results

4.1 Trench 1

This test pit was 1.6m E-W by 1.3m N-S, excavated on the east side of the lock. It was situated at the approximate join of the brickwork around the southern gate and the concrete of the lock chamber. It was excavated to a depth of approximately 1.2m. Beneath the turf a brick buttress was revealed about 0.38m square [context 05]. It was attached to a deep brick wall [context 06] that extended at a right angle to the side of the lock roughly in line with the northern end of the brickwork surrounding the lock gates. This was laid in English Bond. It extended the full 1.6m length of the trench. Both brick wall and buttress extended to the full depth of the pit, although traces of a rougher foundation to the buttress were just becoming apparent at the maximum depth of the trench.

Behind the concrete side of the lock chamber there was no trace of a previous brick wall. The back of the concrete wall [context 04], 0.45m wide, could be clearly seen. This contained two 0.05m steps at depths of 0.3m and 0.92m below the turf. Behind the concrete wall was about 0.25m of topsoil [context 01] followed by about a metre of brown sandy clay [context 02]. There was no trace of residual brick walling that would have been apparent through fragments of brick within the fill behind the concrete. At the bottom of the trench the soil turned into a dark grey, wet and very organic layer of silty clay [context 03]. Set in this was a substantial timber preserved by the waterlogged conditions. This was 0.25m maximum width, with a slightly tapered end. That part seen was 1.1m in length. It extended from a few centimetres to the east of the buttress, disappearing into the east baulk of the trench. It was exactly parallel with the brick wall, and about 0.25m to the north of it.

4.2 Trench 2

This test pit was 0.9m E-W by 0.8m N-S, excavated on the east side of the lock 8.8m in from the bridge at the north end of that same lock. It was excavated to a depth of about 1.4m at which point the trench bottom became waterlogged. The soil sequence behind the concrete lock wall [context 08] was the same as in trench 1. Topsoil [context 09] was followed by just over a metre of dumped sandy clay [context 10], which overlay dark grey silty clay [context 11]. In the bottom of the trench was another large timber [context 12], similar in size, shape

and alignment to that found in trench 1. It was set back about 0.54m from the edge of the concrete wall of the lock, roughly the same distance back from the wall as that found in trench 1. There was no trace of a brick wall, nor any sign of residual brick fragments in the clay dump behind the wall.

4.3 Trench 3

Trench 3 was excavated on the west side of the lock, about midway along the side of the lock chamber. It was 1m E-W by 1m N-S. The sequence of soils, topsoil [context 14], followed by sandy clay [context 15] and silty clay [context 16] was much the same as in the two previous trenches. The depth of the small 0.05m steps at the back of the concrete wall was at 0.4m and 0.94m. As in trenches 1 and 2, there were no traces of brickwork behind the concrete, or as residual materials in the dumped earth behind.

5.0 Discussion

The test pits revealed conclusively than there was no trace of a brick wall behind the concrete at St Catherine's Lock. If there had previously been brickwork here, it would be expected that the dumped soil behind the concrete would contain traces of brick fragments within it. That no brick fragments were seen is highly suggestive that there never was any brick structure in this part of the lock. Previous work at St Catherine's Lock had led this author to conclude that the lock chamber here could have been converted straight from timber to concrete, without an intervening brick stage (Currie 1997). The evidence found during this exercise seemed to confirm this idea.

Further evidence was forthcoming from the timbers found on the east side of the lock. If only one had been found, it might be considered that it was dumped here during previous repair works, and may have been a balancing beam discarded from a replaced gate. However, neither of the two timbers showed any sign of having deteriorated from the day they were fashioned. Both these timbers were made from moderate-sized tree trunks, and were laid exactly at right angles to the lock chamber. It is likely that they represent bracing timbers for the timber revetment once lining the face of the lock chamber. Without these, the pressure of the earth behind would cause the timber sides of the lock to bulge and become unstable. One would expect diagonal brace pieces set between the revetment and these horizontal beams as part of this support.

In the previous reports on St Catherine's Lock (Currie 1996, 1997), an account of the repairs at the lock carried out by the Stevens family in 1909 has been quoted from the family journal. This states that:

'The work included the demolishing of the existing timbers forming the sides of the Lock & replacing the same with concrete walls... The bottom of the Lock & the upper & lower aprons were not touched as they were built of bricks & were in a good state of preservation'

Although this seemed to be saying that the sides of the lock chamber had previously been in timber, and it was replaced at that time by concrete, there has always been much sceptism

that this is exactly what the quote meant. There has always been a suspicion that the concrete was merely a facing for a brick wall behind, as has been clearly proven by recent works at the neighbouring Millmead Lock (Currie 2000). This work has now shown that this quote should be taken quite literally, and that there was never any brickwork within the lock chamber at St Catherine's. This leaves the National Trust in a dilemma about future materials to be used in any reinstatement of the lock sides. The original hope was that the concrete could be removed and replaced with more aesthetically pleasing brickwork (as at Millmead). This present work has now shown that this would be historically incorrect. However, the alternative of using timber would require more management input, and might not be practical from a financial and maintenance point of view.

It is also worthy of note that the brickwork of the gate aprons appears to be early, possibly even original to the 1760's lock. This was suggested at the previous recording exercise (Currie 1997), and this work seems to bear this out. This could help explain the references to brickwork used on a number of the Godalming locks in its early days (ie brick was used on the aprons).

It might be suggested that parts of some of the Godalming Navigation locks may have always had a brick element, but the sides of the chambers may have been originally in timber. An order from the Commissioners dated as early as July 1768 states that John Woods was to look at St. Catherine's Hill lock, and 'to make his report of what is wanted to repair the Brickwork' (GMR 142/1/1, p. 248). In 1809 it was reported that two new pairs of gates were required at St. Catherine's Lock (GMR 142/1/2, p. 158), and again in 1859, when in addition new sides and a bottom were required at a cost of £300 (GMR 142/1/3).

In 1891 new upper gates were put up, and the sides repaired. It was also recorded at this time that the bottom of the lock was of brick (GMR 129/111/1). Further repairs were carried out in 1923, 1932 and 1935 (GMR 137/12/40, p. 26).

This present work now seems to tie in exactly with the records of repairs to the lock, clarifying our understanding of its original construction and subsequent evolution.

6.0 Conclusions

Test pits excavated at St Catherine's Lock failed to come up with any evidence that the concrete sides acted as a facing for earlier brick sides. Substantial horizontal timbers were found behind the concrete suggesting that these were part of a bracing structure to help support an earlier timber revetment. A document in the Godalming Navigation records tells how the timber sides of the lock chamber were replaced by concrete in 1909. Previously interpretation of this record was that it was incomplete, and failed to mention that the concrete was merely a facing to a brick structure. This work has conclusively shown that this was not the case, and, at this particular lock, the conversion from timber lock chambers to concrete was direct, without any intervening brick stage. References to brickwork at this lock now seems certain to relate to the aprons and flooring of the lock, but not to the chamber sides.

7.0 Recommendations

This recording exercise has been particularly useful in helping to understand the constructional history of the locks on the Wey and Godalming Navigations. It has shown that assumptions on how the locks were made should not be allowed to colour our judgement, particular where works connected with achieving historical authenticity are concerned. These discoveries have vindicated the usefulness of archaeology. The management are recommended to continue with their on-going programme of archaeological recording in conjunction with river maintenance.

8.0 Archive

The archive for this work has been deposited with the client. Copies of the report were lodged with the client (at the Estates Advisory Office, Cirencester, Glos, Polesden Lacey, Dorking, Surrey and the Navigation Headquarters at Dapdune, Guildford, Surrey), the Surrey County Sites and Monuments Record (SMR), the Surrey Archaeological Society, Castle Arch, Guildford, and the National Monuments Record (NMR) at Swindon, Wiltshire.

9.0 Acknowledgements

Sincere thanks are given to all those involved with this project. Martin Archer is thanked for providing the machinery and organising the excavations on behalf of the National Trust. The machine operator and his banksman are thanked for the assistance they extend to the author.

10.0 References

10.1 Original sources at the Surrey History Centre (SHC):

These records were formerly at the Guildford Muniment Room (GMR). They were transferred to the Surrey History Centre at Woking after 1997. The accession numbers have remained the same, but in referencing 'SHC' should replace the previous 'GMR', with an additional 'G' added before the number to recall their original allocation.

SHC G129/111/1; Stevens' family accounts of repairs etc, 1861-1893
SHC G137/12/40; Stevens' family accounts of repairs etc, 1906-1936
SHC G142/1/1-4; Minutes of meetings of Commissioners of Godalming Navigation, 1760-1900

10.2 Secondary sources

C K Currie, *A Historical and Archaeological Assessment of the Wey and Godalming Navigations and their Visual Envelopes*, unpublished report to the National Trust (Southern Region), 1996

C K Currie, *Archaeological recording on repair works at St. Catherine Lock, Godalming Navigation, Artington, Surrey,* unpublished report to the National Trust (Southern Region),

1997

C K Currie, *Project Design for archaeological rescue work*, unpublished report, 1999

C K Currie, *Archaeological recording at Millmead Lock, Guildford, Surrey,* unpublished report to the National Trust (Southern Region), 2000

Institute of Field Archaeologists, *Standard and guidance for an archaeological watching brief*, Birmingham, 1994

Institute of Field Archaeologists, *Standard and guidance for archaeological field evaluation*, Birmingham, 1994

The National Trust, *River Wey Navigations. A guide to the Wey and Godalming Navigations*, London, 1990

Appendix 1: list of contexts excavated

Context no.	Description	Munsell colour
01	T/1; sandy clay loam layer	10YR 4/2
02	T/1; sandy clay layer	10YR 5/4
03	T/1; silty clay layer	2.5Y 3/0
04	T/1; concrete wall	
05	T/1; brick buttress	
06	T/1; brick wall	
07	T/1; large timber	
08	T/2; concrete wall	
09	T/2; sandy clay loam layer	10YR 4/2
10	T/2; sandy clay layer	10YR 5/4
11	T/2; silty clay layer	2.5Y 3/0
12	T/2; large timber	
13	T/3; concrete wall	
14	T/3; sandy clay loam layer	10YR 4/2
15	T/3; sandy clay layer	10YR 5/4
16	T/3; silty clay layer	2.5Y 3/0

Appendix 2: catalogue of photographs taken during recording

All the photographs listed below were taken in both colour print and slide transparency at the request of the client. They were deposited in the National Trust River Wey Navigations photographic archive kept at the Navigations' Headquarters, Dapdune Wharf, Wharf Lane, Guildford, Surrey (Tel. 01483-561389). The archive is publicly accessible by appointment with the Property Manager.

This film sequence is prefixed CKC01/1 to distinguish it from previous films taken by the author on the Navigations.

1. Trench 1, east facing section of completed trench showing back of concrete wall and brick buttress, from E
2. ditto
3. Trench 1, north facing section of completed trench showing brickwork and timber, from N
4. ditto
5. Trench 3, west facing section of completed trench showing back of concrete wall, from W
6. ditto
7. Trench 2, south facing section of completed trench showing back of concrete wall and buried timber, from S
8. ditto

Appendix 3: glossary of archaeological terms

Archaeology: the study of man's past by means of the material relics he has left behind him. By material relics, this means both materials buried within the soil (artefacts and remains of structures), and those surviving above the surface such as buildings, structures (e.g. stone circles) and earthworks (e.g. hillforts, old field boundaries etc.). Even the study of old tree or shrub alignments, where they have been artificially planted in the past, can give vital information on past activity.

Baulk: an area of unexcavated soil on an archaeological site. It usually refers to the sides of the archaeological trench.

Context: a number given to a unit of archaeological recording. This can include a layer, a cut, a fill of a cut, a surface or a structure.

Evaluation: a limited programme of intrusive fieldwork (mainly test-trenching) which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified land unit or area. If they are present, this will define their character, extent, and relative quality, and allow an assessment of their worth in local, regional and national terms.

Munsell colour: an objective method of defining soil colour using a specially designed colour chart for soils. The reading defines hue (an objective description of colour; eg YR means yellow-red), value (darkness or lightness of the colour) and chroma (the greyness or purity of the colour). For example 10YR 3/2 is a dark grey-brown.

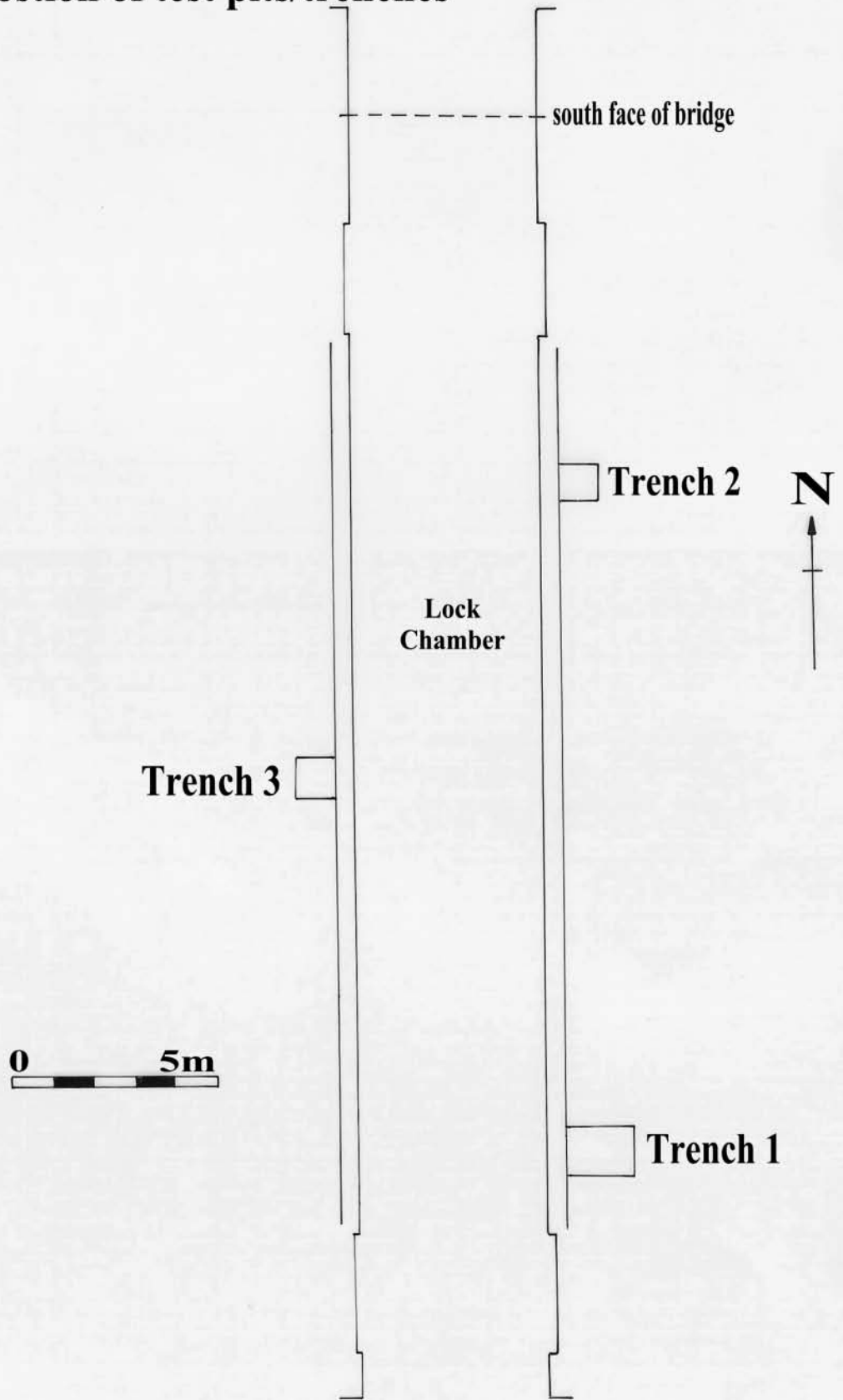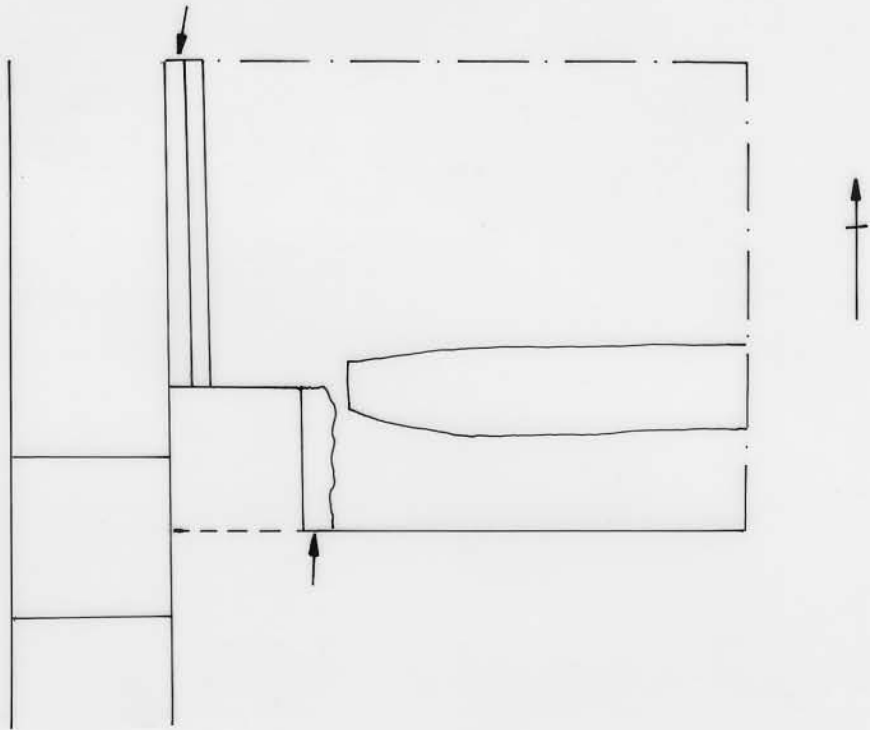**Fig. 2: plan of St Catherine's Lock showing postion of test pits/trenches**

south face of bridge

Trench 2

N

Lock
Chamber

Trench 3

0   5m

Trench 1

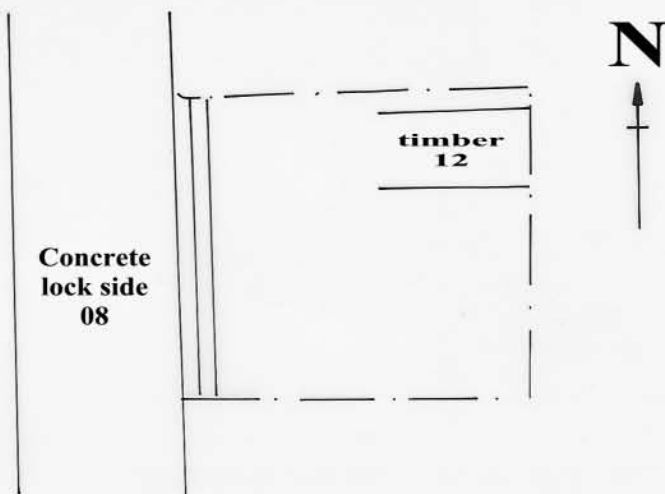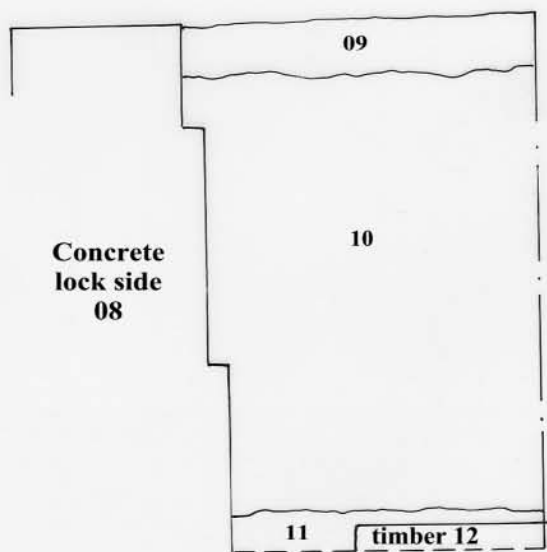# Fig. 3: Trench 1 plan & section

Plan

South facing section

0   1m
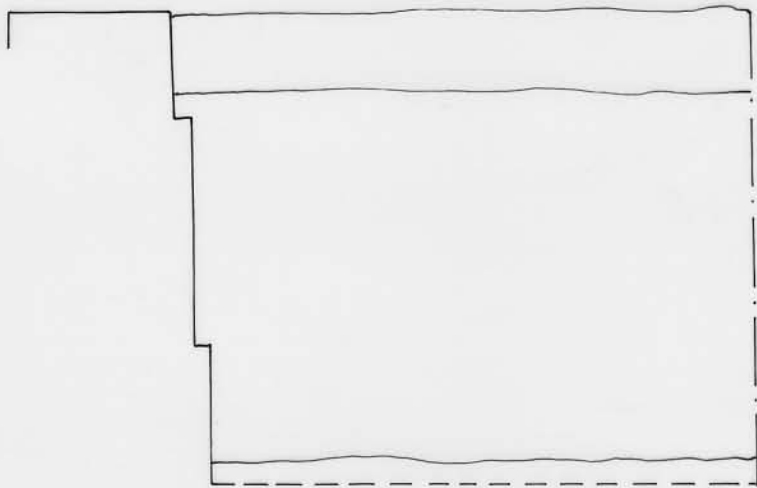
Fig. 4: Trench 2 plan & section

Plan

N

timber
12

Concrete
lock side
08

South facing section

09

Concrete
lock side
08

10

11   timber 12

0   1m