

**FORMER NITROVIT SITE,
TUMBLING FIELDS,
TIVERTON,
DEVON**

Archaeological Evaluation Report

Prepared on behalf of
**Devonshire Homes
Pyramid House
Tiverton Way
Devon**

EX16 6TG

by
Wessex Archaeology
Portway House
Old Sarum Park
Salisbury
Wiltshire
SP4 6EB

Report reference:

65210.02

March 2007

**FORMER NITROVIT SITE,
TUMBLING FIELDS,
TIVERTON,
DEVON**

Archaeological Evaluation Report

Contents

1	INTRODUCTION	1
	1.1 Project Background	1
	1.2 Geology and Topography	1
2	ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	1
3	AIMS AND OBJECTIVES.....	2
4	METHODOLOGY	2
5	RESULTS.....	2
	5.1 Introduction.....	2
	5.2 Results by Trench.....	3
	<i>Trench 1.....</i>	<i>3</i>
	<i>Trench 3.....</i>	<i>3</i>
	<i>Trench 4.....</i>	<i>3</i>
6	FINDS	4
	6.2 Artefacts.....	4
	6.3 Animal Bone	4
7	ENVIRONMENTAL.....	5
8	DISCUSSION/CONCLUSION	5
9	REFERENCES	6

APPENDICES

Appendix 1 Trench Tables

FIGURES

Cover Aerial photograph of the Site, c. 1970

Figure 1 Site and trench location

**FORMER NITROVIT SITE,
TUMBLING FIELDS,
TIVERTON,
DEVON**

Archaeological Evaluation Report

Summary

Wessex Archaeology was commissioned by Devonshire Homes to carry out an archaeological evaluation in advance of development at the former Nitrovit site, Tumbling Fields, Tiverton, Devon (hereafter the Site). The Site is centred on Ordnance Survey NGR 295480 112190.

The evaluation demonstrated that extensive modern disturbance from site use/demolition and extant remains of the 19th/20th century industrial complex survive across the Site to a depth of 1-1.2m depth below ground level (BGL). Post-medieval made ground deposits survive beneath this to a minimum depth of 2m BGL across the Site; these are likely to represent levelling or fill deposits for the purpose of raising the ground level above the floodplain, effectively terracing the bank of the River Loman with imported material. Artefactual evidence suggests that this remodelling is likely to have occurred during the late Victorian period.

No evidence of the historically attested mill complex, or any remains pre-dating them were encountered, and no artefacts pre-dating the later post-medieval were identified. It possible that remains of an earlier date survive buried beneath the extensive made ground deposits covering the Site. However, in view of the depth of the made ground present, the Curator decided that these were unlikely to be affected by the proposed development.

**FORMER NITROVIT SITE,
TUMBLING FIELDS,
TIVERTON,
DEVON**

Archaeological Evaluation Report

Acknowledgements

Wessex Archaeology would like to thank Devonshire Homes for commissioning the project; Steve Russell and Steve Taylor in particular are thanked for their assistance. Wessex Archaeology would also like to acknowledge the advice of Steve Reed, Assistant County Archaeologist to Devon County Council. Special thanks go local resident Jane Evans for kindly providing the aerial photograph shown on the cover of this report.

The fieldwork was carried out by Jon Martin with the assistance of Naomi Hall, Dave Murdie and John Smith. The illustrations were prepared by Linda Coleman. The project was managed by Brigitte Buss on behalf of Wessex Archaeology.

**FORMER NITROVIT SITE,
TUMBLING FIELDS,
TIVERTON,
DEVON**

Archaeological Evaluation Report

1 INTRODUCTION

1.1 Project Background

1.1.1 Wessex Archaeology was commissioned by Devonshire Homes to carry out a programme of archaeological evaluation to assess the potential for the survival of below ground archaeological remains at the former Nitrovit site, Tumbling Fields, Tiverton, Devon (hereafter the Site). The Site was centred on Ordnance Survey NGR 295480,112190. The work was required by a planning condition imposed by the Local Planning Authority (Planning Application No. 04/01900 FULL).

1.1.2 The Site comprises a sub rectangular area totalling approximately 0.9 ha and is bounded to the west by properties fronting on to St Andrews Street, to the north by Great Western Way, Tumbling Fields Road to the north east and the River Lowman to the south east. The eastern and southern part of the development area lies within a 100 year flood zone and therefore no development was proposed in this area, leaving a total development area of approximately 0.4ha.

1.2 Geology and Topography

1.2.1 The British Geological Survey map of the area (Sheet 310, Tiverton) indicates that the Site is underlain by alluvial silt and gravel formed in the floodplain of the River Lowman which in turn overlies bedrock of Permian and Triassic sandstone. The Site is broadly level with a gentle slope to the southeast towards the river. At the time of the fieldwork, the Site was covered with a mixture of concrete slabs, old asphalt hard-standing and overgrown rough ground. An electricity sub station was extant in the middle of the Site and a former wall of the now demolished mill building formed part of the Site boundary to the west.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1.1 The Site has been the subject of a Desk-based Archaeological Assessment (Exeter Archaeology, 2001) which identified that a mill (the Hob House fulling mill) existed on the Site from at least 1622 although it is possible that the Site may also have been the location of a mill mentioned in the

Domesday Book. By 1796 the mill was in use as a flour mill and was rebuilt after a fire in 1850. The mill was converted to a provender (fodder) mill in the late 19th century and appears to have remained in this usage apart from a period in World War II when it reverted to flour milling. In 1969 it was bought by Yeoman's Associated Foods who made animal feed under the Nitrovit brand name. The mill finally closed in 1987 and the buildings (formerly Listed Grade 111) were demolished. A full discussion of the history of the Site can be found in Archaeological Assessment of Land at Tumbling Fields, Tiverton, Devon, Exeter Archaeology, 2001.

3 AIMS AND OBJECTIVES

- 3.1.1 The aim of the evaluation was to elucidate the character, distribution, extent, importance and state of preservation of any archaeological remains within the Site, particularly those forming part of the historic mill complex.

4 METHODOLOGY

- 4.1.1 A Written Scheme of Investigation (WA doc ref **T10591.01**) was prepared by Wessex Archaeology prior to the commencement of fieldwork, and approved by Devon County Council. The methodology laid out in therein will not be reiterated in full here.

- 4.1.2 Three of the four proposed evaluation trenches were excavated (Trenches 1, 3 and 4, see **Figure 1**). The excavation of Trench 2 was abandoned rather than re-sited due to the high presence of on-site constraints (including live below ground services, mature vegetation and concerns regarding the undermining of standing wall footings). Further alterations to the proposed trench locations were as follows:

- Trench 1 was re-sited 7m to the west to avoid mature vegetation.
- Trench 4 was moved slightly southwards to avoid a high voltage electricity cable crossing the proposed trench location

- 4.1.3 In order to safely excavate to a depth of 2.0m trenches were stepped in by 1m at a depth of 1.20m. Machining of Trenches 2 and 3 was stopped at a depth of approximately 1.8m as the trenches flooded at this point.

- 4.1.4 The trial trenches were surveyed on the ground using a Leica GPS 1200 and were located on the Ordnance Survey grid.

5 RESULTS

5.1 Introduction

- 5.1.1 A high level of disturbance of the Site, both from previous industrial use and the demolition of these facilities was in evidence during the fieldwork. The site remained partly occupied by piles of demolition debris, and concrete slabs, which formerly may have contained storage tanks.

- 5.1.2 Due to the extensive depth of made ground across the Site, none of the trenches reached natural geology.
- 5.1.3 Details of all trenches are tabulated in **Appendix 1**.

5.2 Results by Trench

Trench 1

- 5.2.1 Although Trench 1 was repositioned, it remained targeted on the southern edge and backfill of the former mill leat (**Figure 1**). The trench was excavated to a total depth of 2m below ground level (BGL). An irregular layer of modern demolition debris **102** was noted running from northwest to southeast across the trench at a depth of 0.12m to 1.16m. Beneath that, late post-medieval modern ground, mostly consisting of sand and gravel with some artefactual inclusions, continued to the trench base. The latter may represent levelling/fill deposits from a late post-medieval remodelling of the Site. Small quantities of animal bone, mostly sheep metapodials were recovered from the lower fills, such as **103**. No evidence of the mill race was encountered.

Trench 3

- 5.2.2 The position of Trench 3 was retained, and its dimensions were extended to measure 6.6m x 9.0m in plan. The trench had been targeted on the front wall of the Mill (at the point where the leat exits the building) (**Figure 1**). The wall, **303**, was located at a depth of c1.0m BGL; no evidence of the leat was found. The fabric of the wall consisted of roughly faced red sandstone blocks with occasional red brick fragments. It ran approximately northeast to southwest and matched the historically mapped outline and the building remains surviving above ground in materials and construction, which were deemed to be of a 19th century date. A small area of cobbling survived adjacent to the wall (see **Inset photo, Figure 1**). The pottery finds in this trench spanned in date from late 18th century to the Victorian date period.
- 5.2.3 A 2.0m wide machine sondage was dug through wall **303** and its construction cut. No remains of any earlier phases of the building were identified beneath it. Sand and gravel layer **309** underneath the wall contained similar late 18th and 19th century pottery, brick and animal bone inclusion as those identified in the backfill of foundation cut **302**, indicating these to be broadly contemporary. Layer **309** was very similar to the layers recorded in Trench 1 and contained identical inclusions of sheep foot bones, suggesting a wide distribution of these made ground deposits across the Site.

Trench 4

- 5.2.4 Trench 4 was re-sited approximately 11m south of its proposed location due to the presence of live services in its proposed position. In order to retain the targeting of the leat and mill remains, the trench dimensions were extended to a length of 14.0m. Following an on-site meeting with the Curator, the southeastern extent was extended by a further 2m in order to maximise the potential exposure of the leat in this area.

5.2.5 The trench was excavated to a total depth of 1.9m. No evidence of a mill leat or of any other archaeological features were observed. In common with Trenches 1 and 3 all excavated layers consisted of made ground containing late 18th and 19th century pottery, brick, slate and glass. Layer **405** consisted of gravelly sandy silt similar to those encountered in the lower depths of Trenches 1 and 3 (layers **103** and **309**) and, again, contained abundant quantities of animal bone, mostly sheep metapodials.

6 FINDS

6.1.1 Finds were recovered from eight separate contexts within the three evaluation trenches excavated. All are of post-medieval date. Quantities by material type and by context are presented in **Table 1**.

6.2 Artefacts

6.2.1 More closely datable types within the assemblage (pottery, glass) indicate that the finds have a probable date range of 17th to 19th century, although some items could be slightly earlier. Pottery types include coarse redwares (including North Devon gravel-tempered ware), Staffordshire-type slipware, Westerwald stoneware, white saltglaze, and modern refined wares. The glass includes green bottle glass, some of which could be of late 17th /early 18th century date (layer **309**).

Table 1: All finds by context (number / weight in grammes)

CBM = ceramic building material

Context	Animal Bone	CBM	Clay Pipe	Glass	Pottery
105	11/70				2/25
303		1/353			
308		1/13		1/31	
309	3/20	1/129	4/11	2/128	19/706
310		2/92			
403	3/40	1/29		1/114	11/223
404	3/47	1/170			5/152
405	126/3007				
unstrat.					1/51
TOTAL	146/3184	7/786	4/11	4/273	38/1157

6.3 Animal Bone

6.3.1 The 133 bones recovered as a sample consist of 127 sheep (no positive goat) metapodials. Metacarpals and metatarsals are equally represented. Most bones have a fused distal epiphysis. Some clearly represent the legs of one animal. No cut marks were seen. The overall preservation of the bones is fair, but some are in a poorer condition with laminating bone surfaces. Some proximal and some distal articulations are worn.

- 6.3.2 It is likely that the assemblage derives from a re-deposited knuckle-bone floor. The fact that some are worn on the proximal and some are worn on the distal end suggests that the pattern created involved both shapes. Another possibility is that the bones were used to mark flower beddings. In both cases, the bones originally represent tawing waste as the feet were commonly left attached to the skins (tawing is the process of making leather using alum, as distinct from tanning, which originally used only vegetable tanning agents). The sample contained only one phalange amongst 17 metapodials, and although this may reflect purely a bias of recovery, it at least suggests that the deposits do not derive from the tawing process itself. The use of animal bones as a decorative building material was a widespread practice in southern and south-western England in the late 17th /early 18th century (Divers, Killock & Armitage 2002).

7 ENVIRONMENTAL

- 7.1.1 No deposits with palaeo-environmental potential were encountered, and therefore no samples were retained.

8 DISCUSSION/CONCLUSION

- 8.1.1 The evaluation demonstrated that extensive modern disturbance from site use/demolition and extant remains of the 19th/20th century industrial complexes survive across the Site to a depth of 1-1.2m depth BGL. Post-medieval made ground deposits survive beneath this to a minimum depth of 2m BGL across the Site; these are likely to represent levelling or fill deposits for the purpose of raising the ground level above the floodplain, effectively terracing the bank of the River Loman with imported material. Artefactual evidence suggests that this remodelling is likely to have occurred during the late Victorian period, possibly following the historically attested fire in 1850.
- 8.1.2 The made ground deposits features layers of sand and gravels with very large quantity of sheep foot bones, which appear to represent the redeposited remains of a post-medieval knuckle-bone floor of unknown provenance. The material is strictly *ex situ* and provides no further potential for analysis.
- 8.1.3 No evidence of the historically attested mill complex, or any remains pre-dating them were encountered, and no artefacts pre-dating the later post-medieval and modern periods were identified. It possible that remains of an earlier date survive buried beneath the extensive made ground deposits covering the Site. However, in view of the depth of the made ground present, the Curator decided that these were unlikely to be affected by the proposed development.

9 REFERENCES

Exeter Archaeology 2001 *Archaeological Assessment of Land at Tumbling Fields, Tiverton, Devon*. EA Report No. **01.42**

Wessex Archaeology 2007: *Former Nitrovit Site, Tumbling Fields, Tiverton, Devon. Written Scheme of Investigation*. WA doc ref: **T10591.01**

APPENDIX 1: TRENCH TABLES

Trench 1	Height: Top of Trench 61.58m Base of Trench 59.54m	Length 8.00m Width 6.90m
context	Description	Depth
101	Topsoil, dark brown silty clay, sandstone pebbles	0.00-0.12m
102	Layer of modern demolition debris, dark greyish brown sandy silt loam with brick, glass, plastic etc	0.12-1.16m
103	Made up ground, orange sandy silt loam, contained animal bone	1.16-1.50m
104	Orange and yellow sand, rare sandstone inclusions. Fill of (107)	1.50-1.65m
105	Orange sandy silt loam, frequent sandstone gravel	1.50-2.10m
106	Orange loamy sand, gritty	2.01-2.07m
107	Possible cut, not visible in section. Modern fill (104).	Not known
108	Orange sand, very rare, small sandstone inclusions.	1.54-1.90m

Trench 3	Height: Top of Trench 60.83m Base of Trench 59.28m	Length 9.00m Width 6.60m
context	Description	Depth
301	Modern demolition debris containing brick and concrete	0.00-1.00m
302	Foundation trench for NNW-SSE oriented wall. Partially masked by deposit (306)	1.00-1.50m
303	NNW-SSE oriented wall, constructed of roughly faced red sandstone, rare red brick and a rubble core. Cut by modern pit (307) and modern trench (313).	0.00-1.40m
304	Mortar bedding for internal floor, original floor surface robbed out.	0.88-0.93m
305	Cobbled external yard surface, small area visible	0.90-0.98m
306	Greyish brown sandy silt. Dump layer overlies foundation trench, cut by pit (307). Contains CBM	1.00-1.10m
307	Cut for very recent (1990's?) modern pit, plastic in fill.	1.00m+
308	Fill of modern pit, contains plastic, slate, CBM etc	Not excavated
309	Reddish brown sandy silt, frequent sandstone inclusions, contained clay pipe, tin glaze and green glaze pottery. Cut by wall footing (302). Dump layer.	1.00-1.80m+
310	Reddish brown sandy silt, present in SE corner of trench, overlies (309). Dump deposit.	Not excavated
311	Layer of broken roof slate and charcoal, collapsed mill roof. Not seen on the cobbles, internal collapse?	0.73-0.96m
312	Fill of modern trench contains plastic, glass, CBM.	0.00-1.00m
313	Cut of modern trench, visible in SW corner	0.00-1.00m

Trench 4	Height: Top of Trench 60.52m Base of Trench 58.58m	Length 16.10m Width 5.10m
context	Description	Depth
401	Topsoil, dark greyish brown sandy silt, small sandstone pebbles.	0.00-0.30m
402	Reddish brown sandy silt loam, rare sandstone pebbles	0.30m-0.58m
403	Reddish brown sandy silt loam, abundant pebbles, contains slate, CBM, pottery, bone and mortar. Levelling layer, varies in depth.	0.58-0.88m
404	Sandy loam, gravely lenses, contains animal bone, CBM.	0.88m-1.40m
405	Gravelly layer revealed by extra dig. Contained pottery and CBM, also abundant quantities of animal bone (sheep metapodials)	1.40-1.80m+