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The Lands of Ancient Lothian

Interpreting the Archaeology of the A1

Olivia Lelong and Gavin MacGregor

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Interpreting the Archaeology of the A1

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This volume is dedicated to
Patrick Ashmore.

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Olivia Lelong and Gavin MacGregor
November 2007

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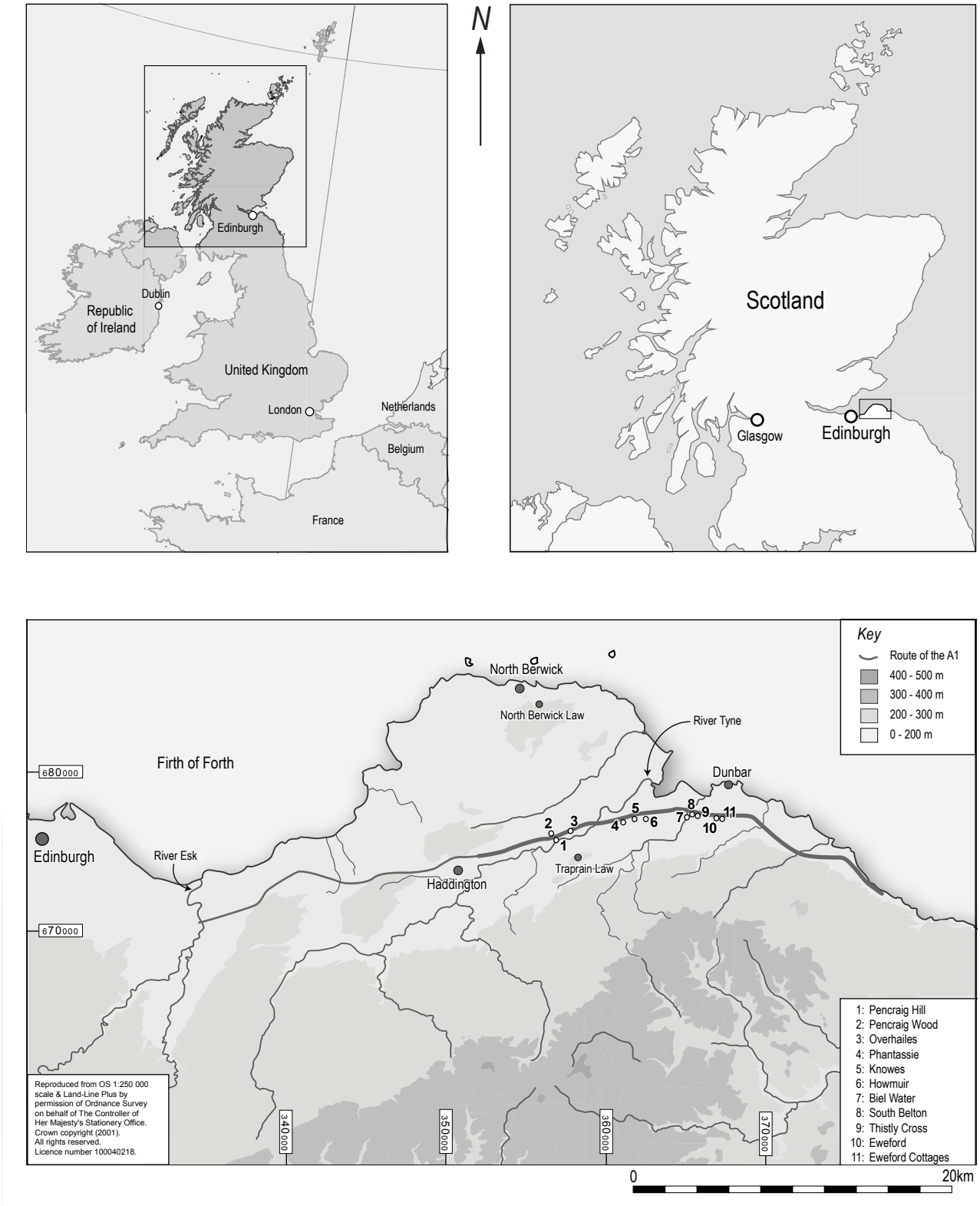


1.1 Location map of the A1 in East Lothian.

Abstract

From 2001 to 2004, a programme of archaeological work was conducted during upgrading of the A1 road to dual carriageway between Haddington and Dunbar in East Lothian. The work involved trial trenching, monitoring of topsoil stripping and excavation of 11 archaeological sites, carried out by Glasgow University Archaeological Research Division (GUARD). The sites ranged chronologically over a period of 5,000 years, from the early fourth millennium BC to the early first millennium AD. The work was funded by the Scottish Executive Trunk Roads Design and Construction Division and monitored by Historic Scotland.

Five of the sites yielded evidence of activity as early as the ninth millennium BC, in the form of microliths, or small stone points that made up composite tools used for hunting, while three produced radiocarbon dates ranging from the fifth to the eighth millennia BC. Two sites had securely dated evidence of use in the early fourth millennium BC. At Eweford West, between 3960 and 3370 BC, people brought human remains and Carinated Bowl pottery to the site; they also built and rebuilt a large mound capped with a stone cairn, and constructed a timber enclosure and successive mortuary structures, eventually destroying them by fire. During the same period (3950–3380 BC) at Pencraig Hill, another group built a mortuary structure and a large, trapezoidal, timber enclosure; they also brought the remains of their dead and burnt them on a pyre inside the enclosure.

Around the time that this phase of activity came to an end at both sites (3370–3190 BC), a line of pits was dug at Knowes, and Impressed Ware pottery and charcoal were packed into three of them. This division of space using pits later found much more complex expression at Eweford East where, between 2880 and 2230 BC, several generations built and elaborated two parallel lines of timber posts and a post-defined enclosure. These might have been used to channel or gather people or animals, perhaps for ceremonial processions or stock gathering.

Several of the excavated sites produced evidence for activities in differing social arenas during the second and third millennium BC, all involving the deposition of artefacts and human remains. Communities returned to the mound at Eweford West numerous times between 3020 and 1890, modifying the cairn, leaving stone tools and Beaker pottery and scattering huge quantities of burnt cereal at the site. At Overhailes, a light structure and possibly a yard stood at some time between 3340 and 2900 BC, and people dug two large pits and filled them with sherds of Fengate Ware pottery and imported stone tools. A thousand years later, between 2340 and 1740, a later generation built a timber building or circle at the same spot. Eweford West saw another sustained phase of ceremonial activity during the second millennium BC: human remains were cremated on a pyre at the site, burnt bone and charcoal were scattered on the ancient mound, a cairn and arcs of stone were built and cremated human bone was buried on over 20 occasions in a variety of arrangements – sometimes in pits, sometimes in or under large, elaborate urns, sometimes with fine objects such as a stone axe-hammer. Radiocarbon dates show people's activities here continued until about 1120 BC. The site of Pencraig Wood also saw at least sporadic activity during the second millennium BC: two pairs of pits holding cremated human bone and charcoal were dug and filled between 1500 and 1250 BC, along with other pits and post-holes.

The A1 excavations found evidence for various kinds of settlement, agriculture and ritual activity during the mid-second and first millennium BC. At Howmuir, post-holes and ditches, probably for field systems relating to nearby settlement, were used between 1910 and 1410 BC. Scoops were dug and filled with midden material at South Belton between 760 and 400 BC, and at some point during the same time span a cist was dug into the ancient, fourth-millennium BC mound at Eweford West and human remains were placed inside it. Between 410 and 200 BC a small homestead stood nearby at Biel Water, while at Eweford Cottages a large settlement enclosed by a ditch was established. This endured until perhaps AD 210, with the ditches filled in and the settlement becoming unenclosed after 40 BC. During this period, another cist was dug into the fourth-millennium BC mortuary site at Pencraig Hill, and again human remains were put inside it. Meanwhile, a farmstead sprung up at Phantassie as early as 210 BC, and it continued to develop into a crowded farming hamlet until it was abandoned by AD 340.

The different excavations produced evidence for widely varying arenas of social practice, from highly structured architectural forms linked to ceremony and mortuary ritual, to farming settlements that have left traces of the everyday lives of their inhabitants. In spite of these differences in the character of the evidence, certain common threads have also emerged from the disparate site, concerns that were expressed and manifested in different ways across more than four millennia. Some of these threads were concerns with sustaining life through farming and with the materials, such middens, querns and grain, and methods, such as sowing and midden spreading, that communities used to ensure the survival of each successive generation. Others were beliefs in the symbolic potency of fire and of certain objects, through their associations and resonances. The strongest thread to run throughout the evidence was the enduring perceived significance of certain places in the landscape, as generations returned to places that previous ones had created, altered and made their own.

The range and the quality of the evidence from the A1 sites allows a long-term themed approach to their study. This volume attempts to populate the excavated sites by presenting the story of human practice at each one and to place them in the context of their contemporary inhabited landscapes.

Résumé

De 2001 à 2004, un programme de fouille a été réalisé à l'occasion de travaux d'aménagement routier sur l'A1, entre Haddington et Dunbar dans la région d'East Lothian, Ecosse. Les travaux ont permis à GUARD (Glasgow University Archaeological Research Division) d'effectuer un contrôle systématique du décapage des sols, d'entreprendre des sondages sous forme de tranchées et de fouiller onze sites archéologiques. Les fouilles ont révélé des niveaux d'occupation couvrant une période de 5000 ans, du début du IV^{e} millénaire av. J.-C. jusqu'aux prémices du début du I^{er} millénaire. Les opérations de fouilles ont été financées par *Scottish Executive Trunk Roads Design* et la *Construction Division* et contrôlées par *Historic Scotland*.

Les fouilles de cinq sites ont manifesté plusieurs témoignages d'occupation attribués au IX^{e} millénaire av. J.-C, sous la forme de microlithes, ou petits projectiles en pierre utilisés sur des outils de chasse. Les fouilles de trois sites ont permis d'obtenir des dates radiocarbones s'échelonnant du V^{e} millénaire au VII^{e} millénaire av. J.-C. Deux chantiers ont confirmé une occupation datant du début du IV^{e} millénaire av. J.-C. Le site de Eweford West témoigne d'une activité datant de 3960 à 3370 av. J.-C. qui s'est concrétisée par la présence: de restes humains; de mobilier céramique de type-*Carinated Bowl*; d'un tertre surmonté d'un large cairn qui semble avoir été reconstruit plusieurs fois; d'un enclos circulaire composé d'une rangée concentrique de trous de poteaux; d'autres structures à vocation funéraire détruites par incendie. Au cours de la même période entre 3950 et 3380 av. J.-C., une phase d'activité à Pencraig Hill a fait apparaître les vestiges d'une structure funéraire et d'un large enclos composé de rangée de trous de poteaux en plan trapézoïdale et aussi la découverte de restes humains ayant été incinérés sur un bûcher au centre de l'enclos.

Au cours de la période de 3370 à 3190 av. J.-C., qui voit la fin de l'occupation des deux sites, un alignement de fosses, contenant du mobilier céramique de type-*Impressed Ware* et des charbons de bois, a été édifié à Knowes. Cette division de l'espace par des fosses a été observée de manière bien plus complexe sur le site de Eweford East où, entre 2280 et 2330 av. J.-C., plusieurs générations ont construit et élaboré deux alignements parallèles de poteaux et un enclos délimité par des poteaux. Ces structures auraient pu être utilisées dans le but d'acheminer ou de regrouper des personnes ou animaux, et ce à l'occasion de processions rituelles ou de rassemblement de bétail.

Les fouilles de plusieurs sites ont mis en évidence une diversité d'activités de caractère social au cours du II^{e} et III^{e} millénaires av. J.-C.; mais, tous les sites comprenaient du mobilier et des dépôts mortuaires. Différentes communautés indigènes sont retournées sur le site d'Eweford West à de nombreuses occasions entre 3020 et 1890 av. J.-C., modifiant le cairn, abandonnant du mobilier lithique et céramique de type-*Beaker* et disséminant en grande quantité des céréales calcinées. Sur le site d'Overhailes, de 3340 à 2900 av. J.-C. une structure légère ainsi qu'un enclos furent implantés; deux larges fosses y ont été creusées dans lesquelles étaient placés des tessons de céramique de type-*Fengate Ware* et du mobilier lithique importé. Un millénaire plus tard, entre 2340 et 1740 av. J.-C., un bâtiment de bois sous forme d'enclos circulaire a été construit au même endroit. Eweford West a connu une nouvelle phase d'activité cérémoniale intense au cours du II^{e} millénaire av. J.-C. Elle s'est caractérisée par la présence d'ossements humains incinérés sur un bûcher, des ossement calcinés et des charbons de bois disséminés sur l'ancien tertre. Un cairn et un enclos circulaire en pierre y aussi ont été construits. Des ossements humains semble y avoir été incinérés, puis enterrés de manière éparse sur tout le site, ce, à une vingtaine d'occasions. Ces dépôts sépulcrales étaient soit disposés au fond d'une fosse, soit à l'intérieur ou sous une urne funéraire présentant des décorations détaillées. Le dépôt se composait en général de mobilier lithique (hache de pierre, marteau). Les dates radiocarbones ont montré que cette période d'activité s'est étendue jusqu'en 1120 av. J.-C. Le site de Pencraig Hill a démontré une activité sporadique au cours du II^{e} millénaire av. J.-C. Elle est marquée par l'existence de deux séries de fosses contenant des ossements humains incinérés avec charbons de bois datés de1500 à 1250 av. J.-C. Ces incinérations sont accompagnées de fosses et trous de poteaux.

Les fouilles ont permis de découvrir diverses occupations du sol, agricole et rituelle, dans une période qui va du milieu du II^{e} au Ie millénaire av. J.-C. Sur le site d' Howmuir, un système de drainage, composé de fosses et trous de poteaux, a pu être associé à un habitat de proximité datant de 1910 à 1410 av. J.-C. Les fouilles sur le site de South Belton ont révélé plusieurs emplacements utilisés pour l'enfouissement de déchets domestiques ayant pu servir d'engrais (*midden*). Cette activité s'échelonne sur environs 340 ans, de 760 à 400 av. J.-C. Durant la même période, un ciste a été édifié sur le tertre d'Eweford West dans lequel des ossement humains ont été placés. Entre 410 et 200 av. J.-C., un petit hameau s'est établi près de Biel Water, tandis qu'à Eweford Cottage, les traces d'une large habitation cernée d'un fossé ont été découvertes. Le remplissage du fossé a confirmé l'arrêt d'activité sur le site autour de 210 ap. J.-C. Un réaménagement du fossé provoquant une ouverture de l'enceinte qu'il créait s'est effectuée dans une période de 40 années avant J.-C. A la même période, un autre ciste a été découvert sur le site funéraire de Pencraig Hill, là aussi, avaient été placés des ossements humains. La fouille du site de Phantassie a mis en évidence l'existence d'un habitat agricole daté de 350 av. J.-C. Ce dernier s'est progressivement transformé en un large hameau agricole jusqu'à son abandon autour de 340 p. J.-C.

Les opérations de fouille ont permis l'identification de différentes pratiques sociales, prenant des formes architecturales complexes, associées à des rituels funéraires et cérémoniaux. L'occupation des sites a aussi laissé des traces de la vie quotidienne des communautés y vivant. Malgré la diversité des témoignages révélée sur chaque site, les fouilles ont aussi permis de mettre en valeur des points communs qui se sont exprimés et manifestés de manière différente pendant quatre millénaires. Un des points communs identifiable est la nécessité de subsistance qui s'est manifestée par la présence de mobilier agricole, comme les moulins à bras, des céréales et des traces de *midden*, et, par des techniques et méthodes agricoles comme les semailles ou l'utilisation de *midden*; ce, afin que chaque communauté puisse assurer la survie des générations futures. Un autre point commun liant ces communautés est l'importance symbolique attribuée au feu et à l'association et résonance de certains objets. Mais le point commun le plus fort, démontré au cours des fouilles, est l'influence considérable et constante de certains lieux où plusieurs générations retournent, là, où leurs ancêtres ont crée, construit et changé un paysage devenu le leur.

L'abondance et la qualité des données recueillies sur les sites ont permis d'alimenter un programme d'étude basée sur une approche thématique. Ce volume tente de réhabiter les sites fouillés en présentant leur histoire et pratiques et de les replacer dans un paysage contemporain.

Zusammenfassung

Von 2001 bis 2004 wurden beim Ausbau der A1 Landstraße zwischen Haddington und Dunbar in East Lothian archäologische Arbeiten durchgeführt. Dieses Programm umfaßte Versuchsgräben, Analysen der Bodenoberflächen und Ausgrabungen von elf Fundstellen und wurde von Glasgow University Archaeological Research Division (GUARD) ausgeführt. Diese Stellen boten eine zeitliche Skala von 5 000 Jahren dar, vom frühen vierten Jahrtausend v.Chr. bis zum frühen ersten Jahrtausend n.Chr. Die Arbeit wurde vom Scottish Executive Trunk Roads Design and Construction Division finanziert und von Historic Scotland überwacht.

Fünf der Fundstellen ergaben Aktivitätsbeweise bis ins frühe neunte Jahrtausend v.Chr., wie Mikrolithen oder kleine Steinspitzen für Jagdgeräte, während drei davon C14 – Daten vom fünften bis zum achten Jahrtausend v.Chr. ergaben. Zwei Fundstellen hatten fest datierte Gebrauchsspuren vom frühen vierten Jahrtausend v.Chr. Bei Eweford West wurden zwischen 3960 und 3370 v.Chr. menschliche Überreste und Carinated Bowl Keramik zu der Fundstelle gebracht. Die Menschen bauten wiederholt einen großen Hügel, gekrönt von einem Steinhaufen, und errichteten eine hölzerne Einfriedung und aufeinanderfolgende Grabstrukturen, die sie schließlich durch Feuer zerstörten. Während desselben Zeitraums (3950–3380 v.Chr.) errichtete bei Pencraig Hill eine andere Gruppe eine Grabstruktur und eine große hölzerne Einfriedung, wohin sie ebenfalls die Überreste ihrer Toten brachte und sie auf einem Scheiterhaufen verbrannte.

Als diese Aktivität an beiden Orten zu Ende kam (3370 –3190 v.Chr.), wurde eine Grubenreihe bei Knowes gegraben, und drei der Gruben wurden mit Impressed Ware Keramik und Holzkohle vollgepackt. Später wurde diese Raumteilung mit Gruben auf komplexere Weise bei Eweford East gefunden, wo zwischen 2880 und 2230 v.Chr. mehrere Generationen zwei parallele Reihen von Holzpfählen und eine von Pfählen begrenzte Einfriedung bauten, vielleicht zum Zweck des Hindurchleitens oder Versammelns von Menschen oder Tieren , vielleicht für zeremonielle Prozessionen oder für Viehherden.

Einige der ausgegrabenen Stellen zeigten Spuren von verschiedenartigen sozialen Bereichen aus dem zweiten und dritten Jahrtausend v.Chr., alle hatten jedoch die Einlagerung von Artefakten und menschlichen Überresten. Der Hügel bei Eweford West wurde zwischen 3020 und 1890 v.Chr. vielmals von einzelnen Gruppen besucht, die den Steinhaufen veränderten, Steingeräte und Beakerkeramik und außerdem große Mengen von verbranntem Getreide hinterließen. Bei Overhailes fand sich ein leicht umzäunter Bau, möglicherweise ein Lagerplatz, irgendwann zwischen 3340 und 2900 v.Chr. Zwei große Gruben wurden ausgehoben und mit Scherben von Fengate Ware und importierten Steinwerkzeugen verfüllt. Tausend Jahre später, zwischen 2340 und 1740, baute an derselben Stelle eine spätere Generation einen Bau oder Kreis aus Holz. Eweford West erlebte während des zweiten Jahrtausend ein weiteres anhaltendes Stadium zeremonieller Aktivität: menschliche Überreste wurden dort auf einem Scheiterhaufen verbrannt, verbrannte Knochen und Holzkohle wurden auf dem alten Hügel verstreut, und ein Steinhaufen und Steinbögen wurden errichtet. Verbranntes menschliches Gebein wurde bei mehr als 20 Anlässen in verschiedenen Anordnungen vergraben, teils in Gruben, teils in oder unter großen, kunstvollen Urnen, manchmal mit Beigaben, wie Steinäxte. C-14 Datierungen weisen eine kontinuierliche menschliche Tätigkeit bis ca. 1120 v.Chr. auf. Bei Pencraig Wood war während des zweiten Jahrtausend v.Chr. zumindest sporadische Aktivität sichtbar: zwei paarweise angeordnete Gruben mit verbrannten menschlichen Gebeinen und Holzkohle wurden ausgehoben und verfüllt zwischen 1500 und 1250 v.Chr., neben anderen Gruben und Pfostenlöchern.

Die A1 – Ausgrabungen fanden Anzeichen von verschiedenen Besiedlungsarten, ebenso landwirtschaftliche und rituelle Aktivitäten während der Mitte des zweiten und ersten Jahrtausend v.Chr. Bei Howmuir waren Pfostenlöcher und Gräben vermutlich für landwirtschaftliche Zwecke für naheliegende Siedlungen in Verwendung. Bei South Belton wurden zwischen 760 und 400 v.Chr. Höhlungen ausgegraben und mit Abfallmaterial verfüllt, und während dieser Zeitspanne wurde ein Höckergrab mit menschlichen Überresten in den alten, aus dem vierten Jahrtausend stammenden

Grabhügel bei Eweford West eingegraben. Zwischen 410 und 200 v.Chr. stand nahe bei Biel Water eine Wohnstätte, während bei Eweford Cottages eine große, von einem Graben umringte Siedlung errichtet wurde. Sie bestand bis vielleicht 210 n.Chr., nachdem nach 40 v.Chr. die Gräben zugeschüttet wurden, wodurch die Siedlung uneingezäunt war. Während dieser Zeit wurde ein weiteres Höckergrab in den alten Grabhügel bei Pencraig Hill eingegraben, wiederum mit menschlichen Überresten. Inzwischen entstand schon um 350 v.Chr. ein Gehöft bei Phantassie, das sich zu einem dicht besiedelten Weiler entwickelte, der dann um 340 n.Chr. aufgegeben wurde.

Die verschiedenen Ausgrabungen ergaben Hinweise auf sehr unterschiedliche soziale Nutzungen, angefangen von komplizierten, strukturierten Architekturfomen, verbunden mit Zeremonie und Begräbnisriten, bis zu landwirtschaftlichen Siedlungen, mit Spuren des alltäglichen Lebens ihrer Einwohner. Trotz dieser unterschiedlichen Befunde zeigten sich an den ungleichartigen Fundstellen Gemeinsamkeiten, Bedenken und Überlegungen, die auf verschiedene Weise über mehr als 4000 Jahre ihren Ausdruck fanden, wie das tägliche Leben in der Landwirtschaft mit dem Material, den Abfallhäufen, den Mahlsteinen und Cerealien und mit den Methoden, wie Aussaat und der Streuung von organischem Material (midden spreading) zu bewältigen war, sodaß nachfolgende Generationen überleben konnten.

Andere Überlegungen waren Glaubensbezeugungen an die Macht des Feuers und gewisser Objekte durch ihre Beziehungen zueinander. Das stärkste Motiv an allen Stellen war die anhaltende Bedeutung für die immer wieder kehrenden Generationen von gewissen Landschaftsteilen, die von früheren Geschlechtern geschaffen, verändert und in Besitz genommen wurden.

Das Ausmaß und die Qualität der A1- Fundstellen gewährt uns einen thematischen Forschungsansatz auf die lange Sicht. Dieser Band versucht, den Fundstellen ein menschliches Antlitz zu verleihen anhand der Geschichte der menschlichen Gewohnheiten, und sie in den Kontext ihrer zeitgenössischen Landschaften zu stellen.

Abstracto

Entre el 2001 y el 2004 un programa de trabajo arqueológico fue realizado durante las obras de mejora en la A1 entre Haddington y Dunbar en East Lothian. El trabajo supuso una serie de catas, control de la extracción de la superficie y la excavación de 11 yacimientos arqueológicos, realizados por la *Glasgow University Archaeological Research Division* (GUARD). Los yacimientos indican un periodo cronológico superior a los 5000 años, desde los inicios del cuarto milenio a.C. hasta los inicios del primer milenio d.C. Todos estos trabajos fueron fundados por la *Scottish Executive Trunk Roads Design and Construction Division* y supervisados por *Historic Scotland*.

Cinco de estos yacimientos muestran evidencias de actividad tan tempranas como el noveno milenio a.C., en forma de microlitos o pequeñas puntas de piedra que forman instrumentos compuestos para la caza. Otros tres yacimientos han producido fechas de carbono radiactivo entre el quinto y octavo milenio a.C. Dos yacimientos han dado evidencias fehacientes de su uso en los inicios del cuarto milenio a.C. En Eweford West, entre el 3960 y el 3370 a.C., restos humanos y cerámica *Carinated Bowl* fueron trasladados al yacimiento. Asimismo se construyó y reconstruyó un gran túmulo cubierto por un *cairn* de piedra y se edificó un vallado de madera y sucesivas estructuras mortuorias, quemándolo todo después. Durante el mismo periodo (3950–3380 a.C.) en Pencraig Hill, un grupo construyó una estructura mortuoria y un largo cercado trapezoidal; ellos también transportaron los restos de sus muertos y los quemaron en una pira dentro del cercado.

Durante el tiempo en que esta fase de actividades terminó en ambos yacimientos (3370–3190 a.C.), una línea de fosas fue excavada en Knowes, siendo tres de ellas rellenadas de Cerámica Impresa y carbón. Esta utilización de fosas para la división del espacio encontró una expresión mas compleja posteriormente en Eweford East, donde entre el 2880 y el 2230 a.C., numerosas generaciones construyeron y elaboraron dos líneas paralelas de postes y un vallado definido por postes. Estos podrían haber sido usados para canalizar o reunir personas o animales, tal vez para procesiones ceremoniales o acumular existencias.

Numerosos de los yacimientos excavados produjeron hallazgos de actividades en distintos aspectos sociales durante el segundo y tercer milenio a.C., todos ellos relacionados con la deposición de artefactos y restos humanos. Durante el 3020 y el 1890 las comunidades regresaron en numerosas ocasiones al túmulo situado en Eweford West, modificando el *cairn*, dejando herramientas de piedra y cerámica *Beaker* y dispersando largas cantidades de cereal quemado. En Overhailes, alzaron una estructura ligera y un posible patio entre el 3340 y el 2900 a.C., asimismo la gente excavo dos grandes fosas y las rellenaron con fragmentos cerámicos del tipo *Fengate Ware* y herramientas de piedra importadas. Mil años más tarde, entre el 2340 y 1740, una generación posterior edificó una construcción de madera o un círculo en el mismo lugar. Eweford West vivió otra fase continua de actividad ceremonial durante el segundo milenio a.C.: restos humanos fueron incinerados en una pira en el yacimiento, hueso quemado y carbón fue esparcido en el antiguo túmulo, un *cairn* y arcos de piedra fueron construidos e incineraciones humanas fueron enterradas en mas de 20 ocasiones siguiendo distintas prácticas – en fosas, en o debajo de grandes y elaboradas urnas, o con objetos finos como hachas/martillo de piedra. Las fechas del carbono radiactivo indican que las actividades humanas continuaron hasta el 1120 a.C. El yacimiento de Pencraig Word también vivió una actividad esporádica durante el segundo milenio a.C.: dos pares de fosas que incluían cremaciones humanas y carbón fueron excavadas y rellenadas durante 1500 y 1250 a.C., junto con otras fosas y agujeros de poste.

Las excavaciones de la A1 han encontrado evidencias de varios tipos de asentamientos, actividades agrícolas y rituales durante la mitad del segundo y primer milenio a.C. En Howmuir, agujeros de poste y zanjas, probablemente relacionados con el sistema agrícola del asentamiento cercano, fueron usados durante 1910 y 1410 a.C. Hoyos poco profundos fueron excavados y rellenados con residuo doméstico en South Belton entre 760 y 400 a.C., durante el mismo periodo una cista fue excavada en el antiguo túmulo del cuarto milenio en Eweford West y restos humanos fueron introducidos en la misma. Entre el 410 y 200 a.C.

una pequeña granja se alzo cerca de Biel Water, mientras en Eweford Cottages se estableció un gran asentamiento rodeado por una zanja. Este proceso perduró quizás hasta el 210 d.C. Después del 40 a.C. la zanja fue rellenada y el cercado del asentamiento fue desmantelado. Durante este periodo, otra cista fue excavada en el yacimiento mortuorio del cuarto milenio a.C. en Pencraig Hill, y de nuevo restos humanos fueron enterrados en él. Mientras tanto, en el 350 a. C., un conjunto de granjas surgió en Phantassie continuando su desarrollo hacia una aldea agraria hasta su abandono cerca del 340 d.C.

Las diferentes excavaciones han producido evidencias de prácticas sociales muy variadas, desde complejas formas arquitectónicas relacionadas con ceremonias y ritos mortuorios, hasta asentamientos agrícolas que han dejado rastros de la vida cotidiana de sus habitantes. A pesar de las diferencias en el carácter de los hallazgos, se han encontrado ciertos rasgos comunes en los distintos yacimientos; las mismas preocupaciones fueron expresadas y manifestadas en diferentes formas durante más de cuatro milenios. Algunos de estos puntos comunes eran las preocupaciones vinculadas con el sustento a través de la agricultura, vinculada con materiales tales como el residuo domestico, *querns* (piedras de moler) y grano, y métodos como la siembra y la dispersión del abono, que las comunidades usaron para asegurar su supervivencia por generaciones. Otras similitudes eran las creencias en la fuerza simbólica del fuego y de ciertos objetos a través de sus asociaciones y propiedades. El vínculo más fuerte entre todos los hallazgos es la importante perdurabilidad de ciertos lugares del paisaje, ya que generación tras generación volvieron a sitios creados y alterados por generaciones previas haciéndolas suyas de nuevo.

La variedad y calidad de los hallazgos de la A1 permite un estudio a largo plazo. Este volumen pretende poblar los yacimientos excavados presentando la historia de la actividad humana en cada una de ellas y situándolos dentro del contexto formado por sus contemporáneos paisajes habitados.

Chapter 1

Routes to East Lothian's past

OLIVIA LELONG and GAVIN MacGREGOR

Introduction

To drive along the A1 through East Lothian is to experience a story: the story held in its present landscape, of how people have lived there over the last 10,000 years. Ordinarily, most elements of this story are buried beneath the surface of the land, but between 2001 and 2004 the upgrading of the A1 to dual carriage expressway between Haddington and Dunbar provided a chance to look beneath the surface and discover some of them. Linking these elements of the story together lets us journey not only through East Lothian's present landscape, but also through its past ones.

The slice through past and present landscapes that the road upgrade revealed lets us explore what people did at particular places, and in the spaces that connected them. We have chosen to present the results of the A1 excavations in a narrative way that integrates evidence from both site and landscape, diverging from the traditional, data-led approach to archaeological writing. We hope that this approach has produced a more highly textured, interpretative account of East Lothian's archaeology.

Background to the project

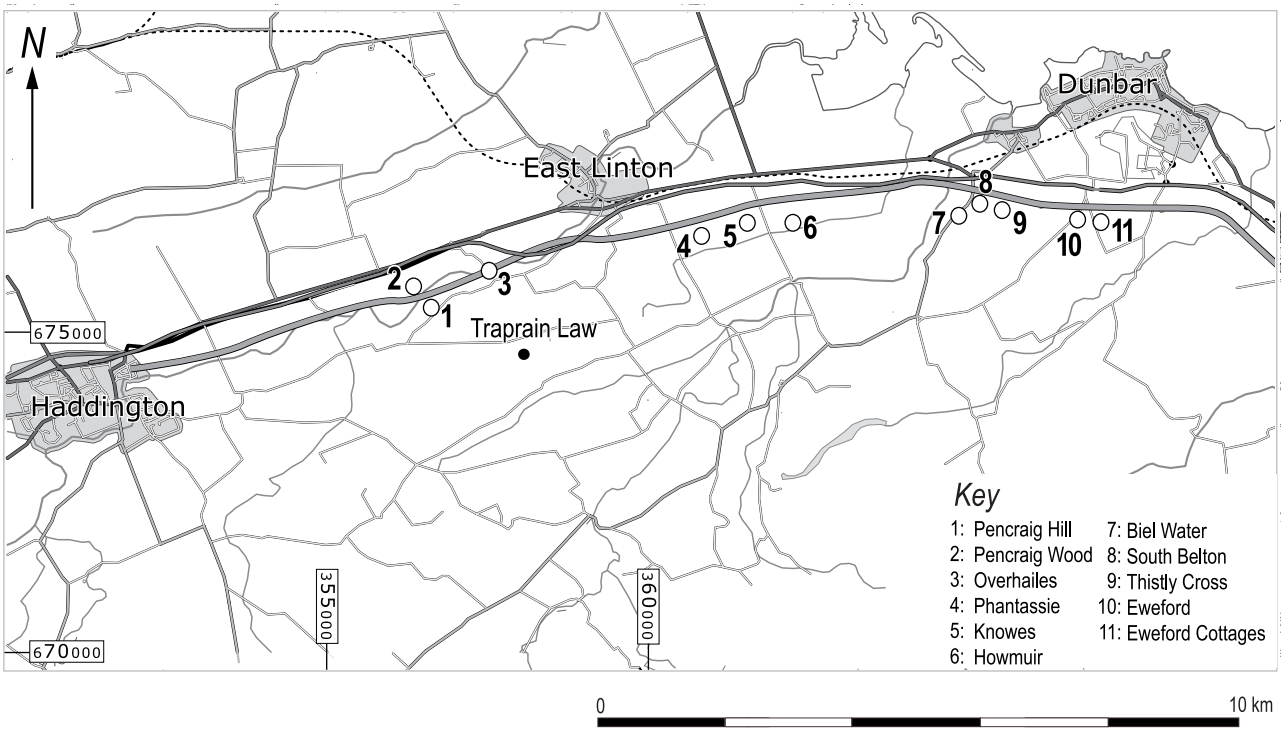
The A1 has historically been an important route way between Edinburgh and the south, and the section between Haddington and Dunbar is the most recent to have been upgraded (Baker 2003). The upgraded section runs for approximately 20km (Figure 1.1). From Haddington, in the west, it runs along level, low-lying ground until it climbs the south-western flank of Pencraig Hill, to the north of Traprain Law. It descends a long slope across Overhailes Farm to cross the River Tyne, skirting the village of East Linton on the south, and climbs the opposite slope to the river valley's shoulder. On Phantassie Farm it drops again to low ground to hug the railway line across Howmuir and Knowes farms, running onto slightly higher ground around Eweford after crossing the Biel Water. Travelling this route in a vehicle takes perhaps 15 minutes.

Along its length, the A1 links disparate places and landscapes. It extends through East Lothian for another 22km further to the west, briefly brushing Midlothian and leading into Edinburgh. To the south-east, it meets the coast at Torness power station and plunges south into the Borders and beyond.

The upgrading of the road was preceded and accompanied by a programme of archaeological work, undertaken by Glasgow University Archaeological Research Division (GUARD), and specified and monitored by Historic Scotland on behalf of the Scottish Executive Trunk Roads Design and Construction Division.

This archaeological work progressed through several phases. The road was designed to avoid all known archaeological sites, except for two Scheduled Ancient Monuments at Eweford which could not be avoided. Historic Scotland specified that the remainder of the road construction corridor should be evaluated through trial trenching of a sample of the area. After desk-based assessment, the fieldwork commenced with the evaluation of a 5 per cent sample of the corridor between Haddington and Thistly Cross over the winter of 2001–2 (Figure

1.2 Evaluation of the road corridor underway, winter 2002.



1.3 Map showing the locations of the excavated sites along the A1.

1.2). GUARD also evaluated parts of the two Scheduled Ancient Monuments at Eweford, stripping 100 per cent of the topsoil over the scheduled areas and up to 30 per cent over the immediate vicinity. These evaluations identified significant archaeological remains at several places, including at Overhailes, Phantassie, Knowes, Howmuir, Pencraig Wood and Eweford (East and West), leading to excavations of these sites during 2001 and 2002 (Figure 1.3). The grubbing up of part of the C-category road that ran beside a Scheduled Ancient Monument at Eweford Cottages led to another excavation in 2002. Subsequently, topsoil-strip monitoring during the construction of the road revealed further significant archaeological remains at Pencraig Hill, Biel Water, South Belton and Thistly Cross. All of these sites were investigated and recorded to some extent, within the constraints of the construction programme.

During all of the excavations, deposits were routinely and consistently bulk sampled for flotation; column samples and kubiena tins were taken where appropriate for micromorphological analysis; the locations of artefacts were recorded in three dimensions, and standard methods of drawn, written and photographic field recording were employed throughout. All of the excavations experienced some or much of the extreme weather conditions typical of Scottish fieldwork: frozen soils and strong winds during winter digging at Eweford East and West; prolonged spells of heavy rain during the late summer and autumn excavations at Pencraig Hill and Eweford Cottages; strong, drying winds and bleached sediments during the early summer work at Phantassie, Overhailes, Pencraig Wood, Knowes and Howmuir.

The results of the excavations have been the subject of intensive post-excavation analysis, which was also funded by the Scottish Executive Trunk Roads Design and Construction Division. Historic Scotland have monitored the post-excavation programme and provided additional support in the form of funding for radiocarbon dates. The site archives have been deposited with the National Monuments Record of Scotland, RCAHMS, while the finds have been allocated to the National Museums of Scotland.

The physical and environmental context

The core area of study addressed in this volume comprises East Lothian, but we also make frequent reference to the archaeology of southern and central Scotland, and particularly that of Mid and West Lothian. In this section, we briefly review the physical and environmental context of the core study area and its wider setting. The character of the local soils, topography and vegetation influenced

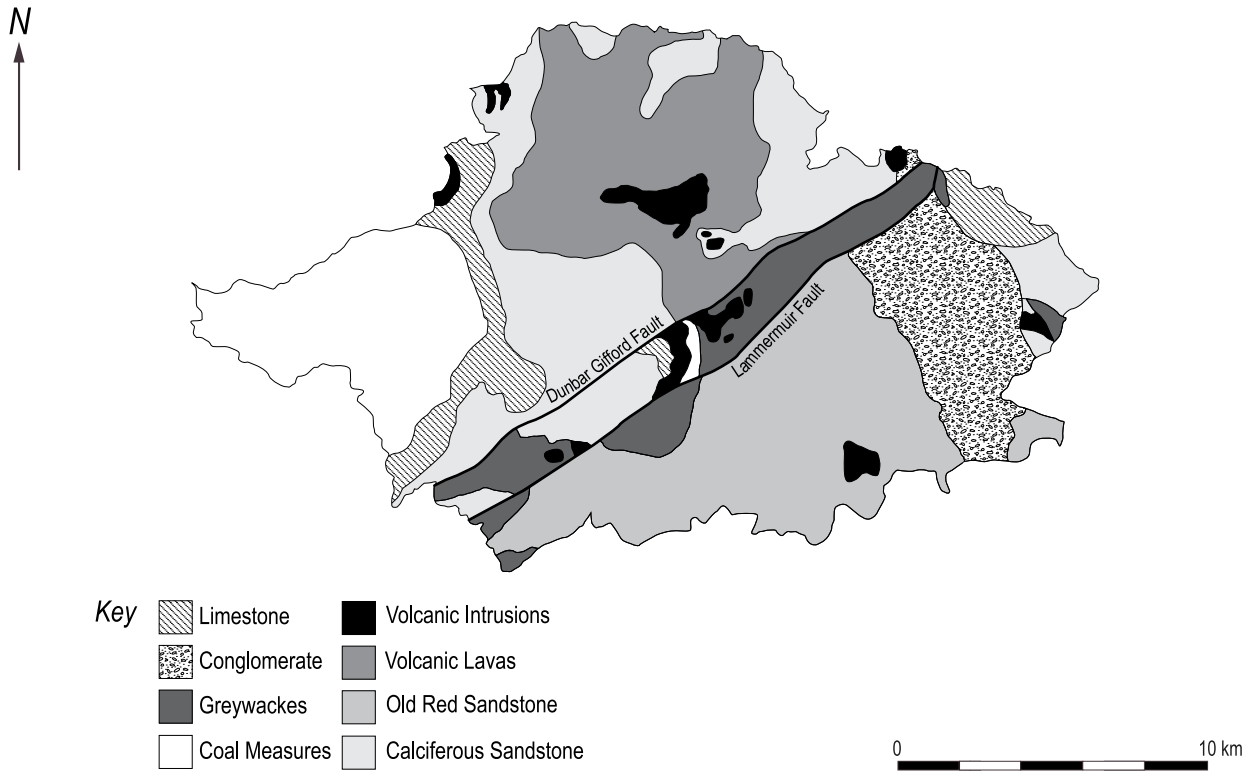
how and where people built dwellings or monuments in the prehistoric past, and evidence for this emerged from the programme of work.

While the geology of the core study region is relatively well-understood, our comprehension of the ancient environment is limited because, to date, no analysis has been carried out of peat or mire deposits in East Lothian. We must therefore infer changes in vegetation and climate from a wider body of evidence, based on analysis elsewhere in southern Scotland and northern England (for example, Tipping 1997a; Dumayne-Peaty 1999). Throughout, it should be remembered that the changing nature of the ancient environment resulted from complex inter-relationships between natural and human factors (Edwards 2004, 69). For example, long term regional changes in climate could have had varying local effects on vegetation, due to different degrees of forest clearance or intensity of agriculture (Tipping 2004, 46–8).

The region is sandwiched between the Firth of Forth to the north and the Southern Uplands to the south. Topographically, East Lothian is like an elongated half-bowl, open to the north where it gives onto the Firth of Forth. Much of it comprises a coastal plain, fringed in places by dune systems along the Forth estuary; these have been much denuded and were probably far more prominent and extensive in the past. The coastal plain undulates, lying flattest along the Firth and stepping upward toward the south, with areas of higher ground to the north of Haddington, at Chesters and around East Linton. The Lammermuir Hills, the Garleton Hills and the Moorfoot Hills define the region to the south, with the Pentland Hills bordering it to the west. Several very distinctive hills punctuate the East Lothian skyline; these include Traprain Law, North Berwick Law, Bass Rock and Arthur's Seat, and the archaeological evidence suggests that these were important reference points to people in prehistory.

Several rivers cross East Lothian, and their valleys create different topographic zones between coast and hill. The Tyne Water flows past Pathhead, becoming the River Tyne at Pentcaitland, and flowing through Haddington and East Linton to reach the sea at Tyne Mouth. Further to the west, the River Esk creates other topographic zones. The North River Esk descends from the higher ground of the Pentland Hills, while the South River Esk leads down from the uplands of the Moorfoot Hills.

In geological terms, the region lies in the Midland Valley of Scotland (Figure 1.4). Within this, the Lammermuir



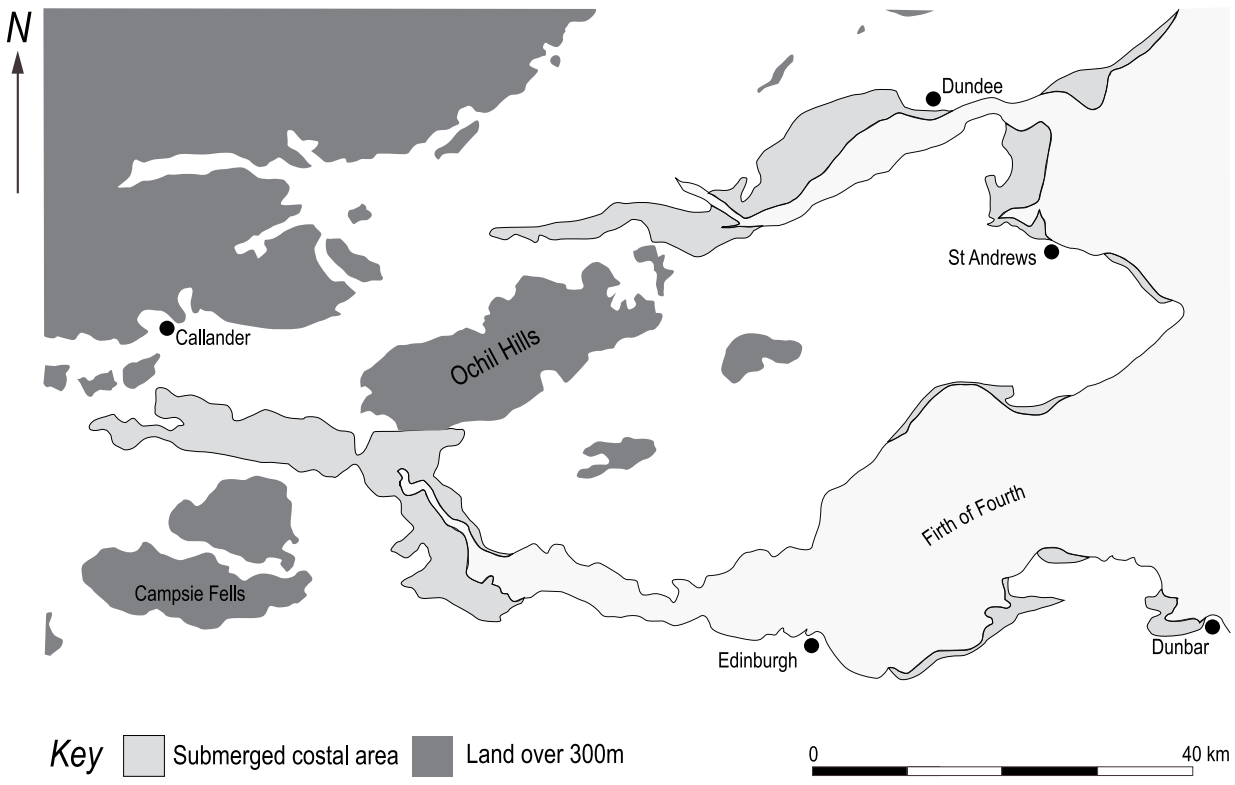
1.4 Map of the solid geology of East Lothian (after Whyte and Whyte 1988, 8).

Hills consist mainly of sedimentary forms of rock, including Silurian and Ordovician greywacke and shale, with a band of Devonian conglomerate running to the south from Spott to Longformaces (Ordnance Survey 1978 a and c). These are bordered to the north by the Dunbar-Gifford and Lammermuir faults, which comprise Devono-carbiniferous Upper Old Red Sandstone. Further north still, the geology is characterised by a mix of sedimentary carboniferous limestone series and millstone grit series and igneous rocks, predominantly trachyte and basalt. The drift geology consists mainly of glacial meltwater deposits and boulder clay (Ordnance Survey 1978b and 1978d), and post-glacial alluvial deposits extend inland from the coast, especially at the mouth of and along the River Tyne.

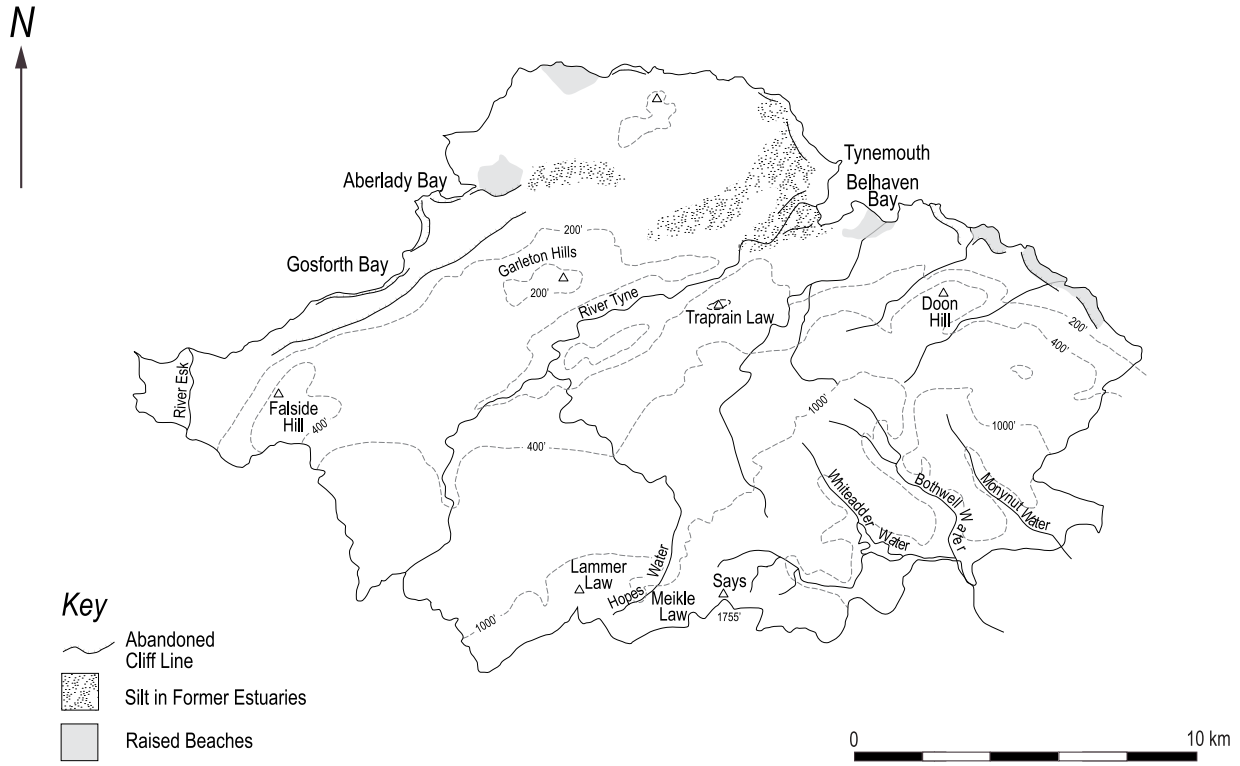
These drift deposits originated during and after the retreat of the last ice sheet around 15,000 BC. The retreat of the ice and subsequent events also resulted in a series of sea level changes, culminating in the main post-glacial transgression during the seventh and sixth millennia BC (Ballantyne 2004), which produced the highest sea levels. The subsequent retreat of the sea left raised beaches and relict cliff lines around the coast. During this main transgression, the lower-lying ground of the Forth Valley was completely covered in water (Ballantyne and Dawson 1997; Coles 1998; Ballantyne 2004) (Figures 1.5 and 1.6).

The changing post-glacial environment was characterised by a recolonisation of the land by flora and fauna. This process involved the gradual replacement of treeless tundra and open grasslands by a landscape hosting flora, including trees, more suited to a temperate climate. This may have commenced with birch (*Betula*) about 8500 BC, followed by hazel (*Corylus*), oak (*Quercus*) and elm (*Ulmus*); this mixed woodland dominated until about 3000 BC (Tipping 1994; 1997a).

As the climate and landscape changed with the shift from late glacial and to early post-glacial conditions (*c.* 11000–9000 BC), a wide range of large mammals populated the region, with Arctic species eventually being replaced by temperate ones (Kitchener *et al* 2004). Some terrestrial species, such as wild horse, may have lingered briefly as tundra turned to birch woodland; others, such as reindeer, would have been driven further north (Kitchener 1998, 66–71). The spread of recolonising woodland would have encouraged the influx of other mammals, including red deer and auroch, and probably brown bear, beaver,



1.5 The extent of the maximum marine transgression around the Firth of Forth (after Edwards and Ralston 1997, 40).



1.6 Map of key surfaces' features (silts, raised beaches, etc.) (after Whyte and Whyte 1988, 12).

wolf, lynx and wild pig. For this period, there is evidence for the presence and exploitation of marine mammals, including a variety of pinnipeds, such as seals and walrus, and cetaceans, including porpoise, dolphins and whales (McCormick and Buckland 1997; Kitchener *et al* 2004). There is also clear evidence for the exploitation of various bird species, shell fish and fish (see Chapter 8). Together, these animals provided a source of food as well as a variety of raw materials, including skins, bone and antler for use as clothing, tools and shelter.

In subsequent millennia, the environment and landscape continued to be affected by natural processes. There is, for example, evidence for a tsunami that swept the eastern seaboard of Scotland during the late fifth millennium BC (Smith *et al* 2004; Tooley and Smith 2005), particularly from Lochhouses, Dunbar (*ibid*, 14). Recent analysis has also highlighted longer-lived climatic processes. Work at Temple Hill Moss, Balerno, for instance, has found evidence for a cycle of increases and decreases in bog surface wetness, with each turn of the cycle lasting about 1100 years (Langdon *et al* 2003; Langdon and Barber 2005). The character of the wider ancient environment may have been influenced by these climatic changes.

From the fifth millennium BC, there is also evidence of significant human intervention in the landscape. There is some evidence for anthropogenic disturbance of woodland before the fourth millennium BC in the wider region (Innes and Shennan 1991; Tipping and Milburn 2000), although the role of clearings and fire in ancient woodland management has long been debated (for example, Mellars 1976; Edwards 1990; Moore 2000; Mason 2000). For the fourth and third millennia BC, palaeo-botanical analyses point to a dynamic and variable patchwork of localised clearance and regeneration (cf Smith and Whitehouse 2005, 136–7), with some evidence for a higher proportion of cereal pollen during the first phases of clearance in the fourth millennium BC (Tipping 1994). There is also evidence that the fourth millennium BC saw the introduction (or development) of domesticates, including cattle, pig and sheep. The evidence suggests that people increasingly relied on domestic animals during the subsequent millennia, with changing emphasis on different species. For example, evidence from further afield suggests that pigs were particularly favoured in the third millennium BC (Albarella and Serjeantson 2002), while cattle were more dominant during the second and first millennia BC (Smith 2000).

Table 1.1 Changing increases in bog surface wetness and comparatively dry phases (based on information in Langdon and Barber 2005, 556)

Dry	*Wet*
4900 BC	
	4700 BC
4400 BC	
	3900 BC
	3350 BC
2900 BC	
	2250 BC
	1900 BC
1750 BC	
	1450 BC
1250–900 BC	
	700–500 BC
AD 100	

By the beginning of the second millennium BC, there had been more extensive clearance of woodland in both lowland and upland areas (Tipping 1994, 31). The middle part of the first millennium BC saw a burst of very intensive woodland clearance, and by the time the Romans arrived in Scotland around AD 80 the forests had been largely cleared (Innes and Shennan 1991; Dumayne-Peaty 1993; Dumayne-Peaty 1999). The Roman presence may have had an impact on the regeneration of woodland, with regression of agricultural activity (Whittington and Edwards 1993), but this was clearly a complex, localised phenomenon (Dumayne-Peaty 1999, 136).

The archaeological context

The excavated sites

The locations of the archaeological remains encountered along the route of the A1 clearly related to the local character of the physical environment, as well as to cultural factors and the character of modern farming.

Because the A1 runs along the fertile East Lothian coastal plain, the land it crosses has been inhabited and farmed for millennia. Modern ploughing has destroyed upstanding remains and truncated ancient floor deposits and ground surfaces. All of the excavated sites had been truncated or disturbed by ploughing to some degree, although at Eweford West, Eweford Cottages and Phantassie some stone-built features survived.

The subsoils encountered along the road corridor varied considerably, and between Haddington and Pencraig Hill they consisted mainly of stiff, sandy clays, with abundant modern field drains. This section of the route was notably devoid of archaeological remains, probably because past activity had penetrated these soils to a shallower depth and so any archaeological remains had been entirely removed by modern ploughing. It is also possible that prehistoric people had occupied this area more sparsely than others, because of the difficulty in cultivating the heavy, poorly draining soils. On Overhailes Farm, where the prehistoric sites of Pencraig Hill, Pencraig Wood and Overhailes itself were discovered, conditions changed abruptly to lighter, sandier soils, with areas of alluvium along the valley bottom. To the east of Howmuir Farm, the subsoils became more dominated by gravel within a sandy matrix.

Beyond the effects of the plough on archaeological survival and the varying nature of the soils along the route, the distribution of archaeological sites discovered also appears to be linked to topography. Many of the sites discovered sat on high ground, near the summits of eminences, or above breaks of slope leading down to the river valley. It seems no coincidence that prehistoric sites began to be discovered as the corridor approached Traprain Law. This hill has always visually dominated the area. As Chapter 11 discusses, generations of people left different marks on the Law, evidence for its changing but enduring significance. It seems to have had a strong gravitational pull on the imaginations, belief systems and ways of life of the prehistoric inhabitants of East Lothian over many millennia.

The fieldwork involved the excavation of significant archaeological remains at 11 locations (Figure 1.3). The character of the archaeology at each of these locations was distinctively different.

At Pencraig Hill (NGR: NT 5673 7632), under the direction of Kirsteen McLellan, a team excavated the remains of a trapezoidal enclosure that contained the remains of a pyre dating to the fourth millennium BC (McLellan 2003; see Chapter 2). As these remains were discovered during topsoil-strip monitoring while the road was being constructed, the excavation was carried out over two weeks in July 2002 (Figure 1.7). The site lay on a level terrace on arable ground, on the south-western flank of Pencraig Hill, at 85m above OD. From here, the ground fell away in long, cultivated slopes to the River Tyne.

At Pencraig Wood (NGR: NT 5692 7645), under the direction Kirsteen McLellan, a team excavated several pits over the course of two weeks in May 2002, some of which contained pottery and cremated human bone dating to

the third and second millennia BC (McLellan 2002a; see Chapters 4 and 5). This site lay on arable ground, on top of a ridge that forms the western flank of Pencraig Wood, at 90m above OD.

Excavations at Overhailes (NGR: NT 5770 7635), directed by Eland Stuart over five weeks in May 2002, investigated numerous pits and post-holes, some containing pottery and stone tools dating to the fourth and third millennia BC (Stuart 2002; see Chapter 4). The site lay on arable ground at about 70m above OD, on a small, natural shelf in a long slope that descends from Pencraig Hill to the River Tyne, looking south toward Traprain Law. The shelf was formed of bedrock that outcropped (after topsoil stripping) on the north and south, bracketing the archaeological features. The features were cut through a deposit of colluvium that had accumulated between the outcrops. After the features were excavated, the colluvium was removed by hand to check for earlier features, but none were found. The exposed bedrock was also swept clean in what proved to be a fruitless search for prehistoric rock art.

1.7 Excavation underway at Pencraig Hill, August 2002.

At Phantassie (NGR: NT 5961 7688), Olivia Lelong directed the excavation of an extensive farmstead, comprising stone-built structures that dated to the late first millennium BC and early first millennium AD (Lelong 2002; see Chapter 7). The site was first discovered during evaluation in February 2002. At this point in the landscape, the corridor crossed the break of slope at the 60m contour before running diagonally downhill to continue eastward. This part of the corridor was intensively targeted during the evaluation for two reasons. Its topographic position, at the break of slope above the river valley, is shared by several cropmark enclosures in the area (for example, Whittinghame, Overhailes, and so on), and it appears to have been favoured for later prehistoric settlement. The field in which the site lay also contained an extensive spread of rubble, including stones of various geological origins, hinting that archaeological remains had been disturbed here.

The evaluation at Phantassie confirmed the presence of substantial, stone-built structural features and cobbling, along with deposits containing prehistoric pottery (Figure 1.8). However, it proved difficult to establish the extent of the site at the evaluation stage because it was covered by a deposit of colluvium (005), with areas of bedrock outcropping in places. This deposit had to be removed by hand to avoid disturbing the stony features beneath, so the true extent and nature of the settlement only appeared gradually through hard manual labour during the first few weeks of the excavation. In all, the excavation was carried out over 10 weeks in May–July 2002. As the excavation proceeded, a large, open area was revealed, allowing the site to be recorded in considerable detail. Because of the constraints of the road-building programme, the site was not fully excavated. Towards the close of the excavation, slot trenches were dug through buildings and deposits to find evidence of the earliest activity on the site. While this did provide glimpses of the nature and date of that earliest activity, large sections of the site were not fully excavated, meaning that the picture of the earliest phases remains partial.

The excavations of a short line of pits associated with fourth-millennium BC pottery at Knowes (NGR: NT 6074 7727) and of prehistoric linear features at Howmuir (NGR: NT 6205 7739) were directed by Kirsteen McLellan over two weeks in May–June 2002 (McLellan 2002b and 2002d; see Chapters 3 and 6). Both lay at about 30m above OD, on level ground immediately south of the railway line.

Due to the timetable of the construction programme, a prehistoric enclosed farmstead at Biel Water (NGR: NT 6485 7742), dating to the first millennium BC, was recorded through salvage excavation by a team in one day in September 2002, under the direction of Gavin MacGregor. Excavation here focused on the remains of a sunken structure containing artefacts and animal bones (MacGregor 2002; see Chapter 6). The site was situated on level ground, at about 20m above OD, to the east of the Biel Water.

1.8 Excavation of Structure 10 at Phantassie, June 2002.

At South Belton (NGR: NT 6508 7746):, two large pits dating to the first millennium BC were excavated under the direction of Kirsteen McLellan over one week in October 2002 (McLellan 2002d). These pits contained midden material, including shell, bone and broken artefacts (see Chapter 6). The site lay at about 20m above OD on level ground.

The partial remains of a sub-rectangular stone-built structure were excavated at Thistly Cross (NGR: NT 3656 6774) under the direction of Dave Swan over two weeks in August and September 2004 (Swan 2004). A small assemblage of prehistoric pottery and a cup-marked stone were associated with the structure (see Chapter 6). The site was partially sealed beneath the southern verge of the existing road line. It was located at about 25m above OD and lay in a natural hollow. The original ground level rose slightly to the north and probably obscured views to the Firth of Forth beyond.

At Eweford West (NGR: NT 6655 7735), evidence for intermittent activity from the fifth to the first millennia BC (see Chapters 2, 4 and 5) was excavated by a team from November to February 2001–2, under the direction of Gavin MacGregor (MacGregor and Shearer 2002). At the same time, two pit alignments and an enclosure dating to the third millennium BC, were excavated at Eweford East, under the supervision of Ingrid Shearer (MacGregor and Shearer 2002; see Chapter 3). The site of Eweford West lay at about 30m above OD, on top of a slight knoll running south-east to north-west. Where the ground fell away to the east was a field ditch that may have been a canalised burn. Eweford East lay to the east of the ditch on relatively flat ground, at a height of about 25m above OD. Part of the Eweford East site was a Scheduled Ancient Monument. As the result of the long sequence of activity at Eweford West, the archaeological remains were stratigraphically complex. Apart from a trench running across the site, opened during the initial evaluation (Figure 1.9), the site was 100 per cent excavated in an open area. The deposits in the central part of the site comprised a truncated earthen mound that sealed traces of earlier structures. To either side were successive deposits filling ancient quarry scoops. The earliest of these deposits related to activities which took place when the monument was upstanding, which had in turn been sealed by material collapsed from the adjacent mound. These deposits had then been sealed and/or truncated by the construction of a cairn that contained deposits of burnt human bone.

The excavation at Eweford Cottages (NGR: NT 6695 7738, at *c.* 30m above OD), directed by Lorna Innes over six weeks in October–November 2002, recorded part of a first millennium BC enclosed settlement (Innes 2003; see Chapter 6). As part of the upgrading of the A1, a stretch of the Eweford to Bowerhouse C road was to be removed and the land returned to agriculture. The grubbing up of the C road presented an opportunity to examine one edge of a large, cropmark enclosure (NMRS NT67NE 123).

The road appeared to run over the western edge of the enclosure, and this portion of it was not Scheduled; the remainder, lying in fairly level arable ground to the east, is Scheduled. The excavation was somewhat complicated by the remains of an earlier, cobbled road which underlay the modern tarmac one, the stones of which were compressed into earlier archaeological features.

Various other isolated remains were also recorded during topsoil-strip monitoring, undertaken by Paul Fox, Dougie Gordon, Donna McGuire, Sam McKean, Charlie Miller, Kylie Seretis and Dave Sneddon; the results are incorporated at appropriate points throughout this volume.

1.9 Aerial photograph of evaluation underway at Eweford East and West, November 2002.

The archaeological background

The excavations listed above together form the most extensive programme of intrusive archaeological work ever to have been undertaken in the Lothians, and their results make a significant contribution to a body of archaeological knowledge produced through past work in the region.

The Lothians have long been a focus for archaeological investigation, and a significant body of archaeological evidence now exists for the area. A review of the evidence (Lelong and MacGregor forthcoming), produced in anticipation of this volume, synthesised the known archaeology from East and Mid Lothian and assessed the models or frameworks of thought that have been used to interpret it. In the following, a summary of that review is provided to give a broader archaeological context to the archaeological programme associated with the A1 upgrade.

Evidence for earlier prehistoric activity in the Lothians has generally emerged in a haphazard and piecemeal fashion. The coastal sand dunes have yielded artefact-rich middens, testifying to activity during the third and second millennia BC (for example, Gibson 1982). There have been a number of important discoveries in recent years, among them the remains of a structure dating to the eighth millennium BC at East Barns (Gooder 2003). Over the years, a considerable body of evidence for the treatment of the dead has also accumulated.

The later prehistoric archaeology of the region has received more deliberate and intensive investigation. This partly stems from the visibility of many sites of this period, particularly as enclosures recorded as crop marks or substantial, upstanding monuments. Several such sites have been excavated, including the enclosures at St Germains (Alexander and Watkins 1998) and Port Seton (Haselgrove and McCullagh 2000). Although awaiting full publication, the excavation of Broxmouth was another significant episode of research (Hill 1982b). Development programmes have led to the discovery of extensive cist cemeteries, such as that at Thornybank (Rees 2002). Most recently, programmes of archaeological research have focused on the prominent enclosed hill of Traprain Law (Armit *et al* 2002) and on enclosures in its environs (Haselgrove *et al* in prep).

Building on these individual programmes of work, the study of the archaeology of the Lothians has contributed to the development of various, more general models explaining the nature of past settlement patterns and the reasons for change. The dominant models here range from explanations for the transition to farming from hunting-gathering-fishing to the emergence of enclosure and tribal society during the later prehistoric period (see Lelong and MacGregor forthcoming). Several synthetic studies of the region's prehistoric past have made significant contributions to our understanding of later prehistoric land management (Halliday 1982),

economies (Macinnes 1984) and the relations between indigenous inhabitants and the Roman army (Macinnes 1989). Despite this considerable body of past work – both fieldwork and synthetic analysis – several authors have recently called for a fresh burst of investigation to better understand the prehistory of south-eastern Scotland, including the Lothians (Armit 1999, 72; Haselgrove 1999, 262; Haselgrove and McCullagh 2000, 189).

The approach and structure of the monograph

The approach: Past lives grounded in changing landscapes

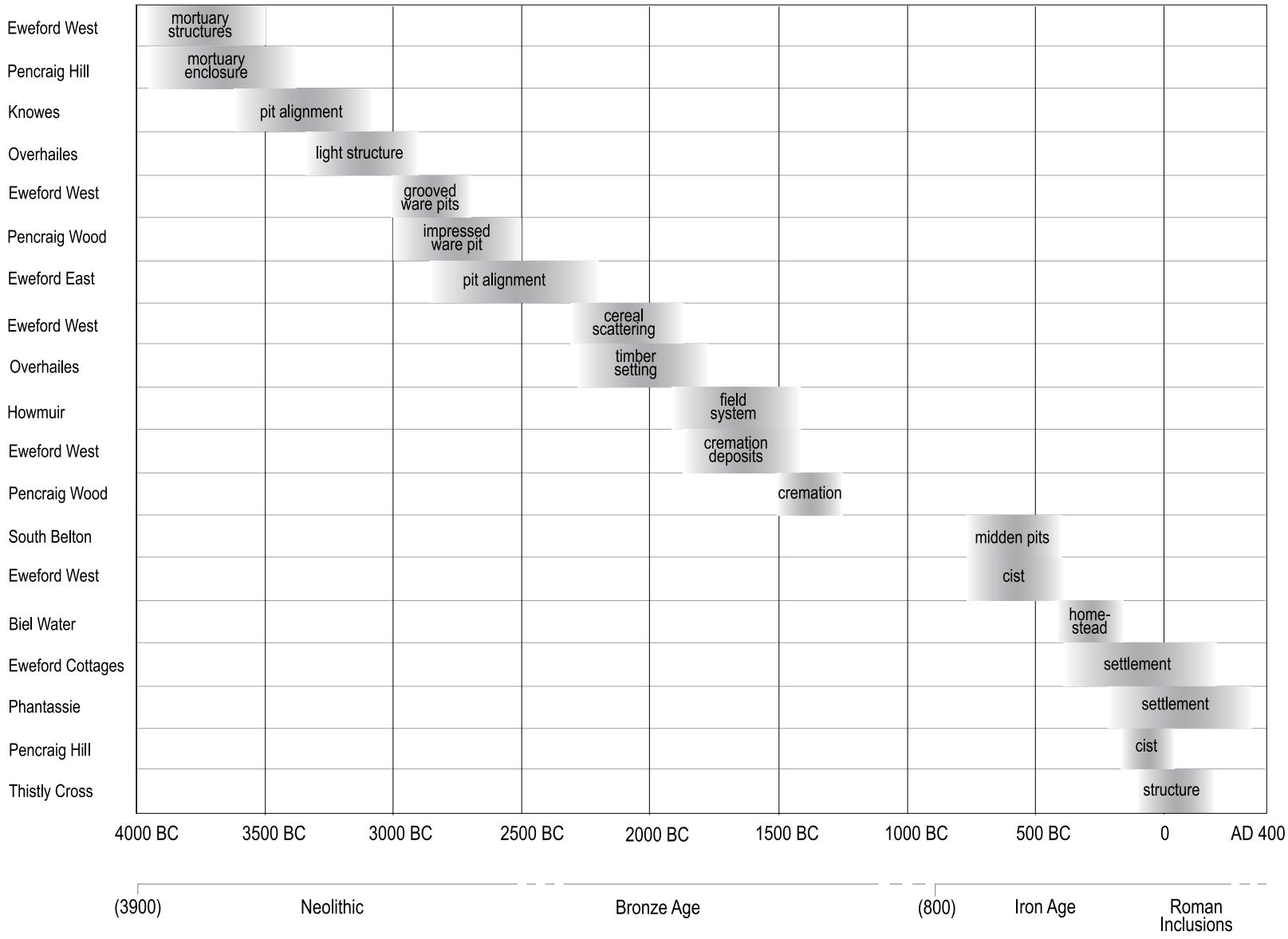
In this context of a rich body of past archaeological work, but where it also seems necessary to re-examine interpretations, the A1 upgrade has provided a significant opportunity to further our understanding of the prehistoric past of the Lothians. The significance of this opportunity is closely linked to the nature of the development itself and the landscape approach it allows.

Linear route projects, such as roads and pipelines, present valuable opportunities for the archaeological examination of large transects of land. These opportunities have only been sporadically exploited in the past. Some of the early archaeological programmes structured around linear developments, it is true, did recognise the value of moving outward from individual sites and 'setting sites and monuments within their contemporary landscape' (Fasham 1988, 83), and others have taken a wider view in terms of understanding and contrasting the character of human activity over long periods of time (for example, Mudd 1999). However, there remain many examples of sites reported individually within one volume, like beads on a string (for example, Catherall *et al* 1984; Price *et al* 1997). In such site-focused reports, the environs of sites and the interrelationships between them are often only skimpily considered. Some projects which do move beyond the sites themselves to more specifically address the surrounding areas – contrasting upland and lowland regions, for example (for example, Lambert 1996; Vyner 2001) – remain limited, as they seem too focused on the environs of the infrastructure project rather than on the changing landscapes which people inhabited in the past.

This variety in approaches to linear route projects reflects the challenges inherent in relating excavated sites to their past environs. This is partly because the very concept of a 'site' is deeply problematic. The extent and nature of past human activity in one particular place are difficult to define, and many sites produce evidence of several phases of activity, whether continuous or intermittent (Foley 1981; Dunnell 1992; Carman 1999). The problems we encounter in defining 'sites' stem from our attempts to define the spatial and temporal boundaries of past human activity. However, in fact, people's lives were not usually so strictly bounded; their episodes of activity in particular places were linked to other routines that reached out into surrounding spaces. Their actions could also possess considerable temporal depth; they arose from earlier traditions or memories and from historically shared perceptions about the world. Given this, it seems that a sound approach to the archaeological remains found along a linear route is to ask how individual sites illuminate what people did in the landscape that contains those sites. This approach has motivated the analysis and publication of the A1 excavations in a single volume, and throughout we have tried to address the temporal rhythms and changing nature of inhabitation in the landscapes of East Lothian.

The term *landscape* is a complex and often over-used one, and it is notoriously difficult to define (Bender 1993; Gosden and Head 1994). We use it here to mean not simply physical topography or space, preferring the terms *area*, *region* or *environs* for that purpose. We understand *landscape* to mean the cultural environment, a dynamic interface between people and land. A landscape consists of complex interactions between topography, geology, climate, soils, animals and plants, people's perceptions and beliefs about those things, and their actions in space and time. A landscape is therefore constantly changing, sometimes quickly and sometimes very slowly, through the results of natural processes and human thought and activity. When we study an archaeological landscape, we are studying the evidence for the changing nature of these dynamic interactions – not a single landscape, then, but *landscapes*.

The archaeological remains discovered during the A1's upgrading result from human activity spanning at least five thousand years, from the fifth millennium BC to the early first millennium AD (Figure 1.10). In order to realise the full potential of these remains, we have tried to extract the story of what people did at each place over time, but also to investigate how these site-specific activities related to the wider physical and cultural environment – in short, to explore each site's contemporary setting, as well as the landscapes that connected various sites at different times. This has involved considering not just the topography, geology and other natural features of the land, but how people engaged with that environment at different times. The landscapes of the A1 were imbued with different associations, meanings and memories in prehistory; they had cosmological aspects, deriving from the beliefs people held about the world, and historical aspects, deriving from the stories people told about the past. These landscapes did not consist simply of physical spaces, nor did they exist wholly in human perception, but were the places



1.10 Timeline showing the calibrated date spans of the excavated sites.

where physical space and perception coincided (Ingold 1993; Lelong 2000; Baines 2004).

People's actions in prehistoric Lothian were motivated by economic, political, social and symbolic concerns, and all of these aspects of life had potential effects upon the contemporary landscape. For example, felling trees in the prehistoric past might have been motivated by the desire to create fields for cultivation; to obtain fuel or building materials for houses or ceremonial structures; to clear views for aesthetic reasons or religious beliefs, or to reveal named topographical features. Small episodes of clearance might have had incremental effects over several generations, eventually and radically changing the character of the landscape by removing forest cover. In turn, the uses of the felled timber would have had effects upon the natural and built environment, whether that timber was burnt in advance of cultivation, altering the soil chemistry and vegetation, or was taken away for use in construction. Its use in building projects created other chains of interaction, in how buildings were erected, the spaces they framed and what took place inside and around them, and the traces left in the soil through their use and abandonment or destruction.

We also recognise that people were not necessarily free to act however they liked. Their behaviour was bound by certain physical, social and conceptual constraints. To ward off hunger and death, for example, members of communities had to do certain things at certain times: milk livestock, sow seeds, harvest crops, collect fuel and so on. Social constraints were equally powerful. Unequal power relations would have given some greater authority and bound others in servitude or even slavery, and social conventions may have barred some members (based on age, gender, status or roles) from doing certain things. Other beliefs about the spirit world, including the dead, may have also directed or constrained behaviour; people probably saw it as imperative to act in certain ways or to build certain monuments to ensure spiritual safety.

In understanding the past landscapes of the Lothians, in exploring people's interactions with each other and their environment, we have looked to a further group of concepts to help structure our interpretations. Some of the terms associated with these concepts, and which we use in the following chapters, merit further definition here. Many of the daily, seasonal and annual routines of people's lives in East Lothian centred around their *dwellings*, which contained *households* made up those people – linked by kinship or other relationships – who cooked, ate and slept beneath the same roof and who worked in and around their dwellings (for example, Allison 1999). A *settlement* could consist of a single, isolated dwelling and the space around it that the household habitually occupied, or of several dwellings clustered together. The members of households who identified themselves as a social group constituted a *community*. The members of that community may have lived together in a settlement, and we often employ the term in that sense, but it is also possible that a community could have consisted of the *inhabitants* of different settlements, who defined themselves as a community based on shared religious beliefs, political cooperation or kinship connections (for example, Yaeger and Canuto 2000; Armit 2002). The way that a landscape was *inhabited* at any particular time lay in the arrangements and character of different dwellings, the make-up and activities of households and communities, and the nature and frequency of their engagement with their environs.

While we find these concepts useful tools for interpreting the past and believe them relevant to how people ordered society, we also recognise that they were never static entities. How people defined *household* or *community* at one time may have differed enormously from how a later generation defined them. In Chapter 11, we draw out the evidence for these differences in society over time.

Because we are mainly concerned with how East Lothian was inhabited at different times in the prehistoric past, we have not devoted much space to identifying and exploring comparanda – either monuments similar in form or comparable practices – from other regions. However, we do refer to wider traditions to some degree in Chapters 8–10, where they help to illuminate the Lothian evidence.

Our challenge in this volume has been to establish what people did in the past at particular places along what is now the A1, and in their environs, over eight millennia. We seek to understand how people knew and inhabited East Lothian at different times in the prehistoric past: the routine activities that moved their lives forward, the ways that they journeyed through and interacted with their environs, the texture of the meanings they gave to the world and the physical and cosmological legacy that each generation left for the next.

The structure of the monograph

Throughout, for the reasons laid out above, this volume draws together the results of excavation and analysis of the sites encountered on the route of the A1 upgrade, and further interprets the results in their contemporary and landscape contexts. The integrated approach has been adopted partly because the various sites were encountered through a single infrastructure project, but mainly because it seemed to offer more interpretative potential. The volume begins with the archaeological remains discovered during the A1 upgrade and then, like the road itself, it extends into the wider region to understand them in more complex ways.

We have attempted to write about the results of the excavations and post-excavation analyses in ways that would prove useful and interesting both to fellow archaeologists and specialists and to those seeking a more general appreciation of the changing character of Lothian's inhabited landscapes. In writing the account of each excavation, we have chosen to present the story of what took place at the site in clear and succinct terms, often in the active voice and supported by references to the physical evidence, rather than leading the account with mechanistic description. The results of specialist analysis of artefacts and environmental remains have been integrated into the account of each excavation. Text boxes written by the specialists allow a closer focus on particular artefacts, activities or processes for which we found evidence.

Chapters 2 to 7 present the results of the excavations and post-excavation analysis for the 11 sites encountered during the A1 upgrade. The chapters are ordered chronologically, from earlier to later evidence; for those sites with various phases of use spanning several millennia (including Eweford West, Pencraig Hill and Pencraig Wood), the relevant phases are presented over more than one chapter. This chronologically ordered treatment of the results helps to illuminate the changing character of human practice over time in East Lothian.

The remaining chapters build on the detailed results. Chapters 8 to 10 set the A1 excavation results in a wider context, considering the evidence from chronologically and geographically comparable sites. Chapter 8 treats the period from the ninth to fourth millennia BC; Chapter 9 considers that from the late fourth to late second millennia BC; and Chapter 10 treats the first millennium BC and early first millennium AD. A final synthetic chapter (11) draws together the observations and interpretations developed in the earlier chapters in two sections: the first reviews the long term changes which have taken place in the Lothians, while the second considers the evidence for the continuity of themes and certain aspects of life through prehistory. Chapter 12 contains a list of the technical reports and catalogues produced by specialists who analysed the artefacts, palaeo-botanical remains and soils from the excavations; because of their length, it was not possible to include these in printed form, and they have been deposited with the site archive, which is held by the Royal Commission on the Ancient and Historical Monuments of Scotland. It also contains a table of the 166 radiocarbon dates obtained. Throughout the volume, the radiocarbon dates for the A1 and any other sites are consistently presented in calibrated form (as 'BC' or 'AD') at 2 sigma; any exceptions are cited as 'bc' or 'ad'.

Woven together, the A1 discoveries take us on a journey from a landscape of forests punctuated by open ground 7,000 years ago, through ones that were gradually cleared, to landscapes that were a patchwork of fields with pockets of scrub and managed woodland about 2,000 years ago. These broad changes in the land's character accompanied changes in society. The A1 excavations revealed diverse archaeological remains, ranging from massive ceremonial monuments and small, light dwellings from the fourth millennium BC, to substantial farming settlements but few ceremonial sites from the first millennium BC. Running through these changes, however, were shared concerns and traditions: common threads related to agrarian cycles, long-held recollections, the continuing significance of certain places and beliefs in ancestral legacies. The following chapters explore the tensions between change and continuity in these ancient Lothian lands.

Chapter 2

A burning desire to build: Excavations at Eweford West and Pencraig Hill (3950–3380 BC)

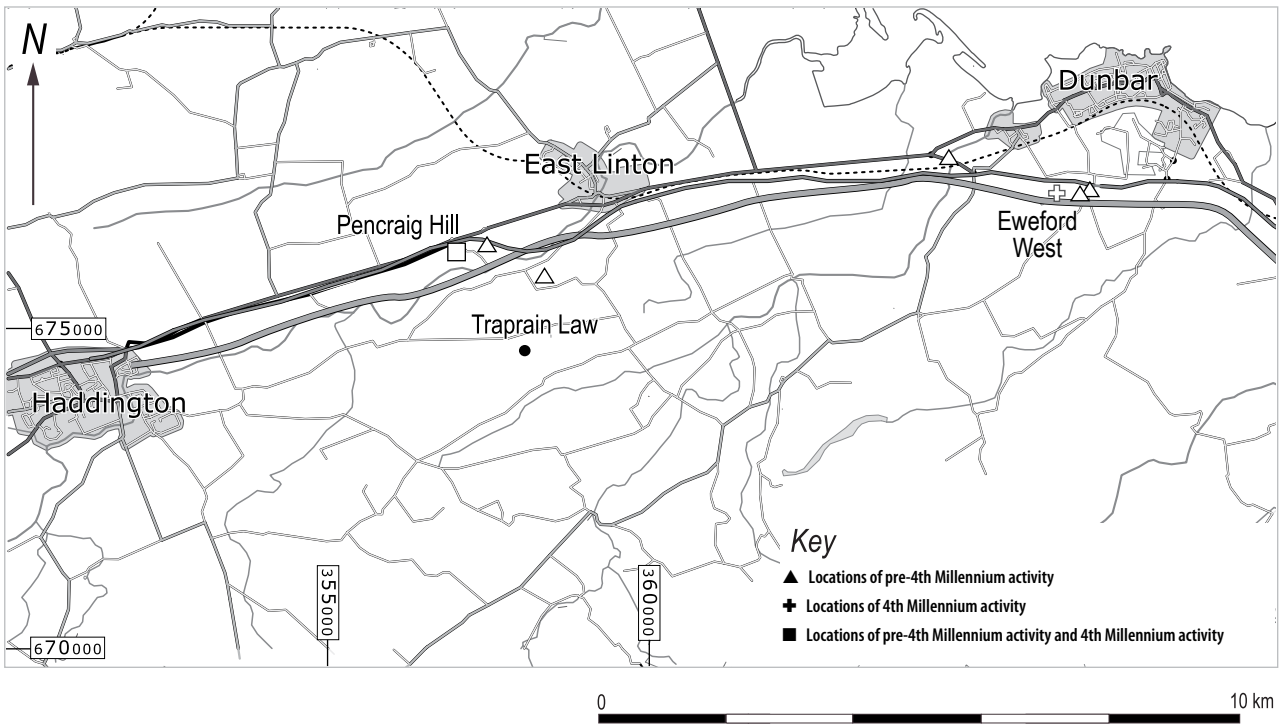
GAVIN MacGREGOR and KIRSTEEN McLELLAN

Introduction

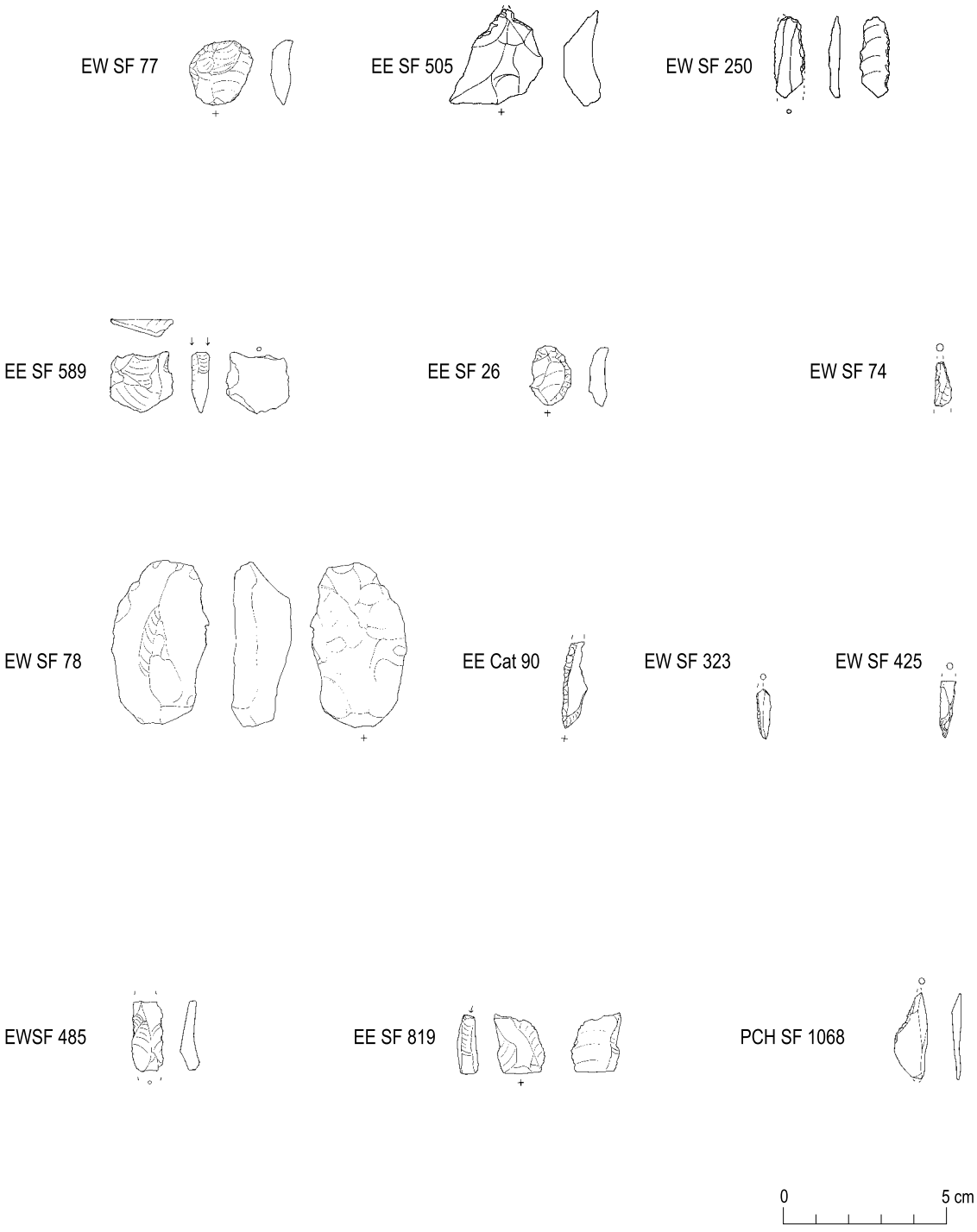
Several of the sites excavated along the A1 produced evidence for human activity before the fourth millennium BC, mostly in the form of struck stone. These earlier remains are not only important in their own right, in terms of what they tell us about the people who left them, but also because they provide the context for the emergence of monument building at two places, Eweford West and Pencraig Hill (Figure 2.1). Communities built large wooden structures at both of these sites during the fourth millennium BC. Radiocarbon dates spanning 3950 to 3380 BC have established that the activity occurred in several phases, over several hundred years; it clearly involved several different generations.

The construction and use of the structures at Eweford West and Pencraig Hill were linked to ceremonial activities – activities which are comparable to those taking place in many parts of Britain at the time (for examples, see Kinnes 1992). In part due to the substantial size of the structures, their associated ceremonial activities are typically perceived as social enterprises which involved the congregation of large groups of people, perhaps drawn together from a wider network of communities.

This chapter presents the results of excavation and specialist post-excavation analysis at both Eweford West and Pencraig Hill, and it then considers the implications of the similarities between two structures that were built at broadly the same time and only 10km, or a few hours



2.1 Map showing the locations of sites mentioned in the chapter.



2.2 Mesolithic stone tools from the excavated sites.

walk, apart. Not all contexts identified during excavation at Eweford West and Pencraig Hill are discussed here, as such high levels of descriptive detail would detract from understanding the activities at the site; these details form part of the site archive (see also MacGregor and Shearer 2002; McLellan 2003a).

In the beginning

For thousands of years, groups of people hunted, gathered and fished in the Lothians before they began to adopt farming about 4000 BC. These activities dating before 400 BC, and thus to the Mesolithic period, are most frequently evidenced today in pieces of struck flint and chert: the waste from tool production and pieces broken through use. The excavation teams on the A1 recovered such remains from several of the sites, with distinctive evidence for later Mesolithic activity at Pencraig Hill, Phantassie, Eweford East, Eweford West and Eweford Cottages (see Figure 2.1). In most cases, it is impossible to distinguish whether or not the artefacts were the result of a single phase or several phases of activity at each site.

Some of the evidence is slight. For example, a single scalene triangle microlith at Pencraig Hill (Figure 2.2: SF 1068; Saville, see Chapter 12 and Archive) may have resulted from the simple loss of an element from a composite tool. The microlith may have become detached when it was fired, as part of an arrowhead, at prey.

At Phantassie, a background scatter of struck stone incorporated into later deposits and features indicates other phases of activity preceding the Iron Age farm there. Analysis of the assemblage has shown that its Mesolithic component comprises evidence for blade technology, including several diagnostic forms such as four flint microliths, backed bladelets and scalene triangles (for example, SFs 713 and 715; Figure 2.2). The presence of blades, flakes, scrapers and piercers in the assemblage, some of which may be Mesolithic, also suggests that people were butchering and skinning animals and working hides at the site (Pannett, see Chapter 12 and Archive).

Among the assemblage of struck quartz, chert and flint from the two large scoops at South Belton (see Chapter 6) there were fragments of tools that are also probably Mesolithic in date. It is possible that other components of the struck stone assemblage from this site are also contemporary with the diagnostically Mesolithic pieces. In the fills (004/005) of scoop A, there were fragments of two broken-backed bladelets, both of light-grey/white flint (SF 18 (Figure 2.2) and SF 20 (not illustrated)), and a bifacial bipolar blade/flake core (Pannett, see Chapter 12 and Archive). The presence of the core, and its association with debitage, suggests that there could have been a short episode of knapping in the vicinity. The fragmentary microliths may be the residue created in repairing a broken composite tool, or perhaps they were brought to the site embedded in an animal that had been hunted.

Mesolithic activity was also recorded at Eweford, in two discrete areas: Eweford East and Eweford West. At Eweford West, the focus of activity was a natural glacial bank running south-west to north-east. Analysis has shown that most of the lithic assemblage here comprises pieces that probably relate to the production and use of tools (Saville, see Chapter 12 and Archive). Notably, the larger part of the assemblage is of chert, which had been collected from fluvio-glacial deposits rather than from outcrops like those that occur in the uplands to the south. Among the Mesolithic-type artefacts were five microliths, including a complete chert scalene triangle (Sample Cat. 17), a fragment of a scalene triangle (Sample Cat. 33), an edge-blunted form (SF 323), a unclassifiable fragment (SF 425) and a near-complete sub-triangular geometric type (Sample Cat. 44) (Figure 2.2). Two edge-trimmed chert flakes (Figure 2.2: SF 250, SF 485), one with evidence of wear, probably also indicate Mesolithic activity.

At Eweford East, *c.* 10m north of the pit-defined enclosure (see Chapter 3), a discrete scatter of struck stone on the subsoil extended over an area of *c.* 15m by 10m. A range of possible Mesolithic-type artefacts was also found as residual pieces in several later features or as a general scatter of unstratified topsoil or surface finds. Analysis has identified a number of Mesolithic-type artefacts (Saville, see Chapter 12 and Archive), including portions of seven microliths: a near complete edge-blunted microlith (Sample Cat. 90); fragments of scalene triangles (Sample Cat. 109 and 110), an unclassifiable obliquely blunted form (SF 74, Figure 2.2), three fragments of unclassifiable narrow-blade microlith forms and a possible *lamelle a cran* (SF 820). Also probably Mesolithic are a chert side-scraper (SF 50), a flint end- and side-scraper (SF 26), a flint end scraper (SF 74), a flint burin (SF 589), a chert burin (SF 819), a piercer (SF 505) and a flint fabricator (SF 78).

Further Mesolithic activity also took place nearby at Eweford Cottages (see Chapter 6). Analysis has shown that blades dominate the assemblage in this instance (Pannett, see Chapter 12 and Archive). The assemblage may be multi-period in nature, but includes two fragments of microliths from the fill of a pit dating to the late third millennium BC (see Chapter 4).

While the evidence for pre-fourth millennium BC activity on the A1 generally takes the form of struck stone (lithics), re-deposited in secondary contexts, radiocarbon dates from residual charcoal at a number of sites may be contemporary with these episodes of activity. Included here are dates of 4230–3960 BC (SUERC-5489) from Phantassie, 5210–4840 BC (SUERC-8198) from South

Belton, 6000–5800 BC (SUERC-5339) from Eweford East and 7600–7525 BC (SUERC-7519) from Overhailes. This cumulative evidence, derived from seven different places along the A1 during excavations, evaluations and topsoil strip monitoring, shows that people were active in the region at this time.

Within this random sample of Mesolithic activity, there are two notable and distinct concentrations: one on

2.1

Tools and the stone to make them

The main raw material used to make the struck stone tools from the A1 sites is flint. Flint is a silicious mineral, formed within chalk, which is very suitable for artefact manufacture because of its hardness, its predictable fracture pattern and its ability to provide a sharp and resilient edge. Chalk, originally much more extensive, is now restricted in Britain to parts of eastern and southern England, but the flint which it contained resists erosion well and it often survives as pebbles and cobbles in river gravels, beaches and glacial tills. Scotland, which has no remaining chalk cover, does have some flint available, mostly in the form of small pebbles found in secondary deposits of this type.

These secondary flint sources were exploited during prehistory; this was certainly the case at Eweford, where most of the artefacts were made from small, rounded pebbles. In fact, in the Mesolithic period people relied almost entirely on such locally available raw materials. Although some local flint was used in later periods, during the Neolithic and Early Bronze Age many flint artefacts were imported into Scotland from flint-rich areas further south. For example, virtually all the flint axeheads found in Scotland have been imported, since the locally available flint was not normally adequate in size or quality for the manufacture of such pieces. With smaller flint implements it is often more difficult to be certain of their origin, but it seems highly likely that the scrapers and serrated-edge flakes from Overhailes and the arrowheads from Eweford are all imported pieces.

The other common raw material used at Eweford is chert, a silicious mineral with similar properties to flint, but distinguishable by its more matt appearance. Chert forms in a variety of ways; it can develop organically in limestone deposits or inorganically in volcanic and other contexts. Chert is quite a common material in southern Scotland, occurring both *in situ* in seams and dykes and as pebbles in secondary deposits. The chert used at Eweford seems to have come from pebbles, and these were almost certainly found locally in East Lothian.

Prehistoric people would have collected pebbles of other workable raw materials wherever they found them, and this explains the occasional pieces of baked mudstone, agate and chalcedony at the A1 sites. Some use was also made of quartz, a raw material which is readily available but not so suitable for flaking. Definitely non-local are the single pieces of worked pitchstone found at Eweford and Pencraig Hill, since this only occurs in workable form on the island of Arran and would have had to be imported. Pitchstone is a type of volcanic glass that fractures in the same way as flint and chert, but which was perhaps appreciated more for its exotic quality, being a desirable rarity in East Lothian.

It appears that, for the most part at the A1 sites, stone tools made from non-local materials were brought in as finished implements, or at least the blanks for implements, rather than the raw material itself. We could envisage settlers from East Lothian travelling south to England or west to Arran to acquire artefacts, or their receiving artefacts that had been handed on across exchange networks that operated across Britain. The latter scenario is perhaps the more probable.

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the higher ground around Traprain Law and the other in the area of Eweford. No diagnostic Mesolithic material was found elsewhere during the evaluation or topsoil strip monitoring. It is possible that these concentrations of material represent specific locales that groups revisited several times before the fourth millennium BC. These locales may have been distinctive clearings in the woodland, where people sourced raw materials (see text box 2.1), made tools or used them to process animals and plants. In some cases, these locales may have been used as hunting stands, taking advantage of more extensive views from the higher ground at Pencraig Hill and Phantassie.

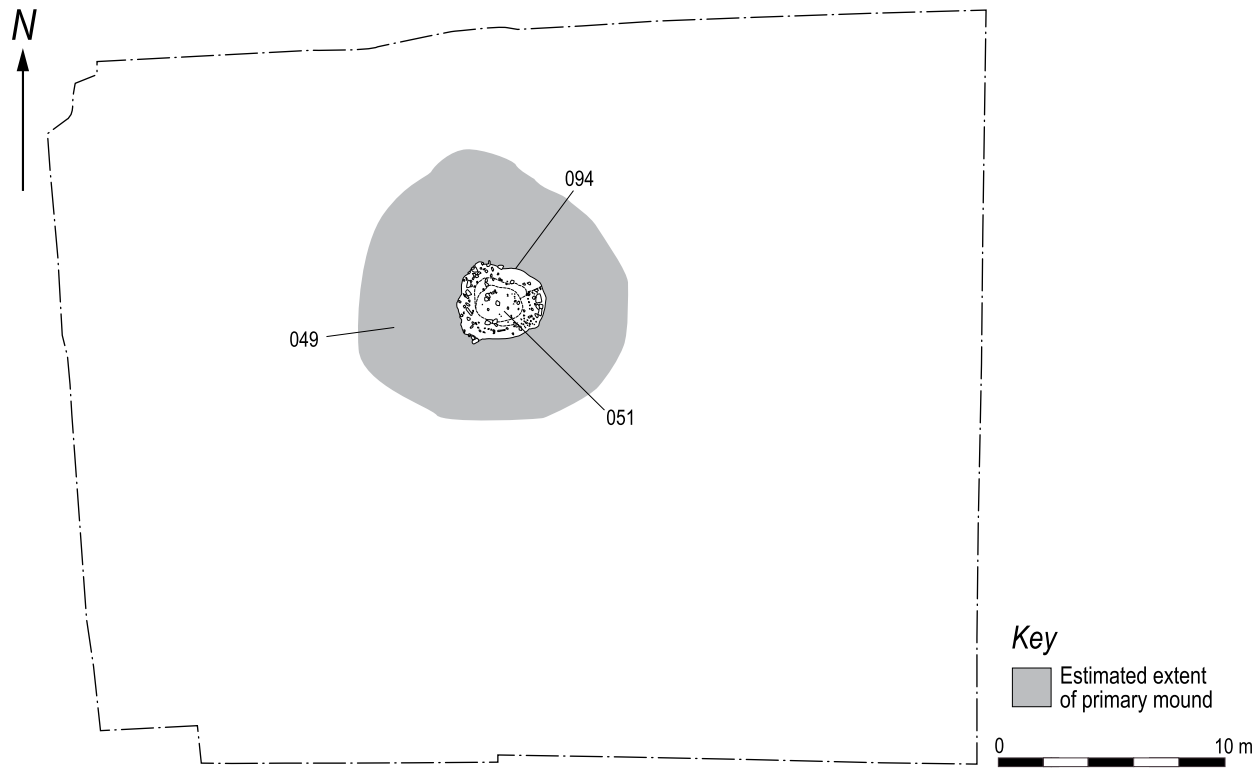
Eweford West

The primary mound

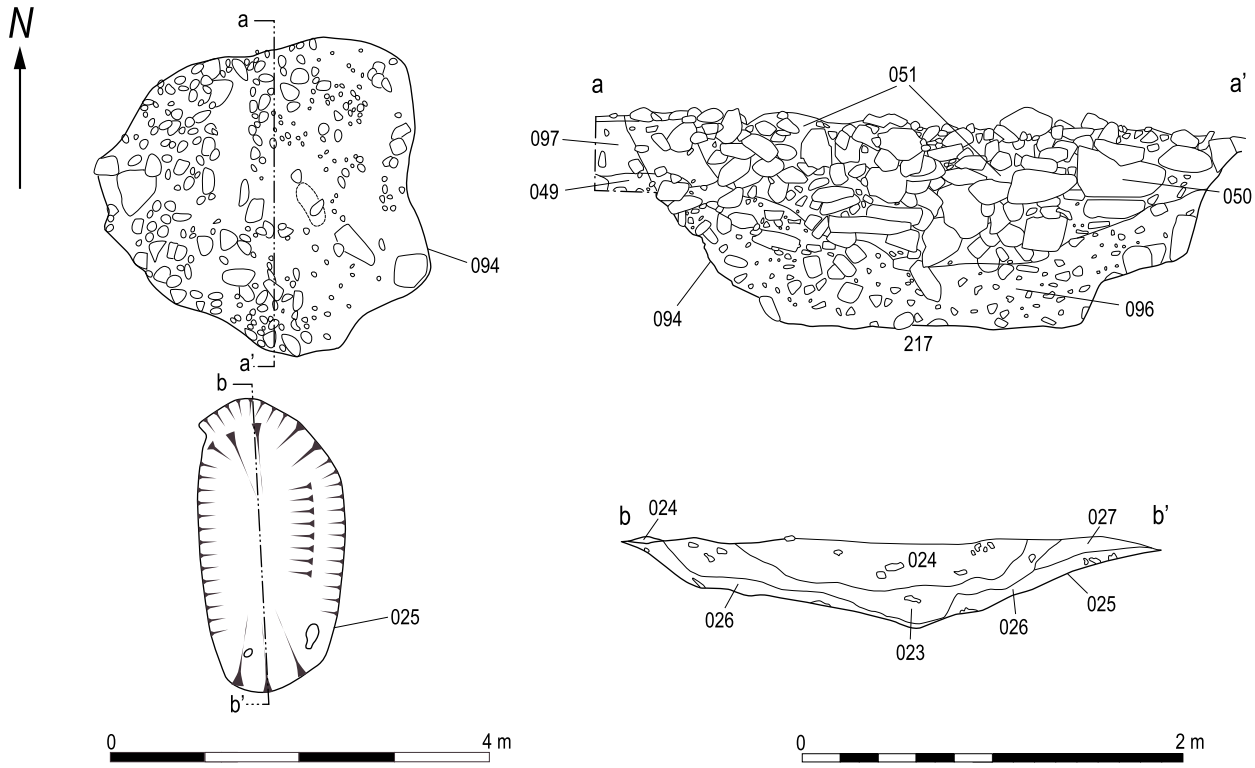
It is not clear how long a period intervened between the time when people were working flint and chert at Eweford West and the time when others later began to leave more tangible traces. What is clear is that, at some point during the first quarter of the fourth millennium BC, a group came to the same location to begin building.

These people came to the north-east end of the natural glacial bank, on which earlier generations had made and used tools, and began to change its shape. Analysis of the sediments at Eweford West has revealed that a low earthen mound (049) was created, at least in part of turves (McKenzie, see Chapter 12 and Archive). Destruction of parts of this low mound by subsequent activities means that we cannot now be certain of its original size and shape, but the evidence suggests that it was sub-circular or oval, up to *c.* 15m across and at least 0.14m high (Figure 2.3). As ground was broken during the turf cutting, levels around the mound may have dropped, enhancing its apparent height.

After the first low mound (049) was constructed, a large, sub-circular pit (094), up to 3.5m across, was dug into it (Figure 2.4). The diggers excavated this pit deep into the natural subsoil, possibly as a quarry to retrieve stone for building material. They later backfilled the pit with different layers of gravel (096), tipping them into the pit from the east before flinging in some large stones (051). This deposit of stones was mounded up above the pit's mouth, and it may have stood for some time as a low, irregular cairn on the surface of the mound (049). Many of



2.3 Plan of the primary mound and stone-filled pit at Eweford West.



2.4 Pits 094 and 025 in plan and section.

the stones (051) were reddened and charcoal stained, as if they had been in contact with fire, and, in one case, a large piece of animal bone was fused to the surface. It is possible that the stones were originally part of a structure that had been burnt down, demolished and backfilled into the pit – perhaps the same pit from which the stones had originally derived. (It is also possible that the stones had been burnt in a hearth, and in fact there were no other traces of an earlier, demolished structure.)

Among the stones (051) were several pieces of unburnt bone, found in small concentrations. Analysis has identified these as fragments of large ungulate vertebra, cattle long bone and a cattle tooth. One piece of bone bore tool marks, suggesting that the animals had been butchered (Smith, see Chapter 12 and Archive). A radiocarbon date of 3960–3780 BC (SUERC-5280) was obtained from a cattle radius. Also among the stones, sometimes associated with these concentrations of bone, were patches of charcoal, all derived from oak (Miller and Ramsay, see Chapter 12 and Archive). The stratigraphic relationships between the large stones (051) and the deposits (202) that sealed them clearly showed that the stones were flung into the pit before a second mound was built.

The pottery pit (025)

At this time in the history of the site, people's activities were not restricted to the primary mound. Another feature close by, about 30m to the south-west, testifies to a short episode of activity in the wider area. A large, sub-rectangular pit (025) was dug, measuring 2.9m by 1.2m (Figure 2.4). After this pit had been dug, it was partially backfilled with a layer of light brown/grey sand (026), then a charcoal-rich deposit (023) was tipped into it from the east. This latter deposit contained alder, hazel and oak charcoal and occasional fragments of burnt hazelnut shell (Miller and Ramsay, see Chapter 12 and Archive). It also contained numerous sherds from seven pots made in the Carinated Bowl tradition (Sheridan, see Chapter 12 and Archive) (Figure 2.5: CBs 1, 2, 3, 4 and 6) and an edge-trimmed flint flake. Each of the pots had clearly been broken before deposition, and only a small proportion of each vessel (generally 1/10 or less) had been placed in the pit. Four of the pots were large Carinated Bowls (CBs 1–4), while a large collared jar (CB 5) and an Uncarinated Bowl or cup (CB 6) were also used. Someone put material in the pit on another occasion (024), depositing more sherds from two of the broken vessels that had already partly been deposited (CBs 1 and 6: SFs 54, 59 and 65). A

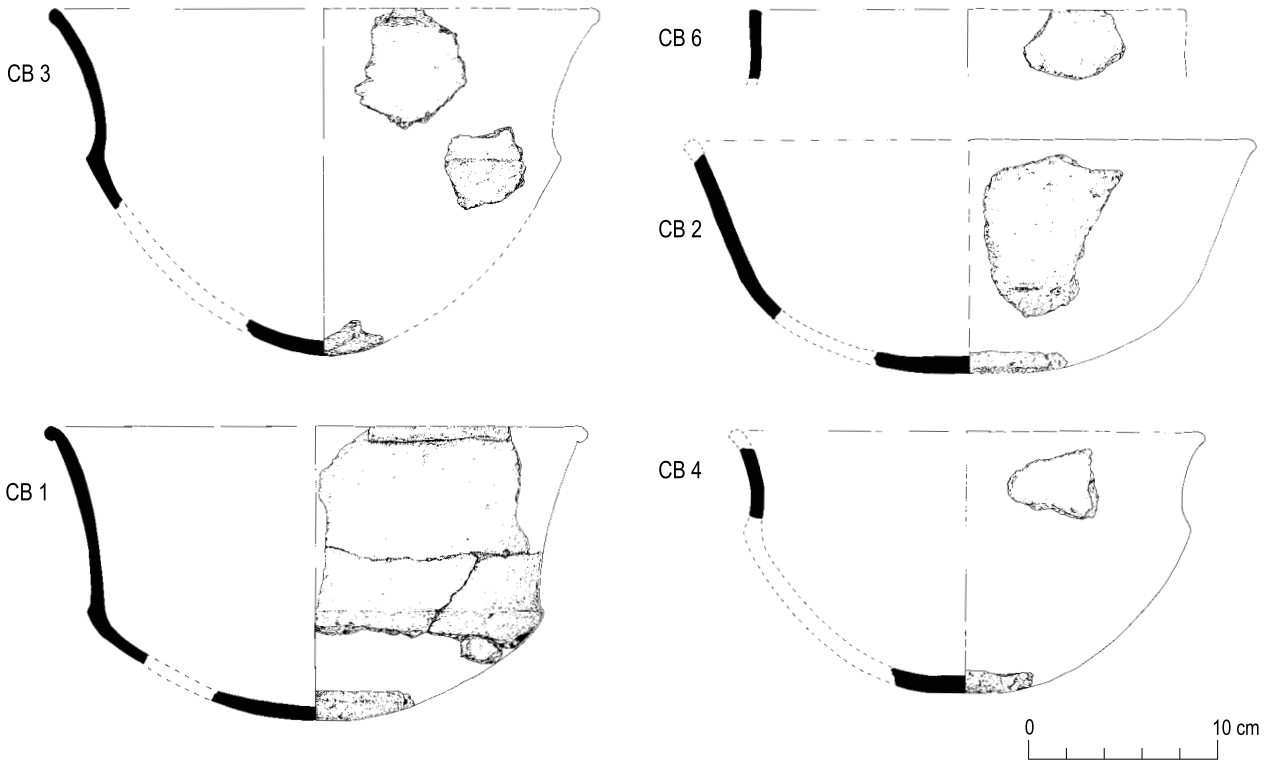
sample of alder (*Alnus*) charcoal from the charcoal-rich lower fill (023) produced a radiocarbon date of 3960–3710 BC (SUERC-5298).

By the end of the phase, we can envisage a low earth-and-turf mound which might have sat in a small clearing, or in a larger one which might have afforded views to the north across the river Forth. On top of the mound was a small, irregular cairn that extended like an iceberg into the ground below. The area around the mound had been scalped of turf. At this time, another pit (025) also formed a focus of activity and its presence 30m away may suggest more extensive clearance had taken place in the vicinity of the mound.

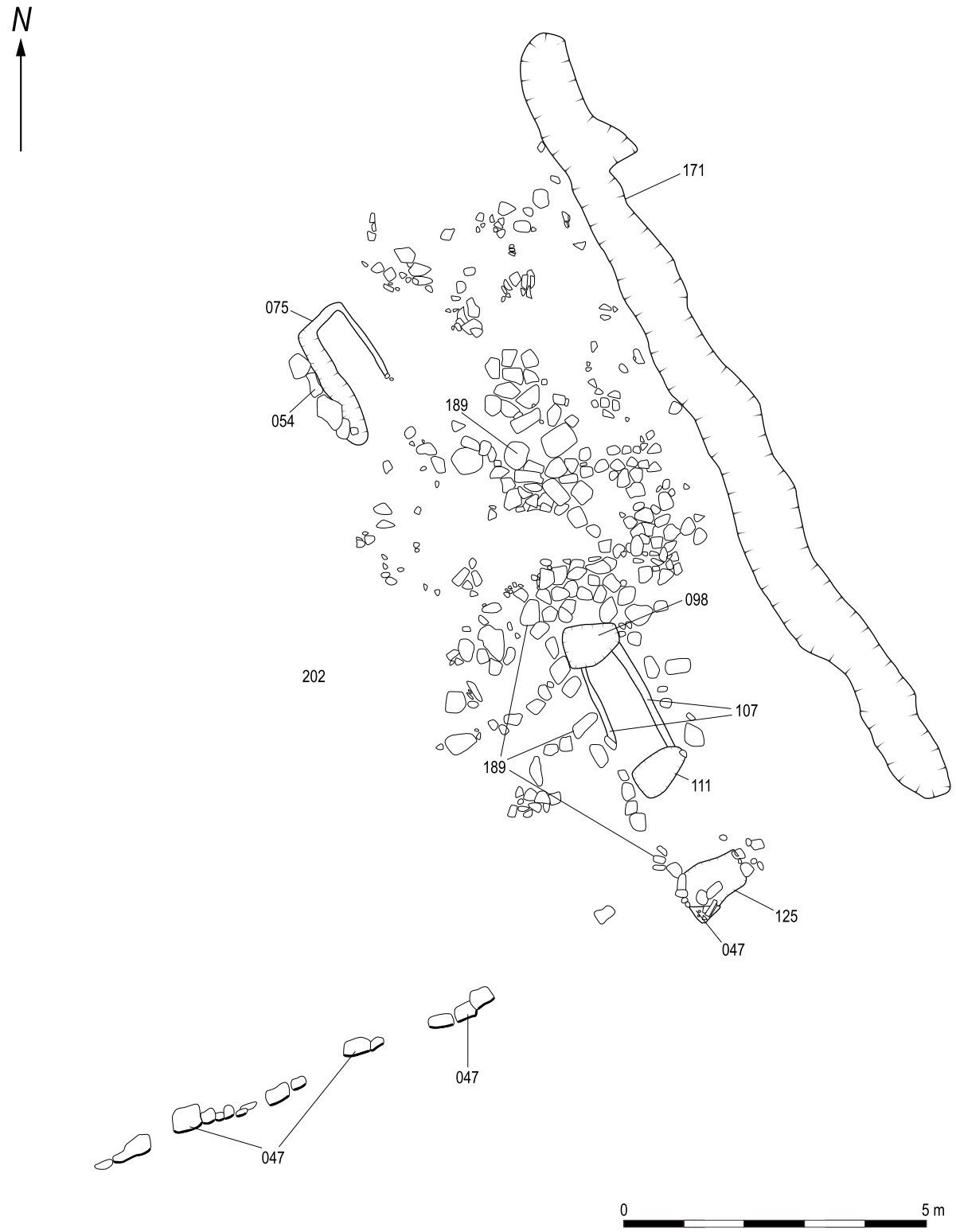
The secondary mound and mortuary structures

After the large pit (094) which had been dug into the primary mound (049) had been filled in with gravel (096), and probably after the stone (051) had been tipped into it, another mound was built of earth (202). Micromorphological analysis has shown that this secondary mound was composed at least in part of turves (McKenzie, see Chapter 12 and Archive), and this earthen deposit had slumped or been tipped into the upper part of the large pit (094). This more substantial, secondary mound (202) was up to 20m across and 0.35m deep. Its surface was exposed for long enough to allow leaching (102) of sediment, although this might have taken place after the site was scalped in the late third millennium BC (see Chapter 4). After creating the secondary mound, the builders constructed wooden and stone structures on top of it (Figure 2.6). The association of these structures with burnt human bone suggests that they were used for mortuary rites; such structures are typically called mortuary structures.

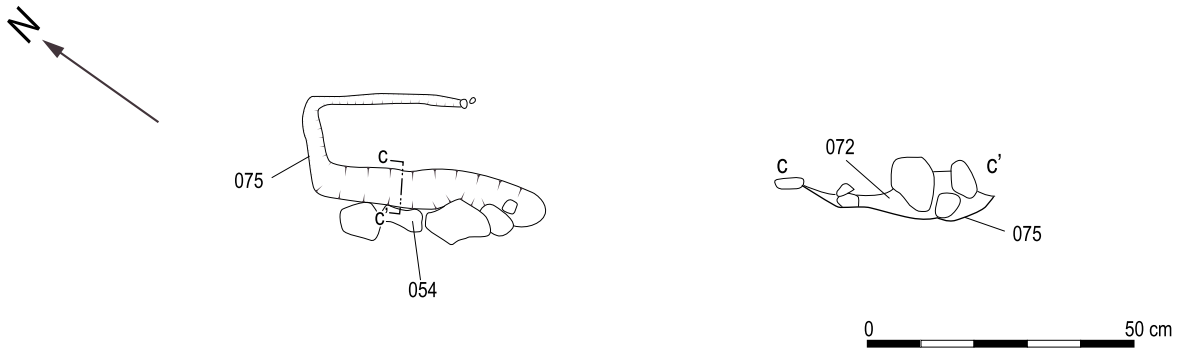
The people active at Eweford West at this time may first have built a small structure (1) (075) with straight sides and one end open to the south-west. Analysis of charcoal from the shallow foundation trench (075) of this structure has shown it all to be oak, suggesting that the trench held oak timbers that were subsequently burnt (Miller and Ramsay, see Chapter 12 and Archive). The monument builders set large stones (054) against the timbers to revet them, at least on the southern-western side, but these probably extended around the north and east sides as well (Figure 2.7). Small quantities (5.9g) of burnt human bone were found in the foundation slots, and these quantities of bone proved to represent the remains of at least one adult and one immature adult (Duffy, see Chapter 12 and Archive).



2.5 Carinated Bowls from pit 025.



2.6 Plan of the traces of mortuary structures, screens and walling.



2.7 Detail of the remains of the first mortuary structure in plan and section.

It is not clear whether the bone was already burnt when it was brought to the structure or if it burnt when the timbers were incinerated, but its small quantity evokes the fragmentary remains overlooked when a pyre was raked through to collect larger fragments. Together, this evidence suggests that those using the monument built a timber and stone structure and placed human remains inside it. They later burnt the building down, removed most of the burnt bone and heaped stone (053) over the collapsed remains.

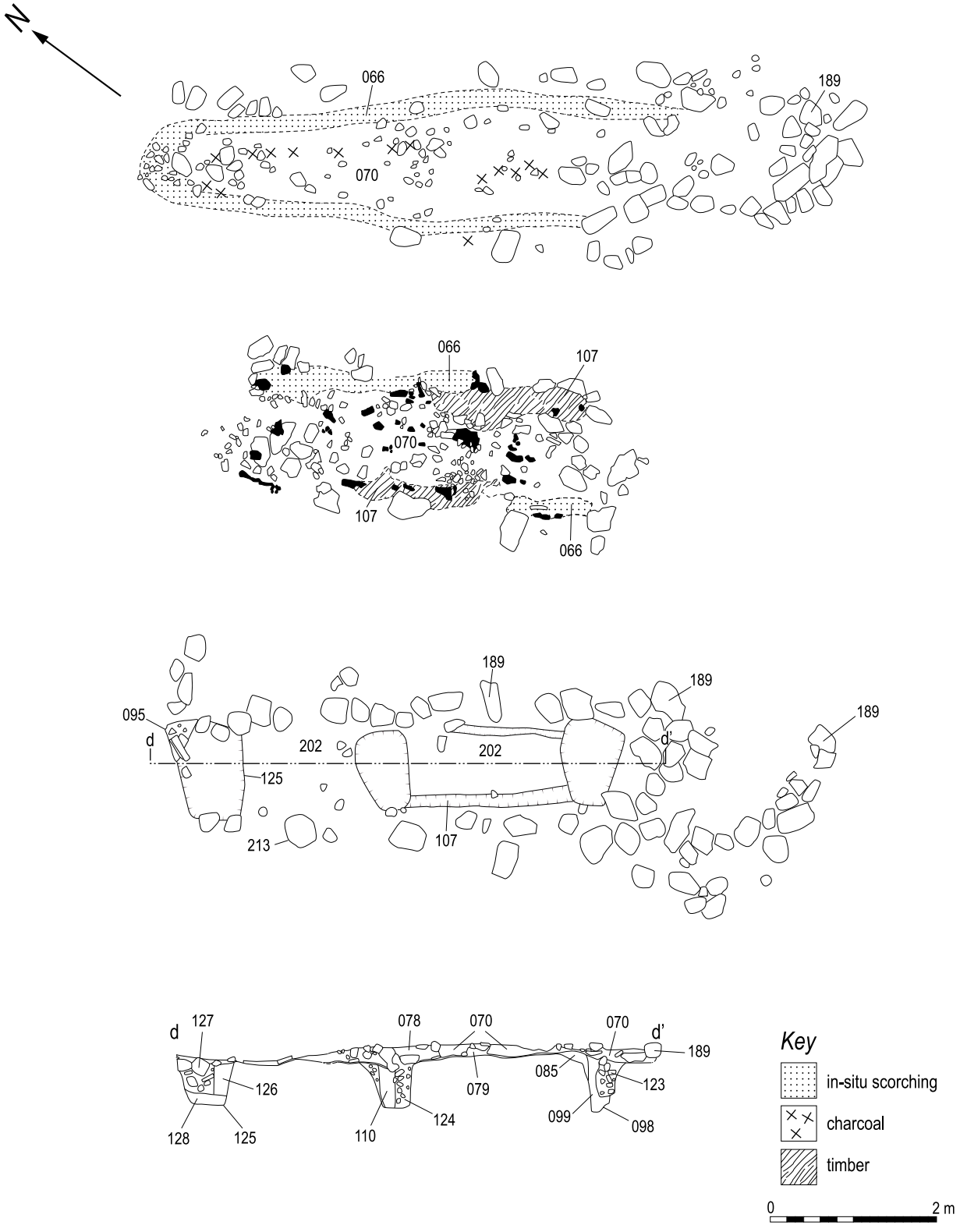
A second wood-and-stone structure (2) was also built on the mound (202), five metres to the south-east of the remains of the first. This second structure was more complicated in form (Figures 2.6 and 2.8). Its builders dug two sub-rectangular pits (111 and 098) through the mound material (202/049) and into the natural subsoil (217) below. They cut slight ramps for each pit, and in each one they placed an oak timber, evident to the excavators as a post-pipe, towards the south side of the cut. The builders dug a third post-hole (125) to the south and partly backfilled it with soil containing oak and hazel charcoal, before placing an oak post in the north side of the hole (Figures 2.8 and 2.9). Traces of timbers (107) burnt *in situ* suggest that the builders also ran timber planks between the three large posts, attaching these planks to the outer faces of the posts. They then set large revetment stones (188) against the outer side of the plank-built structure, forming two parallel lines that met to the north but formed an open end to the south. The revetment stones were placed along each side in a single row, but at the northern end they were laid three rows deep. Alternatively, it is possible that the stones were originally stacked up in three or more courses and later collapsed. This building was also burnt down.

Excavation identified evidence suggesting that the second structure held artefacts and bones, including parts of a Neolithic carinated pottery bowl. Two sherds of an open, burnished, fine ware Carinated Bowl (CB 9, Figure 2.10; see Sheridan, see Chapter 12 and Archive) were found in the upper fill (078) of the collapsed building. Human remains may also have been placed inside this structure; bone (88.3g) was found in its upper fills (070 and 078) and also associated with a timber burnt *in situ* (107) (17.8g). However, cereal found in the same fill as the burnt timbers (107) produced a radiocarbon date of 2140–1890 BC (SUERC-5284), relating to a later phase of activity at the site (see Chapter 4), so it is also possible that the human bone was intrusive.

The building's upper fills (070 and 078) contained the remains of two people, one adult and one infant (probably foetal or neonate), whose bodies were fleshed when they were cremated (Duffy, see Chapter 12 and Archive). The bone associated with the burnt timber (107) represents at least one adult, and the lack of warping of that bone indicates that the soft tissue had decomposed before cremation. This shows that some of the human remains were excarnated, possibly on the mortuary structure, before cremation.

The destruction of the second structure by fire left quantities of oak charcoal inside it (Miller and Ramsay, see Chapter 12 and Archive) and scorched sediments (066) running parallel to the outsides of the burnt timbers (107). The revetment stones (054 and 188) surrounding both Structure 1 and Structure 2 were fire-reddened and charcoal-stained, and these stones had clearly been in place when the timbers were burnt. These stones were also in very similar condition to the stones (051) that had been cast into the earlier pit (094).

The revetment stones (188) surrounding the north end of Structure 2 extended further to the north, forming an arc (189) about 3m long that met the south-eastern end of Structure 1 (Figure 2.6). It is not clear why these stones were put in place, as there was no evidence of timbers set against them. It is possible that they were designed so as to



2.8 Detail of the remains of the second mortuary structure in plan and section.

2.9 The post-holes for the second mortuary structure, taken from the north.

delineate certain ways of moving around on the secondary mound.

Three stake-holes (213, 215, 216) hinted at the presence of more flimsy structural remains. The stakes had been inserted into the mound and later burnt down. Hazel (*Corylus*) charcoal from one stake-hole (216) provided a radiocarbon date of 3960–3770 BC (SUERC-5290).

The screen and façade trench

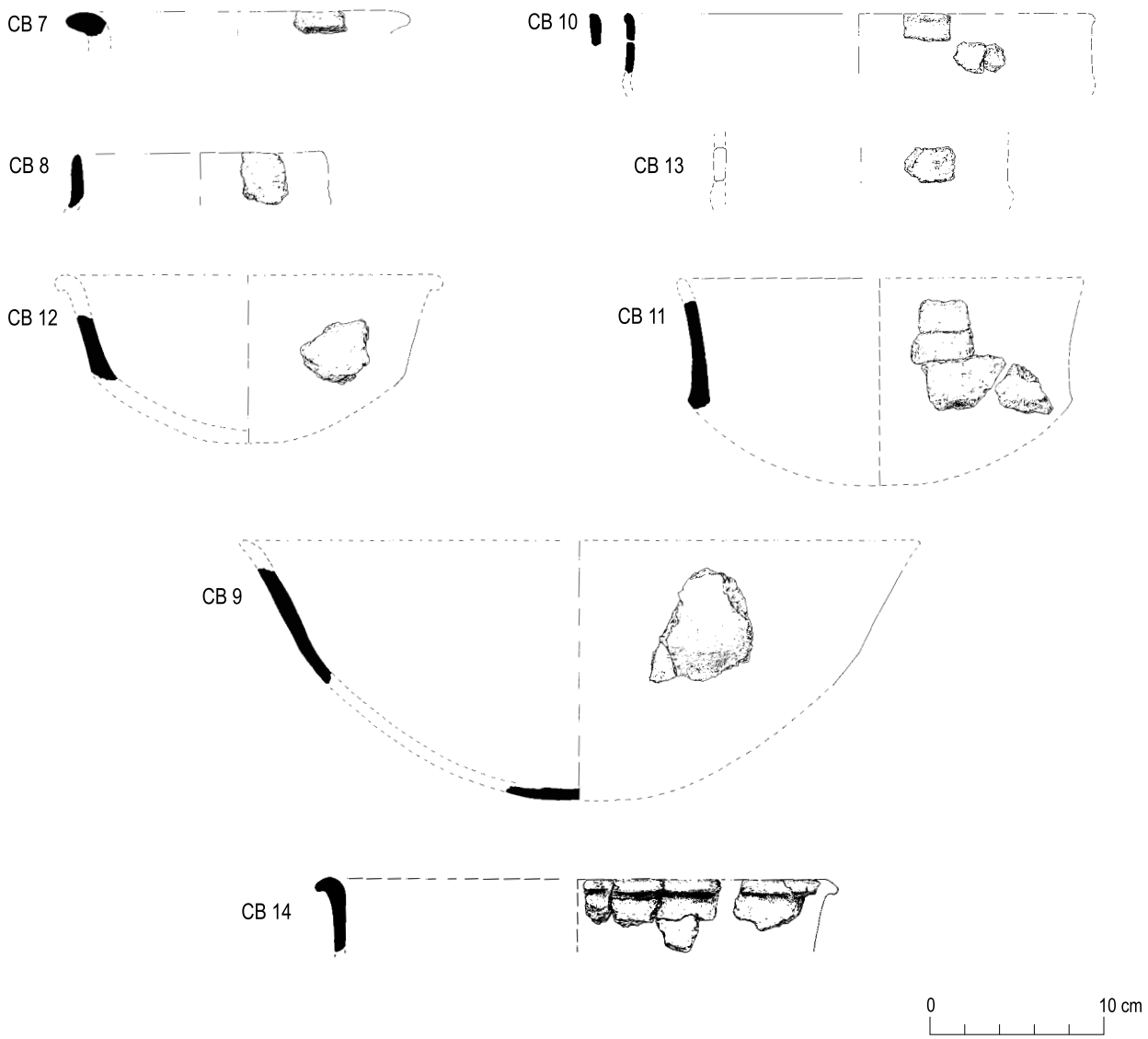
The monument builders at Eweford West also excavated a deep trench (171), up to 10m long and up to 0.75m deep, on the mound (Figures 2.6 and 2.11). The sequence of sediments in the trench showed that the people who excavated this trench placed substantial timbers in it, probably of oak and alder (Miller and Ramsay, see Chapter 12 and Archive). They set the timbers to pitch westward at an angle of perhaps 45 degrees, forming a continuous row or screen. Palaeo-environmental analysis suggests that hazel and oak roundwood may have formed wattle work between or attached to the timbers (Miller and Ramsay, see Chapter 12 and Archive). The timber screen later burnt so intensely that the sediment around it was scorched to a depth of 0.6m. To achieve this, more wood was probably piled against the timbers, and the fire tended to ensure that the uprights burnt to ground level and below.

After this screen was burnt, there was another clear phase of rebuilding, with timbers again set at a pitched angle in the same trench, forming another screen. The timbers of this second screen were again burnt to such an extent that the soil below the ground scorched. Analysis of the charcoal in the trench suggests that these later timbers were mainly oak, with some alder (see Miller and Ramsay, see Chapter 12 and Archive, appendix).

A radiocarbon date of 3800–3650 BC (SUERC-5286) was obtained from alder charcoal in a post-pipe relating to the first phase of construction. During analysis, small, circular holes were observed on the fragments of oak; these were made by woodworm. This shows that the timbers were exposed for long enough after felling to season before being infested with woodworm.

To the west of the screen trench (171), its builders set a line of three posts or stakes (206, 207, 209) (Figure 2.11). Hazel (*Corylus*) charcoal from the fill of one of these (209) produced a radiocarbon date of 3890–3650 BC (SUERC-5289). The exact relationship between the façade and the posts is unclear, but it is possible that the posts supported some of the pitched timbers when the façade was standing (Figure 2.12). Charcoal in the post-hole fills suggests that the posts had burnt down, probably at the same time as the first timbers in the façade trench. If we accept that the height of a post may be three times the depth of its post-hole, the trench depth of 0.75m suggests that the timbers stood up to 2.25m above the ground. With the timbers extending this length and pitched at 45 degrees, they would have extended to meet the east side of Structure 2. In these circumstances the space between the façade and structure 2, effectively forming a timber room.

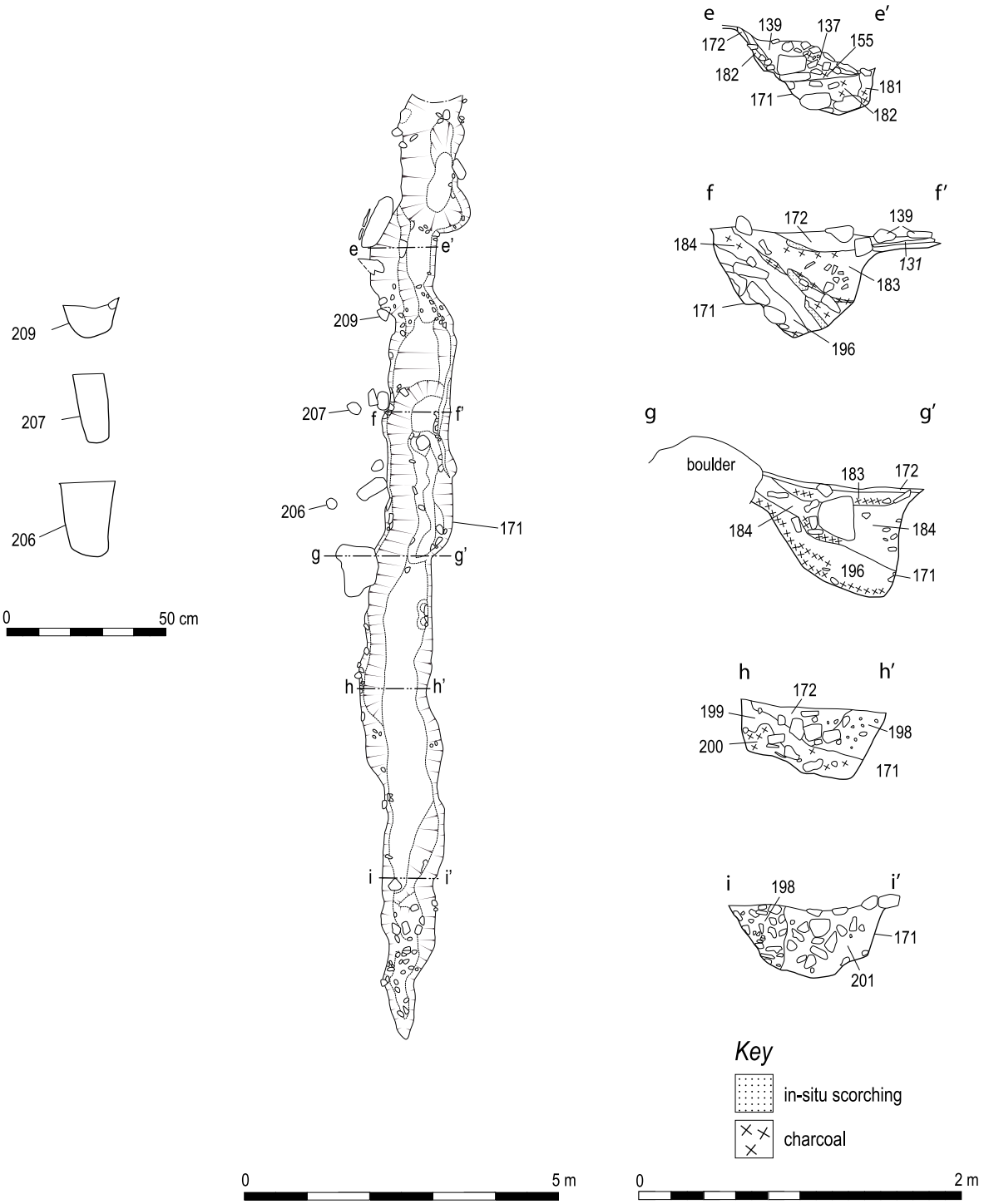
At the same time that people were building and burning structures on the secondary mound, they were also bringing pottery vessels to the site. Analysis has identified evidence for at least seven Carinated Bowls (Figure 2.10; Sheridan, see Chapter 12 and Archive). Particular care was taken in the production of some of these pots, CB 9 in particular having a finely burnished surface. Burning of CB 11 and encrusted residues on CB 9 and CB 10 suggest that these vessels were used for heating liquid. The distribution of the sherds from these vessels suggests that they were deliberately broken and scattered around the site. The majority of sherds were located on the upper mound, but with notably more scattered to the southern side than elsewhere. The distribution of sherds



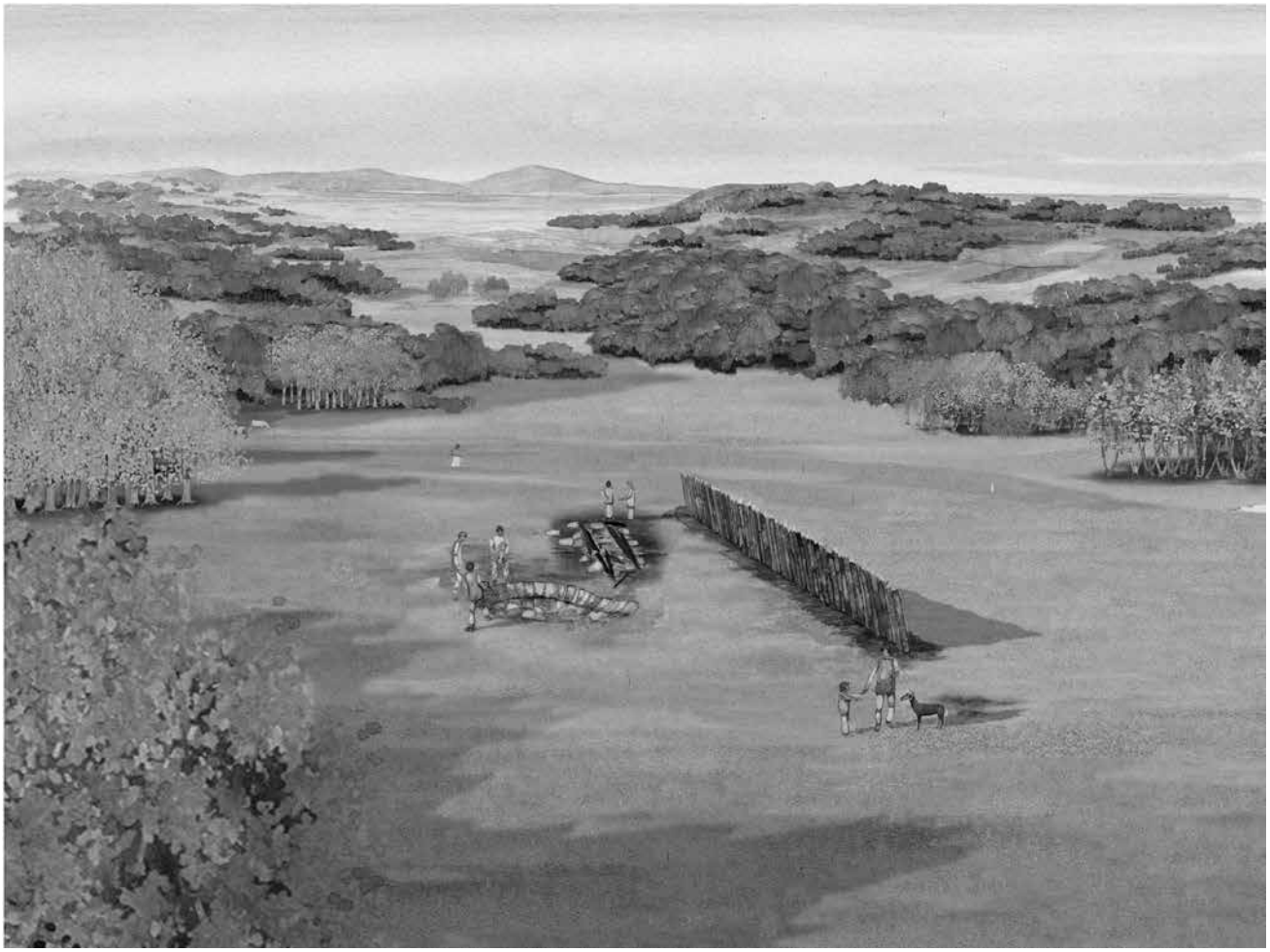
2.10 Carinated Bowls from the second phase at Eweford West.

from CB 9 is particularly striking, as pieces of this large, burnished, fine bowl had been deposited in the mortuary structure but also incorporated in deposits to the north of the mound and in an upper fill (139) of the screen trench; this suggests that the vessel had been broken at the site and its parts dispersed there. Sherds from CB 7 and CB 8 were recovered from the northern hollow, while sherds from CB 11 and CB 12 were recovered from the southern hollow (see below for a description of these hollows). It is possible that the sherds had been deposited on the margins of the mound and subsequently migrated into the hollows. It is particularly striking that there is no evidence for the deposition and breaking of pots to the east of the screen or façade.

Other activities also took place at Eweford West, or at least deposits were made, while the pottery was being brought to the site. This is suggested by fragments of ungulate tooth (Smith, see Chapter 12 and Archive) and by struck stone tools and waste scattered across the surface of the mound (202). They predominantly comprised chert chips (7) and flakes (7) and a retouched chert core-rejuvenation flake (SF 441), but also included chalcedony (2 flakes) and flint (1 flake). These could, of course, be residual from earlier activity.



2.11 The façade trench and stake features in plan and section.



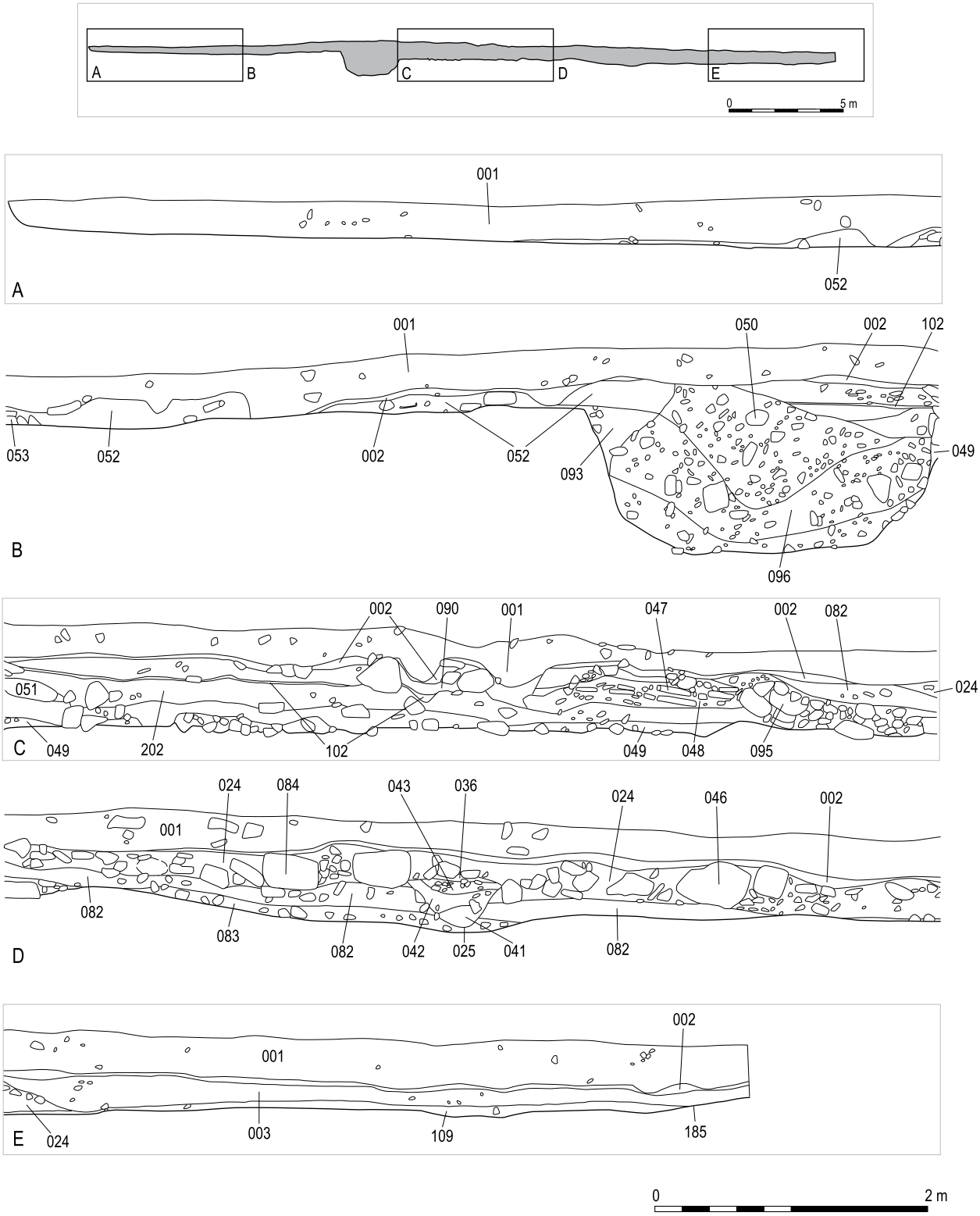
2.12 Reconstruction of the façade and other features at Eweford West.

The final mound

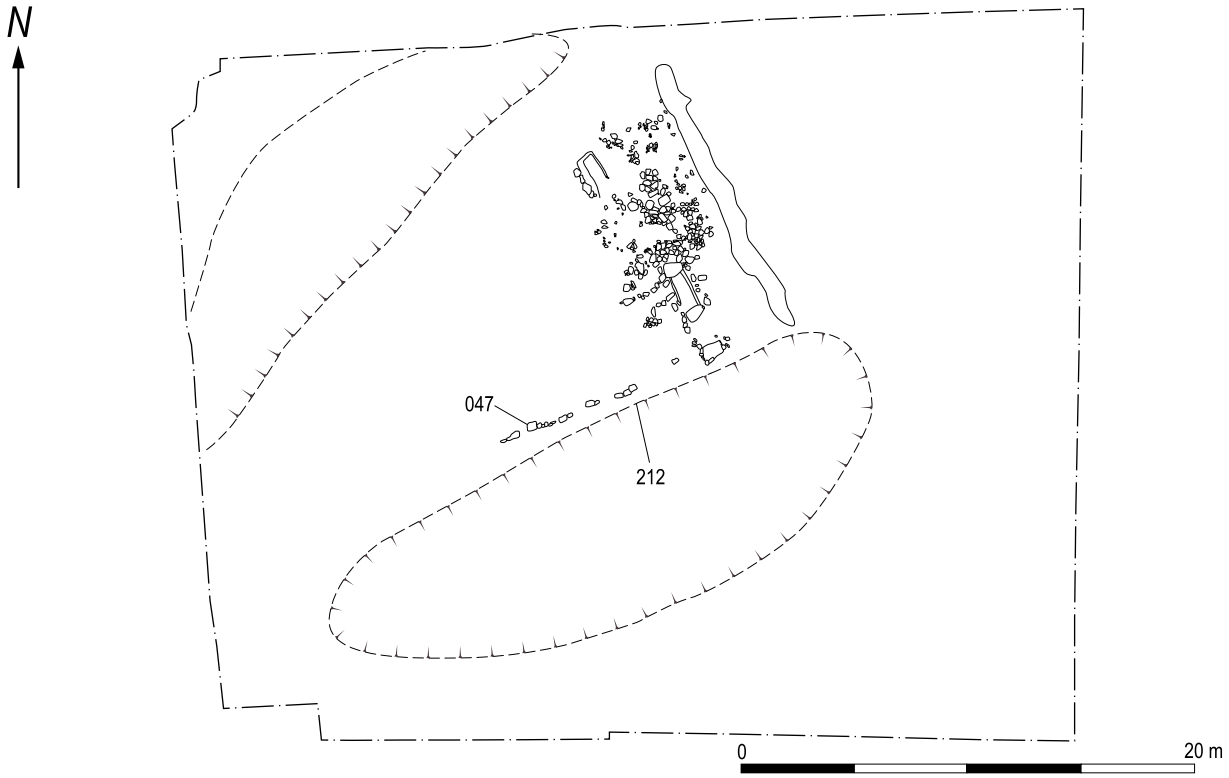
After the building and destruction by fire of the structures on the secondary mound (202), people began to increase the height of the mound by depositing more earth (048, 087 and 090) (see Figure 2.13 for the section through the mound). How high the mound eventually became is unclear, due to scalping of the site in the late third millennium BC (see Chapter 4), erosional processes which resulted in the formation of colluvium (003) and later plough truncation (002), probably after the Iron Age (see Chapter 6). The imported, mound-heightening deposits comprised sands and silts (048, 087 and 090), and these soils may partly have derived from turves (McKenzie, see Chapter 12 and Archive). The builders also laid down a distinctive layer of pinkish gravel (115), which partially sealed the leached ground surface (102) and mixed with the mound deposits above (048, 087 and 090).

Large quarry pits were also dug on two sides of the mound (Figure 2.14). These were observed as a hollow (185) to the south-east, measuring 25m by 10m, and another hollow to the north-west, measuring at least 20m by 10m. The monument builders probably obtained much of the material which they used to heighten the mound from these quarry pits, and it was probably at this time that a pitchstone bladelet (SF 483) was incorporated in the lower fill of the north-western hollow (184). Sherds from two large open Carinated Bowls were also deposited in this hollow (CB 7 and CB 8: see Sheridan, see Chapter 12 and Archive).

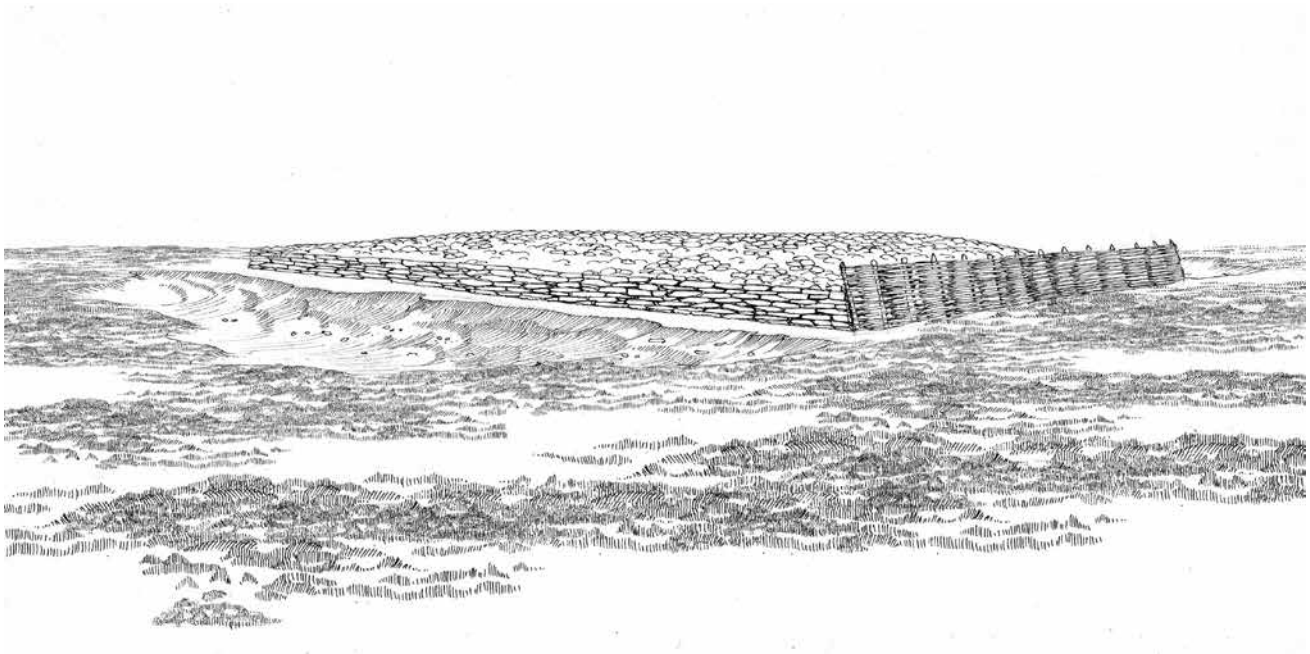
At the same time as the digging of the two hollows, the builders of Eweford West may also have been modifying the mound's southern side. They cut through it to create a straight edge (212) that sloped down into the south-eastern quarry pit. Then they built a drystone wall (047) of sandstone slabs running parallel to this



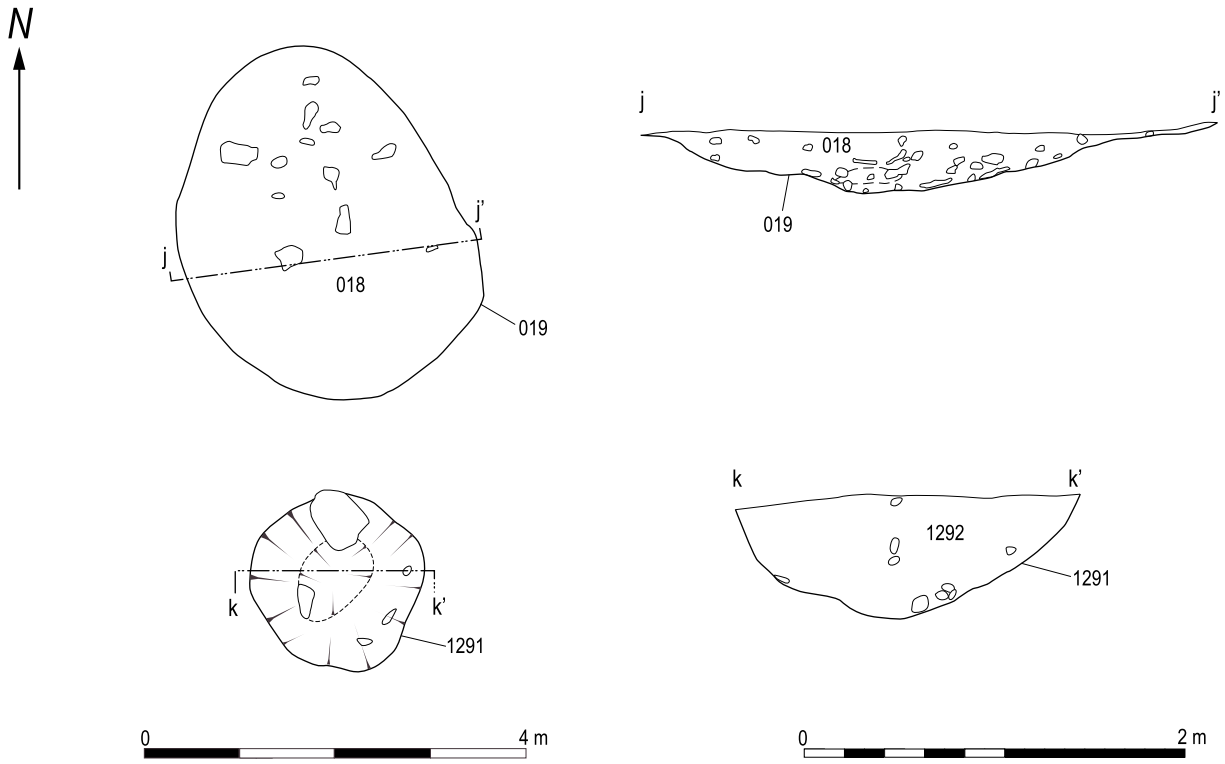
2.13 Section through the mound, pit 049 and later cairn material.



2.14 Plan of the quarry pits that flanked the mound.



2.15 Reconstruction of the mound in its final form.



2.16 Pits 019 and 1291 in plan and section.

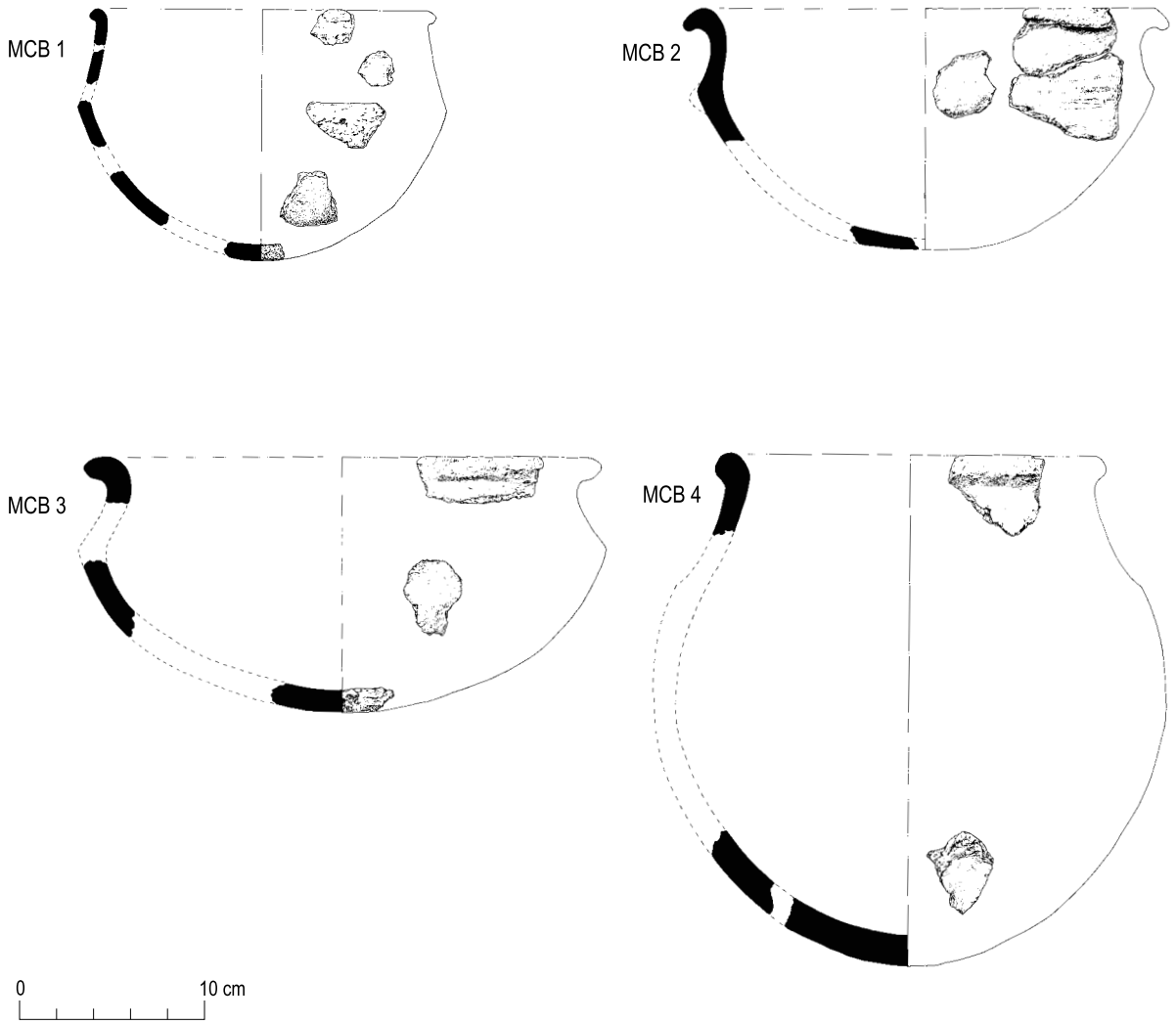
edge, about 0.6m away from it, effectively defining a path between the wall and the hollow (Figure 2.14). The wall survived to a length of 10m, but probably originally extended for 20m. The wall consisted mainly of red stones, with some coloured grey and white, and its collapsed remains (see Chapter 4) indicated that it originally stood to a height of at least 13 courses, perhaps 0.65m. The sandstone slabs (047) extended over the southern end of the second mortuary structure. This spatial relationship may explain why the southern post (126) of Structure 2 stood to the north side of the cut (125) and not the south side, in order to accommodate the wall. It would also suggest that the walling was built while the second mortuary structure still stood. There was no clear evidence for any similar walling on the north edge of the mound; however, a cut (108) sealed beneath later cairn material may indicate where a wall had been robbed out (see Chapter 4).

Probably also at this phase in the history of the site, the trench (171) for the timber screens was extended at either end, increasing its length to about 14m, and more timbers were set along its length (Figure 2.11). This time, however, the timbers were not burnt down but left to rot *in situ* (as indicated by the sections through this feature), forming a façade along the front of the final mound. This most recent timber façade and the drystone walling would have retained the uppermost mound material (048 and 090). It is also possible that mound layer (090) was capped with stones to form a cairn which subsequently collapsed or was dismantled (see Chapters 4 and 5).

We can envisage, then, that the monument at Eweford West, in its final form during the fourth millennium, was a substantial, sub-trapezoidal mound (Figure 2.15). This mound was retained by timbers at its higher, northern-eastern end and by bands of red and grey stone walling along its sides. The top of the mound, which may have been visible above the revetments, was capped with a cairn of grey stone. To the south-east of the walling, and possibly to the north west, was a narrow path, beyond which lay quarry scoops. With time, the oak timbers would have faded to silver grey before rotting away.

Further pottery pits (019 and 1291)

Finishing the mound did not mark the end of human activity at Eweford West; there was another clear phase of activity 20m to the south of the stone-filled pit (094). Here, someone dug another large, oval pit (019), up to 4.5m



2.17 Modified Carinated Bowls from Eweford West.

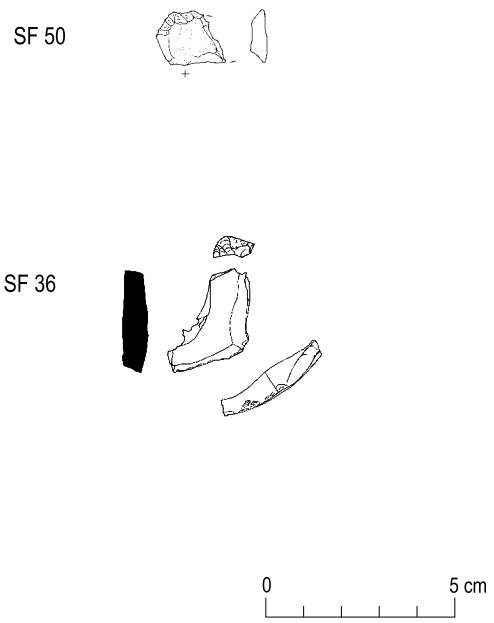
across and up to 0.5m deep (Figure 2.16), and scattered fragments of modified Carinated Bowls in it (Figure 2.17: MCB 1–4). The pottery comprised less than one-tenth of three Carinated Bowls (MCB 1–3), of which MCB 2 had lugs, and one-fifth of a deep-bellied bowl or jar (Sheridan, see Chapter 12 and Archive). The pit also contained flint and chert flakes, a chert scraper (Figure 2.18: SF 50) and an incomplete, retouched flint piece (Figure 2.18: SF 36; Saville, see Chapter 12 and Archive), as well as a hammer stone (SF 47) and a polished stone implement (SF 48, Figure 2.19). Palaeobotanical analysis has shown that the pit contained hazel, blackthorn-type and willow charcoal, and small fragments of burnt hazelnut shell. A sample of hazel (*Corylus*) charcoal produced a radiocarbon date of 3660–3510 BC (SUERC-5297).

About the same time, someone dug another small pit (1291) 275m to the west (Figure 2.16). It contained a sherd from a pottery bowl, a grey flint bladelet with slight edge trim or retouch (Figure 2.18*:* SF 587), pieces of burnt hazelnut and a little burnt human bone, the remains of an adult (0.5g). A sample of hazel (*Corylus)* nutshell from the pit produced a radiocarbon date of 3640–3370 BC (SUERC-5338).

Pencraig Hill

The first phase

In the early fourth millennium BC, a community began to build ceremonial structures at Pencraig Hill (Figure 2.1). These builders selected a spot on the south-western



2.18 Stone tools from Eweford West and East.

slopes of the hill, where the topography obscured views to the north but allowed open views to Traprain Law and the Lammermuir Hills to the south. Analysis of the soil micromorphology suggests that the initial phase of construction comprised the clearance of trees or rough scrubland (Simpson, see Chapter 12 and Archive), perhaps to prepare the ground symbolically as well as physically before any building work took place, creating a working area free from stones and weeds. While no tree holes were observed, any created during clearance may have been removed by the ploughing that later truncated the site.

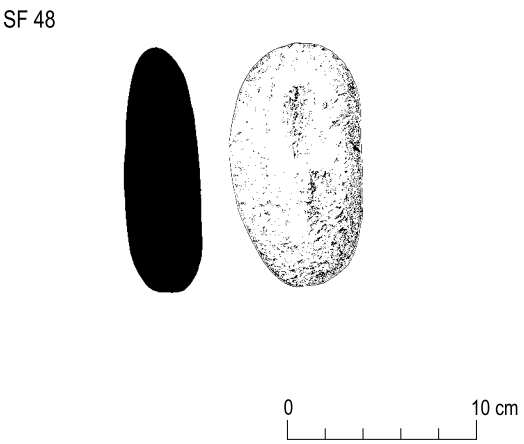
After this initial clearance, several small fires were lit. Evidence for this was found in layers of silt (226) containing charcoal and ash and laced with finer lenses of silt, which seem to indicate *in situ* burning (not illustrated). These deposits were interpreted as the remnants of small fires. After each burning event, the remains of the fire spread outwards, perhaps through trampling, and the next fire was set in the ashes of the first, gradually building up the fine layers seen by the archaeologists. Palaeo-botanical analysis has shown that these layers contained much oak charcoal, with small quantities of alder (Miller and Ramsay, see Chapter 12 and Archive).

On the remains of these fires, a small mound or raised area (210) was constructed, stretching for roughly 13m and forming a sub-trapezoidal or axe-shaped feature orientated west-to-east (Figures 2.20 and 2.21). Two sub-rectangular trenches (157) dug into this mound were lined with clay and stones (217 and 218). These clay-lined trenches may have contained upright timbers, as is suggested by palaeobotanical evidence of oak charcoal in the fills (Miller and Ramsay, see Chapter 12 and Archive), and also stones used to pack the timbers. Another spread of grey-brown silt (204), lying in an irregular hollow cut into the mound (210), may indicate where a similar feature had been disturbed. Together these features (204, 217 and 218) may represent parts of a small, open-ended structure, perhaps built of wood and stone, with an entrance to the west (Figure 2.21). Inside this structure, the builders of Pencraig Hill laid clay (173), and on top of that they lit another series of small fires (122), represented by laminated lenses of charcoal-rich silts. The remains of these fires were similar to the traces of the primary burning events (226), described above, and they also included large quantities of oak charcoal (Miller and Ramsay, see Chapter 12 and Archive).

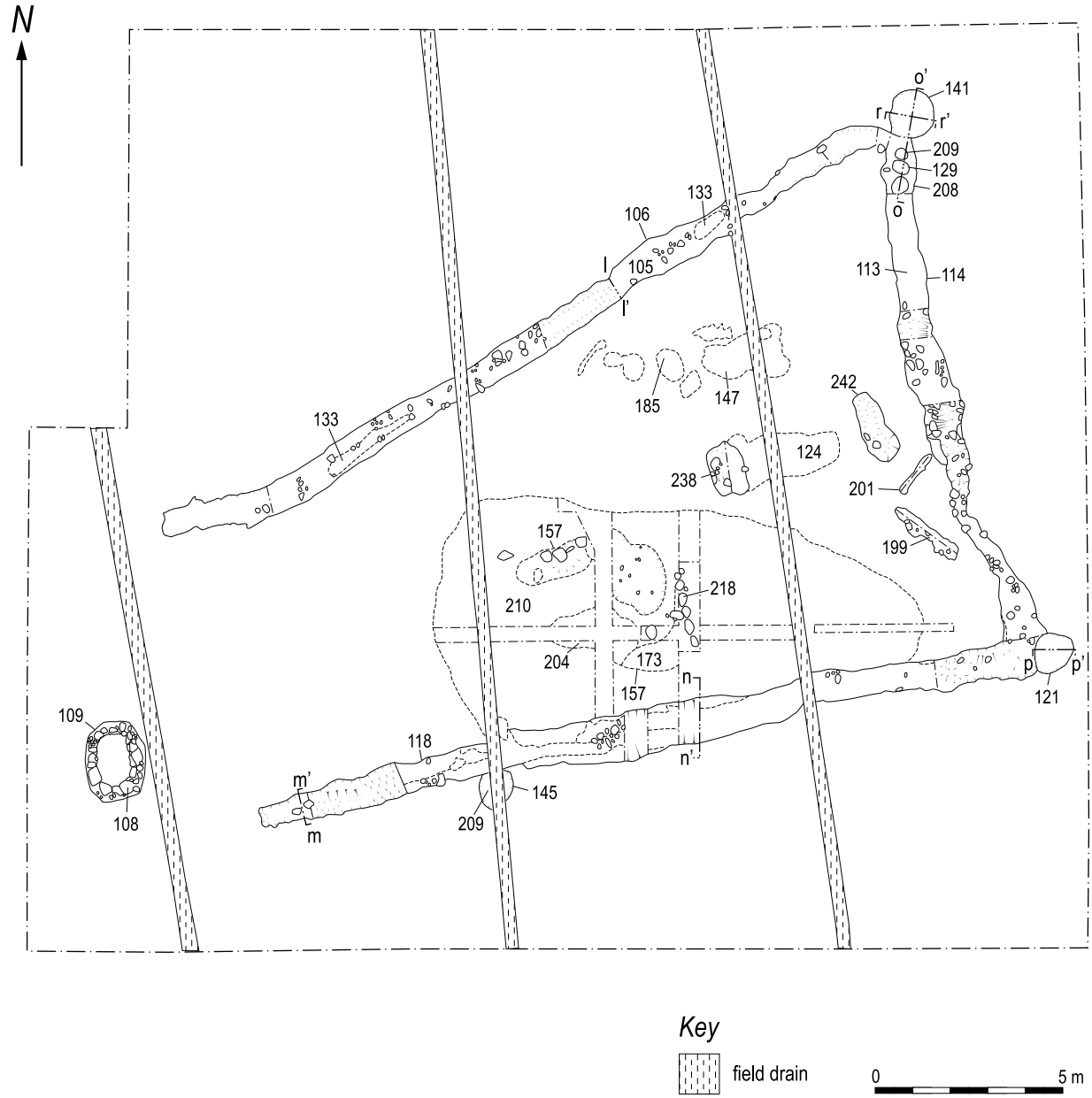
A sample of alder (*Alnus*) charcoal from the later rake-out (122) of these fires produced a radiocarbon date of 3950–3710 BC (SUERC-7663). It is possible that the structure (217 and 218) was also burnt down at the time this later rake-out (122) formed, resulting in a low mound with several short lengths of stone visible upon its surface. Subsequent phases of activity, particularly modern ploughing, dislodged and removed many of these stones.

The trapezoidal enclosure

After building this possibly open-ended structure (217 and 218), people created a more monumental enclosure around it. They dug two large trenches (106 and 118) on either side of the putative building, running east/west and forming converging lines which later became part of a sub-



2.19 The polished stone implement from Eweford West.

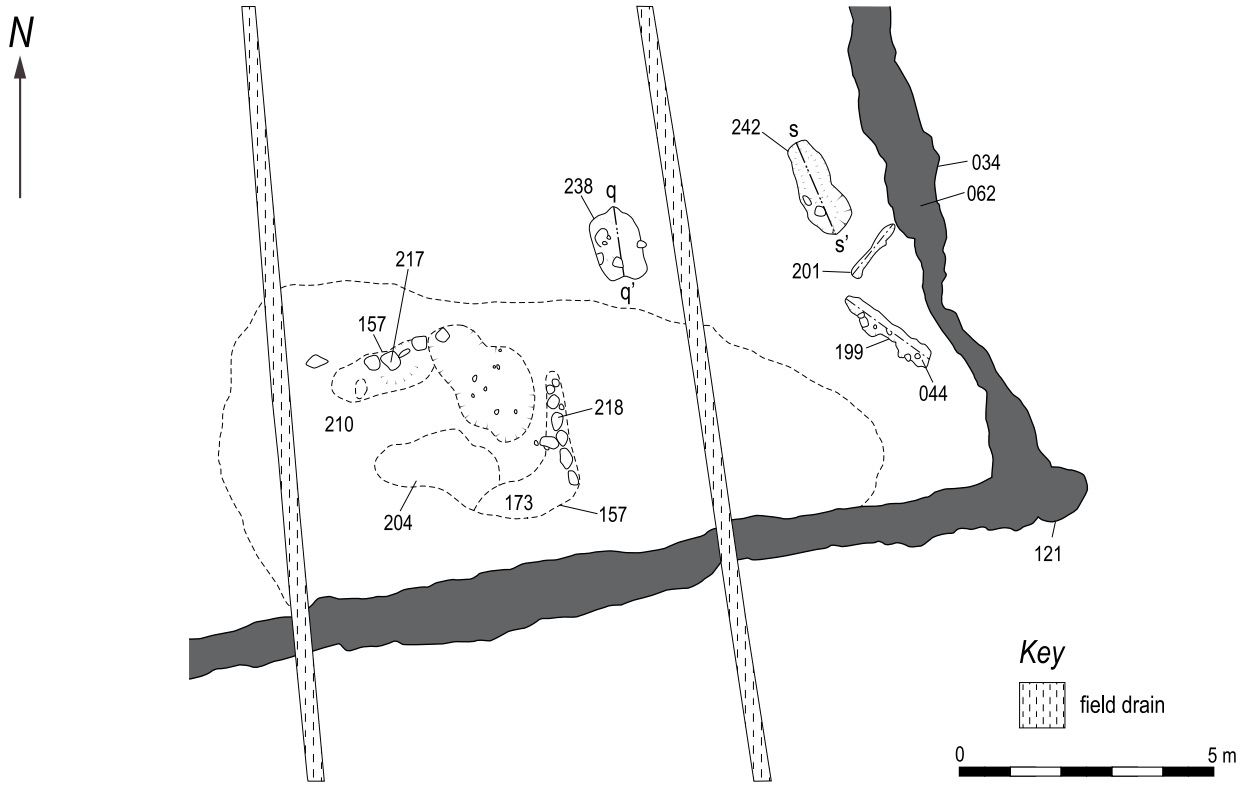


2.20 Plan of the mortuary enclosure at Pencraig Hill.

trapezoidal enclosure (Figures 2.20 and 2.22). The base of trench (118) (Figure 2.23, m-m') undulated in profile and expanded and contracted in plan, perhaps indicating that it was dug in discrete segments. The diggers of this trench may have worked in teams, perhaps drawn from different communities, with each team responsible for a short section of trench. These diggers left the trenches open for some time, as is evident from a silty deposit (165) in the base of the trenches and slumping into them from the sides (164) (Figure 2.23, m-m').

Eventually, the monument builders set a screen formed of planks against the inner edge of the southern trench, represented by a post-pipe (119) in its fill (Figure 2.23, n-n'). Palaeobotanical evidence from the fill of the trench, comprising mainly oak charcoal with smaller quantities of pine, hazel and alder, suggests that the screen was built of oak planks fastened together with pine, alder or hazel pegs (Miller and Ramsay, see Chapter 12 and Archive).

Mirroring the construction of this southern screen, a similar screen was built in the northern trench. However,

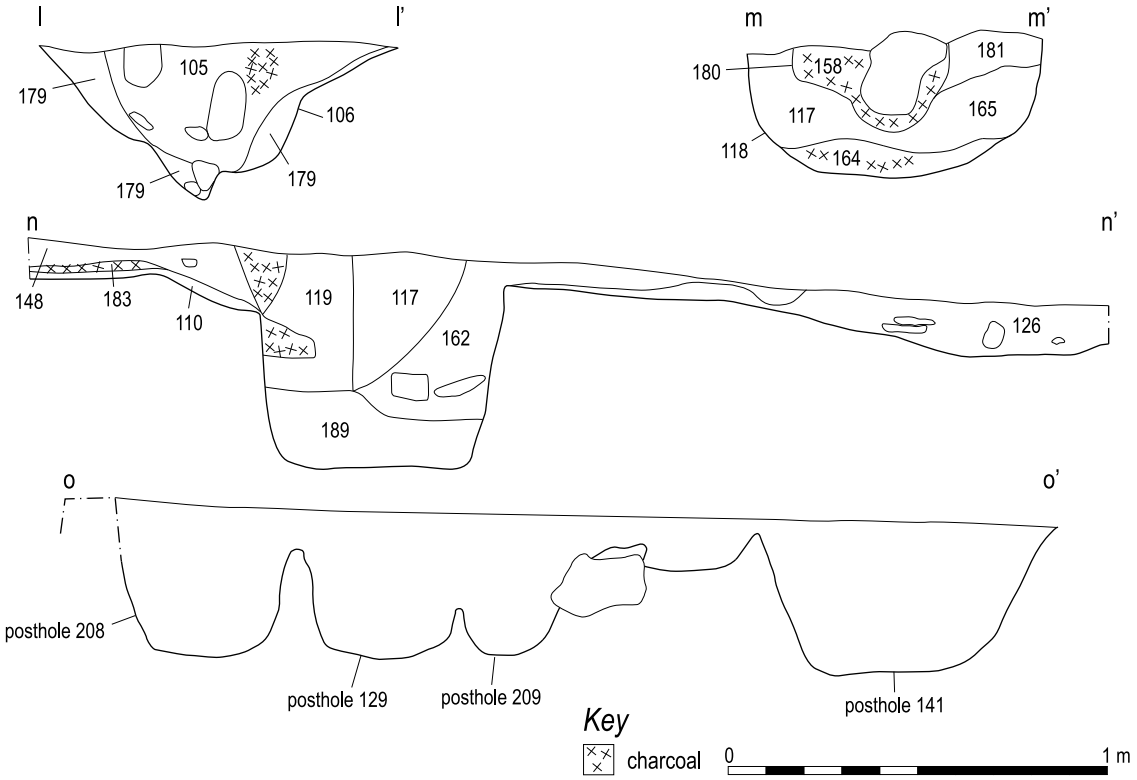


2.21 Detail of the features relating to the first phase at Pencraig Hill.

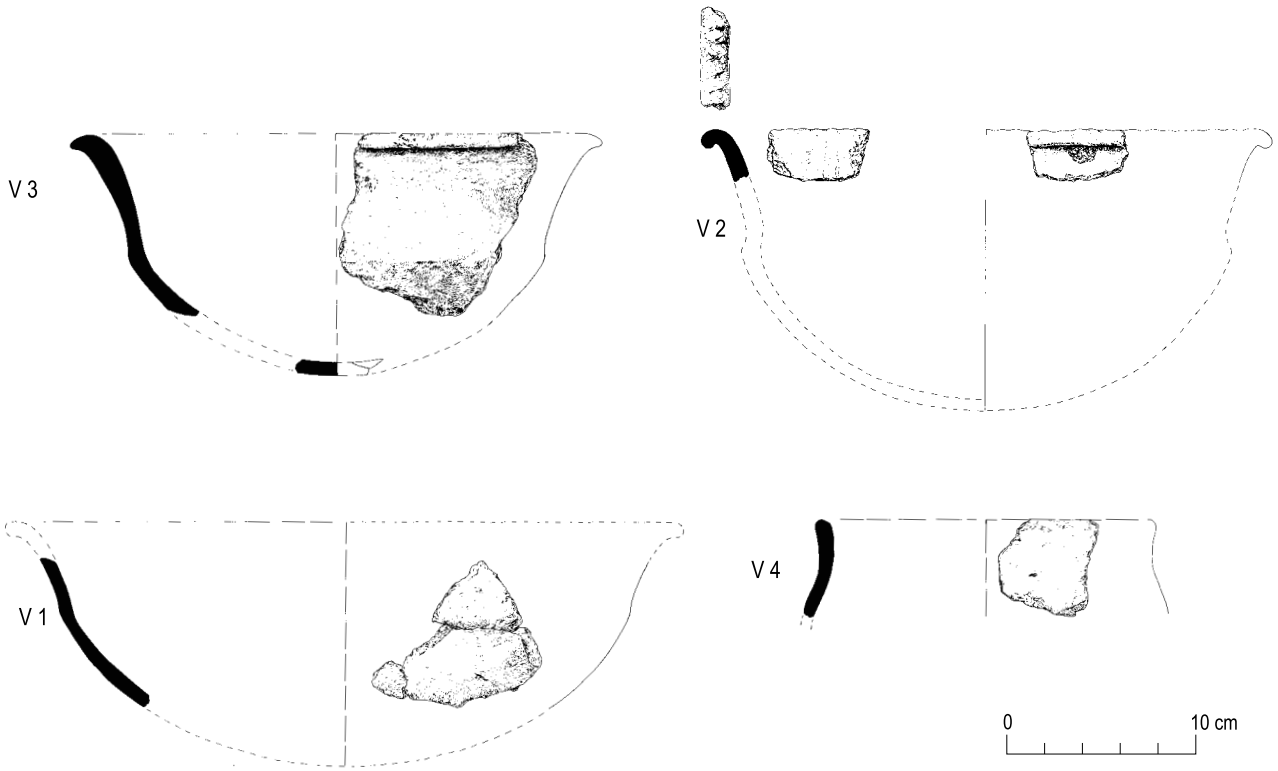
there are two main differences between the archaeology of the northern trench and that of the southern trench. A sherd from an earlier Neolithic Carinated Bowl (Figure 2.24*:* V 3, SF 18) was placed in the fill (105) of the northern ditch. An encrustation adhering to this sherd suggests that the pot had been used for cooking (Sheridan, see Chapter 12 and Archive). The fill of the northern ditch also contained a few grains of six-row barley (*Hordeum vulgare sl*), perhaps deriving from hearth waste (Miller and Ramsay, see Chapter 12 and Archive). Samples of alder (*Alnus*) and hazel (*Corylus*) charcoal from the main fill (105) of the trench produced radiocarbon dates of 2460–2150 BC (SUERC-7655) and 3910–3650 BC (SUERC-7654). The former date range is much later than other radiocarbon dates from this site, and probably derives from intrusive material.

After creating the trenches to support the north and south screens, the builders excavated a third trench (114) along the east side (Figure 2.20). Excavation by the archaeologists revealed that the techniques used to create this east trench varied from those used for the southern and northern trenches. Large, circular pits (209), (129) and (208) were dug to form the northern portion of the east trench,

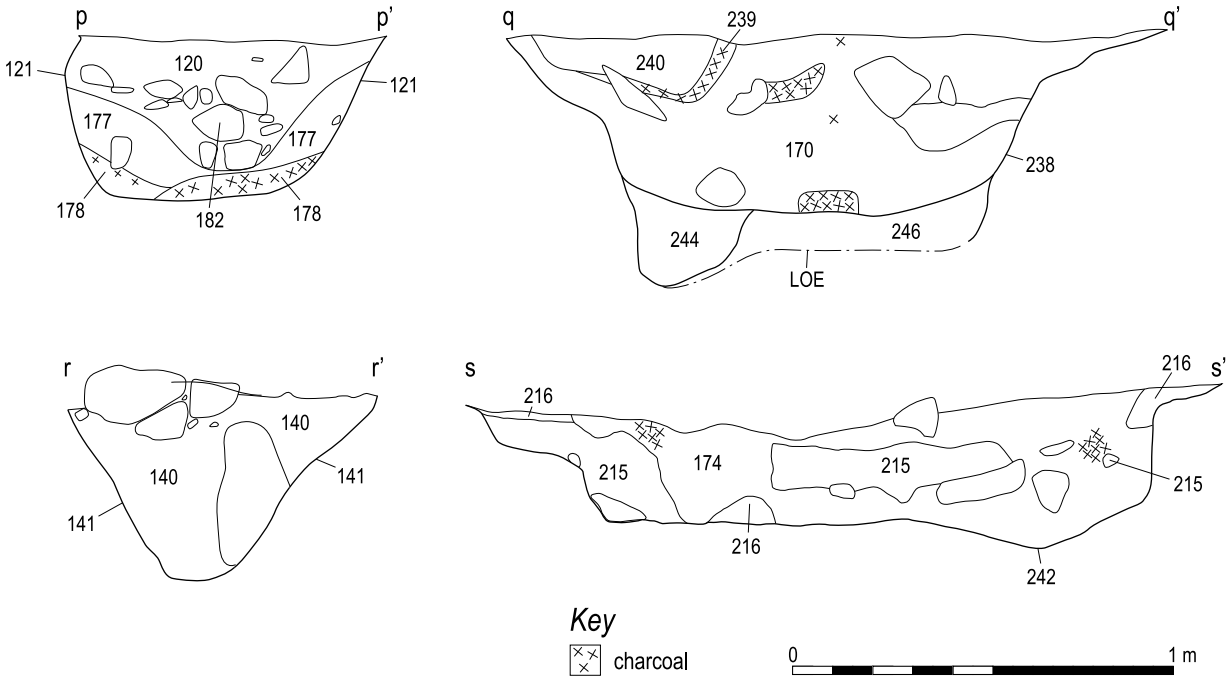
2.22 The trapezoidal enclosure during excavation, from the SSW.



2.23 Sections through the enclosure trenches.



2.24 Carinated Bowls from Pencraig Hill.



2.25 Sections through the post-pits for the screen and mortuary structure.

covering a distance of several metres. Charcoal from oak, alder, hazel and pine indicates that, again, oak timbers were set in the pits to form a screen (Miller and Ramsay, see Chapter 12 and Archive). To the south, the east trench narrowed markedly and there was no evidence for individual post-holes. This difference in form, combined with field observations of fragments of daub along this section of the trench, could indicate that a wattle-and-daub screen stood here instead of a timber one.

A wattle-and-daub screen might have been more mobile; it could be removed to allow onlookers to watch activities taking place inside the enclosure. It is also possible that a light screen could have been used as a mobile door, allowing a different way into the enclosure. Analysis of the main fill (113) of this part of the east trench found alder (*Alnus*) charcoal (Miller and Ramsay, see Chapter 12 and Archive), a sample of which produced a radiocarbon date of 3800–3650 BC (SUERC-7658). There was also evidence for particular acts beside the eastern screen. Those using the monument smashed a Carinated Bowl and put 15 of the sherds (about a quarter of the vessel) into the screen trench (Figure 2.24: V 1, SF 26–30). Two cereal grains (one identified as six row barley) and the alder charcoal may suggest that hearth waste was also dumped into the trench (Miller and Ramsay, see Chapter 12 and Archive).

Directly to the west of the putative wattle-and-daub screen, by the narrowest part of the eastern trench, two linear slots (199) and (201) formed an 'L' shape, creating a small, triangular space inside the palisade (Figures 2.17 and 2.26). The slots contained abundant fragments of oak charcoal, and one slot (199) had evidence for several possible stake-holes set in its base. These may have held screens that channelled people's movement through the eastern façade and into the enclosure. One fragment of hazel (*Corylus*) charcoal from the fill of slot (199) produced a radiocarbon date of 3800–3650 BC (SUERC-7656).

Those creating the monument also dug two large pits (141 and 121) at the eastern end of the north and south timber screens, and both of these pits cut into the side and front (east) screen-construction trenches (Figure 2.20). The northern pit (141) had been packed with stones and redeposited subsoil (237), suggesting that it held a substantial timber (Figure 2.25, r-r'). A charcoal-rich deposit was dumped into the base of the southern pit (121), and then a timber was inserted, as indicated by packing stones (182) (Figure 2.25, p-p'). Palaeobotanical analysis has established that oak charcoal dominated the fills of both pits, so they may have held large oak timbers (Miller and Ramsay, see Chapter 12 and Archive). A radiocarbon date of 3780–3520 BC (SUERC-8001) was

obtained from hazel (*Corylus)* charcoal in the northern pit (140).

The interior of the enclosure contained a redeposited till (Simpson, see Chapter 12 and Archive), which may suggest that there was a phase of mound-building or filling of the interior before the next phase of activity on the site.

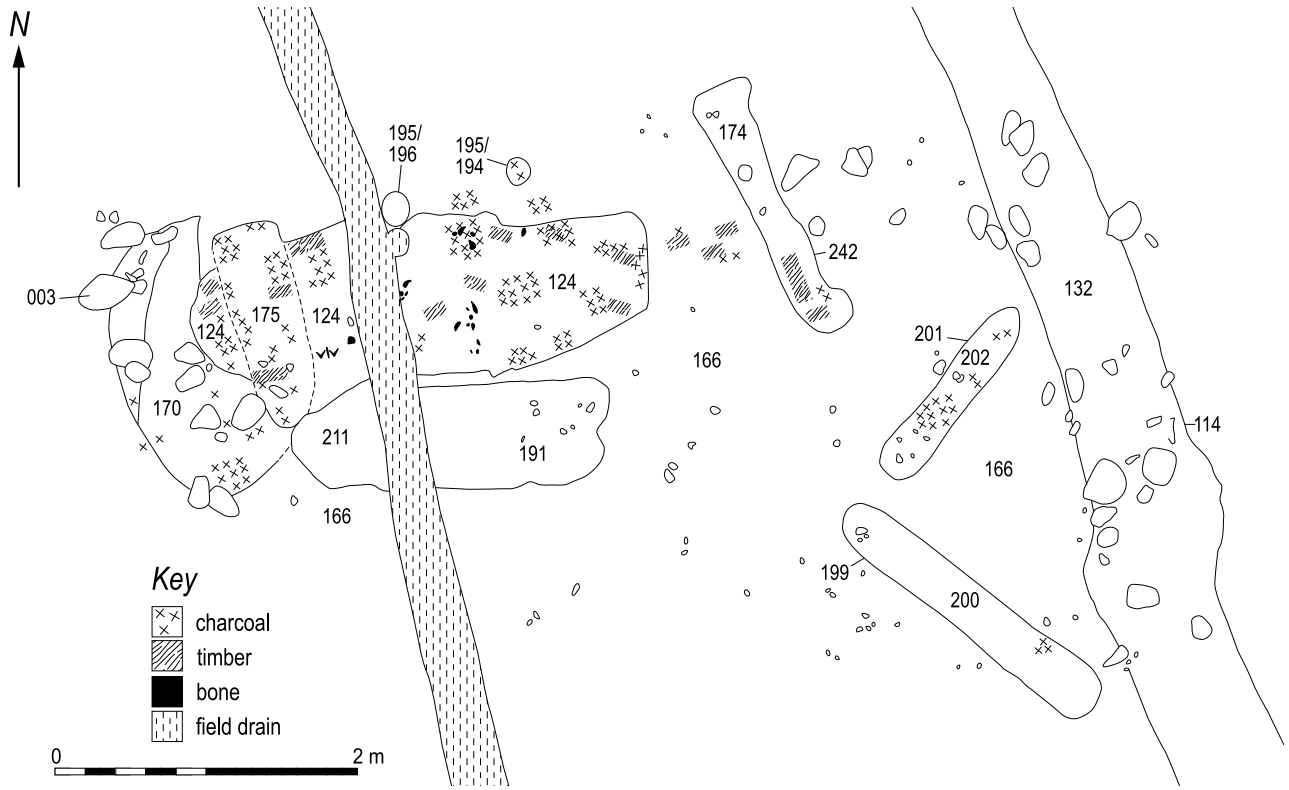
The mortuary structure and pyre

After digging the three trenches (106)/(118)/(114) and erecting screens to create a sub-trapezoidal enclosure, those using the monument built another structure. These later activities appear to have taken place on the modified till deposit (166). Into this the monument builders dug two large pits (238 and 242), set *c.* 3.2m apart (Figure 2.21). These formed the foundations for a timber mortuary structure measuring *c.* 4.4m long by 1.4m wide.

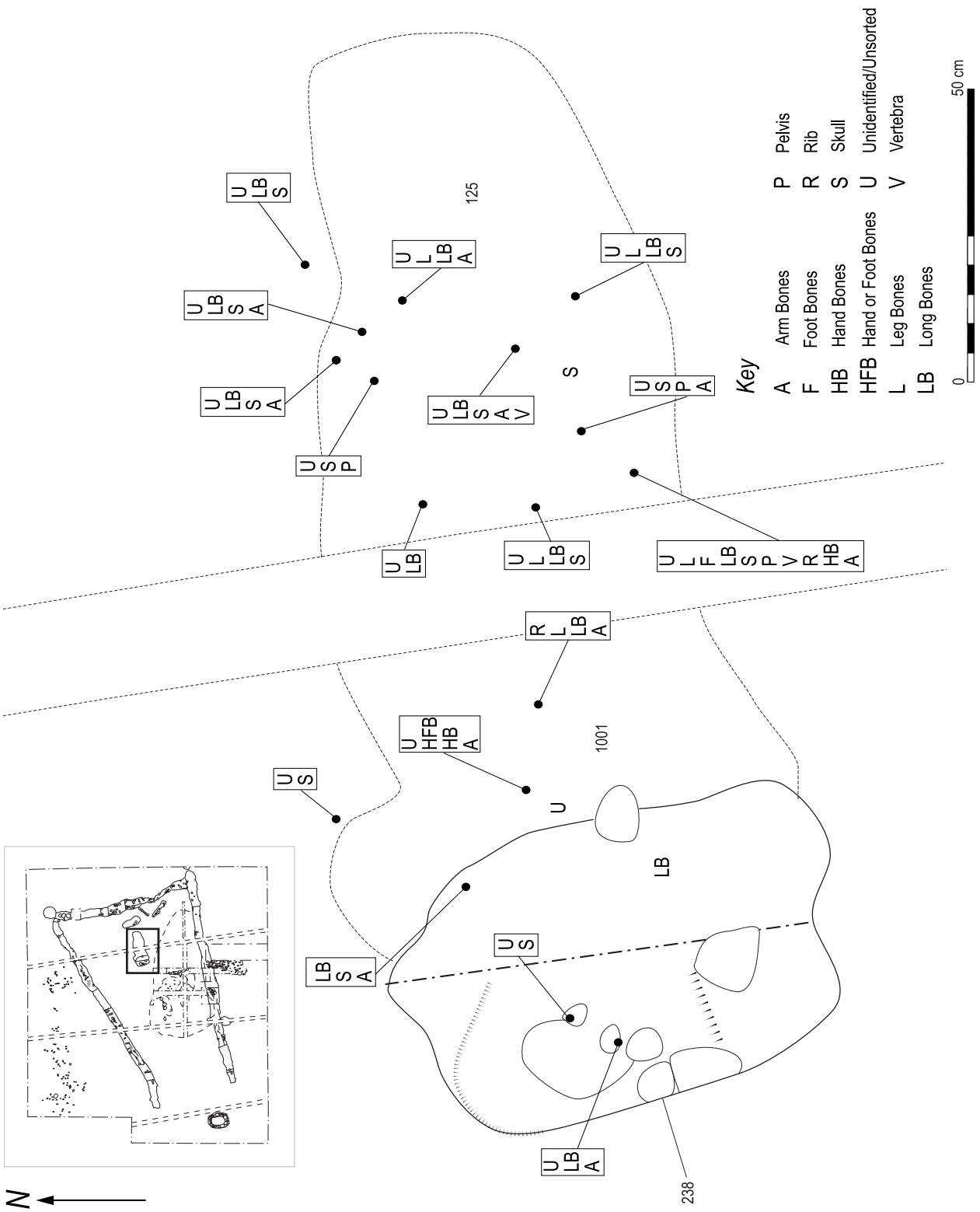
The western part of the mortuary structure's remains consisted of a large, sub-rectangular pit (238) measuring 1.4m across and up to 0.6m in depth (Figure 2.25, q-q'); this was not fully excavated due to time constraints. The builders set two wooden posts (244) at either side of the pit, indicated by post-pipes, placing a large, flat stone (246) between the posts to brace them and inserting other packing stones. Palaeobotanical analysis indicates that the posts were of oak (Miller and Ramsay, see Chapter 12 and Archive). Eventually, the posts – which probably formed part of a larger structure – were burnt where they stood, and fragments of charcoal mixed with the packing (170). The unburnt, below-ground portions of the posts decayed, causing heat-reddened, ashy, charcoal-rich deposits (239 and 240) to slump into the pit. Palaeobotanical analysis identified just oak charcoal and carbonised bark, evoking the remains of an undressed oak timber burnt *in situ* (Ramsay, and Miller see Chapter 12 and Archive).

Along the west and north edges of the pit (238) were several stones (003), which may originally have been set around the upright post, or placed to form a kerb or revetment for the timber mortuary structure. If the stones were originally set against the wooden structure, they later collapsed and were moved about by the plough. Equally, some may have been packing stones within pit 238.

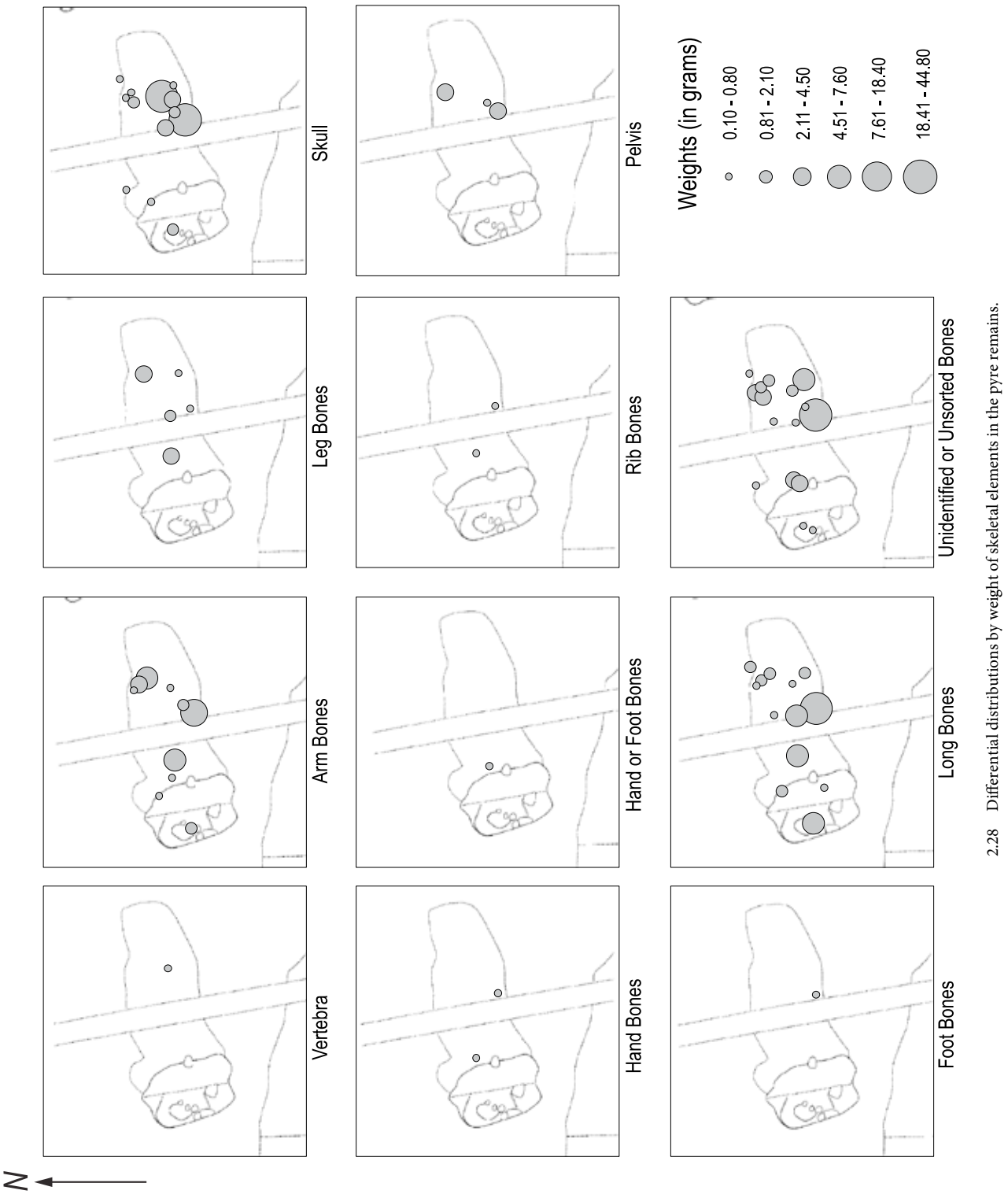
The eastern pit was a sub-rectangular trench (242), measuring 1.9m by 0.4m by 0.4m in depth ((Figure 2.25,



2.26 Detailed plan of the remains of the mortuary structure and pyre.



2.27 Overall distribution of the different skeletal elements in the pyre remains.



2.28 Differential distributions by weight of skeletal elements in the pyre remains.

s-s'). The fill comprised a charcoal rich silt clay (174) in which the excavation team found fragments of collapsed oak beams that had burnt *in situ*. This pit also contained orange-pink sand clay (215) and large stones that probably represent packing. A small quantity (2.5g) of burnt human bone was found in the fill (174).

At either side of the mortuary structure, the builders dug small pits (193), (195) and (197) which may have held small posts, probably made of oak (as the palaeobotanical evidence suggests), introduced to help carry the weight of the mortuary platform (Figure 2.26). The presence of these posts along the sides and the possible presence of revetment stones at the west suggest that a wooden structure stood between posts 242 and 238.

Lying between the two pits (242 and 238) was a charcoal-rich, black, ashy deposit (124), extending 3m by 1m and with a depth of up to 40mm (Figure 2.26). The deposit contained frequent concentrations of burnt human bone and lengths of carbonised wood. A high proportion of the wood appears to derive from oak beams that ran east-to-west across the pyre and which were burnt *in situ*; these may have been the collapsed remains of a mortuary platform. There was also evidence at the western end of the pyre for a concentration of charcoal (175) that could represent cross-planks on the platform. Samples of bark from the collapsed pyre (124, 166, 170 and 239) produced radiocarbon dates of 3940–3660 BC (SUERC-9033), 3930–3650 BC (SUERC-9034), 3970–3760 BC (SUERC-9035) and 3940–3660 BC (SUERC-9039) respectively.

The fragments of burnt bone (534g) showed that bodies (or perhaps portions of them) had been placed on the platform, and then cremated. Cracking and warping of the larger bone fragments indicated that the bodies were fleshed when they were cremated. The pyre had held at least two individuals, one of whom was an adult male. Pitting on the outer surface of cranial fragments indicates that one had suffered from iron deficiency anaemia (Marquez-Grant, see Chapter 12 and Archive). Fragments of bone produced radiocarbon dates of 3920–3630 BC (SUERC-7910) and 3700–3380 BC (SUERC-7911).

The cremated bone assemblage comprised a disproportionate number of long bone and skull fragments. The intriguing possibility that people gathered up most of the bone for use elsewhere, leaving mainly long bone and skull fragments, cannot be dismissed. Alternatively, it is possible that the pyre only ever contained parts of bodies rather than whole individuals. Equally, it may be that the smaller, more fragile bones did not survive the fire. Analysis of the distribution of the bone shows that it lay in one part of the collapsed mortuary structure, rather than along its whole length. The distribution of the different bone elements does not correlate with an extended body position; most of the skeletal elements were scattered throughout the deposit, except for a concentration of cranial fragments near the centre (Figure 2.27 and 2.28). This could in part be due to the collapse of the structure, but equally could relate to the pyre's having been raked through. However, the relatively discrete concentration of bone and the remnants of *in situ* timbers suggest that the pyre had not been greatly disturbed and the remaining bone had not been spread much.

To the north of the pyre were several small pits (157, 185 and 187), one of which (185) contained burnt human bone (73g). Analysis has established that most of the bone derives from the skull (71.7g), with small quantities of rib (0.2g) and long bone (1.1g) (Marquez-Grant, see Chapter 12 and Archive). This may suggest that people deliberately selected skull fragments to deposit in the pit, perhaps from the nearby pyre.

After the mortuary platform had been set alight, or perhaps even at the same time, the entire sub-trapezoidal enclosure at Pencraig Hill was fired and razed to the ground. This was evident from the high concentrations of charcoal in the trenches that held the screens. Thus, after the fire and perhaps for many decades, the monument would have appeared as a blackened outline, perhaps with the stubs of charred timbers poking up. At its centre there would have been a large black stain, with cremated human bone and burnt timbers lying around it, and next to this a small raised area with the remains of the earliest stone structure.

Discussion

Enough evidence emerged from several of the excavated sites along the A1 to suggest that groups of hunters, gatherers and fishers had long occupied the region before the fourth millennium BC. At Eweford, people may have been making and using tools, perhaps during short-term, seasonal visits. At Pencraig Hill, hunters may have felled an animal during a chase, losing a microlith in the process. The activity at Eweford West took place on a low glacial ridge, perhaps in a small clearing. Groups of hunters and gatherers may have traversed the area along well-known paths that led from one place to another within their territories.

At the beginning of the fourth millennium BC, groups of people were drawn to two different locales, Pencraig Hill and Eweford West, where they began to create monuments. At both places, activity extending over several hundred years ultimately resulted in distinctive and substantial monuments. We might consider these monuments to have been inter-generational projects. At both places, the activities were very similar in form and sequence, and this seems highly significant. At the same

time, the monuments created were remarkably different. We want to consider in more detail the nature of these activities and their implications for how we understand these inter-generational projects.

At each site we can identify three broadly similar kinds of activity: the construction of mounds and buildings; the construction of more buildings and their use as funeral pyres; and the formalisation of space into sub-trapezoidal forms.

Both places may first have seen the creation of low, sub-oval mounds or built-up areas, following preparation of the ground involving clearance of vegetation and stone from the surface: neutralising the natural world, creating a clean canvas for what was to follow. In each case, people probably cut turf in the vicinity to obtain material to build the mounds, laying bare the soil below (McKenzie, see Chapter 12 and Archive).

At Pencraig Hill, there is sufficient evidence to suggest that a structure was built on the mound, delineated by stones set in a clay-lined foundation trench and incorporating timber uprights. The fragmentary evidence suggests that this structure may have been three-sided, with an open end to the west; it represented the first creation or formalisation of space at the site. Whatever activities took place in this space, the evidence suggests that they involved at least five episodes of burning.

At Eweford West, the evidence for an early phase of construction is more circumstantial. However, the heat-affected stones which had been pitched into the large pit, associated with oak charcoal, were similar in size and condition to the remains of later buildings on the mound; they evoke the demolished remains of a structure.

Although different in sequence, the secondary and tertiary phases at each site are broadly similar, even with considerable differences in detail. At Eweford West, the second phase involved the creation of two buildings, both comprising stone rows revetting timber uprights to which planking was attached. Both buildings may have been used as mortuary structures, or ultimately pyres, as they were eventually burnt down with human remains inside them. The second phase at Pencraig Hill involved digging trenches and erecting timber planking in them to create two sides of an enclosure. This was followed by the creation of a third trench, which held timber posts and wattle screens, to close off the east end and create an open-ended, sub-trapezoidal enclosure measuring about 15m by 20m.

At Pencraig Hill, in the third phase, it appears that a mortuary structure was built of timber uprights, oak planking and stone revetting. This structure was ultimately used as a pyre. About the same time, two slots that probably held screens outside the eastern wall of the enclosure may have channelled movement into it through a movable wattle-and-daub screen. The third phase at Eweford West is more comparable to the second phase at Pencraig Hill. While evidence for walling survived on only one side at Eweford West, it is likely that the builders constructed two side walls or revetments of drystone, which were complemented by a timber-and-wattle screen. Together these created a sub-trapezoidal form measuring about 14.5 by 20m. While the variations in materials are of significance, ultimately they were combined to create spaces that were effectively of the same size, shape and form.

Although the second and third phases were different in sequence at the two sites, at both they ultimately resulted in a sub-trapezoidal monument. This shows that, while there was clearly scope for variations in how people thought each phase of construction (and potentially use) should proceed, the several generations that built and used both monuments shared a sense of architectural order. It is tempting to see such strong parallels as evidence that each monument was developed according to a plan, conceived long in advance. This, however, misses the significance of these parallel sequences and forms of construction. We believe that these parallel building traditions grew from the wider social landscape in which the communities lived. Changes in practices at each location were the consequences of wider changes, related to the transformation of generations. In Chapter 8, we address what these wider social changes may have been and why they came about.

Changing practices

Beyond the similarities in phase and form, we can observe similarities in other practices at the two sites. For example, the presence of broken early Neolithic Carinated Bowls at both sites shows that people considered it appropriate to bring this sort of material culture to Eweford West and Pencraig Hill and to treat it in a similar manner, depositing the pots in a broken state. The cremated human remains at both sites were also treated in similar ways. At each site, structures were built, human remains were immediately or eventually placed inside them and the buildings were fired, acting as funeral pyres. It is not just significant that human remains were brought to each site, but also that this happened at what were considered appropriate points in the lifespan of each monument. This highlights the fact that, at each place, the phases of building set the scene for other acts which are less archaeologically visible.

While we have stressed the similarities of both the projects at Pencraig Hill and Eweford, there is a fundamental difference we have not yet explored. The locations chosen for each project were very different, both possibly affording extensive but different views, depending

on the degree of woodland clearance: one on the side of a long slope, with extensive views to the south dominated by Traprain Law; the other towards the north end of a low glacial bank with extensive views of the Forth to the north. (Paradoxically, the careful definition of space by building walls and screens would have isolated those inside the monumental enclosures from this wider environment.) We could consider these different topographic positions as local expressions of wider traditions, an indication of the freedoms that individual communities or social groups had to interpret how they produced certain architectural forms. On another level, however, they may hint that the roles of these sites transcended their locations, because each was constructed by members of several different communities and generations.

This introduces the possibility that the monument builders of Eweford West and Pencraig Hill may not have understood these monuments as separate sites; instead, they could have perceived them as inter-connected places, forming foci within wider systems of ceremonial activity. While the activities taking place at both sites were very similar, the differences in sequence suggest that the monuments developed in very different ways. It is equally possible that these differences arose as individual communities and successive generations decided what forms of practice were appropriate at different times.

2.2

The many uses of birch

The charcoal assemblages from Eweford West and Pencraig Hill were unusual in that they contained only trace amounts of charcoal from birch trees. When these sites were being used during the fourth millennium BC, birch would have been one of the most common trees in the local woodlands, so why was it not being used for either fuel or construction? Birch burns well, even when green, and it forms a strong timber when dry. It would seem that people had other priorities when it came to choosing certain woods for particular purposes. It appears that they were actively avoiding using birch for fuel or to build any of the structures that were subsequently burnt down at either place. If birch was being used there, it must have been for some purpose that did not bring it into contact with fire.

Birch trees produce many useful products other than wood for fuel or construction. The twiggy branches can be used to make brooms or as thatch for roofs. Resin in the bark can be tapped off as a sticky glue to fix flint blades to handles or to use as waterproofing. Tannins can be extracted from the bark to use in tanning hides for leather. All of these uses would have made birch trees valuable to the fourth-millennium BC inhabitants of East Lothian, and so the trees may have been used in ways that left no trace in the charcoal record at either site.

Another possible use for birch trees also involves the bark. The silvery white outer bark is both durable and waterproof, and it can be stripped from the trees in large sheets. These can be used to make roofs, canoes or all manner of buckets, baskets, mats or even clothing. The sheets of bark can be sewn together to form even larger pieces or more complicated shapes. Anything made from the bark would have been an eye-catching object because of its intense, silvery white colour. If an entire roof was made of birch bark, for example, it would have been visible from all around and its shine would have reflected light. There is evidence from the ninth-millennium BC site of Starr Carr in Yorkshire that birch bark was incorporated into platforms along with birch twigs, forming a walkway that would have shone with a silvery white glow in sunlight or even moonlight.

It is clear that East Lothian's early prehistoric inhabitants used birch in ways that differed from how they used other trees. It may be that they associated birch with special properties, either physical or symbolic.

JENNIFER MILLER and SUSAN RAMSAY

2.29 Reconstruction of the Pencraig Hill enclosure being fired.

In order to understand what took place at each site, we need to consider them both as significant places within wider networks of activity. The surrounding area was the source of wood and stone for building materials, and the specific locations chosen to fell trees or gather stones may have been loaded with deeper meanings. For example, the palaeo-environmental analysis has highlighted the apparent avoidance of birch at both sites (see text box 2.2). Pottery was probably made in other places, and vessels or their fragments were brought to the monuments. The remains of people who had died elsewhere were brought there too, and the bodies were transformed and fragmented. Some bone remained on the sites, becoming part of the monuments after the pyres collapsed, but people may have raked through the ashes and taken some of the bone elsewhere.

We should also consider the visual and auditory effects of both Pencraig Hill and Eweford West. The noise of their construction – hammering of wooden pegs, shaping of stones, the building of structures, as well as the sounds of voices involved in this process – would have been heard in the surrounding area. Their visual impacts would have varied with light and weather. For instance, Pencraig Hill would have loomed large in the land during the day, with its tall screens, but at night it may have blended into the darkness. While elements of the monuments were burning, they would have looked particularly striking from a high vantage point such as Traprain Law, especially if the fires burned at night. The spectacles viewed from afar would have been very different from the sights at ground level, close up. The noises and the smells produced by the rituals carried out here would have travelled across large distances.

Building and burning

Consideration of the parallels between the monuments at Pencraig Hill and Eweford West has been particularly illuminating. While differences in the sequence of activities suggest a degree of fluidity in how these projects unfolded, their common characteristics indicate that people across space and time shared an awareness of what was appropriate to build (Kinnes 1992; Bradley 1998). We argue that this awareness grew as members of different communities, living in wider social networks, collectively undertook inter-generational projects. Whether these groups came together to create and use these monuments or whether the monuments represent the expressions of individual communities is unclear. When we consider the monuments in these terms, we

have to understand what took place at each in the context of the wider, inhabited landscape. These activities were not confined to a rarified ritual or ceremonial context, but grew from and had implications for other arenas of social practice. Thus, while people's activities at each site may appear similar, the effects and meanings of what they did could have been radically different.

Given that both sites produced archaeological traces of substantial wooden structures that were deliberately burnt down, it would be tempting to conclude that, at both Pencraig Hill and Eweford West, communities built with the intention to burn (Figure 2.29). However, consideration of how architecture and practices developed at both sites suggests that the role of the structures and the nature of practices changed over several generations. In the earliest phases, we see evidence of a burning desire to build; for a time, building in its own right may have been significant to the social groups that participated. This creation of new arenas for novel practices ultimately led to a phase in which other rites and practices were more important than the acts of building. Equally, the burning of the structures was not always the final phase of activity: in the case of Eweford West, the mound of earth and stone with its timber façade continued to be a focus for future generations (see Chapters 4 and 5).

Chapter 3

Tracing time: Excavations at Knowes and Eweford East (3370–3190 BC)

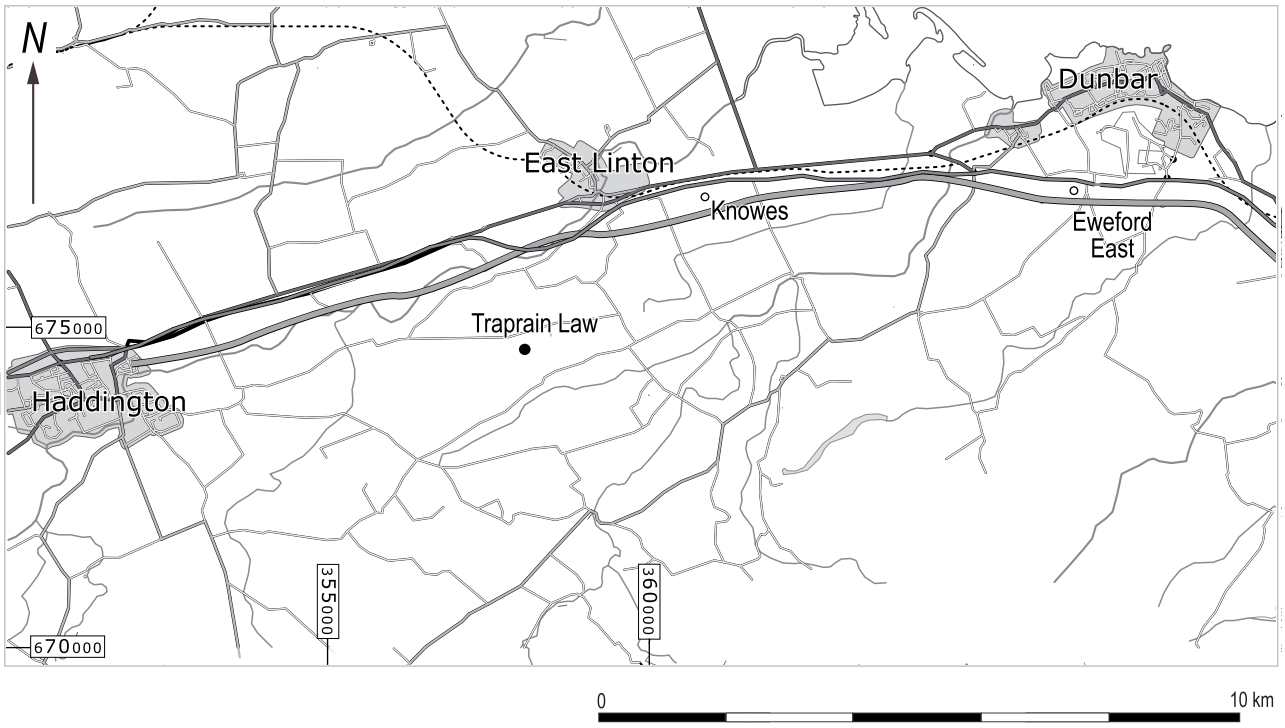
INGRID SHEARER and KIRSTEEN McLELLAN

Introduction

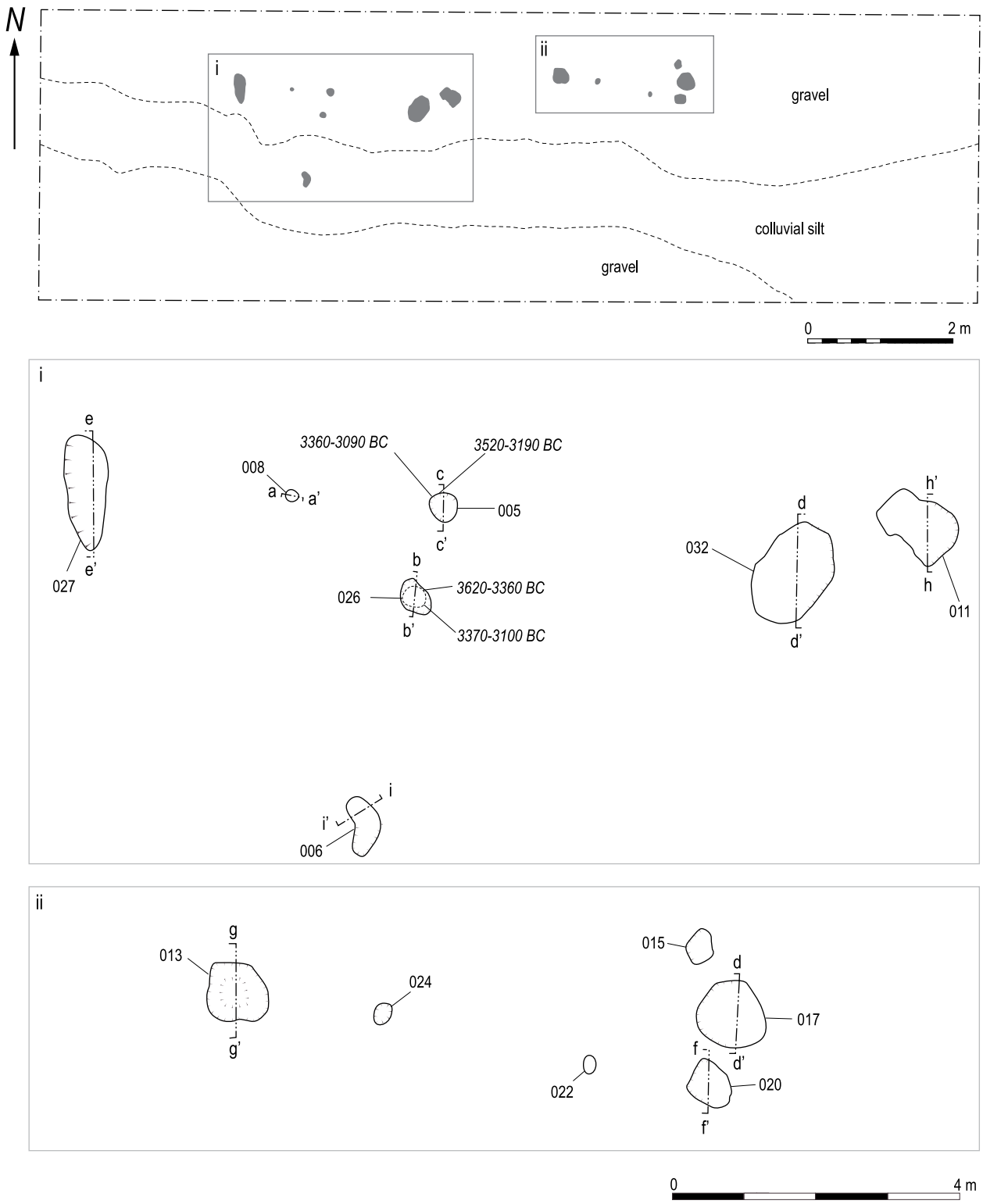
At Knowes, an alignment of pits was excavated that dated to the late fourth millennium BC, and at Eweford East, two pit alignments and a timber enclosure were discovered that dated to the third millennium BC (Figure 3.1). At both places, people's activities focused on defining and dividing space, in both linear and circular arrangements, for ceremonial or symbolic purposes. We argue that the acts that created these boundaries were as important as the spaces that they defined. These acts involved drawing in and deliberately incorporating material culture and structural materials into the fabric of the boundaries. We will examine the construction and use of these monuments and suggest what they might have represented to those who built and used them.

Knowes alignment of pits

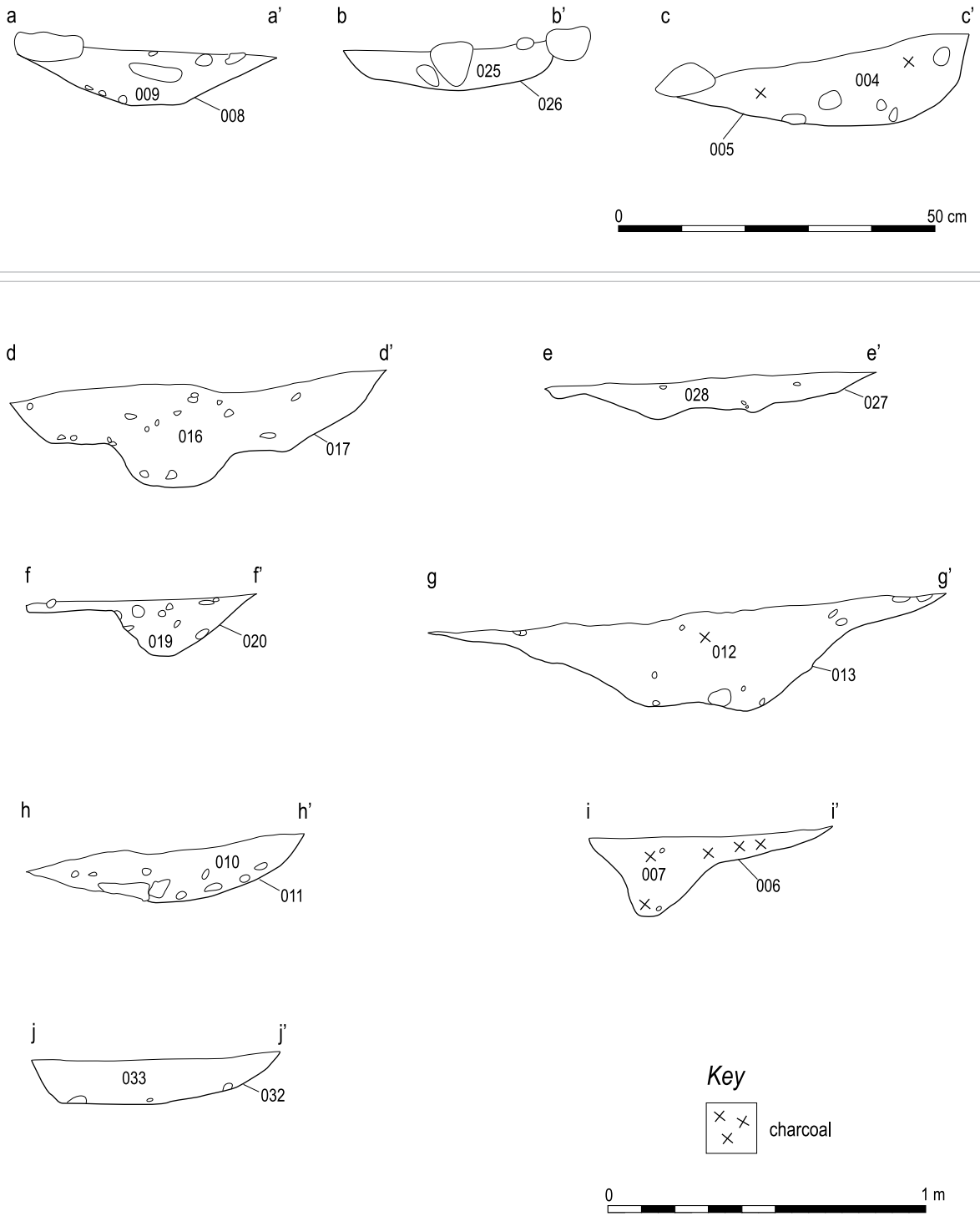
At Knowes Farm, a community or person living in the mid to late fourth millennium BC dug a rough line of 12 pits over a distance of 12m along level ground. At either end of the line, they grouped together several pits to form two small clusters (Figures 3.2 and 3.3). At the western end, they created three small, shallow pits (005), (026) and (008). They packed sherds from three heavily incised Impressed Ware vessels (Vessels 1–3; Sheridan, see Chapter 12 and Archive) into the pits, selecting sherds from one vessel (3) to place in all three pits (Figure 3.4). Not all of the sherds from the broken pots were put in the pits; the remainder may have been left where they were broken, or deposited elsewhere. The pot-packed pits were then filled them with deposits rich in charcoal. Two of the pits



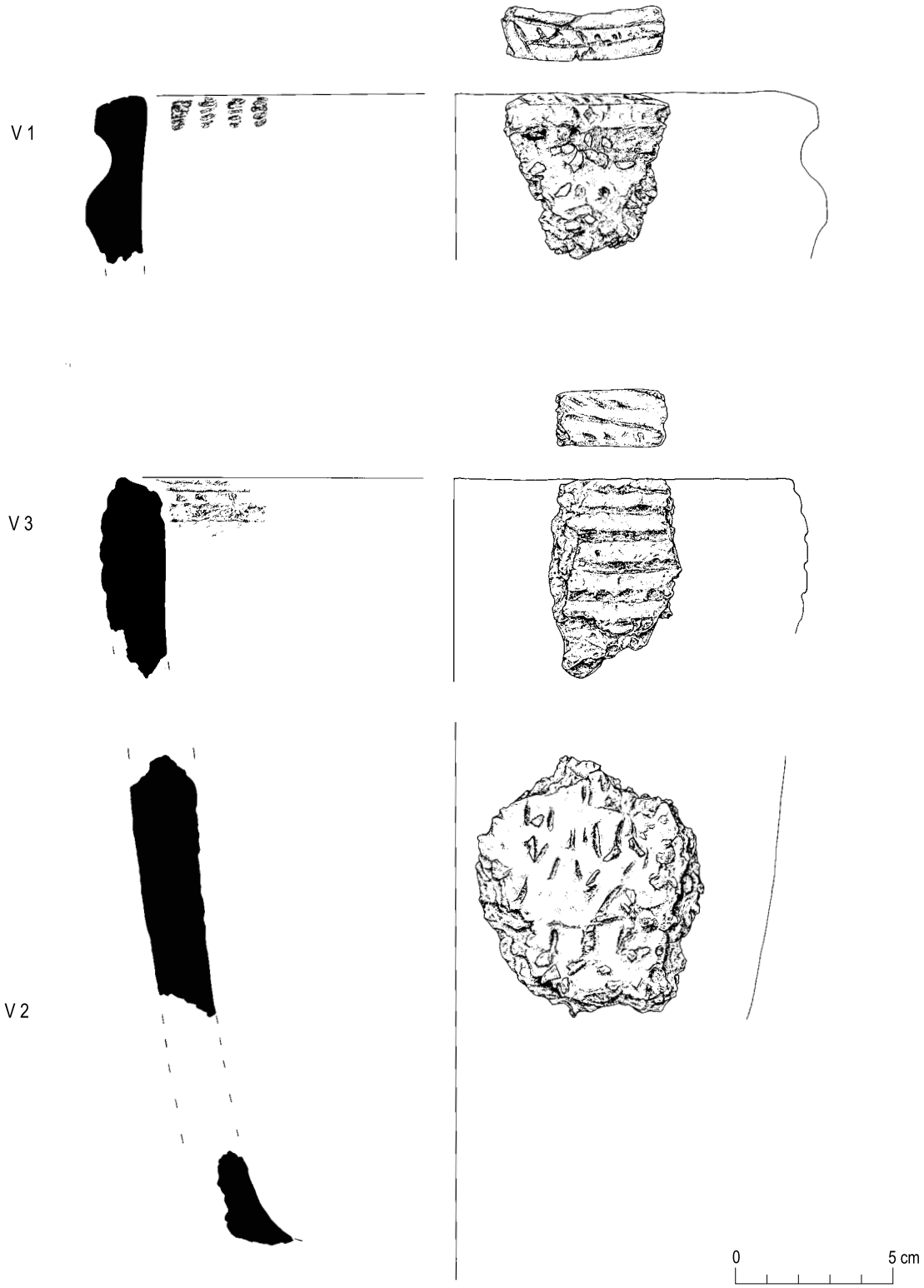
3.1 Map showing the locations of Knowes and Eweford East.



3.2 Plan of the excavated features at Knowes, showing radiocarbon dates obtained.



3.3 Sections through the pot-bearing features (upper panel) and other pits (lower panel) at Knowes.

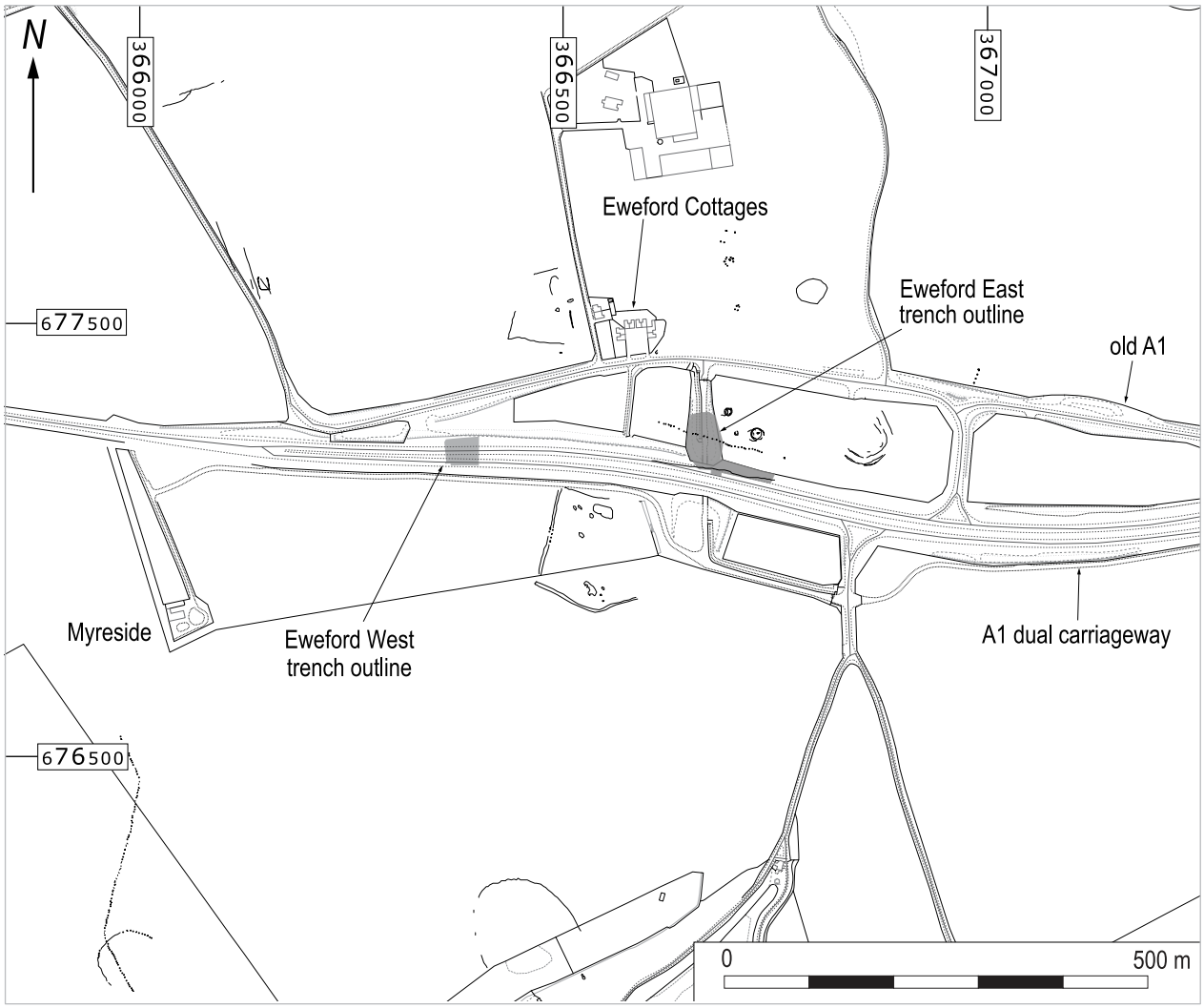


3.4 The pottery from Knowes.

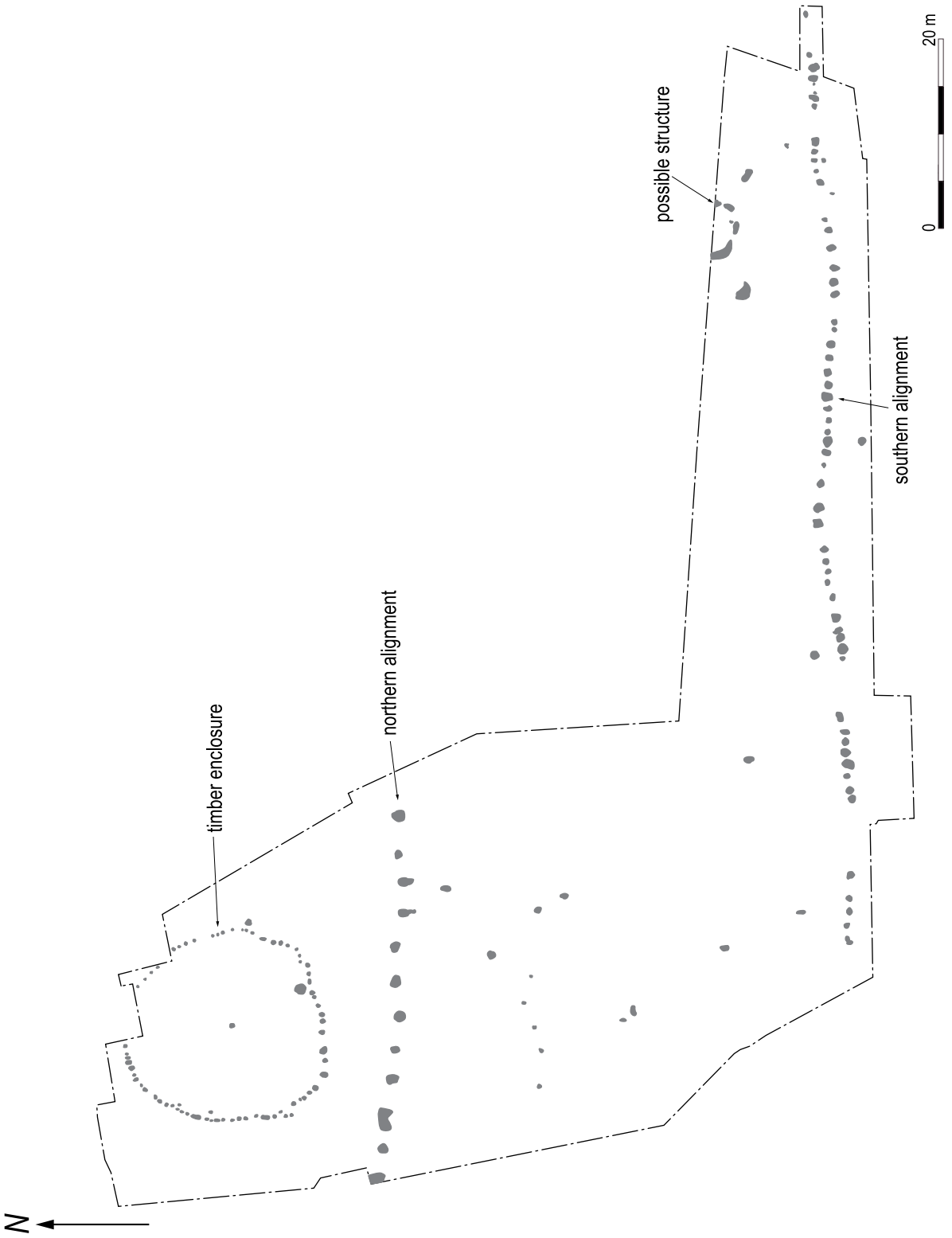
(005 and 026) contained charcoal from alder, birch, hazel, blackthorn, rose, cherry, willow and hazelnut shell, as well as oak (Miller and Ramsay, see Chapter 12 and Archive). In contrast, the third pit (008) contained mostly oak charcoal. Charcoal from two of the pits (005 and 026) produced a suite of radiocarbon dates ranging from 3620 BC to 3090 BC. Willow (*Salix*) and alder (*Alnus*) charcoal from the fill (025) of one pit dated to 3370–3100 BC and 3620–3360 BC respectively (SUERC-7524; SUERC-7525). Birch (*Betula*) and willow (*Salix*) from the fill (004) of another dated to 3360–3090 BC and 3520–3190 BC respectively (SUERC-7522; SUERC-7523) (see Figure 3.2 for the locations of the submitted samples). The range in the calibrated dates might suggest that wood of different ages was burnt in the hearths from which the fills derived.

At the opposite, eastern end of the alignment, another three pits (015), (017) and (020) formed a second small cluster. In contrast to the group of pits at the western end, the pits of the eastern cluster were filled with light brown, loose sandy silt, which may represent either deliberate backfilling of the features or sediment that washed into them when they were open. Palaeobotanical analysis identified tiny amounts of oak charcoal in them, but no other identifiable burnt material.

The remaining pits, which in effect linked the two clusters, were dug at fairly regular intervals along the alignment. Like the three pits forming the eastern cluster, these contained fairly clean, silty fills, all but one of which (024) contained small quantities of oak charcoal.



3.5 Map of the area around Eweford East, showing cropmarks based on aerial photograph transcriptions by the RCAHMS.



3.6 Plan of the excavated pit alignments and enclosure at Eweford East.

Whether any of the pits held posts is debatable. It is conceivable that the oak charcoal could have derived from the charred bases of posts, and was all that survived after the posts rotted and the holes silted up. However, the pits all had shallow, open profiles, with no evidence of packing or post-pipes. While plough truncation may have distorted the evidence, on balance it seems unlikely that they had ever held posts. The small amounts of charcoal in most of the pits may have floated or washed in along with the silty fills.

The three pits (005, 026 and 008) at the western end were treated in a strikingly different way from the others. Their contents – carefully distributed, freshly broken sherds of pottery along with a diverse range of charcoal – appear to have been carefully selected and deposited. While again it is possible that these pits held posts – the pot sherds could have served as packing material – it is more probable that the different kinds of charcoal they held came from a hearth or several burning events. The three pits were filled with material that came from other contexts: from pots that might have been used to serve and share food or drink, and from wood collected and burnt in fires. Both the pots and the wood may have been used at special social gatherings such as ceremonial events, or from everyday domestic contexts. Their careful selection and deposition in the pits at Knowes might have been a way of transferring those other contexts and other meanings to the alignment.

Eweford East pit alignments and enclosure

Excavations at Eweford East revealed three major groups of archaeological features – two parallel lines of post-holes, and a post-defined circular enclosure – in an area that had long been a focus for ceremony (Figure 3.5). Radiocarbon dates indicate that the site was a focus for activity over three phases, spanning perhaps several hundred years during the second half of the third millennium BC. The forms of the structures evoke a complex sequence of events that led to their creation. The features lay on a natural terrace, which sloped down gently to the east and south. To the west, the ground dropped away sharply to meet a canalised burn. The fourth millennium BC funerary monument at Eweford West, which saw intermittent ceremonial activity during the following three millennia, lay about 250m to the west (see Chapters 2, 4, 5 and 6).

Of the features that made up the two alignments and the enclosure, most of them contained convincing evidence (in the form of packing stones, post-pipes and ramps) for having held posts, although some did not. However, based on the consistency in form and depth of the features and their obvious coherence in plan, we are assuming for the purposes of this argument that all of them held posts, and that truncation had removed some of the evidence for this.

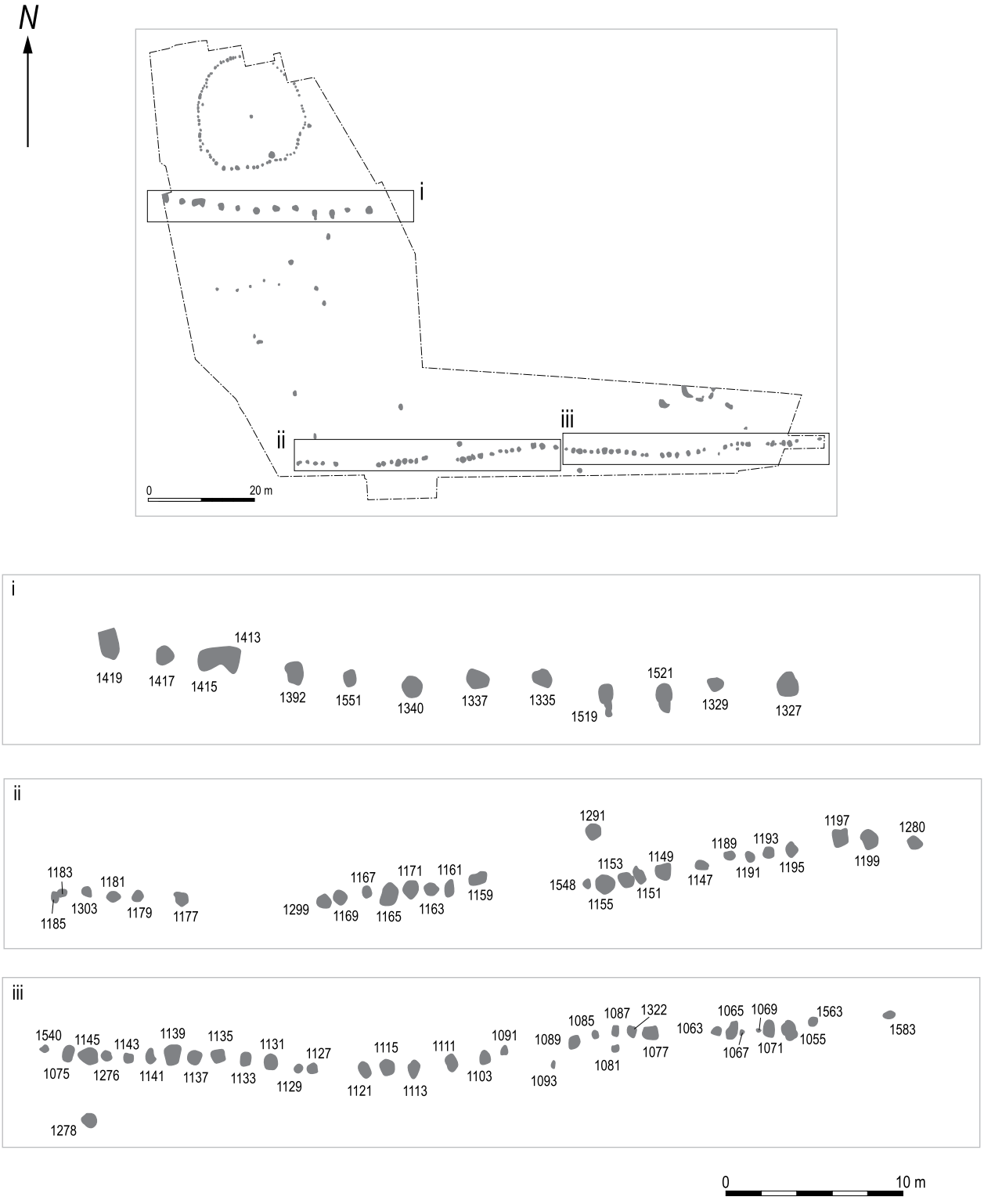
All of the post-holes contained charcoal, predominantly oak and hazel, and some of the charcoal from both pit alignments had been burnt long or intensively enough to turn to cinder (Miller and Ramsay, see Chapter 12 and Archive). The almost total absence of cereal grains and hazelnut shell has been taken to indicate that the charcoal derives from burnt structural remains. The relatively small amount of charcoal in each of the post-holes does not suggest that the bases of the posts charred *in situ*. Rather, we have interpreted the charcoal as indicating that the above-ground portions of the posts burnt where they stood; as the bases rotted and post-pipes formed, some of the charcoal from their burning washed into the post-holes.

Phase 1: Beginning the southern alignment

The excavation at Eweford East revealed a sinuous line of 62 pits, each up to 1.05m in diameter and 1.04m in depth, running approximately east/west (Figures 3.6 and 3.7). Samples from two features provided radiocarbon dates: at the eastern end of the alignment, willow (*Salix*) charcoal from the fill (1114) of one pit (1115) was dated to 2880–2580 BC (SUERC-5340); at the western end, hazel (*Corylus*) charcoal and willow (*Salix*) charcoal from the fill (1166) of another (1165) returned dates of 2470–2200 BC (SUERC-5344) and 2470–2230 BC (SUERC-5345) (see Figure 3.8). These dates, spanning a period of around 600 years, turned out to be the earliest and latest dates from all of the features forming the alignments and enclosure. The southern alignment, therefore, may have developed over many generations.

The first phase of activity created the southern alignment's eastern portion. A series of circular pits was dug, with the individual pits lying between 0.5m and 2m apart, to form short segments, each on a slightly different alignment from the others. Immediately, or at least within a matter of days, someone inserted upright timbers in the pits, set packing stones around them and backfilled the holes with the subsoil they had excavated. One pit (1087) contained silt at its base, suggesting that it had been left open to the elements for a longer period. Palaeobotanical analysis of the pit fills indicates that the posts were cut from oak.

Six of the pits contained post-pipes; the largest, in pit (1111), measured 0.60m in diameter, while the deepest (1120) in pit (1121) was 1.04m deep. The post-pipe fills were generally dark reddish- or greyish-brown in colour, with a higher silt component than the surrounding back-filled deposit. All the post-pipes were set against the northern side of the cut. The pits ranged from steep-sided cuts to shallow scoops, with both rounded and flattened



3.7 Plan of the northern and southern pit alignments.

bases (Figure 3.9 shows a selection of sections through the features).

The posts could potentially have reached up to two metres above the ground surface in height, based on the premise that a post would fall over if it stood more than three times the depth of the pit in which it was set (Speak and Burgess 1999, 106–7) (see text box 3.1). There was no evidence that the monument builders altered or re-cut the holes after setting the timbers. If oak posts survive for about 15 years for every 50 mm of their diameter (Wainwright 1971, 224–5), then the largest of the posts in the southern alignment may have stood for a *maximum* of 180 years.

When they backfilled the pits, the monument builders placed objects of stone, flint, chert and pottery into some of them (see Figure 3.10). Into pit (1077), they put 12 sherds and two fragments of finely made Grooved Ware pottery (SF 585), pieces that may have derived from the same vessel (Sheridan, see Chapter 12 and Archive). They distributed other abraded sherds, possibly also Grooved Ware, into around a quarter of the pits making up the eastern half of the southern alignment. Charred residues adhering to some of the sherds probably derive from food or liquid. Most of the pottery was found in the pits making up the eastern end of the alignment, but one segment (1127–1141) contained no artefacts at all (Figure 3.8).

Worked pieces of chert, flint and quartz were also found in some of the pits. Some of these may accidentally have slipped into holes as the pits' diggers penetrated the existing ground surfaces, including that surface associated with a scatter of Mesolithic material to the north of the enclosure (see Chapter 2); these ground surfaces were subsequently removed by ploughing.

Other objects in the southern alignment of pits included a late Neolithic 'chisel-type' grey flint arrowhead (Figure 3.10: SF 524) in the fill of pit (1171) (Saville, see Chapter 12 and Archive) and a flake from a broken, polished stone axe in the fill of pit (1276) (Figure 3.10: SF 774) (Saville, see Chapter 12 and Archive). The monument builders at Eweford East also placed cup-marked stones (McLaren,

3.1

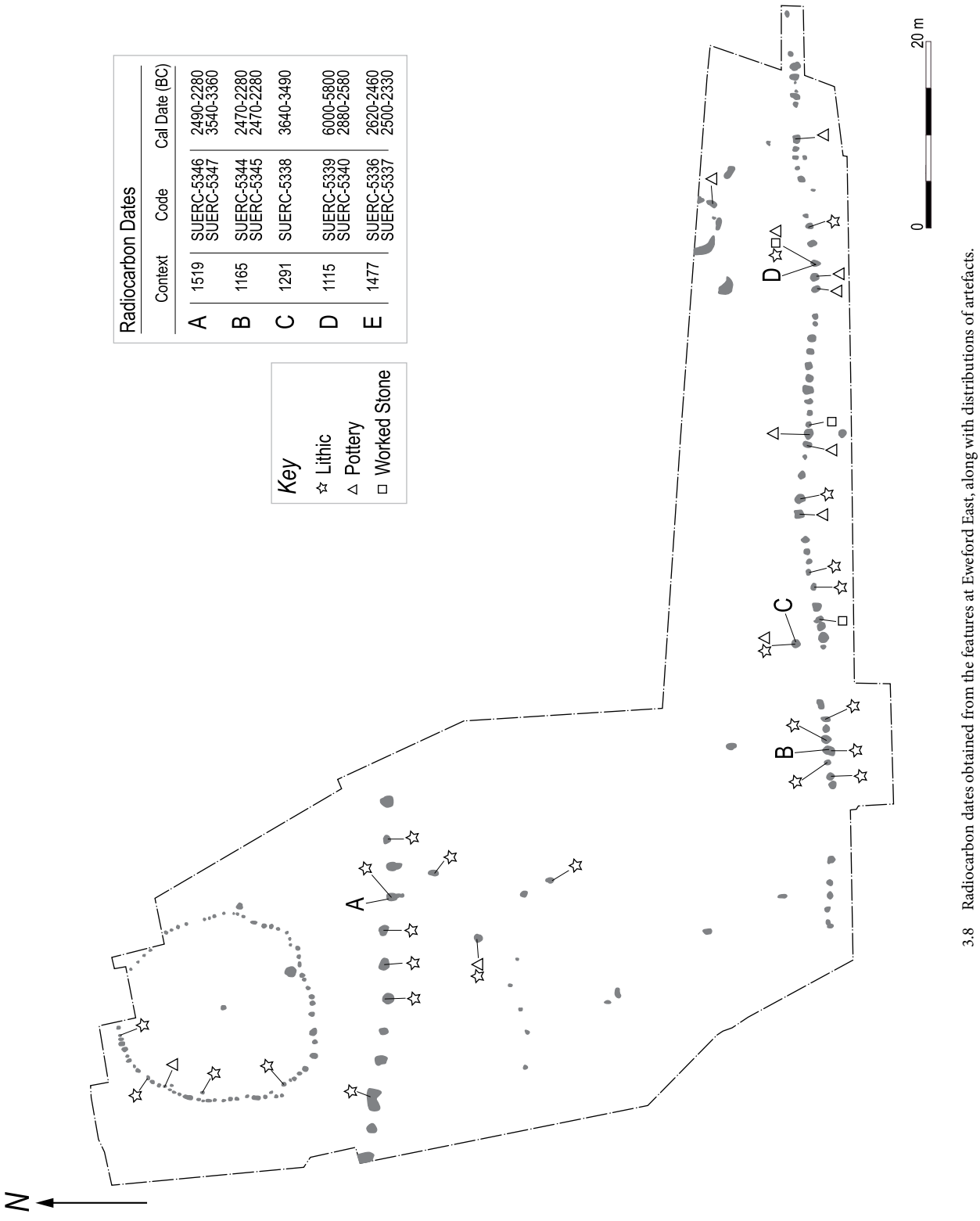
How high were the posts at Eweford East?

Based on the size of the post-pipes at Eweford East, it seems likely that the timber posts were fairly substantial, reaching up to around 0.5m in diameter (see Figure 3.17). Oak is difficult to cut across the grain, and it takes considerable effort even to fell a large oak. The timber needs to be worked almost immediately after felling, as the seasoning process hardens the wood to the point where it is almost impossible to split or carve.

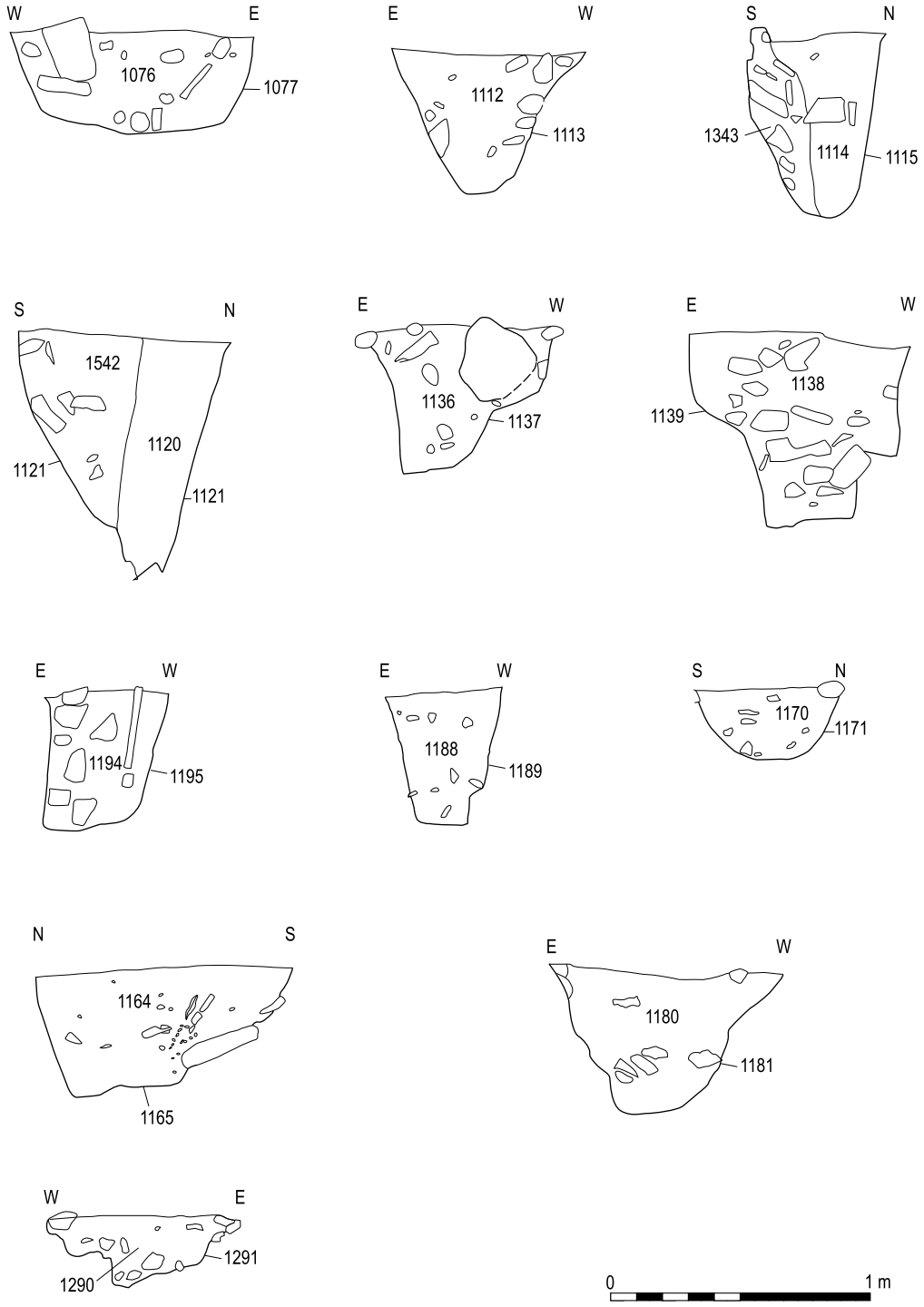
It is generally assumed that a post could have stood up to three times the height of its posthole depth, but this does not take into account the effects of earthen or stone-built external support. Material banked around the bases of posts (like that at Blackshouse Burn; see Lelong and Pollard 1998) could have significantly increased the height of the monument. Neither does the formula take into consideration the possible truncation of features by ploughing or other processes, which is likely to decrease the estimated height of the uprights. The 3:1 ratio can provide an indication of potential *minimum* supportable height, but it should be used with caution.

The best preserved post-holes at Eweford West lay in the southern alignment, measuring up to 1.04m deep. Using the 3:1 ratio, this would suggest that the posts stood to around three metres high. If even some of the posts in the southern alignment stood to this height, it would have been a substantial, visually imposing structure. Similarly, post-holes in the northern alignment reached depths of between 0.7 and 0.94m, again suggesting the potential for considerable height. The post-holes of the enclosure were much smaller and shallower than those comprising the alignments, suggesting that this structure was composed of shorter uprights that stood to 0.75m or perhaps higher, taking into account truncation. However, the posts were spaced much closer together and this may have helped give strength and rigidity to the structure, especially if hurdling linked the posts.

INGRID SHEARER



3.8 Radiocarbon dates obtained from the features at Eweford East, along with distributions of artefacts.



3.9 Sections through a selection of the pits in the southern alignment.

see Chapter 12 and Archive) into two pits – (1151)/(SF 583) and (1113)/(SF 584) – in the eastern half of the alignment (Figure 3.11). Both cup-marked stones lay in the upper parts of the fills and one (SF 583) was visible on the surface of the (albeit truncated) fill (1112), with the decorated side facing downwards.

The charcoal assemblage from the southern alignment comprised mainly oak, as well as hazel, willow and members of the rose family (blackthorn, cherry, rose and apple) (Figures 3.12 and 3.13). If, as we argue above, the charcoal derived from burning of the above-ground structural features, these may have consisted of oak posts linked with screens woven of hazel and willow. Charcoal from blackthorn and cherry species was particularly abundant in samples taken from the eastern half of the alignment. These plants may have been woven into the hurdling, integrated into the fabric of the monument to create a striking visual and tactile effect. The spiny branches and thorns would have formed a hostile physical barrier to animals or humans, perhaps discouraging access into, out of or around the monument. Alternatively, brushwood was set around the bases of the posts as kindling when they were fired.

The posts and putative wicker screens of the southern alignment were, we would argue, eventually destroyed by fire. If all were burnt, as the charcoal assemblage indicates, then they may have been deliberately set alight (see text box 3.2). If the branches of willow, hazel and rose family were used as kindling rather than forming structural screens, it does not necessarily mean that the symbolic associations of these species were less potent. Indeed, we might expect the builders to have shown a preference for other species such as birch or pine if their only consideration had been flammability.

It is possible that these burning events took place at night, and that they were intended to be dramatic, highly visible actions. The spectacle could have been prolonged, and even if a fire were started during daylight hours, it is likely to have extended into the night. Lighting the scrubby willow and hazel would not have been difficult,

3.2

Big smoke from small acorns

Estimating the size and age (at felling) of timbers used in oak structures is complicated by the way this species burns; charred material tends to flake off in thin plates along the grain, making it difficult to assess the curvature and density of the tree rings.

Of all the tree types native to Britain, oak is one of the hardest to set alight, and it needs particular attention to keep it aflame. Modern house fires, with all their attendant accelerants, can reach temperatures in excess of 1100 degrees Fahrenheit. Even in such circumstances, oak rafters will retain their integrity; the timbers will be charred and brittle but are rarely reduced to a pile of ash.

To set fire to a line of oak timbers in the open air would have required determination and dedication on the part of several people. Hazel and willow hurdling would have caught quickly, but would have burned out much faster than the oak which, once alight, burns slowly but intensely. The hazel and oak charcoal may derive from kindling rather than hurdling, which was perhaps built up around the bases of the posts. We have no evidence at Eweford East for the deliberate removal or destruction of the posts after they were burnt, so we can assume that they stood for a while as lines of charred, blackened uprights.

At both Eweford East and West, palaeo-environmental evidence suggests that people were relying heavily on oak and deliberately avoiding other tall tree types (there is virtually no birch, alder or pine wood charocal from the sites), which would have been readily available and significantly easier to fell, work and burn. The fact that people chose to use a timber that resisted felling and burning in so many ceremonial monuments that were eventually set alight suggests that they considered oak a significant component of these monuments for other, less prosaic reasons.

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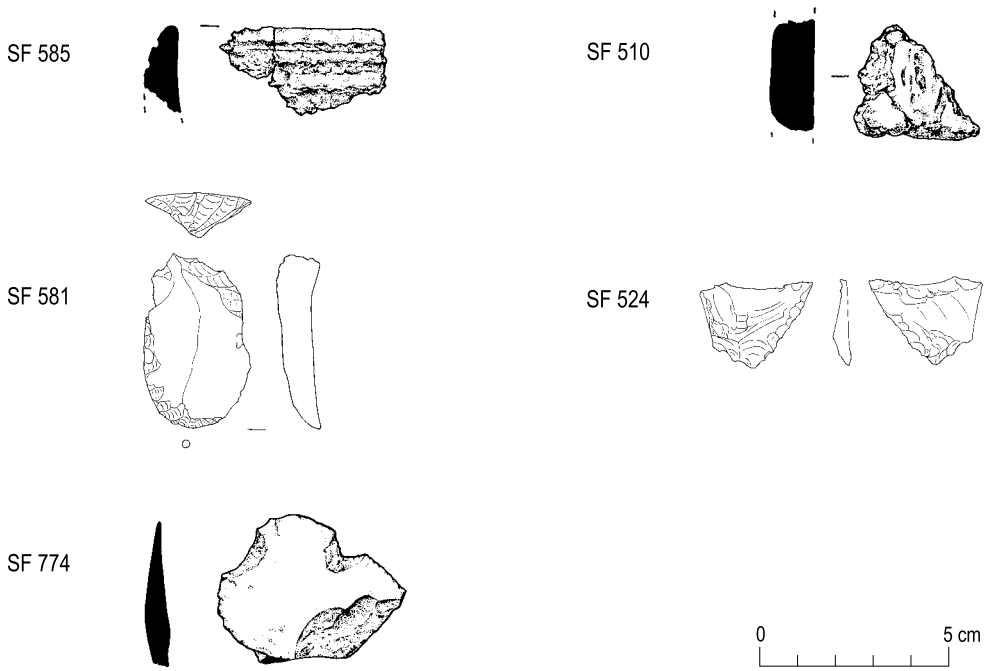


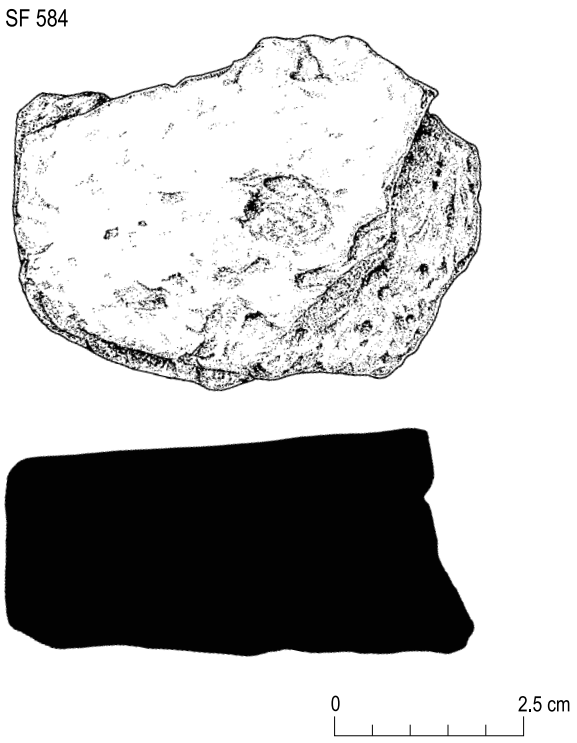
3.10 Grooved Ware sherds and stone tools from Eweford East.

and once the fire took hold the oak timbers would have begun to smoulder and eventually flame. The oak would have burnt slowly but intensely, and it may even still have been glowing the following day. Once the embers had died, the charred, blackened stumps were left to slowly rot away, but the memories of their location and significance would have been fixed in the collective consciousness by the fiery spectacle.

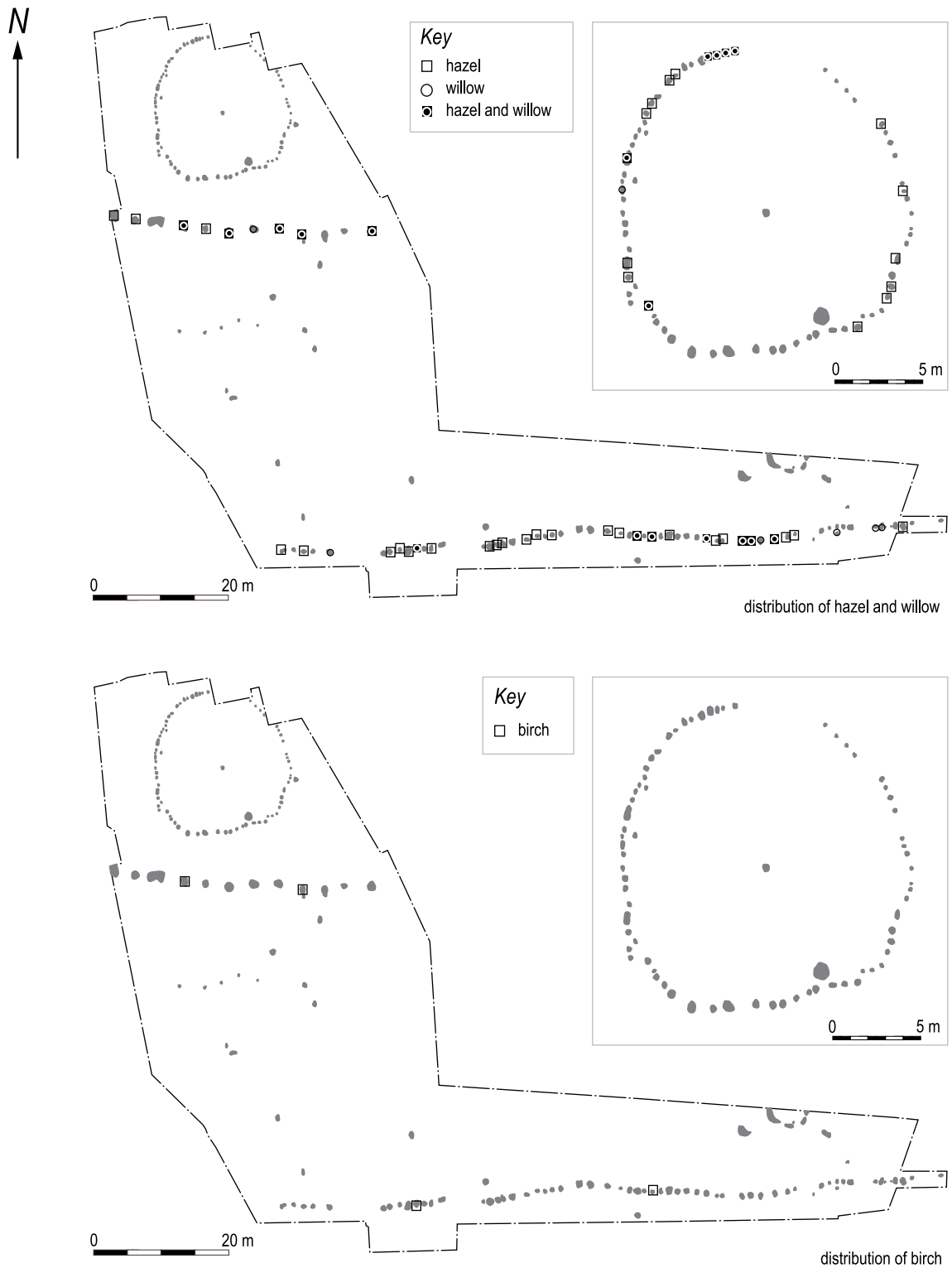
Phase 2: The timber enclosure

To the north of the southern alignment, 70 small pits were dug at Eweford East, enclosing an oval space up to 20m in diameter, with a possible entrance on the east. Although many of these pits were shallow and extremely truncated, enough post-pipes were identified to suggest that this enclosure comprised a ring of closely set upright timbers. The builders probably constructed this ring in segments, as is evident from the fact that it comprised 10 distinct linear or curvilinear groups of posts (see Figure 3.14 for plan, Figure 3.15 for section drawings).

Those who built the Eweford East timber enclosure probably belonged to a later generation than those who began building the southern alignment. Radiocarbon dates suggest that construction of the enclosure happened several hundred years after the willow was cut for use in pit (1115) in the southern alignment (2880–2580 BC (SUERC-5340)). Samples of hazel (*Corylus*) and



3.11 Cup-marked stone from the southern alignment.



3.12 The distribution of hazel, willow and birch charcoal in the Eweford East pits.

willow (*Salix*) charcoal from the fill (1478) of post-hole (1477) in the enclosure provided radiocarbon dates of 2570–2300 BC (SUERC-5337) and 2620–2460 BC (SUERC-5336) (see Figure 3.8). While there could have been a hiatus in construction across the site during this period, there is a brief overlap in the latest and earliest dates in the radiometric spectrum for the pit (1115) from the alignment and that from the enclosure (1447). The dating evidence for the southern alignment suggests that its various segments were constructed in a sequence progressing from east to west over several hundred years. The minimal overlap in date ranges means it is unlikely that the posts at the eastern end of the southern alignment still stood while the timber circle was being built; however, it is possible that those along the centre and western end of the alignment were standing at that time.

Those who built the enclosure did express a certain awareness of the building traditions evident in the eastern half of the southern alignment. They continued to build in segments, using lines and curving sections of smaller and more closely spaced post-holes to create the circular shape. The palaeoenvironmental evidence suggests that they favoured oak timbers for the uprights, perhaps also using hazel and willow to create hurdling (Miller and Ramsay, see Chapter 12 and Archive; Figures 3.12 and 3.13). A single sherd of abraded Grooved Ware (SF 258) (Sheridan, see Chapter 12 and Archive) from one post-hole (1577) also suggests that they continued some of their predecessors' depositional practices.

Truncation had removed any traces of activities that took place inside the enclosure. Four pits (1443, 1591, 1601, 1637) were dug inside it, but it is not clear why, or even whether they were contemporary with the enclosure. The enclosure's proximity to the broadly contemporary pit alignments and the similarly segmented forms of their construction suggest that its use was in some way related to that of the pit alignments.

Phase 2/3: The northern pit alignment

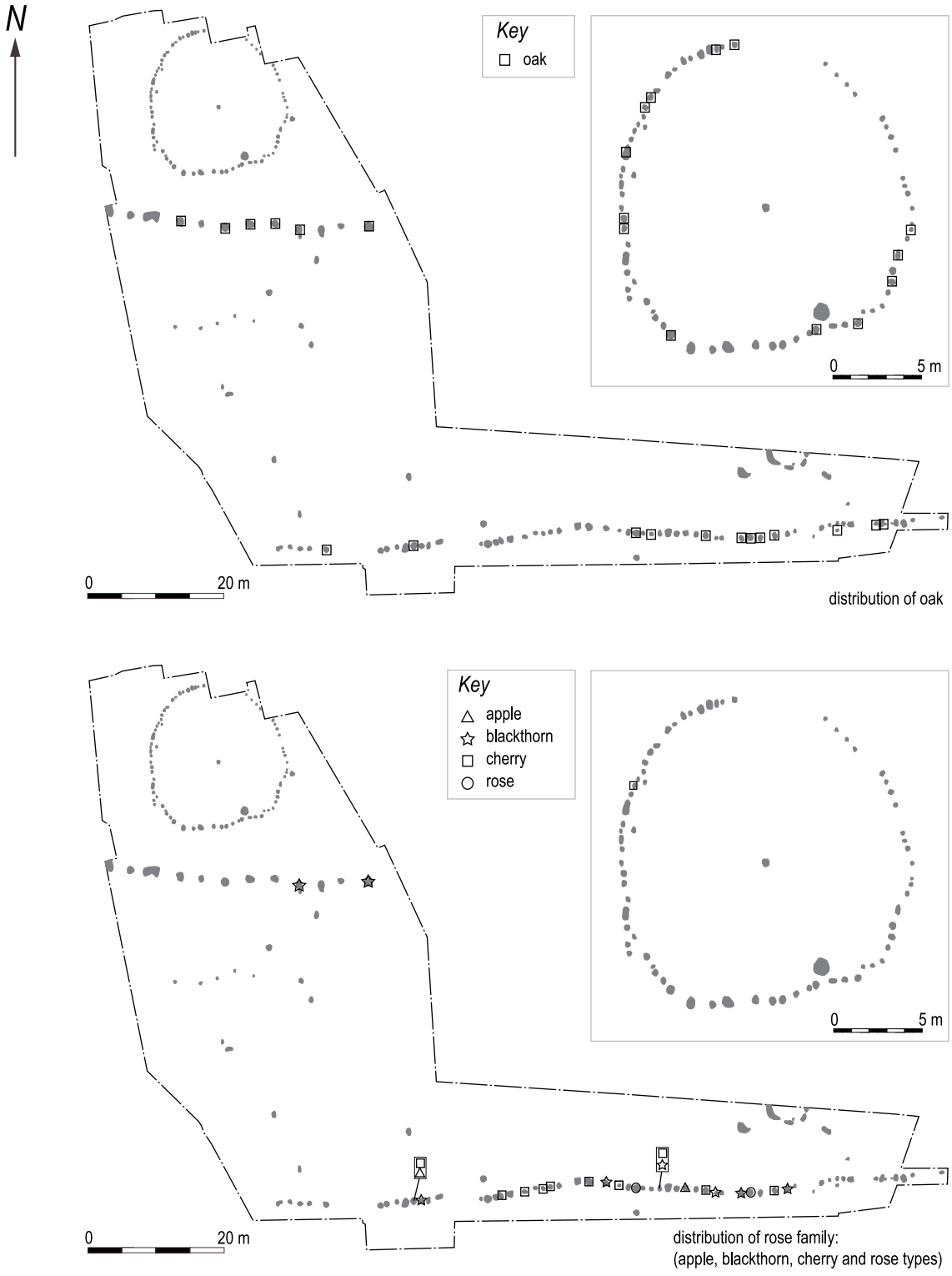
At around 2400 BC, the northern pit alignment and the western sections of the southern alignment were built. The excavated portion of the northern alignment comprised 13 large, widely spaced, oval pits, extending over 38m (Figures 3.6 and 3.7); aerial photographs show that it extends for at least another 60m to the east and another 40m to the west beyond the excavation area (Figure 3.5). In this case, the builders dug large pits, up to 1.3m in diameter and 0.90m in depth, into the glacial till. Having dug them, they erected timbers in at least six of them, as was evident from their post-packing and post-pipes (Figure 3.15). The builders set all of the posts near the northern sides of the post-holes, and again they chose oak for the timber uprights. They used hazel and willow in some way but, as with the enclosure, they appear at first to have shunned the rose family species that were so prevalent in the eastern half of the southern alignment (Figure 3.13; see Miller and Ramsay, see Chapter 12 and Archive). They placed a double-ended scraper (SF 581; Figure 3.10), struck from flint imported from further south (Saville, see Chapter 12 and Archive), into the fill of one post-hole (1340), and a broken whetstone (SF 208) (Sheridan, see Chapter 12 and Archive) into another (1519).

The pits they dug for the northern alignment were larger and more regularly and widely spaced than those making up the southern alignment. There was no clear indication that the builders copied the segmental approach used by their predecessors in the southern alignment and enclosure. However, these variations must be interpreted with care, as only about 30 per cent of the northern alignment was investigated, a much smaller sample than the excavated portion of the southern alignment.

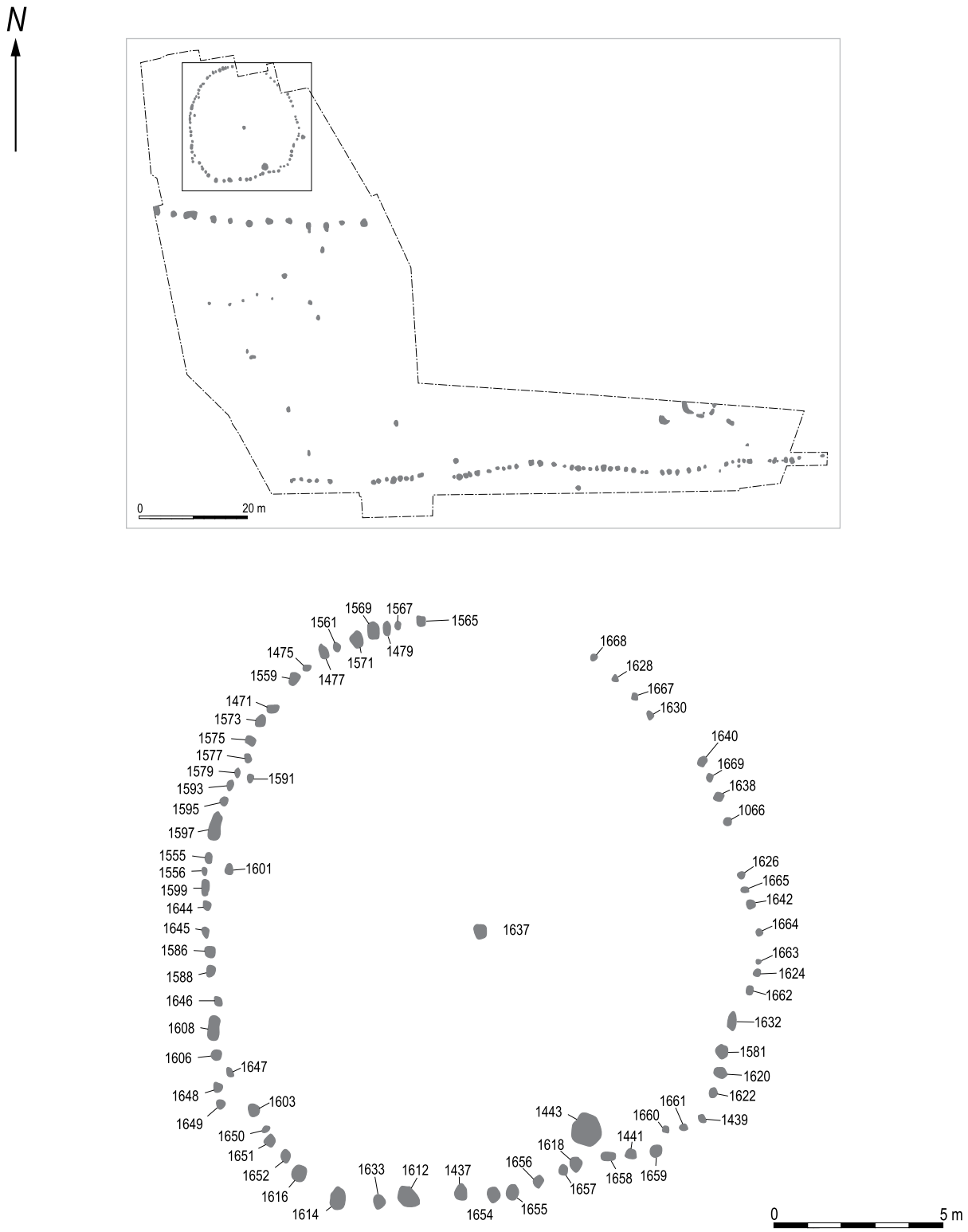
A sample of hazel (*Corylus*) charcoal from the lower fill (1549) of a post-hole (1519) in the northern alignment gave a date of 2490–2280 BC (SUERC-5346), while samples of hazel *(Corylus)* and willow *(Salix)* from a pit (1165) at the western end of the southern alignment yielded dates of 2470–2200 BC (SUERC-5344) and 2470–2230 BC (SUERC-5345) respectively (see Figure 3.8). Assuming that the rest of the pits in the northern alignment are contemporary, the similarity in these dates suggests it was built over a relatively short period.

The radiocarbon dates also suggest that, around the same time that the northern alignment was being built, the last sections of the southern alignment were being constructed. The builders continued to work in segments, a style first employed many generations before at the eastern end of the alignment. On the south, the builders separated the groups of pits even more markedly, leaving gaps of up to seven metres between the last two segments. In contrast to the northern alignment, the builders did continue to use wood from rose family species at this end of the monument, a defining characteristic of the southern alignment as a whole (Figure 3.13).

Several isolated features lay between the two alignments, but they produced no dating evidence. By comparing them to the dated features, we can suggest where they might fit into the overall chronology for the site. To the north of the eastern end of the southern alignment, a group of pits and slots were dug to support what may have been a curving structure that ran beneath the trench edge to the north. The structure incorporated oak, willow, hazel and blackthorn, as charcoal from these species was found in some of the features (1201, 1203, 1271, 1219, 1332) (see Miller and Ramsay, see Chapter 12 and Archive), along with a single sherd of heavily abraded, possible Grooved



3.13 The distribution of oak and rose family charcoal in the Eweford East pits.



3.14 Plan of the timber enclosure.

Ware pottery (SF 132) (see Sheridan, see Chapter 12 and Archive) from the fill of a shallow pit (1333). Both the use of blackthorn and the habit of putting pottery into pits appear to coincide with when the eastern end of the southern alignment and the enclosure were built. Another two pits (1545) and (1367), dug to the south of the northern alignment, may also date to this phase of activity. One pit (1545) yielded several sherds of Grooved Ware (Figure 3.10: SF 510) (Sheridan, see Chapter 12 and Archive), while the other (1367) contained a small quantity (0.2 g) of burnt human bone (Duffy, see Chapter 12 and Archive). (However, this could have been residual from earlier activity in the vicinity; see Chapter 2.)

Discussion

The features at Knowes and Eweford East share at least two characteristics: both involved digging pits that formed lines, and depositing objects into some of them. However, there were also significant differences between them. At Knowes, pits that were dug to form a short line in the mid to late fourth millennium BC seem to have been left open, or were backfilled with clean sediment, except for a cluster of three that were filled with pot sherds and charcoal brought from other places or events. At Eweford East, the pits held posts and a short line gradually developed into a much longer one, a second line and circular enclosure over about 600 years, from the early to late third millennium BC. Pot sherds and worked stone were put into some of these pits.

Both sites fall into the archaeological category of 'pit alignments'. What is it possible to say about what motivated the creation of these sites? Did the practices in evidence at each share common meanings or reference points?

Making lines in the landscape

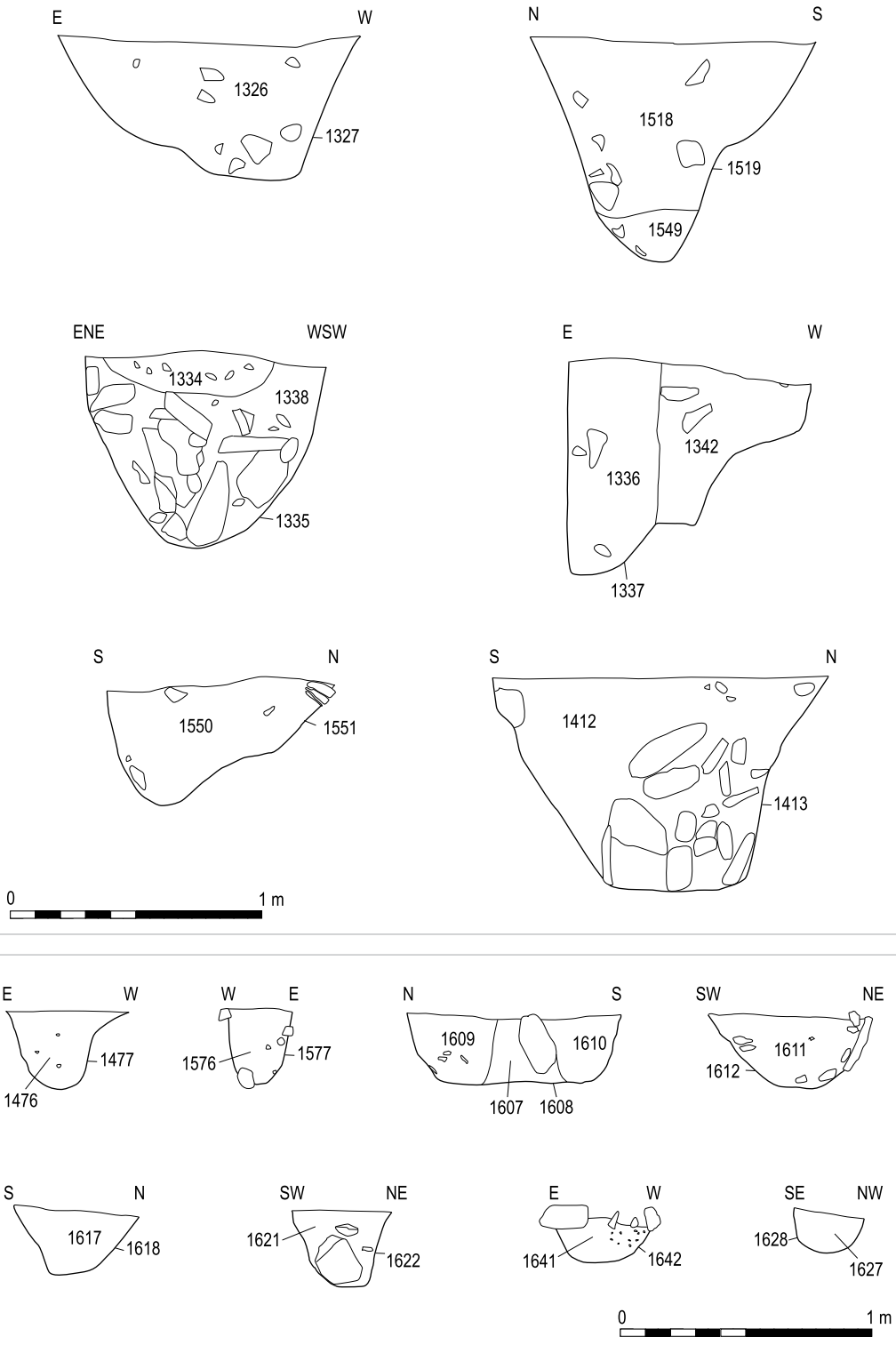
At its simplest, the creation of a line of pits at Knowes amounted to simple demarcation – marking out the space on one side of the line as different from the space on the other, or marking the line itself as the most important thing. In this most basic sense, the creation of a line in the earth at Knowes could be as an embryonic form of the more complicated practices at Eweford East. There we witness architectural efforts (and, by implication, the activities the monuments framed) that became more complex through time, while still preserving essential elements of the first phase. This practice involved the digging of lines of pits, the deposition of broken pottery and other artefacts, the erection of timber posts and their destruction by fire. Because Eweford East was a larger, more complex and better preserved monument, it offers more scope for interpretation.

In interpreting what it meant to create these lines of pits, it is important to remember that the digging of each pit or post-hole was a discrete event, although at both sites each one ultimately worked as part of a group or an overall alignment. The probable time span for the construction of the pit-defined features at Eweford East suggests that these individual digging events extended over several generations to form complete structures. Thus, the concept of memory is fundamental to how we interpret that site: it represented a fixed point to which people returned, perhaps over generations or several hundred years, to add another pit or another segment of pits. It is unclear how long the pits at Knowes remained visible, but the line they marked or the spaces it defined may have been remembered over a long period. It is important to remember, however, that modern Western notions of memory are closely linked to linear conceptions of time (Yates 1992; Gell 1992). Ideas about the passage of time and its relationship to memory may have been very different in early prehistoric Lothian, perhaps linked to agricultural or other seasonal cycles, or to relationships with ancestors (cf Lucas 2005, 61–2).

The clusters of features at the east and west ends of Knowes suggest slightly more complex meanings than a simple linear arrangement. It must be significant that all three pits in the western cluster contained fragments from the same pot (Vessel 3), along with hearth waste – in contrast to the relatively clean fills of the other pits. In contrast to Knowes, only one feature at Eweford East – pit 1087 – showed signs of having been left open following its excavation and, even here, only a small amount of primary silt was found lining the base of the cut. It may be that, at Eweford East, people perceived this initial penetration and exposure of the earth as a ritually hazardous endeavour, and therefore deliberately accelerated this phase of the construction process (see Davies and Robb 2004).

In common with those who created Knowes, the builders of the Eweford East alignments also placed objects into some of the pits and post-holes. Those who created the eastern end of the southern alignment, the curvilinear structure and the first arcs of the enclosure put sherds of Grooved Ware pottery into them, but later builders abandoned this practice. With the exception of one sherd (SF 585) from a pit (1077), all the sherds had been in circulation for some time; they were heavily abraded. In placing pot sherds into the pits at both sites, the builders may have been creating and maintaining memories: of particular pots and how they were made and used, or of events or people connected with the pots themselves, such as feasts or other social occasions.

Both earlier and later builders at Eweford East put stone tools into the pits and post-holes they dug, such as



3.15 Sections through pits in the northern alignment (upper panel) and timber enclosure (lower panel).

the two cup-marked stones from the eastern half of the southern alignment and the broken whetstone from the northern one. Two of the stone tools from the southern alignment (the double-ended scraper (SF 581) and the arrowhead (SF 524) from post-hole (1340) and pit (1171) respectively) are imported types (Saville, see Chapter 12 and Archive), and they may have been seen as special for that reason. Great care was taken in the selection of building materials for the timber uprights, and we see a similar level of concern for the kinds of objects deemed appropriate for depositing in the pits. The rejection of pottery sherds as suitable objects in some cases may have expressed different views of objects, perhaps based on their material properties or associations with other contexts of use. Several cup-marked stones were also recovered from the cairn at Eweford West, a few hundred metres to the west (see Chapter 4).

It may be that the builders of the earlier phases of the Eweford East alignments connected them with the domain of the living. As time went on, perhaps this connection weakened, coinciding with a marked decline in the use of the flowering, fruit bearing rose family species. The construction of the timber circle also marked a change in emphasis, with the builders achieving an entirely different form of monument.

Rhythms in lines

When we consider the chronology of events at Eweford East, the most significant contrast may have been the move from a linear monument, where straight lines defined spaces, to the building of a circular enclosure that still employed post-holes in its architecture. The builders at Eweford East created their linear alignments using a segmental style of construction (Figure 3.16). These short linear and curvilinear stretches of features formed the southern alignment and the timber enclosure, although not the northern alignment. While the ultimate form of these monuments and the spaces were important, the repetition and sense of rhythm created through sequences of action – pit by pit, or segment by segment – seem fundamental to understanding how the monuments were made and used.

The ultimate form of the enclosure differed fundamentally from those of the alignments, and this must have expressed essential differences in its purpose, meaning and use. While the alignments were potentially infinite projects that could be extended indefinitely across the land, the enclosure had a finite, closed form. Along the northern curve of the enclosure there was a break in the arc of post-holes, observed when the baulk (see Figure 3.14) was removed under archaeological monitoring. This may be simply a result of truncation, as the neighbouring post-holes were relatively shallow, particularly those along the north-western arc. Alternatively, the builders may have chosen to site an entrance on the north side, an aspect that never receives direct sunlight. This possible shift in cardinal referencing was reinforced by their choice of its location – due north of the two alignments. Furthermore, none of the enclosure post-holes produced charcoal from rose family members, with their fruit-bearing, life-giving associations.

3.16 One of the segments in the southern alignment.

The southern portion of the enclosure appears decidedly flattened in plan, perhaps echoing the northern alignment running alongside it to the south. Although the date range returned from the enclosure post-hole (1477) pre-dates the construction of the northern alignment, if the latter were constructed in episodic fashion like the southern alignment, then the temporal relationship between it and the enclosure may have been closer than the radiocarbon dates indicate. Alternatively, perhaps the northern alignment was indeed built later, but along a

pre-existing conceptual boundary which the enclosure respected.

This sense of rhythm, repetition and progression suggests that those who built and used the various structures were expressing complex notions of time (cf Gell 1992; Lucas 2005). The postulated east-to-west evolution of the southern alignment would have reflected the movement of the sun through the sky, suggesting associations with daytime and the world of the living. The inclusion of rose family species in the southern alignment suggests that seasonal cycles of blossoming and fruiting may have been important to its meaning (cf Hayman 2003). These associations with birth, death and regeneration may have extended beyond the monuments to the individuals or groups that created them. If each segment was identified with a generational group, or each pit with an individual, the posts that they held may have metaphorically died along with those associated with them. In firing the posts, the community may have been evoking the death of an old generation and the birth of new ones, with the promise of the group's regeneration. These events would also have helped to fix the memory of these people and the structures they built in the collective consciousness (Van Dyke and Alcock 2003, 4; Connerton 1989).

These short segments of post-holes also appear to have been related to the creation, definition and use of space. Each segment displayed the builders' memory of and respect for previous segments; alignments continued on the same orientation, and the southern arc of the enclosure may have echoed the linear nature of the alignments.

Common threads

Clearly, the pit alignments created at Knowes and Eweford East differed vastly in scale, complexity and appearance, with the monument at Eweford East marked out by standing posts and that at Knowes marked by holes in the ground, either left open for a time or deliberately filled in. What links them is the act of marking lines in the landscape to define different categories of space.

At Knowes, we may be seeing traces of earlier notions about space and the symbolism of dividing it; these notions were developed over the centuries and millennia that followed, finding evolving and sophisticated expression at Eweford East. The pot sherds, charcoal and (at Eweford East) worked stone put into some of the pits may have given them meanings that transferred from other social contexts.

Previous interpretations have often stressed a pragmatic function for pit alignments, either as stock enclosures or territorial boundary markers (for example, Halliday 1982). Different physical uses might have been linked to or based on more abstract meanings or histories; for

3.17 Reconstruction of the southern alignment being built.

example, one space might have been considered suitable for growing crops while another was thought to be spiritually polluted. The lines of pits may have proscribed movement in and around the monuments, and at Eweford East we might imagine the upright timbers channelling complex processions of people or animals. We consider the uses and architecture of these monuments further in Chapter 9.

Chapter 4

Everything in its place: Excavations at Eweford West, Overhails, Pencraig Wood and Eweford Cottages (3300–1700 BC)

GAVING MacGREGOR and ELAND STUART

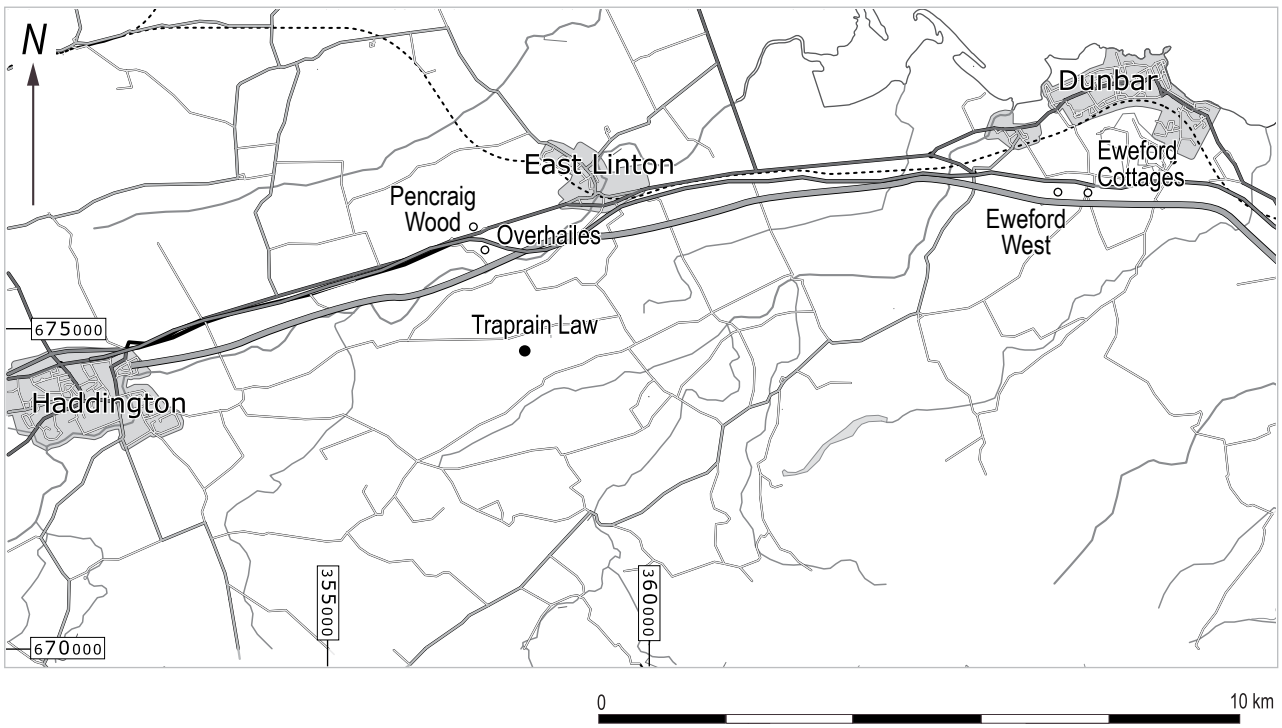
Introduction

Several of the excavated sites had archaeological remains dating from the late fourth millennium to the end of the second millennium BC, all of them associated in some way with the deliberate deposition of artefacts. In this chapter, we examine the changing nature of deposition during this period and the various contexts in which it took place. These practices varied considerably, from evidence at Overhailes for the deposition of exotic artefacts, perhaps related to a stake-defined structure, to the deposition of artefacts at the ceremonial site of Eweford West. While most of the evidence considered in this chapter is from Overhailes and Eweford West, other instances of similar practice are explored from Pencraig Wood and Eweford Cottages (Figure 4.1).

The making of place at Overhailes

The activities at Overhailes took place on a small shelf on the long, south-facing slope that runs down from the summit of Pencraig Hill to the River Tyne (Figure 4.1). Bedrock, which rose up through the subsoil, bracketed the shelf at the north and south edges of the trench (Figure 4.2). The biggest outcrop was downslope, where a great hump covered with plough scars jutted out of the subsoil. This bedrock lurked below a thin layer of ploughsoil and could well have been exposed in prehistory as an outcrop. Ploughing may have removed the upper fills of features as well as anything that originally stood above ground, such as midden heaps.

Radiocarbon dates, spatial relationships and associated artefacts date the activity on the terrace to several different



4.1 Map showing the locations of Overhailes, Eweford West and Pencraig Wood.

phases. Starting with the earlier material, the basic sequence is as follows: a single date of 7600–7525 BC from an ambiguous feature attests to the passage of Mesolithic feet (see Chapter 2); between 3340 and 2900 BC, several large pits were dug and then filled in, and stake-holes that respected these pits might have formed a contemporary building and yard; and finally, between 2340 BC and 1740 BC, a stone box was created and a setting or building of five timber uprights was constructed.

In the first phase of activity on the shelf (3340–2900 BC), people undertook most archaeologically visible tasks in the north-eastern part of the site. They drove in numerous stakes to create a structure of some sort, possibly a building with an adjacent yard. Inside the yard they dug two large pits.

A possible building and a yard

The stake-holes on the site plan may have traced the outline of a light, sub-circular or horseshoe-shaped building (Structure A) measuring about 6m in diameter, with a sub-circular yard to the south (Figures 4.3 and 4.4). Palaeobotanical evidence suggests that the building could have been made of oak standards (Miller and Ramsay, see Chapter 12 and Archive).

It is possible that more stake-holes defined a yard or enclosure that abutted the building to the south. While some stake-holes were barren (157, 197, 185), most contained a mixture of wood species (Miller and Ramsay, see Chapter 12 and Archive) that suggests they may have supported wicker hurdling, which was subsequently burnt down. One stake-hole (250) contained hazel, blackthorn and oak; another (172) contained alder, birch and heather, and two contained single species, hazel in one (154) and heather in another (178). All other stake-holes in the area either contained oak with small quantities of hazel or were barren. The large gaps between the stake-holes would suggest that they supported a very light screen, but plough truncation could have resulted in differential preservation.

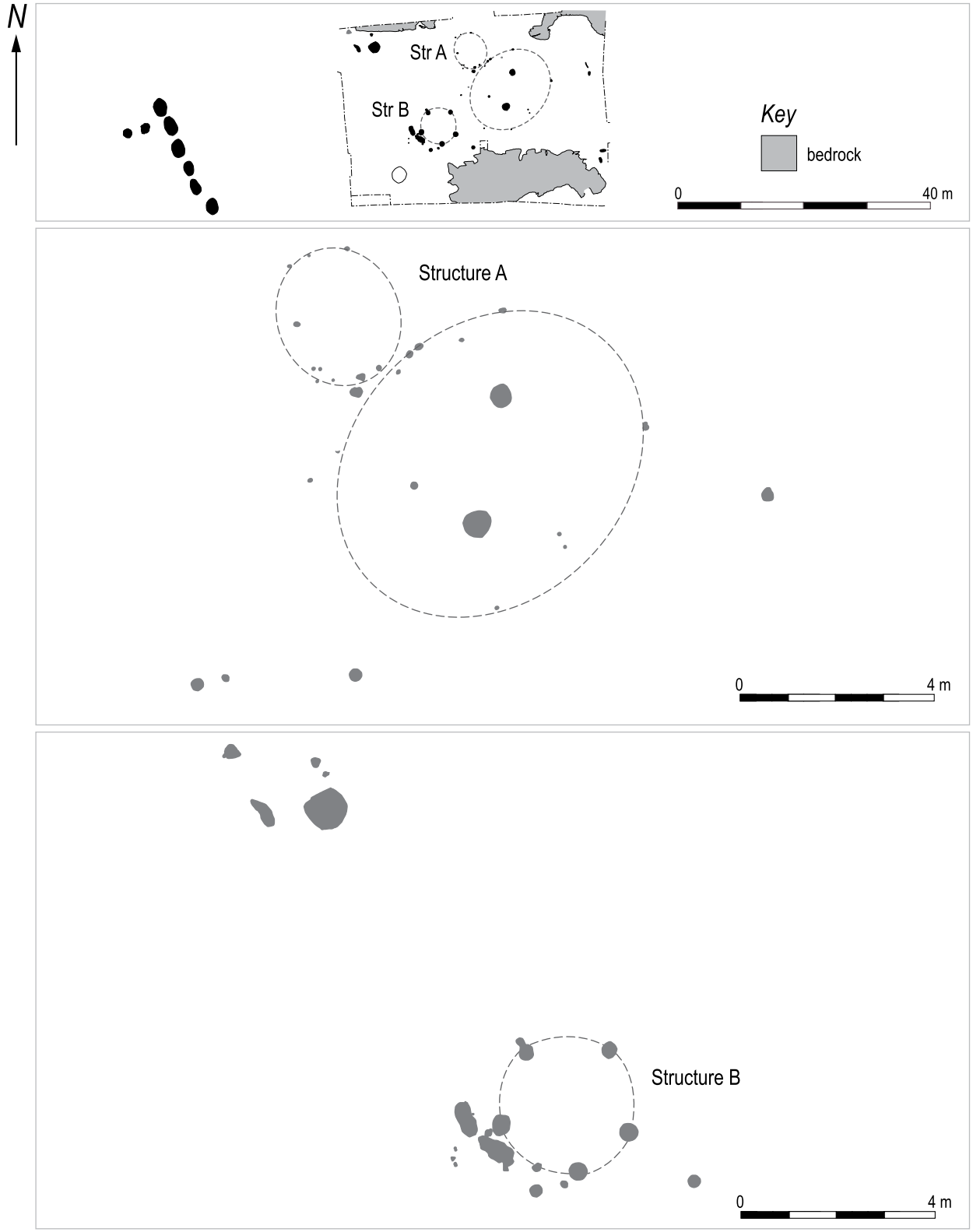
Inside the possible yard

Inside the possible yard, the early residents at Overhailes dug two pits, (050) and (247) (Figure 4.4). They threw several handfuls of flint, a few other stone tools, pottery and some burnt animal bones into each hole.

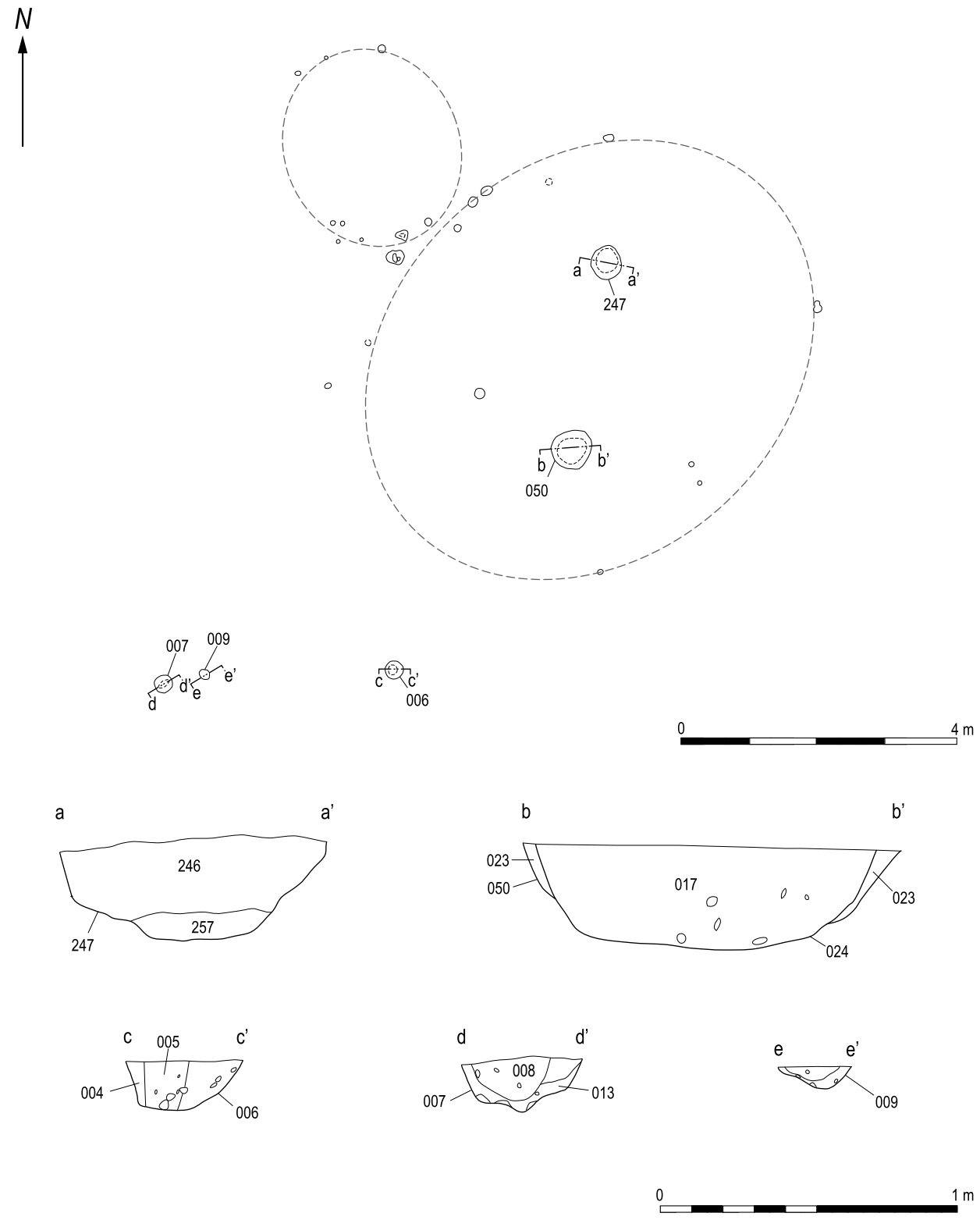
They filled in the northern pit (247) in two stages (246 and 257), soon after it was dug (no deposits were blown in or fell in while it lay open). First, they put in a small deposit, only 0.08m deep, rich in burnt plant remains and containing a pottery sherd and an unretouched flint flake and a fragment of end scraper (Figure 4.5: SF 23). On top of this, they put in more material rich in the burnt remains of hazel, oak and willow (246), as well as a little burnt animal bone, over 30 pieces of worked flint and pottery sherds from 12 different Fengate Ware vessels (Vessels 1–12; Sheridan, see Chapter 12 and Archive). Only a small proportion of each vessel was present, suggesting they had been broken elsewhere and drawn together for deposition (see Chapter 12 and Archive). One pot (Figure 4.6: V 1), a large collared vessel with splaying walls and impressed decoration, had clearly been used for cooking or boiling, as evident from burnt encrustations on its outer and inner surfaces; after breaking it may have a lain in a hearth, causing its interior to scorch bright red. Fragments of another large collared vessel with incised decoration (Figure 4.6: V 2), a large thick-walled and flat-based vessel (Figure 4.6: V 3), two large, thick-walled, coarse vessels (V 4 and V 5), three large, thin-walled, fine-textured pots (V 5, 6 and 7), medium and large, tub-shaped vessels with incised decoration (Figure 4.6: V 10 and 11) and a small, thin-walled, incised-decorated vessel (Figure 4.6: V 12). Of these other pots, five also have indications that they were used on a hearth (V 2, 3, 4, 10 and 11).

4.2 The site at Overhailes during excavation.

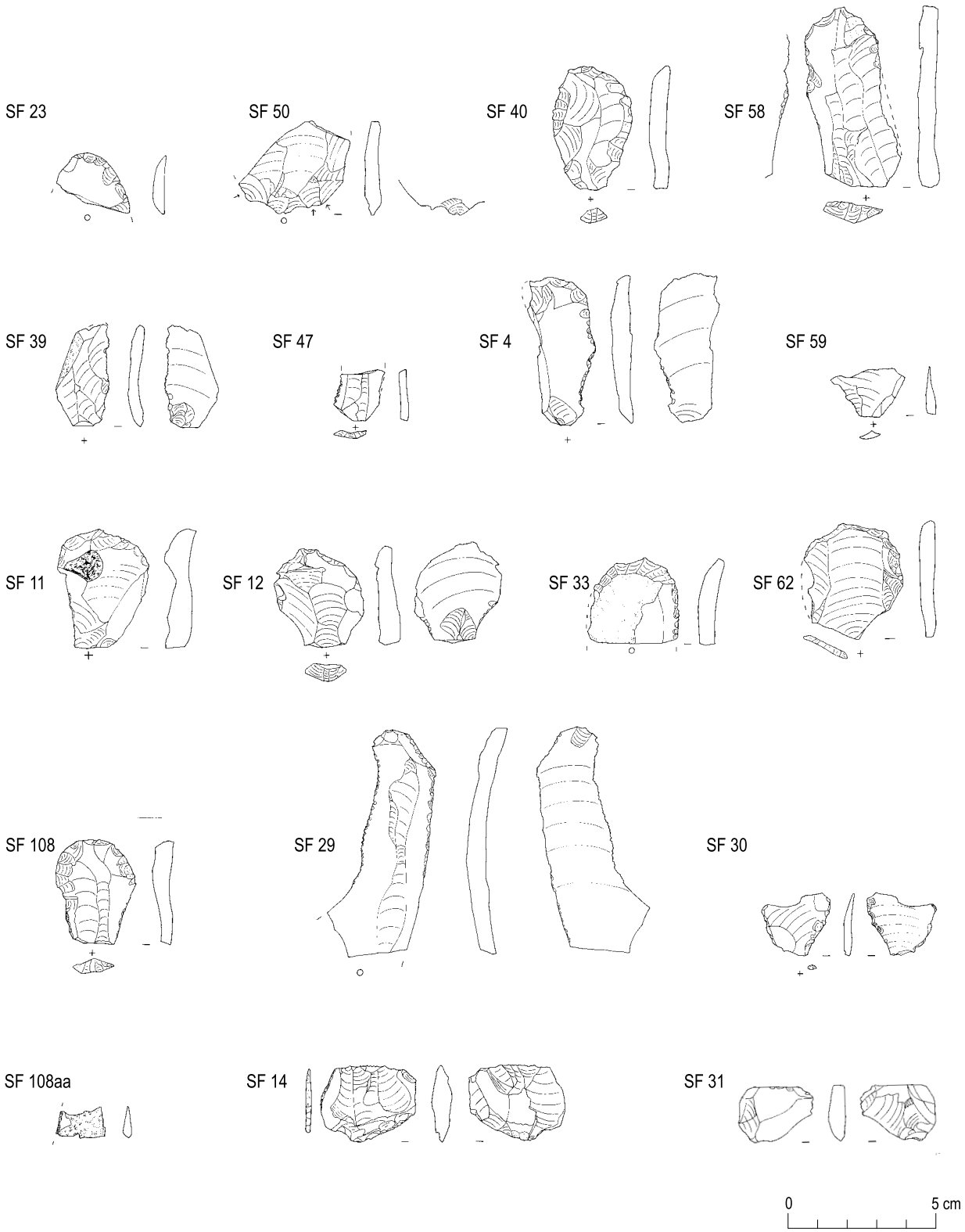
As well as flint chips (13) and unretouched flakes (9), the upper fill (246) contained a retouched piece (SF 50), two end scrapers (SFs 40, 58), two flakes with serrated edges (SFs 39, 47), a scraper/serrated combination tool



4.3 Plans of the main features at Overhailes.



4.4 Plan of Structure A and sections through pits 247, 050, 009, 007, 006.



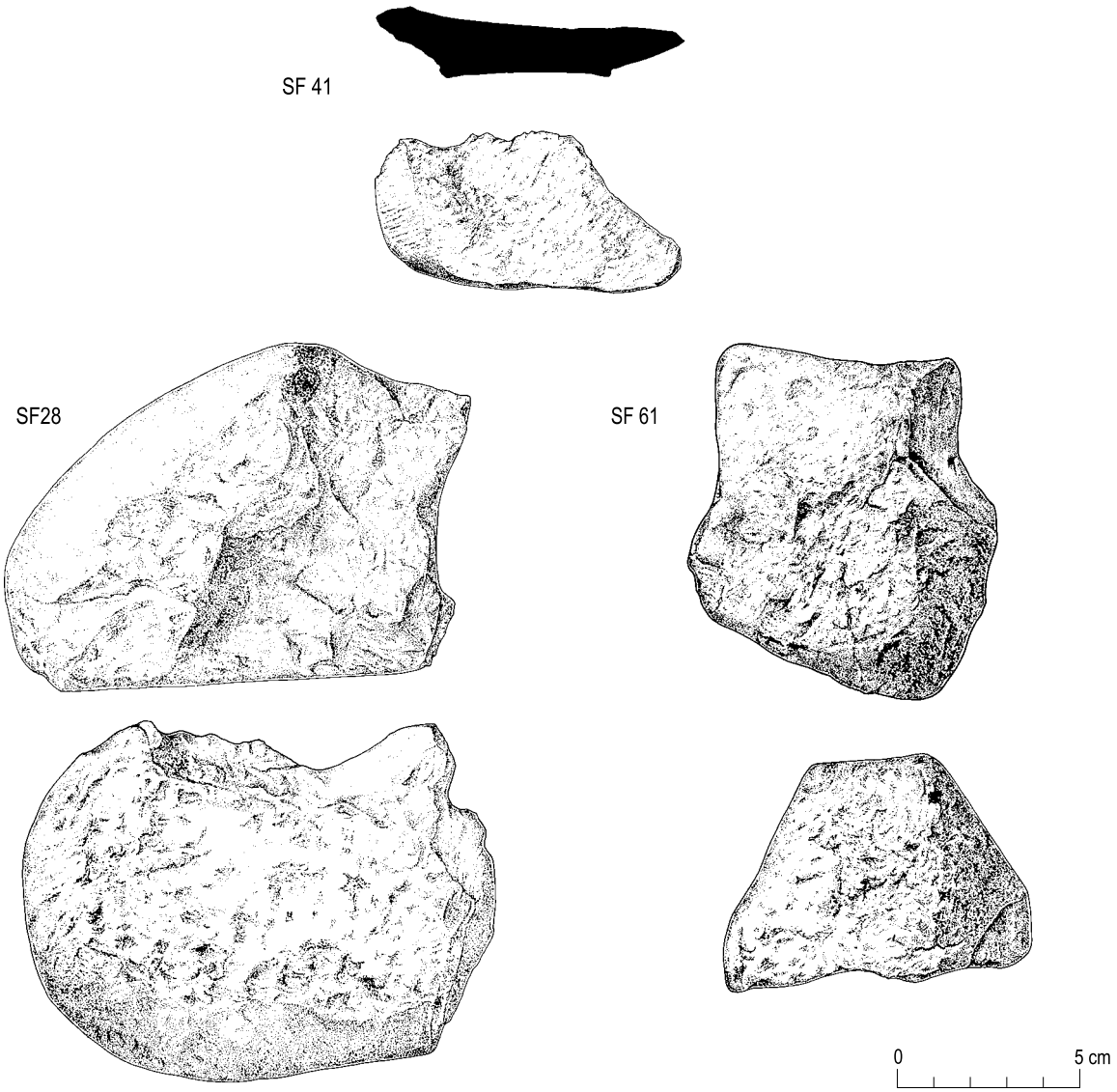
4.5 Flint and chert stone tools from Overhailes.

4.6 Pottery vessels from Overhailes.

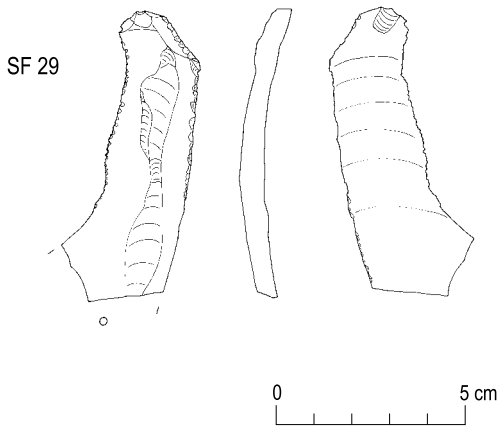
(SF 4) and a flake from a polished flint axe (SF 59) (Saville, see Chapter 12 and Archive) (Figure 4.5). The polished surface of the axe had been the platform. The tool-maker might have used a broken axe for a core because the flake had other scars on its dorsal surface that ran in the same direction. Coarse stone tools had also been deposited in the pit, including a large, struck-stone flake (SF 41) (Figure 4.7) and a fragment from a cobble (SF 46) (Stuart, see Chapter 12 and Archive) (not illustrated).

The upper fill (246) produced radiocarbon dates from hazel (*Corylus*) charcoal and hazelnut shell (*Corylus avellana*) of 3340–2920 BC (SUERC-7504) and 3320–2910 BC (SUERC-7505). Small fragments of animal bones were present and identified by analysis as mammal in origin (Smith, see Chapter 12 and Archive).

The southern pit (050, fill 023) differed most from the northern one in that, soon after it had been backfilled, it was re-dug and filled in again. This sequence of activity removed most of the initial fill, a fine, yellow-brown silt (023). What remained contained a little charcoal and a single flint chip (SF 102). The second fill (017) was darker and contained more burnt plant remains, including hazelnut shell, hazel, apple, blackthorn and oak charcoal (Miller and Ramsay, see Chapter 12 and Archive). There



4.7 Heavy stone tools from Overhailes.



4.8 A serrated edge tool from Overhailes.

were also small fragments of animal bone, which analysis identified as mammal in origin (Smith, see Chapter 12 and Archive). Samples of hazel (*Corylus*) and apple type (*Maloideae*) charcoal produced radiocarbon dates of 3340–3010 BC (SUERC-7509) and 3270–2900 BC (SUERC-7510), very similar calibrated ranges to those from the northern pit.

Those who filled in the pit for the second time also added a few handfuls of flint and pottery sherds as they worked. The pottery sherds are from ten different vessels: a large coarse, thick-walled vessel (Figure 4.6: V 13), four large, thin-walled and fine-textured vessels (V 14, 15, 16 and 18), a medium-sized vessel (Figure 4.6: V 17), a small, coarse-textured vessel (Figure 4.6: V 19), a thin-walled, fine-textured, flat-based pot with trunco-conic profile and incised decoration (Figure 4.6: V 20) and two other fine-textured vessels (V 21 and 22) (see Sheridan, see Chapter 12 and Archive). Only a small proportion of each vessel was deposited, sherds from several of which indicate that they may have been used for cooking or burnt after breakage. Among the flints were five scrapers (SFs 11, 12, 33, 62, 108), one flake with a serrated edge (SF 29), two retouched pieces (SFs 30, 108AA), a core (SF 14) and a core fragment (SF 31) (Saville, see Chapter 12 and Archive) (Stuart, see Chapter 12 and Archive) (Figure 4.5). Coarse stone tools, an anvil (SF 28) and a possible pounder (SF 61), were also deposited in the pit (Figure 4.7).

The stone tool assemblage from both pits embodies an interesting contrast (see text box 4.1). The evidence suggests that someone knapped stone at the site and deposited a small, bipolar anvil core and a core fragment in the southern pit (050), along with the anvil on which it may have been struck. The core was a broken, retouched flake (Saville, see Chapter 12 and Archive). The implements, on the other hand, were flaked from sophisticated platform cores that were not put in the pit. Either the cores were never brought to the site, or they were kept in circulation. The nature of the raw material suggests that the tools came from at least as far away as Yorkshire and possibly further still. They were probably brought as finished pieces, or at least blanks, since nothing in the knapping debris indicated that large nodules were worked at Overhailes (Saville, see Chapter 12 and Archive). Similarly, the pottery assemblage includes a form of large, collared vessel that has never previously been recognised in Scotland. This form, part of a Fengate ware tradition, has a distribution much further to the south (Sherdian, see Chapter 12 and Archive). These observations imply that the people using the shelf at Overhailes had social contacts over a wide geographical range.

Other activity

Perhaps at around the same time that they dug and filled in the two large pits, those occupying the shelf also dug a line of three smaller pits to the south-west of the yard (Figure 4.4). In one small pit (007), the diggers pressed a few stones into its base, then put in a deposit with a small amount of charcoal (013). They covered this with two other deposits (008 and 012); both contained charcoal and one (008) contained tiny fragments of burnt bone and sherds of pottery. The charcoal was of burnt hazel, blackthorn, heather and oak (Miller and Ramsay, see Chapter 12 and Archive), while the animal remains were mammalian but too small to identify (Smith, see Chapter 12 and Archive). Radiocarbon dates were obtained from samples of blackthorn type (*Prunus spinosa*) charcoal and hazel (*Corylus*) charcoal of 3330–2920 BC (SUERC-7511) and 3340–2930 BC (SUERC-7512).

Although no radiocarbon dates came from the other two pits, their relative positions and the artefacts they contained suggest that they could be contemporary. About one metre to the east, another small pit (009) was dug and filled with a deposit containing what may be burnt food remains, including some hazelnut shell and mammal bone (010). Most of the bone was unidentifiable, but one was a heavily calcined bone from the foot of a pig, an adult or immature adult (Smith, see Chapter 12 and Archive). The pit was filled up with an ashy deposit of burnt alder and hazel, with more food remains among it, again including hazelnut shell (011) (Miller and Ramsay, see Chapter 12 and Archive).

About 5m further to the east was a third small pit (006) that probably held a post: an inner fill of dark-brown silty sand (005) against its steep western edge was interpreted as a post-pipe, and oak charcoal from this may have been the remains of a post. Sherds of pottery from four different

4.1

Stone tools from the Overhailes pits

The two pits in the yard outside Structure 1 contained particularly interesting sets of flint tools. One of the pits (050) held five scrapers and a serrated-edge flake, while the other (247) held two scrapers, two serrated-edge flakes and a tool which combines both scraping and serrated edges (see Figure 4.8).

Scrapers are flakes of stone; the flakes have been retouched, usually at the distal end, to form convex scraping edges. They were used, as the name implies, for scraping, with the tool held in such a way that the ventral surface of the retouched edge is in contact with the material being scraped. Micro-wear analysis and experimentation has shown that scrapers are multi-purpose tools which can be used for working various raw materials, including wood and bone, but that they are especially suitable for preparing animal skins.

Serrated-edge tools are flakes on which part of the edge has been given closely spaced indentations using the edge of another piece of flint, creating serrated edges that look like the teeth of a fine saw (Figure 4.8). This provides a robust working edge, but its function is still disputed. For a long time it was thought that serrated-edge tools were components – hafted singly or in combinations – of sickle-like harvesting tools. However, microwear studies have shown that serrated pieces have often been used in a whittling fashion rather than in a saw-like motion. Some connection with the working of plant material (including wood) seems likely, in any case, because so many serrated-edge tools have a distinctive edge gloss, thought to relate to continued contact with plant silica. The largest serrated-edge flake from Overhailes has a small patch of gloss on the back of the denticulations (saw-teeth).

While scrapers are a ubiquitous tool type, occurring in archaeological assemblages from the Palaeolithic period to the Bronze Age, serrated-edge flakes are less common. They have been reported in contexts in Britain ranging from the Mesolithic period to the early Bronze Age, but seem to have had a particular currency during the early to middle Neolithic. Since both scrapers and serrated-edge flakes are basic tool-types with fairly standard characteristics, they rarely occur in chronologically diagnostic forms (that is, they are difficult, if not impossible, to closely date in isolation). So their presence together in the pits at Overhailes, dated to the second half of the fourth millennium BC, helps to establish a chronological horizon for these tools in eastern Scotland.

All of the implements from these pits appear to have been used before they were discarded, though they do not seem to have been used so heavily that they were no longer functional. They are also of relatively large size – larger than most blanks obtainable from local pebble sources – and so they could have been reworked into other tools rather than left in the pit. So their presence in these pit fills is somewhat enigmatic, since one might expect them to have remained in circulation rather than been abandoned. Given the ritualised nature of social and technological activity during the Neolithic, however, there could be many reasons why people chose to abandon or conceal them rather than to continue using them.

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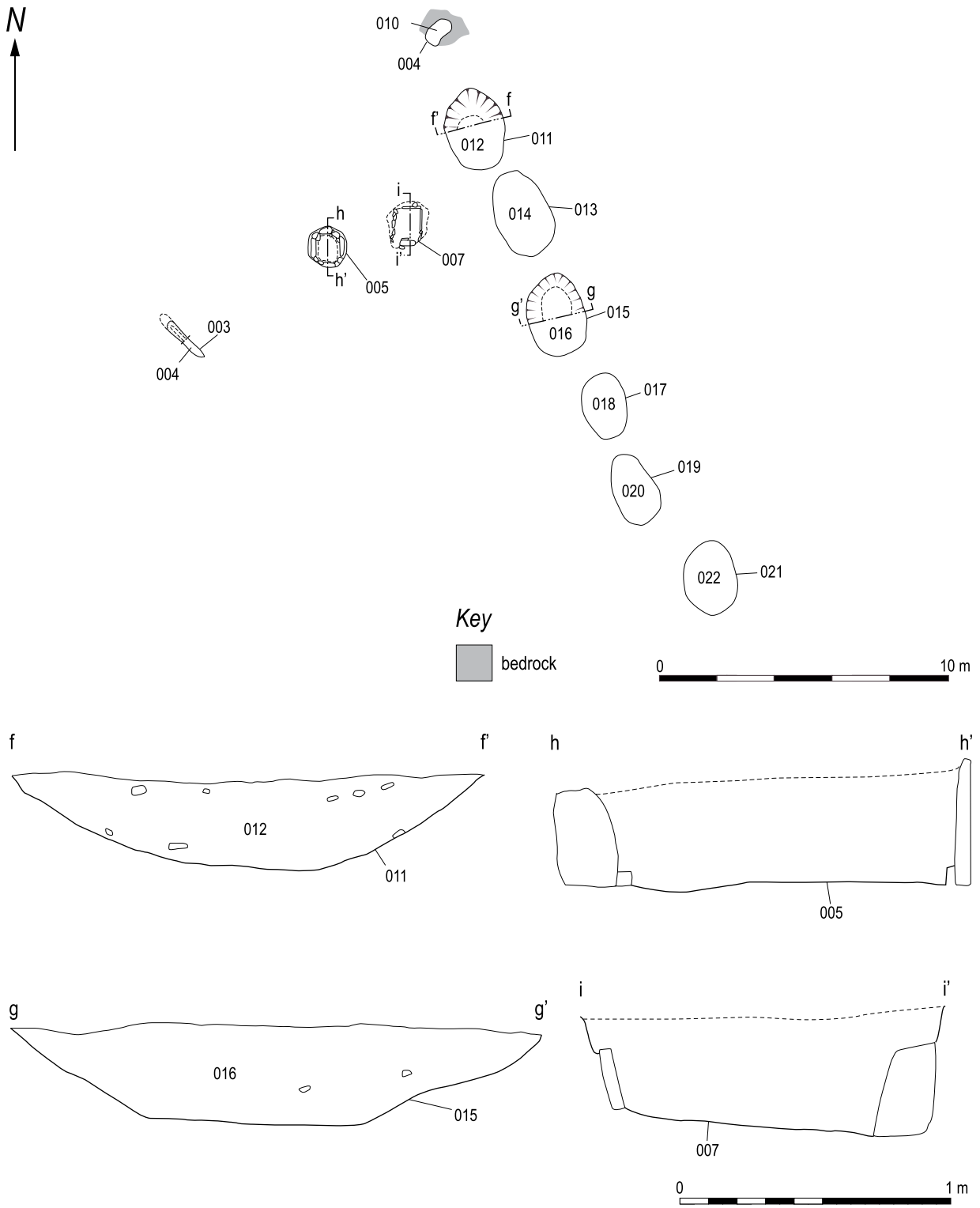
vessels (Sheridan, see Chapter 12 and Archive; V 23–26) had been placed in the pit: from two large vessels (pots 23 and 24), a small vessel (V 25) and a small, thin-walled, fine ware pot with incised decoration (Figure 4.6: V 26). These sherds were found in the outer fill (004), lying against the post-pipe, and they may have been tucked in deliberately, along with charcoal, burnt animal bone and burnt hazelnut shell, perhaps from a hearth. The charcoal consisted of oak, alder, birch, hazel, and apple charcoal (Miller and Ramsay, see Chapter 12 and Archive).



4.9 The pit alignment in plan and section.

Long after the pits had been backfilled and the stake-built structure (A) and enclosure had burnt down, another phase of activity was initiated by a new generation. Around the end of the third millennium BC, an alignment of pits was created along with three large, stone-lined pits and a structure or circle of large timber posts (Figure 4.3). The chronology of much of this activity is not clear, but it is possible that the features are broadly contemporary.

An alignment of pits

About 15m to the west of the long-vanished building and yard, a new generation came to the site and dug a line of eight pits that ran down the slope, from north to south (Figure 4.9). All the pits except one were oval in plan, up to 2.8m in length and 0.4m in depth. The exception was the northernmost pit, which had been cut into the outcropping bedrock on the hillside and was only 1m long. This general consistency in form may suggest that the pits were created to hold upright timbers.

4.10 The stone-lined pit (241) during excavation.

No dating evidence was recovered from these features. However, it is possible, by analogy with other pit alignments identified in the wider region (see Chapter 3), that they date to the third millennium BC.

Stone-lined pits and linear features

Close to the pit alignment, three sub-circular pits and a linear feature were dug. Their spatial relationships suggest that they were contemporary (Figure 4.9).

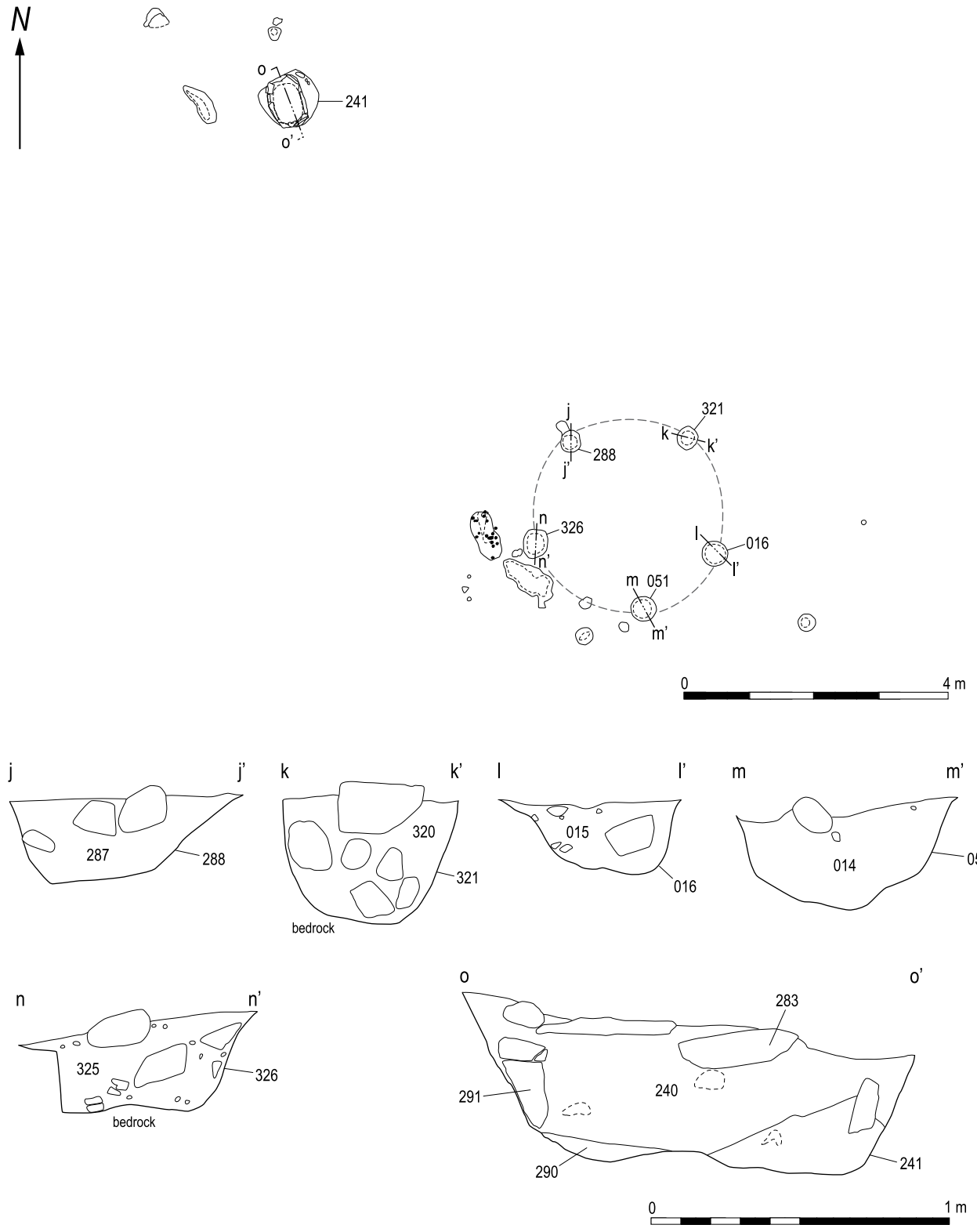
To the west of the pit alignment were two stone-lined boxes or cists (005 and 007), sitting along a line perpendicular to that of the alignment (Figure 4.9). Although subsequent ploughing may have damaged the pits, dragging stones out of them, whoever created them appears to have set upright, flat slabs against the edges, with packing stones to hold them in place. The fills of both stone boxes were silts (TSM-006 and TSM-008), which may suggest they had been left open to the elements. Fragments of unidentifiable burnt bone were observed in the fill (TSM-006) of the westernmost pit. Large pieces of rubble in the eastern pit (TSM-005) may suggest that it originally had a capstone that had broken, and some of the pieces of which had fallen in.

To the east of the pit alignment, this later generation dug another pit (241) down to the bedrock (Figures 4.10 and 4.11). They set slabs (291) hard against the edges, setting some in compact sandy silt (290/289) that might have been earthen luting, and set packing stones around the lining. This pit was filled with a light, friable deposit of dark, sandy silt (240) that is likely to have been the result of natural silting. On the fill were set several large slabs (283) that formed a capstone; subsequent ploughing may have dragged it slightly off-centre. Samples of hazel (*Corylus*) charcoal and oat (*Avena sp*) from the silty fill (240) gave radiocarbon dates of 2350–2040 BC (SUERC-7513) and 1150–1280 AD (SUERC-7514) respectively. The Medieval date is most likely to derive from intrusive material, but the late second millennium BC may at best represent a *terminus ante quem* for the construction of the feature.

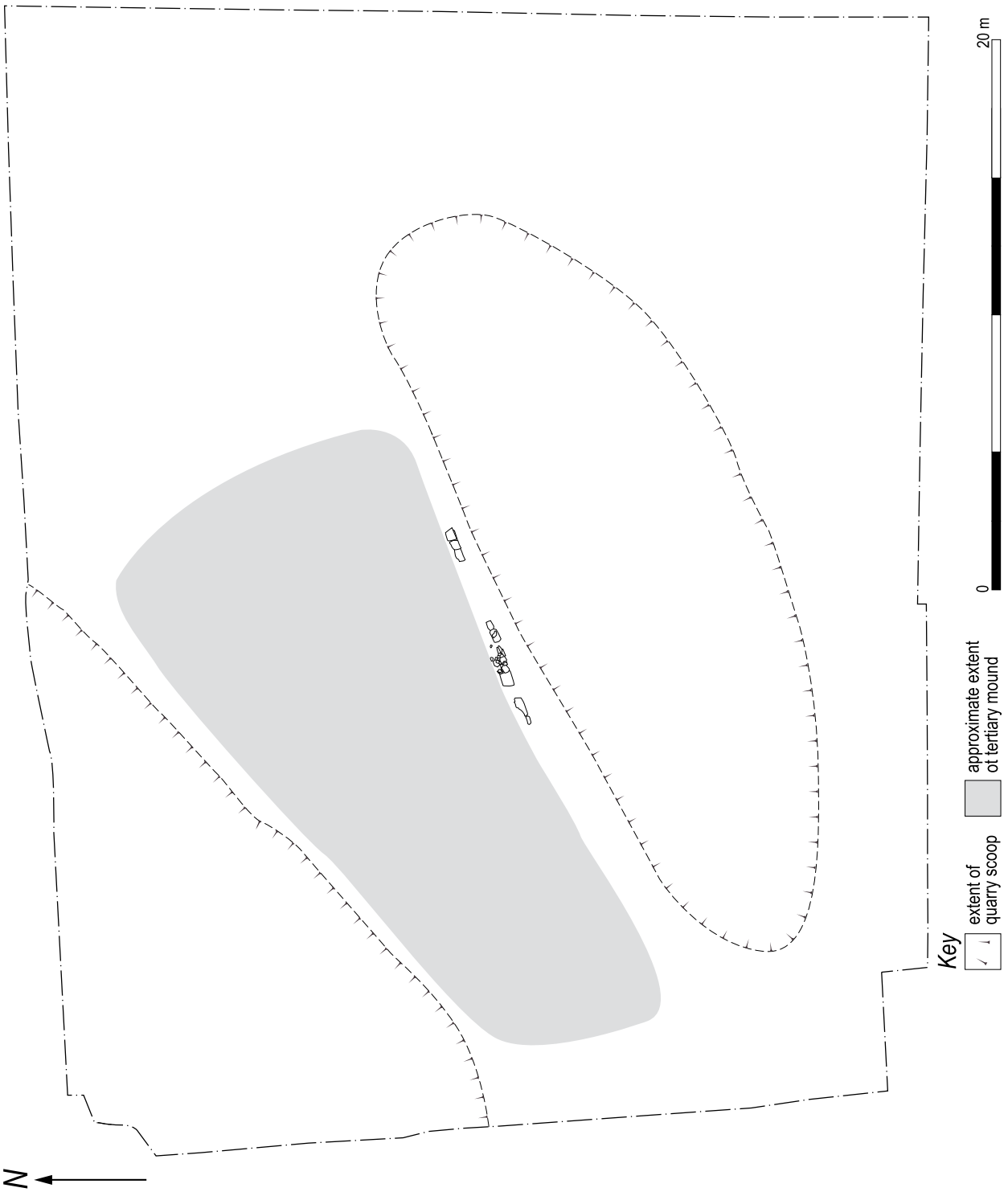
Of several other pits in the vicinity, one (003) may be contemporary. This linear pit (003), up to 2.2m in length and 0.4m wide with a charcoal-rich fill (004), appears to have been positioned in relation to stone-lined pits (005) and (007).

A timber circle or structure

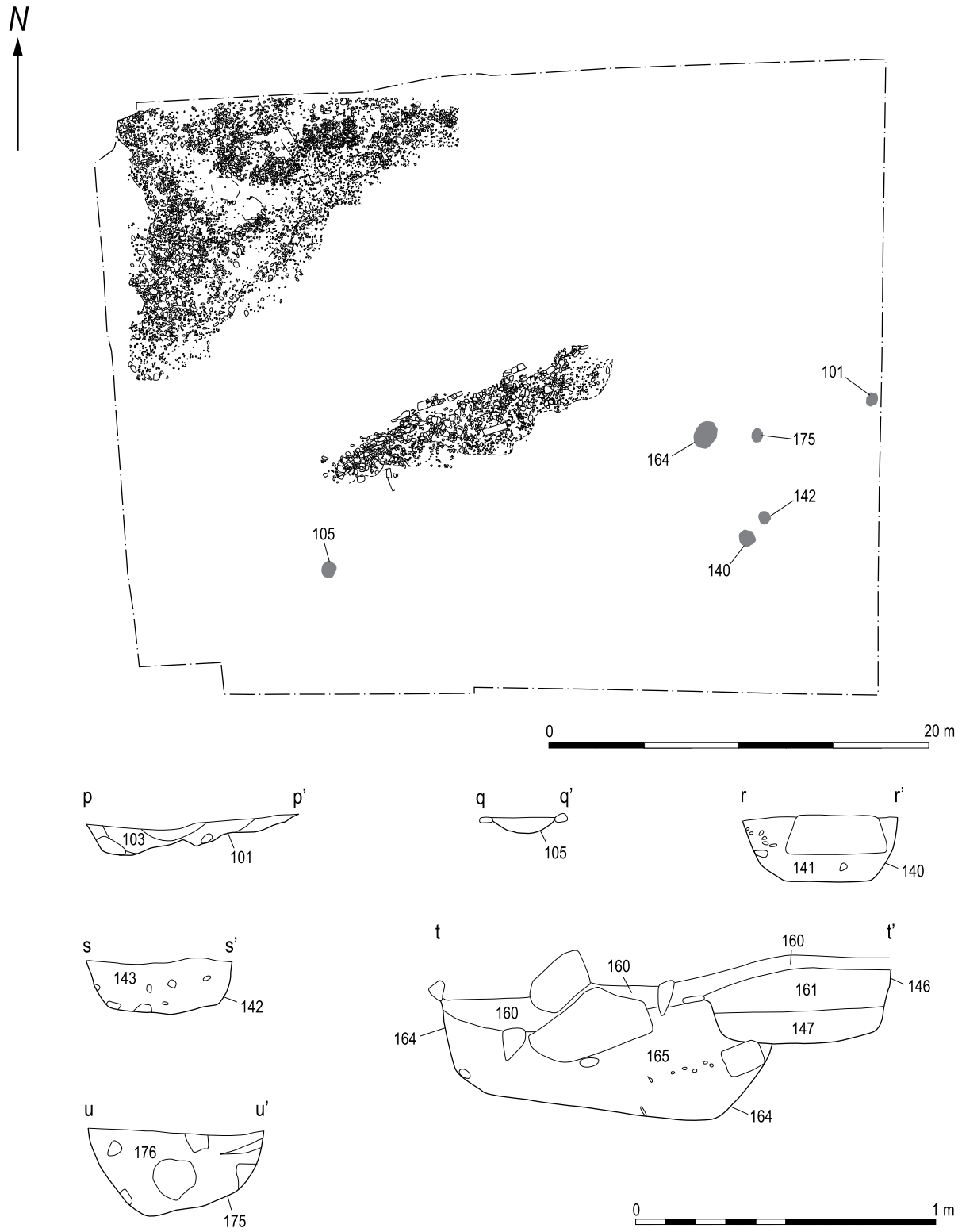
About 15m south-east of the stone-lined pit (241), these later occupants of Overhailes created a ring of five posts, set in post-holes (016, 051, 288, 321 and 326) (Figure 4.11). The largest post-hole was just over 1m across, but the rest were about 0.7m wide, and all reached down onto the surface of the bedrock. The occupants erected substantial oak timbers in them; three (051), (288) and (326) contained post-pipes, and the similarities in form



4.11 Plans of Structure B and the stone-lined pit (241), with sections through the features.



4.12 Plan showing the approximate extent of the third mound at Eweford West, flanked by quarry scoops.



4.13 Plan of the pits and cairn material, with sections through the pits.

and packing between all five indicate a common function. They also packed the posts with cobbles and larger stones, and they dug two further single post-holes (319 and 322) outside the ring on the south.

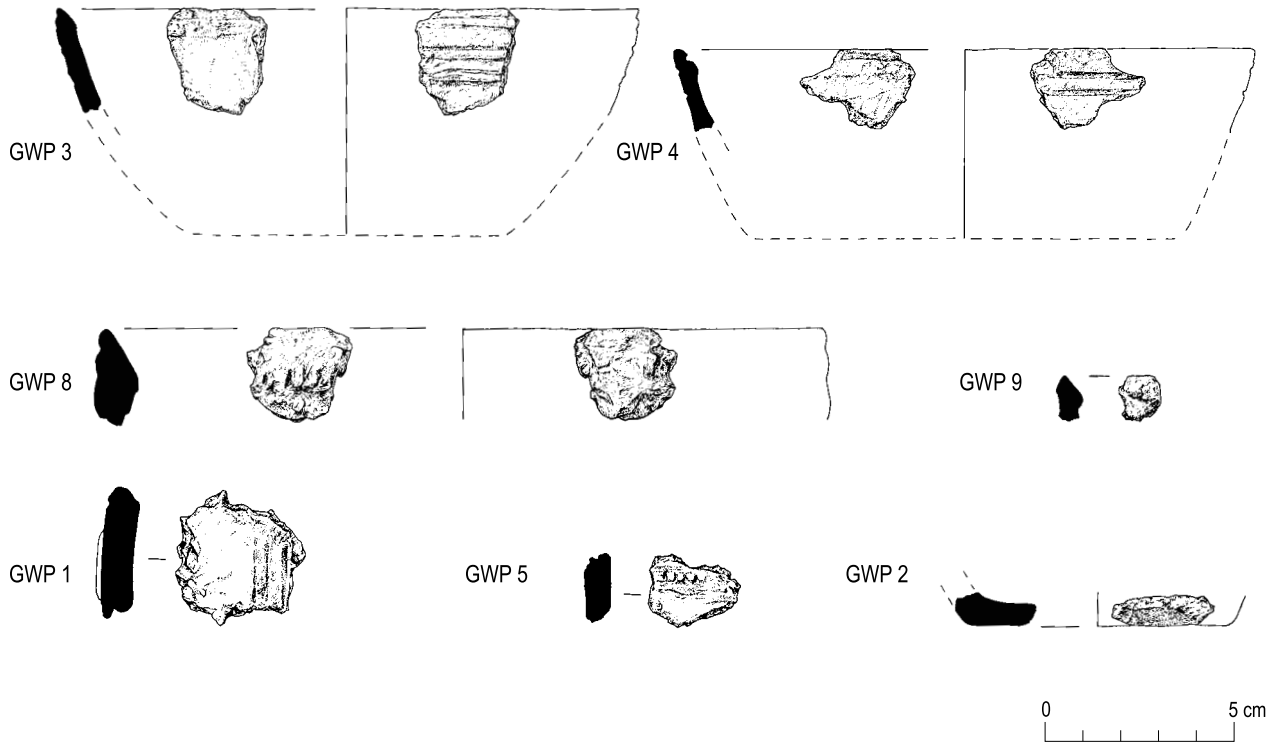
When the posts were in place, the builders backfilled the holes with burnt wood and (in three of them) burnt plant food remains. Palaeobotanical analysis shows one contained indeterminate cereal (287), while two (015 and 325) contained cereals and burnt seeds of radish, pea, hazelnut shell and tuber fragments (Miller and Ramsay, see Chapter 12 and Archive). Radiocarbon dates of 2340–2040 BC (SUERC-7520) and 1930–1740 BC (SUERC-7521) were obtained from samples of hazel (*Corlyus*) charcoal and blackthorn type (*Prunus spinosa*) charcoal in one post-hole (288). In one post-hole (051), small featureless sherds from two pots (Sheridan, see Chapter 12 and Archive; V 27 and 28), were also deposited. This may have been a small timber circle, marking off an area about 5m in diameter; alternatively, the posts may have supported the roof of a small, circular building.

The return to place at Eweford West

At Eweford West (Figure 4.1), by the end of the fourth millennium BC, previous generations had constructed a long, trapezoidal mound of earth and stone, retained by lengths of drystone walling and a timber façade (see Chapter 2). The mound had been built after several hundred years of activity that included building and burning wooden and stone structures that held human remains, digging pits and smashing pottery.

It would appear that for several hundred years, perhaps during the first half of the third millennium BC, the old mound was no longer such a focus of activity, or at least none that left archaeologically visible traces. We cannot be sure whether the monument was completely ignored or abandoned during this period, or whether its importance simply decreased. Inevitably, the wooden façade rotted and the stone cap tumbled down. Much of the subsequent activity at Eweford West focused on the southern and northern margins of the mound, on its flanks and in hollows that may have been used as quarry pits for mound material from the fourth millennium BC onward (see Figure 4.12).

The first archaeologically visible activity from this phase was a small, isolated pit, dug and filled (101) in the early second millennium BC. This pit lay to the east of the mound, beyond the southern hollow (Figure 4.13). Broken artefacts and burnt plant remains were placed



4.14 Grooved Ware vessels from Eweford West.

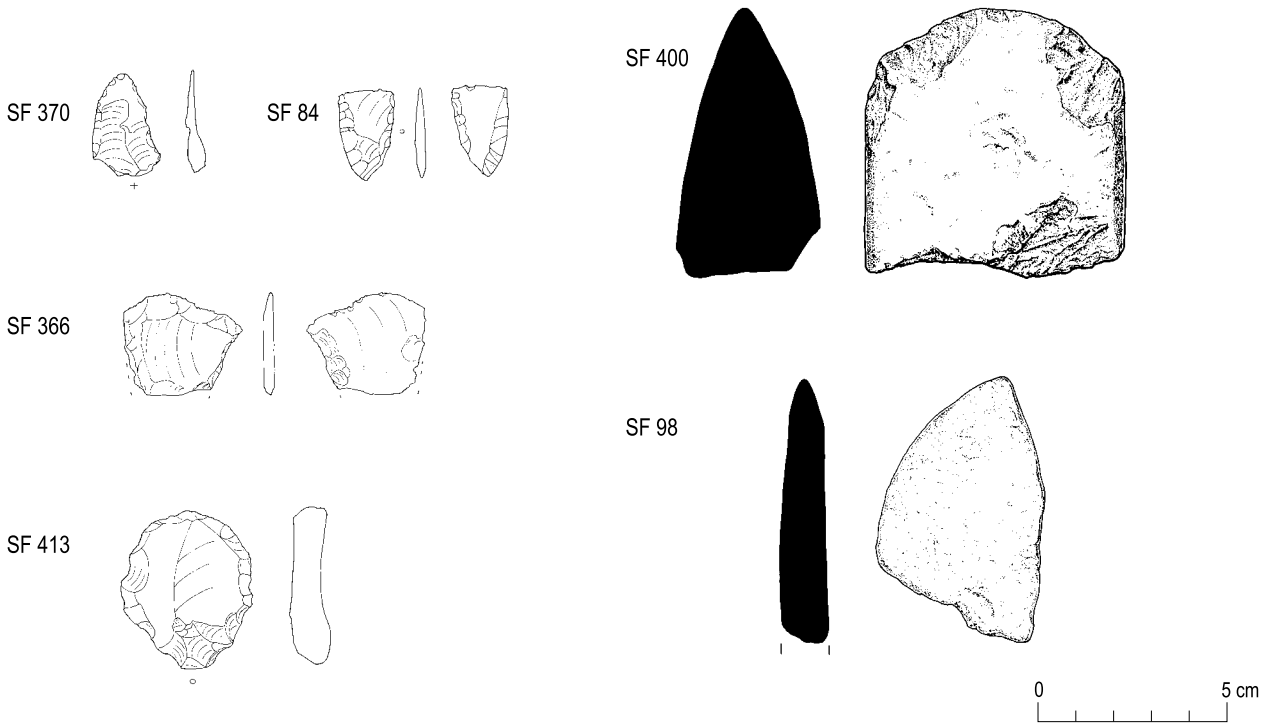
in it. Part of a grey flint arrowhead (SF 493) (Saville, see Chapter 12 and Archive) was put in the pit, along with two chips of grey flint, a grey-blue chert flake and two sherds of pottery (SF 492, 494) from two possible Grooved Ware vessels (GWP 1 and 2, Figure 4.14; Sheridan, see Chapter 12 and Archive) that had been smashed elsewhere. These artefacts were mixed with hazel and oak charcoal, fragments of hazelnut shell and two carbonised grains of six-row barley (Miller and Ramsay, see Chapter 12 and Archive). A radiocarbon date of 3020–2700 BC (SUERC-5294) was obtained from hazelnut shell.

Filling the hollows

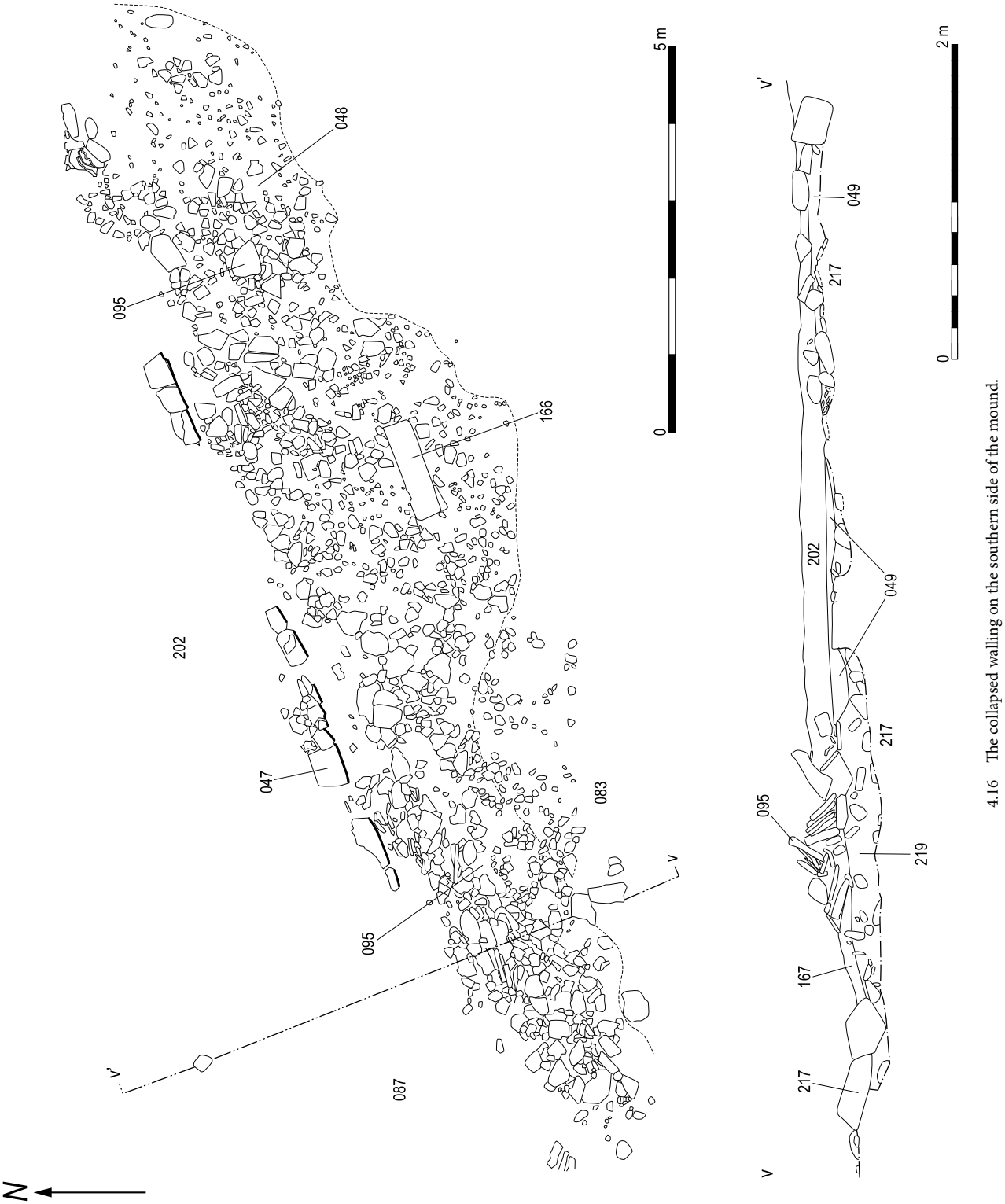
Perhaps about the same time, the southern hollow began to act as a focus for other activities, which left artefacts in a layer of sand and silts (104/109/167) that formed in the hollow's base and on the flank of the old mound. People brought fragments of pottery vessels to the site, as represented by a number of sherds (SFs 334, 344, 345, 349, 355, 358, 359, 362, 363, 367, 371, 374, 382, 383). These sherds came from a variety of up to seven Grooved Ware vessels (GWP 3–9, Figure 4.14; Sheridan, see Chapter 12 and Archive). The pots were predominantly thin-walled, fine-textured vessels, two of which were small bowls with splaying sides (GWP 3 and 4) and two of which may have been larger and tub-shaped (GWP 8 and 9). Only a tiny proportion of each pot was present, and the sherds were generally worn. Together, this suggests that they were trampled in the course of other activity in the hollows.

Some of this activity involved the use of human remains. A small pit (105) had been cut into layer (104), and among the contents (106) of that pit was a small quantity (0.2g) of burnt human bone and oak charcoal. Specialist analysis of the bone suggests that it derives from both an adult and a neonate (see Duffy, see Chapter 12 and Archive). A small quantity of burnt human bone (1.2g) was also found within layer 104.

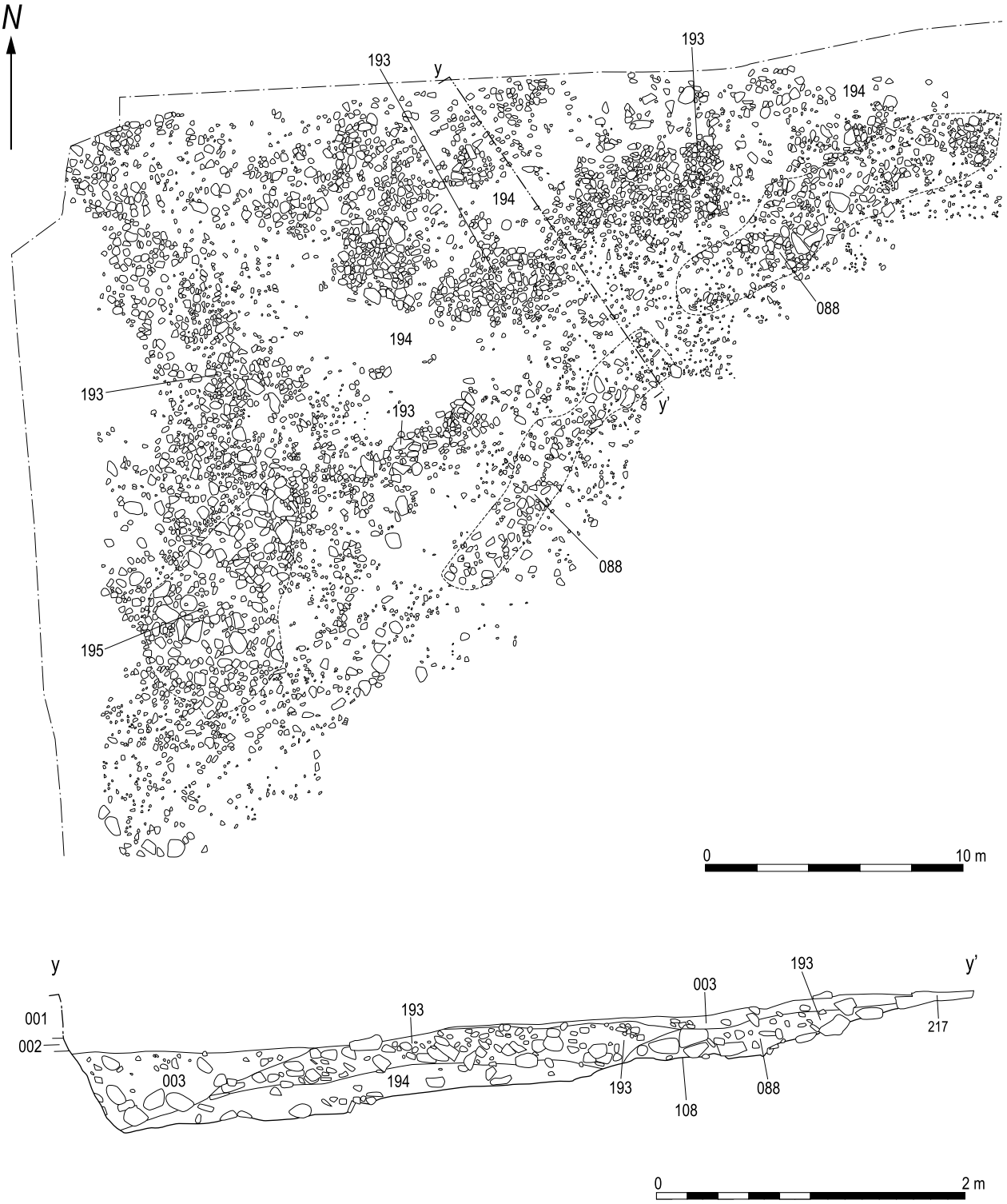
People also dropped pieces of quartz in the area (in layer 104), particularly towards the west end of the southern hollow. Although many of these pieces were unworked flakes, some – including a core (SF 333) – had been worked (Saville, see Chapter 12 and Archive). Again, it is difficult to be certain which of these artefacts relates directly to this phase of activity, since a microlith (Sample cat no 44) and perhaps other stone tools might have been residual (see Chapter 2, Figure 2.3). However, two of the tools from the area (from 167) almost certainly relate to this phase of activity: a retouched piece produced from



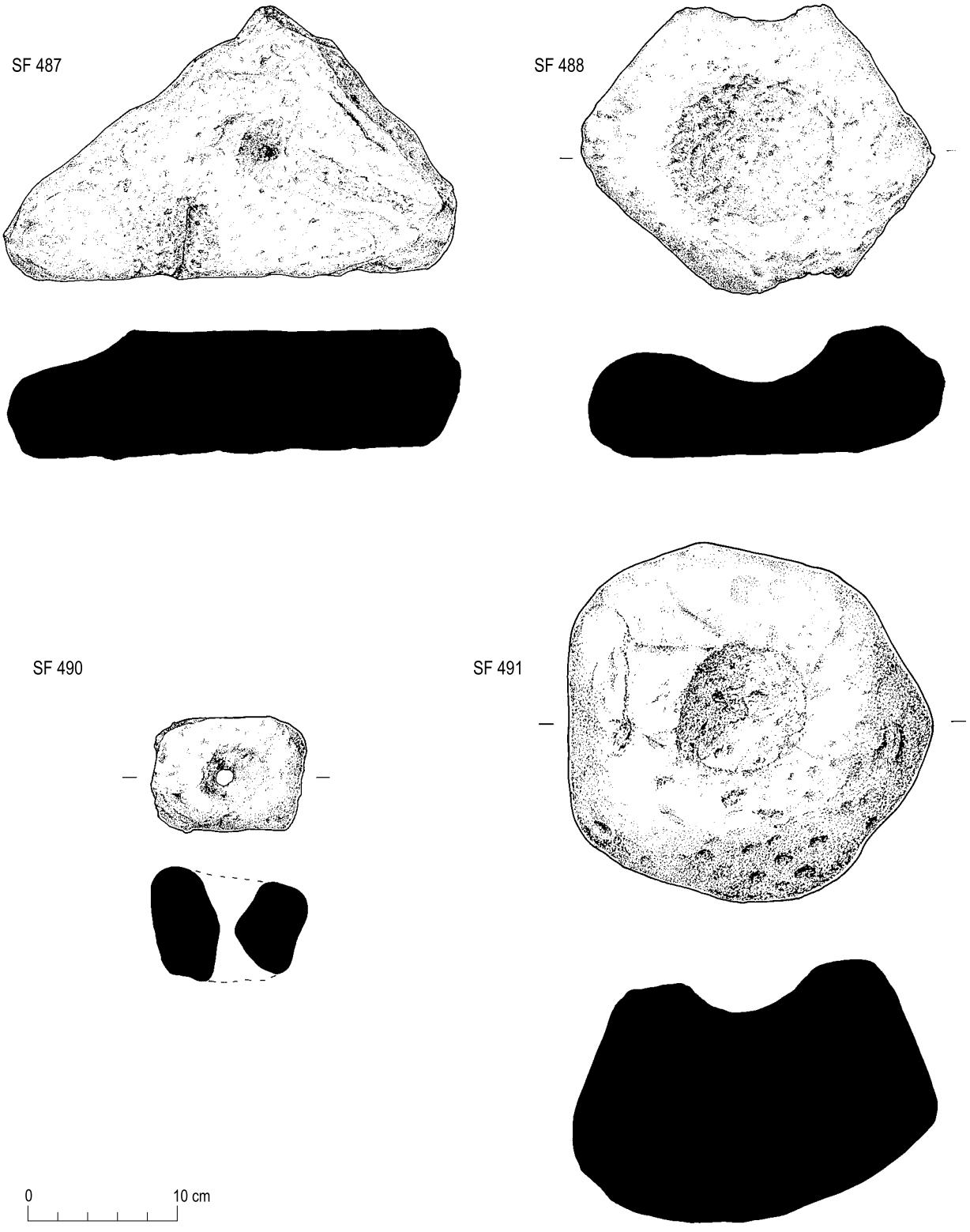
4.15 Stone tools from Eweford West.



4.16 The collapsed walling on the southern side of the mound.



4.17 Later arcs of stonework on the mound.



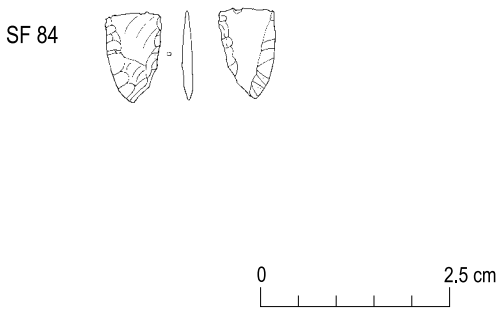
4.18 Cup-marked stones from Eweford West.

a broken, polished, flint axehead (SF 370, Figure 4.15) and an incomplete grey flint chisel arrowhead (SF 366) (Figure 4.15). A large horse shoe scraper (SF 413, Figure 4.15) may also have been brought at this time. One coarse stone tool from the area (from 167) may also relate to this phase. This was a fragment of an elongated pebble (SF 367) that had first been used as a hammer stone and then as a whetstone (McLaren, see Chapter 12 and Archive).

After these artefacts were scattered to the south of the old mound, piles of sandstone slabs (095) were set on the flank of the mound itself; they later pitched down its slope (212) and partially sealed the artefact-rich deposits in the hollow and on the flank of the mound (Figure 4.16). Although these slabs were jumbled and broken, they still retained some of their original order. This order evoked the remains of a wall that had collapsed in a single, decisive event, and the slabs were interpreted as the remains of the wall that had retained the mound's southern side (see Chapter 2). It is unclear whether the collapse of this wall was the result of deliberate destruction or structural failure, caused by the pressure of the earth behind it.

Shortly afterward, the mound may have been deliberately scalped to re-use the deposits and stone of the upper cairn. A layer of cairn material (083) was spread to form an arc extending over *c.* 7m by 35m, sealing one of the artefact-rich deposits (104). The stones were mixed with considerable quantities of sediment, suggesting that this deposit might have been a mixture of the capping cairn material and the earthen mound below. Equally, it is possible that this stoney layer (083) originally had a more coherent form, but that it had become mixed or levelled with subsequent use, as was evident in deposits to the north-west of the old mound (see below): this mixing is evident through the presence of a sherd of Grooved Ware (083) (GWP 3, Figure 4.14; Sheridan, see Chapter 12 and Archive). Certain artefacts may have been deliberately deposited in the stoney layer (083) at this time, including part of a flat, ovoid whetstone (not illustrated; SF 403) and two broken stone axe heads (McLaren, see Chapter 12 and Archive). One, a sandstone axe head, was heat-reddened and sooty, so the people active at Eweford West at this time may have broken and burned the axe head before depositing it (Figure 4.15; SF 400). These people also broke another polished stone axe in half before leaving it among the stones Figure 4.15; SF 98). The cutting edge showed signs of damage, so the axe had been used elsewhere before being brought to the monument. The sandstone axe could have been made from local stone, but the stone axe is probably from Langdale in Cumbria (Sheridan, see Chapter 12 and Archive).

At around this time, the monument builders created two new arcs of cairn along the north-western flank of the old mound, and these arcs also extended into the quarry pit below. They consisted of several distinct banks of stone (Figure 4.17). One ran along the upper edge of the old mound (088), extending as two lengths (7m by 1.4m and 6m by 1.2m wide and up to 0.35m deep) that rested on a notable cut (108), perhaps where a length of drystone walling equivalent to the southern wall (047) had been robbed (108). Another bank of stone (195) ran further down the slope (6.3m by 3m and up to 0.30m deep). The builders incorporated cup-marked stones into the cairn, two in the upper bank (088) (SFs 600, 601; not illustrated) and five in the lower one (195) (SFs 487–491; see Figure 4.18 (489 not illustrated)). One of them (SF 490) was perforated (Sheridan, see Chapter 12 and Archive). The absence of cup-marked stones elsewhere on the monument suggests that they were being placed here in an intentional, meaningful way. The area between the banks (088 and 195) was strewn with stone (193). This stone (193) might have derived from more coherent deposits of stone, which had originally formed more substantial banks or cairns that were later spread by erosion and ploughing. At its northernmost extent, this spread of cairn material lay at a depth of 0.90m and was sealed by colluvium (003).



4.19 The chisel arrowhead.

Activity beyond the hollows

After the mound was scalped, it seems that other artefacts were put or dropped on its surface. The late Neolithic chisel arrowhead of grey flint mentioned above (SF 84; see text box 4.2 and Figure 4.19) was incorporated into what was left of the mound after scalping (090). Although some of the 27 pieces of worked stone from this layer (090) pre-date the fourth millennium BC (see Chapter 2), others – predominantly grey chert and flint flakes – might have been deposited at the same time as the arrowhead (Savillle, see Chapter 12 and Archive).

Elsewhere in the vicinity of the old mound, 200m to the east, someone dug a small pit (028, not illustrated)

4.2

Chisel arrowheads

Chisel arrowheads, which have a broad cutting edge rather than a point, are typically associated with later Neolithic contexts in Britain. They were made using a distinctive method, starting with a broad flake, one lateral edge of which was left unretouched as the cutting edge while the other edges were trimmed to form the base or tang for hafting (see Figure 4.19). Arrowheads of this type were presumably designed to cut wide, profusely bleeding wounds. There has been much speculation over the type of game they were used to target, with some authorities suggesting large birds such as geese.

Surprisingly, however, there is little evidence for the use of bows and arrows for hunting or sport during the Neolithic period. On the contrary, there is considerable evidence for their use in earlier and middle Neolithic times as a weapon of war – for example, from finds of leaf-shaped arrowheads embedded in human bones found in chambered tombs – although there is no evidence that chisel arrowheads were used in this way in Britain. It is, therefore, possible that their introduction marked a swing towards hunting or sport, accompanying other cultural changes in the late Neolithic.

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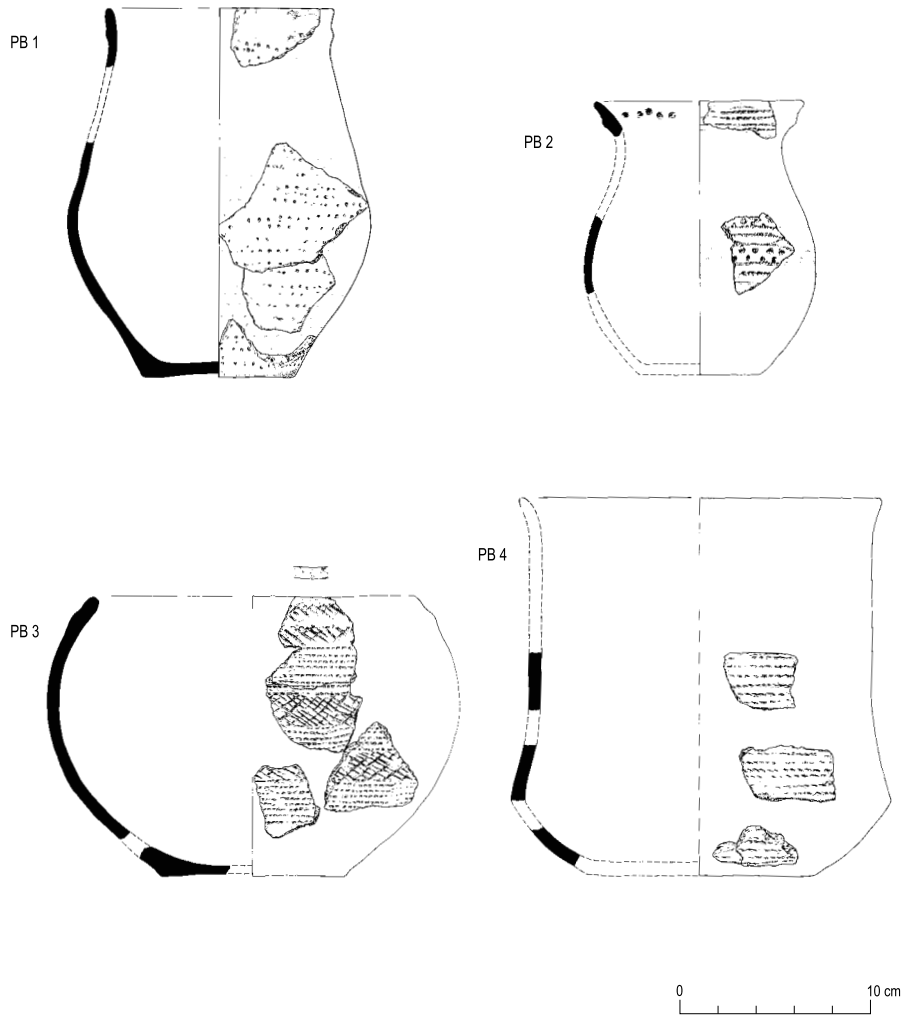
and put fragments from four different Beakers and some charcoal into it, including apple type (*Maloideae*), oak (*Quercus*), hazel (*Corylus*), willow (*Salix*) and cherry type (*Prunoideae*) charcoal (Miller and Ramsay, see Chapter 12 and Archive). Mixed in with this were burnt hazelnut (*Corylus avellana*) fragments, burnt rowan seeds (*Sorbus aucuparia*) and a few burnt cereal grains, some of which were identifiable as barley. A radiocarbon date of 2310–2030 BC (SUERC-5299) was obtained from carbonised cereal grains (*Hordeum vulgare*).

The Beakers from which the sherds came were of different forms (Sheridan, see Chapter 12 and Archive). One pot had been decorated with impressions from a round-toothed comb (BP 1, Figure 4.20; less than one-quarter of the pot is present), another with impressions from a rectangular-toothed comb (BP 2, Figure 4.20; less than one-tenth is present). A third was a globular bowl, decorated in zones with impressions made with a comb and with incised lines (BP 3, Figure 2.40; less than one-fifth is present). A fourth had been a large vessel decorated all over with comb impressions (BP 4, Figure 4.20; less than one-fifth is present). All the sherds were unabraded, so they had not been lying around for long before they were put into the pits. Whoever put them there might have smashed the vessels deliberately with the intention of depositing parts of them.

Two other pits (142 and 140) were dug closer to the old mound, just beyond the south-eastern hollow (Figure 4.13). One (143) contained oak and hazel charcoal, carbonised hazelnut shell and approximately 2000 cereal grains (including naked and hulled barley, bread wheat and emmer wheat) (Miller and Ramsay, see Chapter 12 and Archive). A radiocarbon date of 2280–2030 BC (SUERC-5296) was obtained from one cereal grain (*Triticum dicoccum*). A chert flake, two flint chips and a burnt flint fragment accompanied the grain, shell and charcoal.

The neighbouring pit (140) contained similar material (Figure 4.13). Its ashy lower fill contained two chert flakes and a flint flake, as well as oak and hazel charcoal, carbonised hazelnut shell and approximately 1000 cereal grains (including naked and hulled barley, bread wheat and emmer wheat) (Miller and Ramsay, see Chapter 12 and Archive). A radiocarbon date of 2200–1940 BC (SUERC-5295)) was obtained from a cereal grain (*Hordeum vulgare var vulgare*). In this pit (unlike its neighbour), they set three large stones in the upper fill, sealing the contents.

At around the same time, a sub-rectangular pit (164) was dug into the flank of the old mound, cutting through the layer of mixed cairn material (083) (Figure 4.13). This pit was filled with about 25,000 burnt cereal grains, mainly barley, with twice as much of the naked variety as hulled, and a small quantity of emmer wheat (Miller and Ramsay, see Chapter 12 and Archive). Along with the cereal grains, the pit held charcoal, predominantly oak and hazel with smaller quantities of cherry and alder; a chert core, two flint chips and a burnt fragment of a bifacially worked point (Saville, see Chapter 12 and Archive), and



4.20 Beaker pots 1–4.

two sherds from two different Beakers (BP 8 and BP 9) (SFs 120 and 326) (Sheridan, see Chapter 12 and Archive). A radiocarbon date of 2140–1910 BC (SUERC-5316) was obtained from a sample of cereal grain (*Hordeum vulgare var vulgare*).

Another pit (175) was dug close by and filled with a similar deposit, consisting of four sherds of Beaker pottery (BP 10) (Sheridan, see Chapter 12 and Archive) and about 9000 grains of burnt cereal (Figure 4.13). It consisted mostly of naked barley, with some emmer and bread wheat (Miller and Ramsay, see Chapter 12 and Archive).

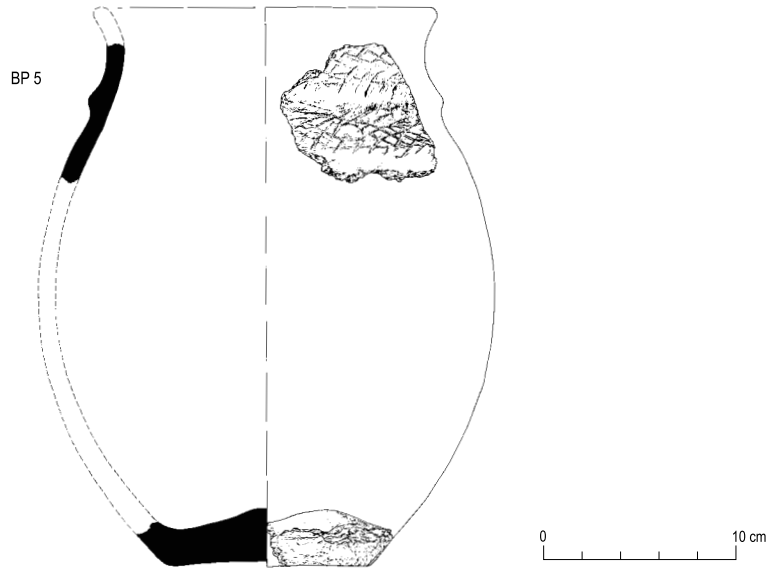
Part of another Beaker vessel (BP 5, Figure 4.21) was discovered in a pit which had been dug during the second millennium BC, to hold a cremation deposit (see Chapter 5).

Sowing seeds: The deposition of carbonised cereal at Eweford West

As well as filling pits with burnt cereal and Beaker sherds, there is evidence to suggest that people deposited cereal grains across a wider area, with varying consequences for the archaeological record.

Large numbers of burnt cereal grains came to be incorporated in the fills of later pits, which also contained human bone (see Chapter 5). Radiocarbon dating has shown that these cereal grains derived from the time when the pits described above were being filled with grain (see table 4.1).

The sheer number of burnt cereal grains found in the later deposits, either scraped up with the ashes of pyres or backfilled into pits, shows that huge quantities of



4.21 Beaker pot 5.

grain were strewn across site around the end of the third millennium BC. Analysis has identified approximately 56,000 cereal grains from pit fills and bulk samples of deposits which probably relate to this phase of activity (Miller and Ramsay, see Chapter 12 and Archive). People probably scattered hundreds of thousands of cereal grains, and their distribution shows that this was only across the south-eastern flank of the mound. There was no evidence for the *in situ* burning of the grain, and it is possible that the cereal was charred elsewhere.

What might have been the final act of deposition during this phase was also the simplest. Someone placed a bronze halberd (SF 146; see text box 9.2) between the layers of stone that formed the cairn (083). The position selected suggests that this was a potent act: the halberd was placed at the north-eastern end of the stoney arc, in front of the collapsed mound. The weapon had already seen use. Analysis has shown surface evidence that the blade had been polished and/or sharpened, while damage around the surviving rivet hole indicates that it was probably used or modified before it was left in the cairn (Cowie, see Chapter 12 and Archive).

The Wider Landscape: Acts of deposition at Eweford Cottages and Pencraig Wood

There is some evidence for other activity around this time in the environs of Overhailes and Eweford West. At Eweford Cottages (Figure 4.1) in the mid third millennium BC, a pit (024) was dug and filled with three deposits (012, 017 and 018) containing over 429 pieces of struck stone, mainly debris from knapping. Most of the pieces were of grey flint; 15 were burnt, and a few others were of chert and quartz. Among this assemblage were two fragments of microliths from an earlier phase of activity at the site. Analysis of the assemblage has identified a high proportion of micro-debitage, debris created during knapping, while the absence of cores shows that these were kept rather than discarded (Pannett, see Chapter 12 and Archive). The pit also contained abundant charcoal, including alder, apple, hazel, willow, oak and elm, and fragments of burnt hazelnut shell (Ramsay and Miller, see Chapter 12 and Archive). A sample of apple (*Maloideae*) charcoal produced a radiocarbon date of 2890–2630 BC (SUERC-8179).

Several hundred years later, a few hundred metres to the north of the excavated Eweford sites, a body was buried in a stone short cist that incorporated a cup-marked stone (NMRS NT67NE 65; NT 6663 7771). The inhumation was excavated in the 1970s (Nisbet 1973), and a radiocarbon date was obtained from the bone (proximal half left ulna) as part of the A1 post-excavation work. The bone produced a date of 2140–1890 BC (SUERC-5318). The human bone was analysed by Kathleen McSweeney (2005) on behalf of the National Museums of Scotland, who identified the individual as a male, probably in his early thirties.

Between the time when the pit at Eweford Cottages was filled with knapping waste, and the body of a man was buried in a stone cist to the north, other pits were dug at Pencraig Wood, about 10km to the west (Figure 4.1). Someone dug a pit (027) and put two deposits

Table 4.1 Radiocarbon dates from cereal-filled pits at Eweford West.

Code	*Sample (2 sigma)*	*Context*	*Calibrated date*
SUERC-5316	Cereal – *Hordeum vulgare var vulgare*	165 Pit	2140–1910 BC
SUERC-5284	Cereal – *Hordeum vulgare var nudum*	107 Collapse of structural elements of S mortuary structure	2140–1890 BC
SUERC-5318	Human Bone Proximal ½ left ulna	Inhumation	2140–1890 BC
SUERC-5295	Cereal – *Hordeum vulgare var vulgare*	141 Pit beyond hollow	2200–1940 BC
SUERC-5317	Cereal – *Hordeum vulgare var vulgare*	176 Pit	2200–1940 BC
SUERC-5308	Cereal – *Hordeum vulgare var nudum*	147 Cremation pit	2200–1950 BC
SUERC-5314	Cereal – *Hordeum vulgare*	156 Cremation pit	2200–1960 BC
SUERC-5315	Cereal – *Hordeum vulgare var nudum*	170 Cremation pit	2200–1970 BC
SUERC-5309	Cereal – *Hordeum vulgare sl*	148 Cremation pit	2280–1970 BC
SUERC-5310	Cereal – *Hordeum vulgare var nudum*	151 Cremation pit	2280–1980 BC
SUERC-5296	Cereal – *Triticum dicoccum*	143 Pit beyond hollow	2280–2030 BC
SUERC-5306	Cereal – *Hordeum vulgare var nudum*	119 Cremation pit	2290–1980 BC
SUERC-5299	Cereal – *Hordeum vulgare*	028 Pit beyond hollow	2310–2030 BC

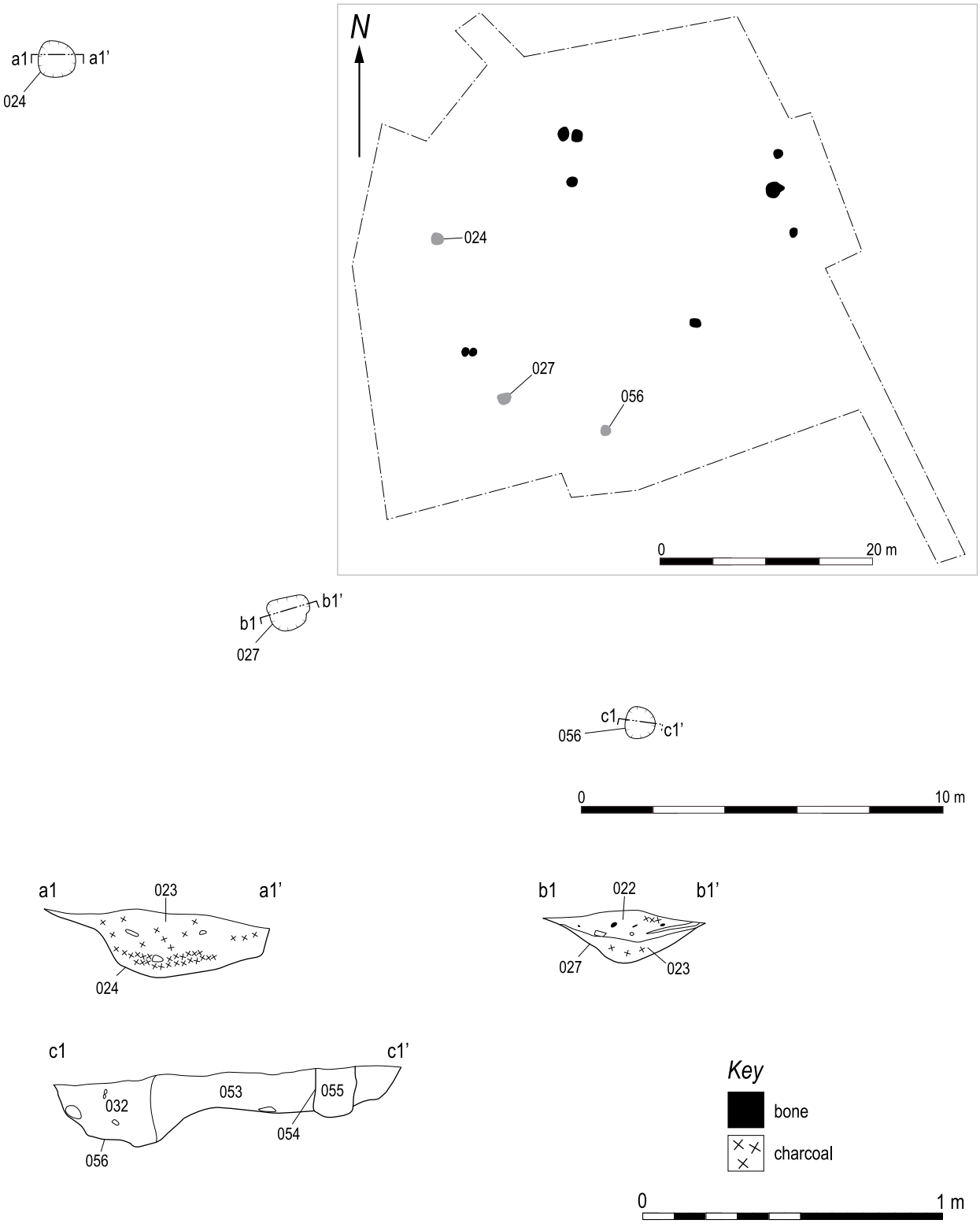
in it (Figure 4.22). The lower fill (025) contained small fragments of burnt hazelnut shell and oak charcoal (Ramsay and Miller, see Chapter 12 and Archive). Samples of hazelnut shell (*Corylus avellana*) produced dates of 2480–2230 BC (SUERC-6890) and 2460–2200 BC (SUERC-6891). The upper fill (022) contained oak charcoal and four sherds of pottery. The pottery may have been derived from a coarse, round-based vessel (Figure 4.23: V 2), and encrusted residues on the sherds show that the vessel had been used for cooking. Several of the sherds also show signs of abrasion and heat damage, so they may have lain in a hearth for some time (Sheridan, see Chapter 12 and Archive). With them were two conjoining pieces of daub (SF 13 and 14, Figure 4.23) – clay that had been squeezed onto wattle, which left corrugated impressions on its surface (Sheridan, see Chapter 12 and Archive). Both fills also contained burnt human bone (127g), which represents at least one adult (Marquez-Grant, see Chapter 12 and Archive).

At the base of the pit was a stake-hole (039), which contained oak charcoal. The presence of oak charcoal in the upper two fills of the pit, as the only carbonised wood present (Ramsay and Miller, see Chapter 12 and Archive), may suggest an oak stake extended through the feature and that it was subsequently burnt down.

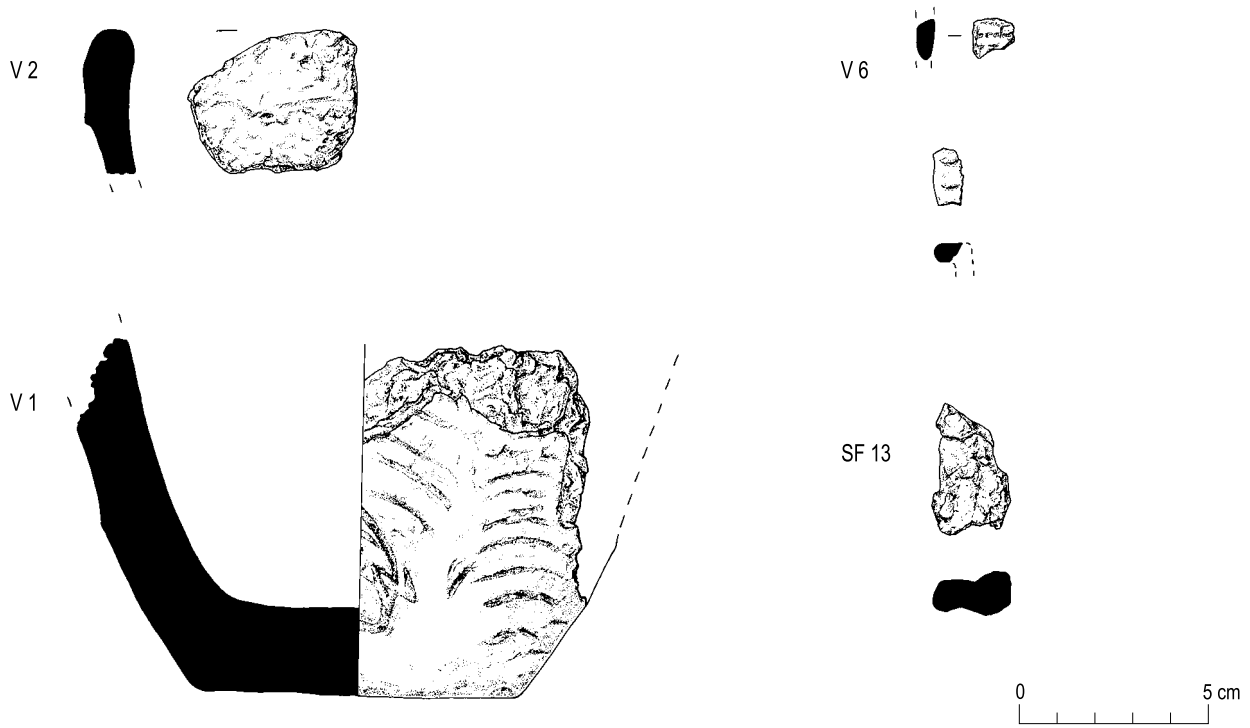
It is possible that two other pits (024) and (056) at Pencraig Wood were broadly contemporary with this event (Figure 4.22). One of them (024) was filled with a deposit (023) containing burnt hazelnut shell and a diverse assemblage of charcoal (alder, birch, hazel, apple family, oak, rose family and willow), perhaps raked out from a hearth (Miller and Ramsay, see Chapter 12 and Archive). Also mixed in were fragments (14 g) of burnt human bone (Marquez-Grant, see Chapter 12 and Archive), representing the partial remains of one adult. Along with the bone and charcoal were five sherds of pottery from three separate vessels (V 4–6) (Sheridan, see Chapter 12 and Archive). One vessel had a flat rim with radial finger nail impressions, its body decorated with horizontal lines impressed with a comb (Figure 4.23, V 4). In another small pit (056), people put the broken remains of a coarse, flat-based pottery vessel (Figure 4.23, V 1), decorated with loose rows of arc-shaped impressions, probably made by rocking a curved tool back and forth across the surface. The pottery from these two pits may be late Neolithic Impressed Ware (Sheridan, see Chapter 12 and Archive).

Discussion

There are fundamental differences in what happened at each of the places we discuss in this chapter, in terms of the scale and nature of activities. At Eweford West, an ancient mound saw sustained episodes of deposition and modification. At Overhailes, another place saw two or three episodes of more understated building and modest transformation, with a considerable hiatus between them. At Pencraig Wood, another place saw a brief period of pit digging and deposition, and at Eweford Cottages, we glimpse knapping and burning events, reflected in a single pit.



4.22 The third-millennium BC features at Pencraig Wood in plan and section.



4.23 Pottery from Pencraig Wood.

But look again and similarities between them emerge. At all of the sites, people dug pits and buried objects of apparent significance in them: pottery, stone tools and huge quantities of burnt cereal, along with burnt wood, animal remains and, in some cases, human bone. Did these acts have anything in common? How can we make sense of practices that appear similar but that took place in very different social arenas? We consider further what people did at each place, how they used material culture and how these different social arenas may have related to one another.

To appreciate the significance of these practices, we should consider the texture of the lives of which they were part. In the late fourth and the third millennia BC, communities would have gathered or produced most of their food, medicine and materials for garments, tools and buildings from their immediate environment. They had, therefore, an intimate relationship with the land and its varying flora, fauna and geology. They could trace the origin of what they ate, wore and used. They probably built their own homes. They knew who tended, killed and prepared any animals they ate, who sewed every stitch on their backs, and who made most of the items they used. They knew what each component was made from, where it was found and how it was made. Their buildings were probably small, dark and flimsy, and they may have spent much of their time outside (see Figure 4.24). They probably made most of their land journeys on foot (for discussion of the introduction of the domestic horse, see Levine 1993; Anthony 1995). This self-sufficiency and close relationship with their environment generated deep practical knowledge. People met all their needs with materials available around them, and they knew the technologies that enabled them to meet those needs and pursue their shared projects. With these points in mind, let us reassess how the superficially similar practices actually differed from site to site. While at each site broken objects were deposited, they were deployed in distinctly different ways.

The uses of objects

East Lothian communities were using and depositing material culture in specific, deliberate ways at certain places during the late fourth and the third millennia BC. At Pencraig Wood, they combined pottery, human remains and plant remains in pits. At Overhailes, they filled pits and post-holes with plant remains and animal bones, and put carefully assembled collections of well-travelled

objects in two large pits. At Eweford West, there were periods during the third millennium BC when people were depositing broken arrowheads, smashed axes and Beaker pottery in pits, and spreading burnt cereals across the remains of the older mound. At Eweford Cottages, people knapped flint, chert and quartz and put the waste into a pit, along with the burnt remains of plants.

At Overhailes, it may be that a light structure that left minimal traces was erected to frame certain activities, including the deposition of flint tools and pottery in two pits. If we compare and contrast the pieces that were put in the pits (see table 4.2) a number of observations can be made. First, despite differences in the numbers of artefacts, each pit contained broadly the same range of materials. The predominant formal tool types were scrapers and serrated blades; both were accompanied by sherds from pottery vessels and broken coarse stone tools. Pit 050 held more scrapers and pit 247 more serrated edge tools, but both kinds of tool appeared in both pits, suggesting they were each constituents of the contemporary toolbox.

The life histories of these different objects may be relevant to their meanings. The coarse stone tools and pottery had been broken and burnt at the end of their life spans, but the flint tools were still usable for practical purposes. In light of this, their deposition may have represented an act of sacrifice rather than rubbish disposal. Such a sacrifice would have been even more potent because of the size of the pieces, which means they could have been reworked, and the flint's quality, which suggests that it had been imported (Saville, see Chapter 12 and Archive). Alternatively, perhaps people considered it inappropriate to use the pieces again in any other place or context because they had been polluted through previous contacts or ritual use (see Douglas 1966; Huntington and Metcalf 1991).

In light of these observations, we can compare the practices at Pencraig Wood, where fragments of pottery and burnt plant remains – superficially the detritus of daily life – were put in three pits. One of the pots may have been used for cooking and this, along with plant remains reminiscent of hearth waste, could evoke a domestic scene. Yet in two cases, small amounts of human bone accompanied this apparent detritus. Was this simply a case of human bone having been disposed as rubbish? The small amount of human remains deposited hints at some other intention; the remains of these individuals had been fragmented and separated, suggesting categories

4.24 Reconstruction of Structure A at Overhailes.

Table 4.2 Comparison of artefacts between pits 050 and 247

Pit 050	*Pit 247*
5 scrapers	2 scrapers
1 serrated edge tool	3 serrated edge tool
1 core and 1 core fragment	1 flake from polished tool
1 burnt anvil stone	1 fragment of cobble stone
	1 burnt possible stone pounder
Sherds from 10 vessels	Sherds from 12 Fengate vessels

of practice more complex than simple burial or rubbish disposal.

At Eweford West, there were traces of other kinds of practice. For example, the sherds from four smashed Beaker pots, deposited with wood charcoal, carbonised cereal grains and rowan seeds (028) (potentially rich with symbolism (Hayman 2003, 1; Tebbs 1994)), could be construed as domestic waste. However, the fact that only small proportions of broken pots were deposited suggests that the fragmentation and dispersal of artefacts was integral to the meaning of these practices. Other deposits at Eweford West demonstrate that its visitors were not solely concerned with depositing pottery. During the third millennium BC, people scattered struck quartz and deposited a small quantity of burnt bone at the site. Others came during the late third millennium BC and spread large quantities of burnt cereals and broken artefacts across the mound. The burning and spreading of cereal grains are highly potent acts, involving the sacrifice of food and, because of their potential for sowing, some loss of the following year's harvest.

The evidence suggests that people were combining pieces of material culture, including broken ones (artefactual and human), and sacrificing objects (functional artefacts and edible foodstuffs) in ways that transcend our categories of understanding. These intentional acts may be better understood by considering their wider context.

Every place is a stage

The practices in evidence at the above sites differ in many respects, but most fundamentally in the nature of the places where they were carried out. They also differ in how they would have been understood in a wider network of associations, networks which extended both spatially and temporally, through social connections and social memory.

At Overhailes, a possible yard enclosed two pits in which useful artefacts were sacrificed. We might, therefore, suggest that the yard was built to screen or frame activities that culminated in the deposits in the pits. The light nature of the possible early structures at Overhailes could also suggest that the inhabitants were there for no more than a few days or weeks. They may have built rudimentary structures to shelter them from wind and weather during their stay, and perhaps their activities here ended when they filled up the two pits. Alternatively, the buildings were intended to last longer, perhaps sheltering occasional residents over a few seasons. Perhaps the putative yard was used to pen animals while their owners negotiated an exchange, which was sealed with a meal and formal acts of depositions.

However we assess the structures' function or length of use, it is difficult to see the entire building process, including gathering and cutting the timber, taking a small group of people more than a day. By contrast, the effort (physical or social) involved in procuring the artefacts to deposit in the pits was considerable. The stone tools travelled at least 250km to get to the site, and the Fengate Ware pottery (or its concept) might have come along the same route (see Saville, see Chapter 12 and Archive; Sheridan, see Chapter 12 and Archive). Whether these artefacts arrived through exchange from hand to hand or at the end of one person's long journey, they must have been recognised as deriving from elsewhere. The community that built at Overhailes may have associated them with faraway places and other, distant communities; each object may have come with a story about its origins and how it was acquired. Making contacts, arranging to acquire the pieces and taking possession of them all took time. The travelling might have involved some danger – the perils of the sea, threats posed by bears, wolves or who knows what from the long forgotten Neolithic bestiary, or the cunning devices of human enemies. Perhaps the deposition of the objects tied the community's social memory of this place – overlooking Traprain Law and the Lammermuir Hills beyond – more tightly to it than did slight and short-lived structures.

Another group came to the same spot about a thousand years later, to erect more substantial posts that formed a small building or a timber circle. It may be that the effort of digging the pits onto bedrock, erecting the timbers and filling the holes was as important here as the building's intended use. The burnt plant and animal remains buried in the post-holes were perhaps foundation deposits. Once standing, the posts may have framed other activities on the natural shelf or marked an important place in the landscape.

Those approaching Pencraig Wood may have passed or observed the timber setting at Overhailes. The deposits that people left at Pencraig Wood during the late third millennium BC were in close proximity to an earlier

ceremonial site, Pencraig Hill (see Chapter 2). These acts marked a new place of importance, perhaps with reference to the earlier site, that subsequently became a locus for depositing larger quantities of human remains during the second millennium BC (see Chapter 5).

The acts that people carried out at Eweford West during this phase were framed by the remains of earlier generations; they used the ancient mound as the focus for their activities, and this phase of activity ultimately saw its decline and fall. It is not clear whether those using the monument simply did not bother to maintain it or whether they deliberately pulled the drystone walls down. The eventual exposure of the upper mound, the collapse of the wall and the spreading of the cairn are more evocative of deliberate destruction. Whatever the cause of the collapse, it must have been viewed as an exceptionally significant event in the life of the monument, with ramifications far beyond the site itself.

However, the rearranged lengths of cairn to the north-west of the earlier mound, which incorporated cup marked stones, indicate that this was not simply a phase of destruction. In creating these stony arcs, the builders were actively reconstructing the earlier monument, returning to a place of long-held significance to rework the meanings associated with it. Their activities during this period at Eweford West evoked the place's earlier meanings in partly destroying it, and wove them together with new ones.

The reworking of the monument's fabric was accompanied by other practices that resulted in the sacrifice of edible foodstuffs and potentially re-usable artefacts. As at Overhailes, well-travelled artefacts were also deposited at Eweford West: the broken Langdale axe from 200km to the south and the bronze halberd, almost certainly from further afield, perhaps from Aberdeenshire 170km to the north (Needham 2004). These objects may have had greater significance due to the distances they had travelled, and they certainly could have been reworked or recycled instead of being deposited at the site. The chronological relationships between phases of reworking the monument's fabric and acts of deposition are not entirely clear, but together they constituted the continual return to and reinvention of a place associated with previous generations.

We have focused on the activities that took place in the immediate vicinity of the mound at Eweford West, but this was not the only locus of activity in this part of the contemporary landscape. The pit (028) that lay between the mound and the pit alignments at Eweford East (see Chapter 3) shows that other depositional acts took place beyond the mound. This reminds us that significant places did not exist in isolation, but formed a network of places that extended across the landscape. What people did at these places may have been remembered and referred to in other contexts, acting as nodes of memory to anchor the daily rhythms of life.

The acts of deposition at Eweford West, Overhailes and Pencraig Wood were not isolated; they made sense with reference to other acts at other places, and their meanings arose from the social, temporal and spatial relationships that formed their context.

Everything in its place

While it would be easy to characterise the deposits at Eweford West, Overhailes and Pencraig Wood as rubbish disposal, their composition suggests different categories of behaviour. In this respect, precisely what took place at each site is unclear, and our poor understanding of the routine matters of third millennium BC life complicates its interpretation. What if the social structures and codes of behaviour that shaped people's lives demanded that they dispose of work-a-day rubbish in a formal way (see Hill 1995a, 3–4; Needham 1996, 19–25)? How can we distinguish this kind of rubbish, which might consist of pottery, stone tools and burnt plant remains, from that created during ritual proceedings? From a modern perspective, the materials that we mix or separate and when we do one or the other shed little light on the structures that inform our social behaviour. Past social structures (very different from ours today) generated patterns of deposits that we interpret according to our own ways of thinking, so that we end up with this dualism between ritual and domestic life and deposits (Bradley 2005). This distinction might be entirely particular to our own, rather secular way of doing things.

The purposes for which structures were erected at Overhailes are not immediately clear. In the earliest phase, some light structures might have framed or screened activities that culminated in the burial of well-travelled artefacts in two pits. In the later phase, timbers were erected perhaps to form a small structure, perhaps as a timber circle. The interpretation of these can be problematic if we consider past societies having had clearly demarcated, separate domestic and ritual spheres of activity. We may deliberate whether or not, in each case, these were dwellings or formalised arenas for ceremonial activity. However, in some respects, how we categorise these remains is unimportant. What matters more is that the structures at Overhailes provided an arena for the use and deposition of material culture. The occupants understood the origins, the meanings and the patina from past journeys that accompanied the stone tools and the pottery.

At Eweford West during the first half of the third millennium BC, communities came intermittently to a place that was loaded with (oral) historical or mythical associations and deposited fragments of objects in pits.

Again we face an interpretative dilemma: were these remains collected in the domestic sphere, perhaps from the hearth around which households ate and slept, or were they instead drawn together for the first time at a place previously given over to the dead?

That question is difficult to answer, but again what is important is that people were using material culture in specific ways, through occasional interventions at Eweford West. The temporal rhythms of these acts were entirely different from the daily routines. At the end of the third millennium BC, a number of objects were destroyed or sacrificed before being disposed of or buried at the site. These artefacts and plant remains may have derived from other social arenas, but in the contemporary historical conditions communities deemed it necessary or appropriate to bring them together at this time and place.

Thus, we can interpret the material culture at Pencraig Wood, Overhailes and Eweford West as both 'domestic' (infused with meanings from other social arenas, part of daily life) and 'ceremonial' (intentionally drawn together for acts of sacrifice) and deployed in formal practices, which were intended to achieve specific social outcomes. This material culture was drawn from a network of places. Each piece was tinged with perceptions about its origins; each possessed a geographical genealogy. Place and time became entangled with these objects. In Chapter 9 we consider how these objects were used and understood in other social arenas and why they were combined in these ways.

Chapter 5

The uses of bones and beads: Excavations at Eweford West and Pencraig Wood (2000–1120 BC)

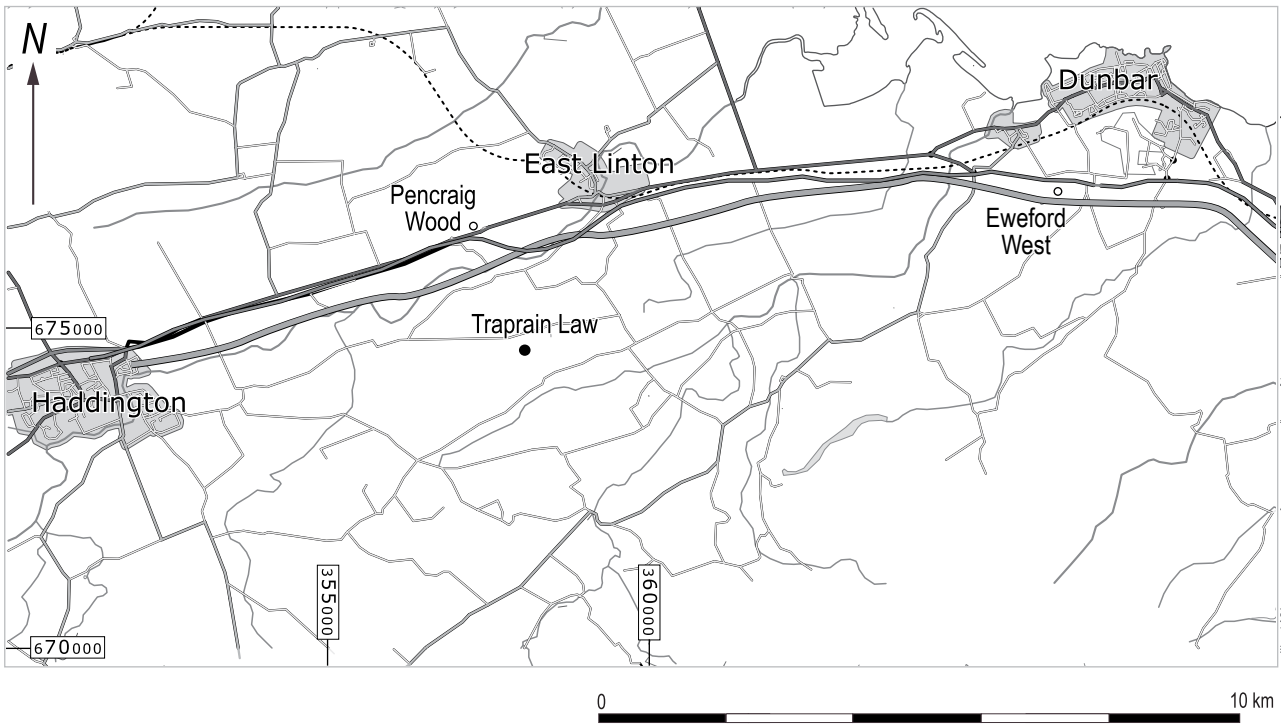
GAVIN MacGREGOR and ELAND STUART

Introduction

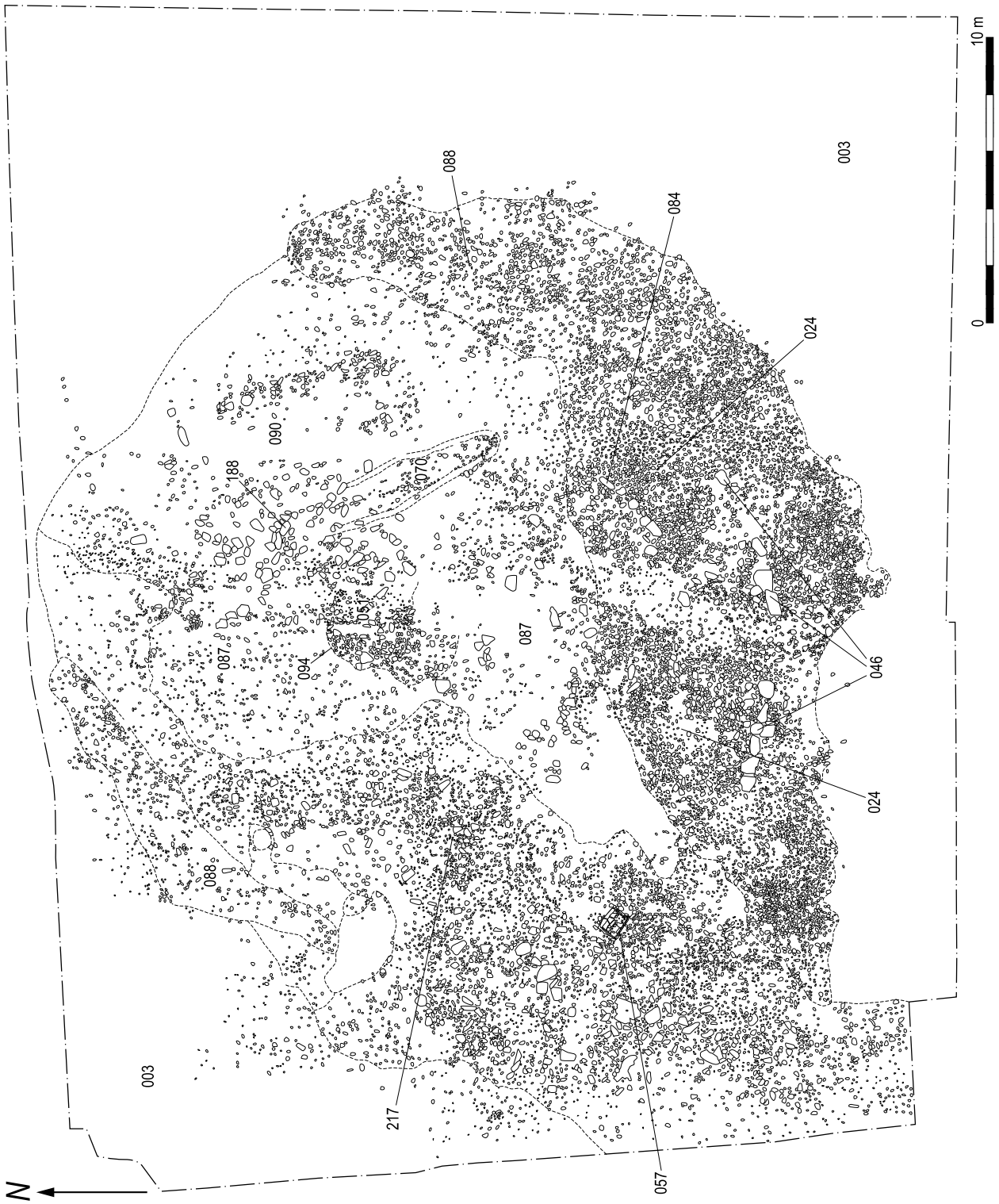
Two sites along the A1, Eweford West and Pencraig Wood (Figure 5.1), related to the treatment of the dead between about 4000 and 3000 years ago (2000–1120 BC, or 160–120 generations past), and both had previously been the focus of ceremonial activities involving the dead (see Chapters 2 and 4). In the second millennium BC, at both sites, pits were dug to hold the fragmentary burnt bones of the dead, and sometimes artefacts were also placed in them. Archaeologists usually consider such combinations of human remains and 'grave goods' as burials, comparable to how we bury our dead today. When applied to these sites, such a view may oversimplify the different reasons behind the choices people made in the past. This chapter will examine the variations in what took place at both sites and consider what those acts of deposition meant.

Eweford West (2000–1120 BC)

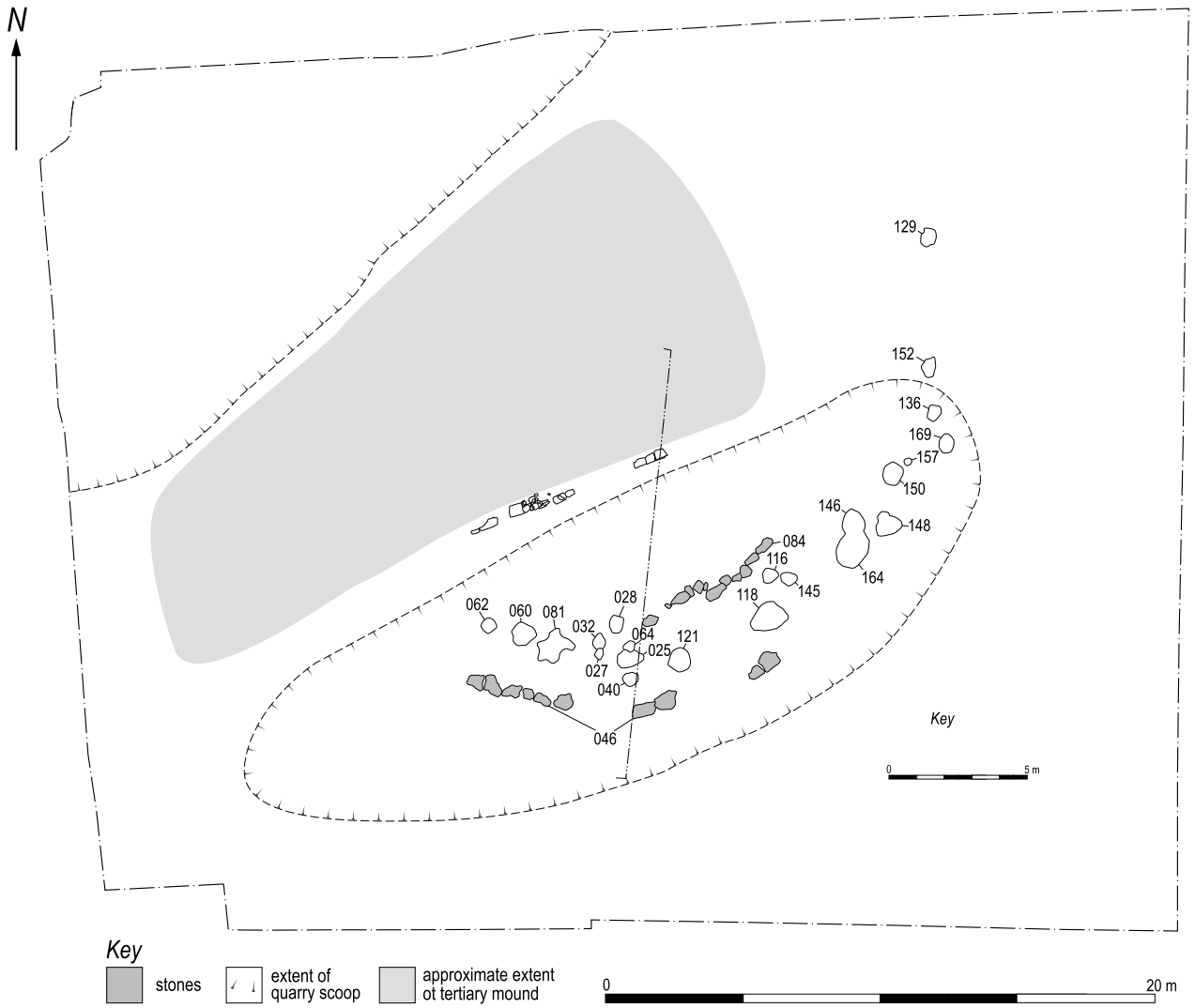
The excavation team at Eweford West identified the results of events that took place between 2000 and 1120 BC (Figure 5.2), after an earlier period of ceremonial activity (see Figure 5.3). The excavated features and deposits lay in front of a low mound created during the fourth millennium BC, which had probably been capped with a cairn retained by a timber façade and drystone revetments, with quarry scoops or hollows to the north-west and south-east (see



5.1 Map showing the locations of Eweford West and Pencraig Wood.



5.2 Plan showing the latest phase of the ceremonial site at Eweford West.



5.3 Plan showing positions of the earlier, Neolithic features in relation to the later cremations.

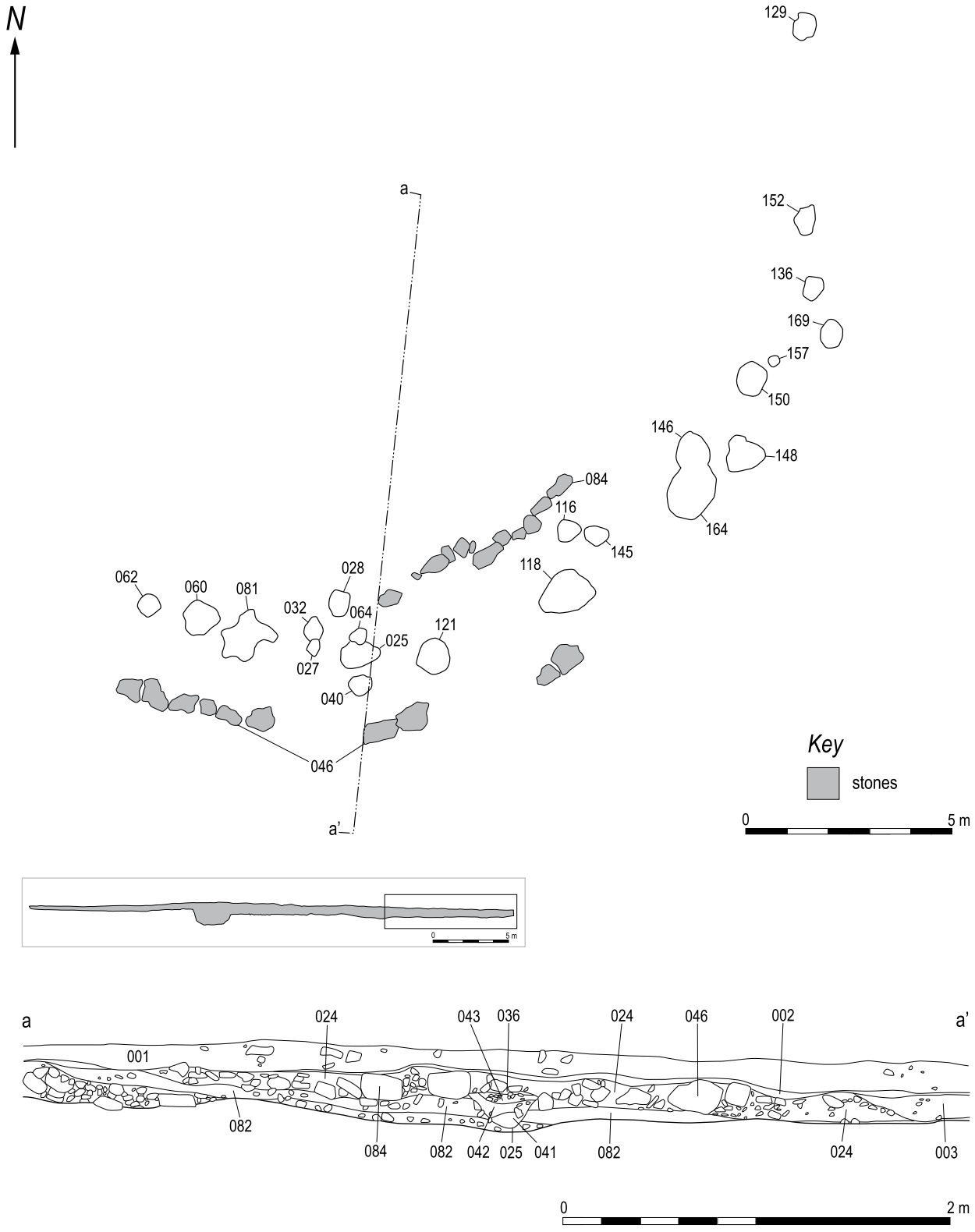
Chapter 2). During the third millennium BC, a further phase of activity filled the hollows with artefact-rich deposits and the cairn's collapsed capping (see Chapter 4). During the second millennium BC, reported in this chapter, human remains were left in discrete deposits around the mound, sealed in places with a low cairn that was probably retained by short stone rows (Figure 5.4).

People began coming to Eweford West in the second millennium BC, returning over several generations to dig into the ground, ultimately creating 21 pits or hollows in an arc that extended for about 23m (see Figure 5.5). In all except one pit, they placed burnt bone and also (in eight cases) artefacts. The radiocarbon dates show that most of these acts of deposition happened between 1900 and 1500 BC, with occasional deposition between 1500 and 1100 BC (for example, pits 146 and 157) (see table 5.1). Individual radiocarbon dates are cited in this chapter where they are derived from samples of human bone and can confidently be related to an act of deposition. In the descriptions of these acts that follow, references to botanical remains and human remains are based upon specialist analyses of samples from the site (Miller and Ramsay for botanical remains; Duffy for human remains; see Chapter 12 and Archive).

The surfaces and pyre

This phase of activity at Eweford began on two contemporary ground surfaces, one covering the surface of

5.4 Detailed plan of the cairn and retaining stones.



5.5 Plan of the arc of pits, with a section showing the pits and retaining stones.

the earlier low mound (090) and the other (082) lying in a hollow to the south of the mound. Most activity took place in the hollow, where the ground surface (082) extended over an area of about 25m east/west by 15m north/south. This surface may already have built up, through the erosion of the mound deposits to the north, as a layer into which charcoal and burnt bone had been trampled. It may have been covered with vegetation for most of the year, only disturbed intermittently by the digging of pits into it. Communities returned here over several centuries, perhaps only once a generation.

At one point, they brought oak timbers and built a cremation pyre, upon which the body of at least one adult was burnt. A distinct concentration of charcoal and burnt bone (590g) in the existing ground surface (082), associated with reddening of the sediments through *in situ* burning (036), indicated the pyre's location (see section drawing, Figure 5.5). Studies of pyre technology suggest that it may have burned intensely for a few hours, then smouldered before cooling a day later (McKinley 1997, 134). It may have been just after the pyre cooled that its builders raked though the charcoal and scorched earth to

5.1

Animals at the earlier prehistoric A1 sites

Animal bones were recovered from two of the early prehistoric sites on the A1, Overhailes and Eweford West. While the animal remains from both sites were fragmentary, they provide evidence both of animal husbandry and funerary practices in East Lothian in the Neolithic and Bronze Ages.

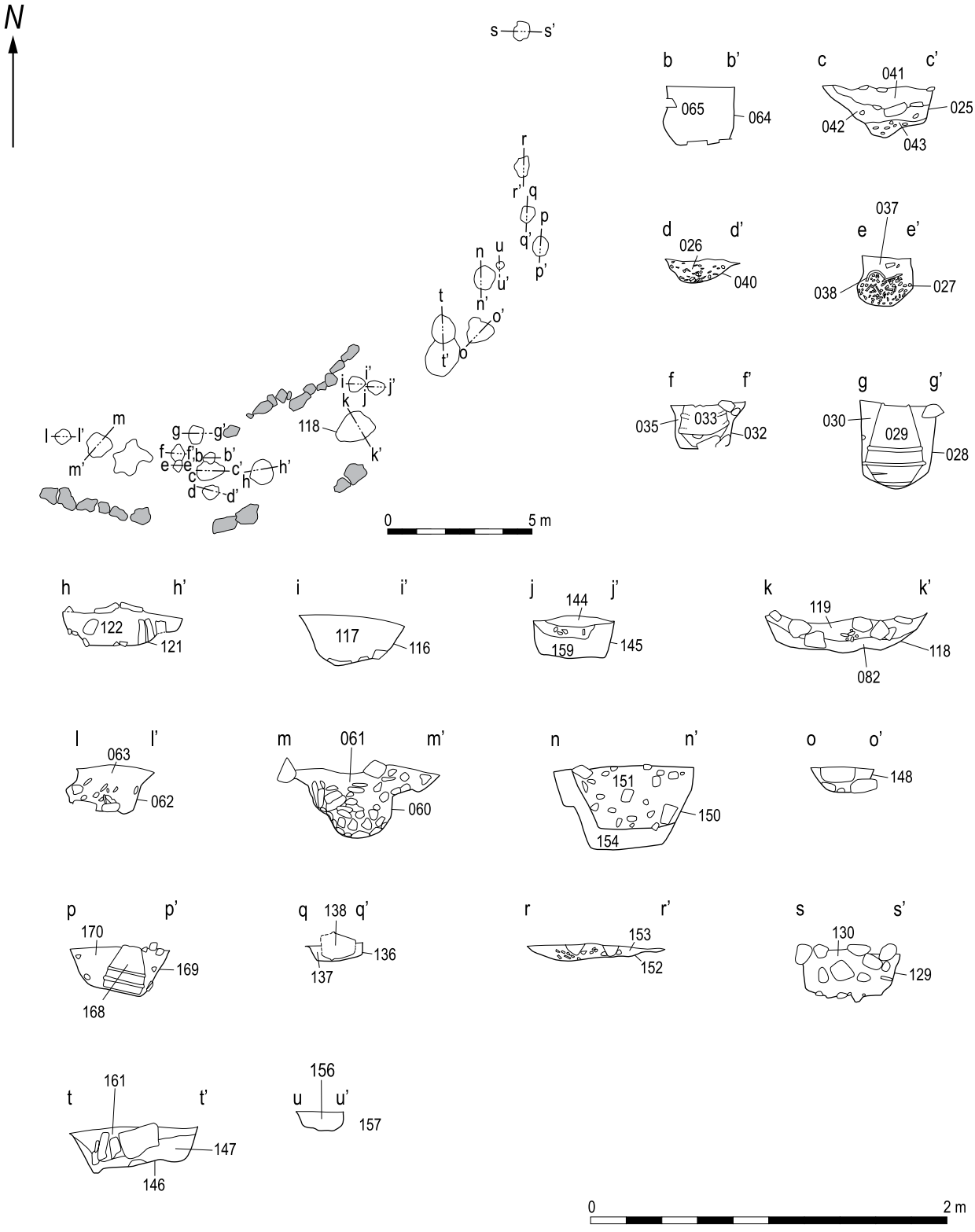
The animals kept during this period were domesticated cattle and sheep or goats; remains of both were found at Eweford West (see table 5.1). At later Neolithic Overhailes, there was also evidence of pigs, in the form of a very small burnt phalange (toe-bone) fragment. We do not know whether this bone came from a domesticated pig or from its wild ancestor, the wild boar (Sus scrofa). The wild pig was part of the native fauna of Scotland at this time, and was almost certainly hunted for its meat.

Table 5.1 Species found at early prehistoric sites along the A1

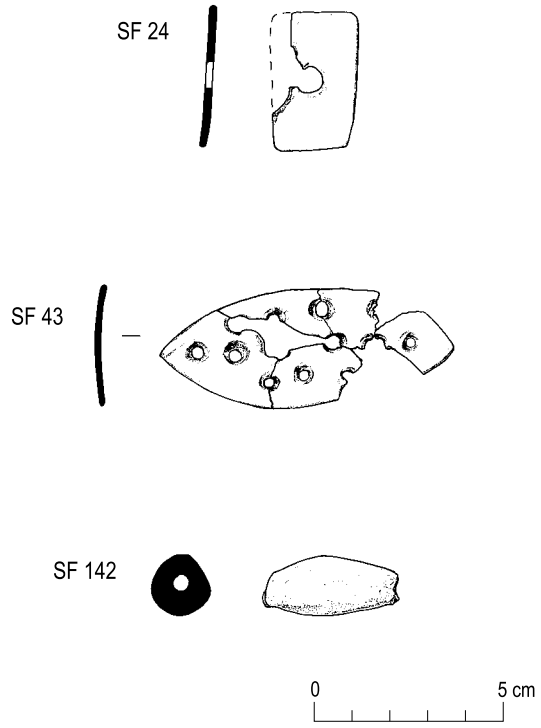
Eweford West	*Overhailes*
cattle	pig
sheep/goat	indeterminate mammal
large ungulate	–
small ungulate	–
ungulate	–
indeterminate mammal	–
bird	–
fish (probably)	–
amphibian	–

At Eweford, there is some evidence that joints of mutton and beef played a part in funerary rites in the Bronze Age. Burnt sheep/goat bones were found in some of the cremation burials. These animal bones may represent food offerings, perhaps intended as sustenance for the dead personís journey to the afterlife, or they may be the remains of ritual meals eaten by the mourners. Although their exact significance cannot be known, the bones seem to provide evidence of ritual activities carried out upon the death of members of the Bronze Age community and during disposal of their mortal remains.

CATHERINE SMITH



5.6 Sections through the cremation pits.



5.7 The bone bead and toggles.

find the fragments of bone, or it may have been some time later. Analysis of the bone from various pits has shown that sometimes this bone was left exposed for weeks, its surface weathering, before it was collected. In some cases, the bone had been washed, revealing shades of white, grey and yellow, but in others it remained mixed with pyre material, the pale bone mingling with the blacks, reds and browns of scorched earth and burnt oak.

During this period, people also dumped or scattered some burnt human bone mixed with charcoal, including charcoal and burnt hazelnut shell, on top of the mound (090). A radiocarbon date of 1940–1730 BC (SUERC-5288) was obtained from the bone. Analysis has shown that the bone represents a small proportion (90g) of at least one adult. The scatter confirms that this surface was exposed during the early second millennium BC.

The peopling of pits

Each of the pits and its contents was the result of certain choices. While each act essentially involved depositing burnt human bone and sometimes also artefacts in pits, the differences between these acts help to illuminate what they meant to those that carried them out. The condition of the human remains allows us to infer the events that led to this point. Several general points about these deposits are important to remember when we come to interpret their meaning.

All except one of the pits contained burnt human bone, in many cases from more than one individual, and sometimes also burnt animal bone (see text box 5.1). Analysis of the human bone (Duffy, see Chapter 12 and Archive) has produced information on the minimum numbers of individuals represented, age and sex where possible, and traces of disease or trauma where evident. The bone was burnt on a funeral pyre constructed of wood. Palaeo-botanical analysis (Miller and Ramsay, see Chapter 12 and Archive) has shown that most of the charcoal from the pits, which probably derived from the wood used to build the pyres, was oak. However, there were also significant amounts of hazel charcoal, along with smaller amounts of alder, birch, apple family, blackthorn type, cherry, rose family and willow. This combination of charcoal types shows that a variety of wood types was used, perhaps according to what was readily available; however, some wood types may have been used for more symbolic reasons, according to how the different species of trees were perceived (Hayman 2003; Bloch 2005).

After the pyre had cooled down, the community collected the burnt remains of the cremated bodies. Analysis has shown that the quantity of bone in the pits did not usually equal the amount that would result from the cremation of a body, so in most cases only parts of individuals were present (Duffy, see Chapter 12 and Archive). The proportions represented were highly variable, with no apparent patterns of selection of particular body parts.

The radiocarbon dates from charcoal and human bone in the pit fills show that human remains were being deposited mainly between 1890 and 1520 BC, over perhaps nine generations. While it is not clear which deposit was placed in the ground first during this phase of activity at Eweford, a combination of stratigraphic observations and radiocarbon dates suggests that the earliest activity created the features between the stone settings (084) and (046) and allows the construction of an approximate chronology of deposition. In broad terms, those using the monument first dug the pits to the south-west which cut into the trampled ground surface (082), but as later generations returned they tended to create pits further to the north-east. In many cases, the pits were cut through the ground surface (082), into or through the remains of the collapsed capping (083) of the earlier mound (see Chapter 2) and also into earlier layers below (104, 109) (see Chapter 4). As they worked, the pit diggers may have encountered fragments of earlier artefacts and observed that the soil through which they dug was different from that they encountered

5.2

Bone and antler toggles of the Bronze Age

Two perforated Bronze Age toggles, produced from thin splinters of bone or antler, were found during the excavation of Eweford West cairn (see Figure 5.7). Both of them were burnt, probably having gone through the pyre, attached to the garments or shrouds of the deceased.

The first is an incomplete, flat, perforated, lozenge-shaped bone toggle (SF 42 and 43). Seven less ornate examples of similarly shaped toggles are known in Scotland. The Eweford toggle appears to be unique, in that it has the remains of thirteen perforations. The holes are laid out in three rows, two following the upper and lower edges of the toggle and a third row running along the middle. The ornate detail suggests that this was a decorative ornament, as well as a functional piece used to fasten cloth or leather. One piece came from the cairn material itself (024), where it was associated with cremated human remains, and another four fragments came from a cremation deposit made up of the remains of four people (081).

The discovery of fragments of one toggle in two different contexts is significant, because it raises questions about our conventional ideas of formal burial deposits. Were some cremated remains kept from the pyre, to be scattered on top of the cairn after it was built, perhaps as a closing rite? Was some pyre debris swept up and scattered on the cairn after the burial itself?

The second piece (SF 24) consists of two conjoining fragments of a small, incomplete, sub-rectangular plate of bone or antler with a central, circular perforation. This was found among the cremated remains of a man, a woman and an infant (064). Like the first toggle, its white, brittle condition shows that it had passed through fire, perhaps attached to a garment that covered one of the bodies. Although no exact parallels are known, three similar flat toggles with single perforations are known from throughout Scotland.

Perforated flat bone or antler toggles fall into four broad types based on shape: lozenge-shaped, sub-rectangular, oval and circular; however, some examples fall outside these categories. Looking at the group as a whole, these artefacts have a fairly wide distribution throughout Scotland. Lozenge-shaped bone toggles are found almost exclusively with a type of cinerary urn known as Cordoned Urns, as are sub-rectangular flat toggles. The majority of Bronze Age bone toggles have been found in association with cremation burials, but this is a biased picture, based on preservation conditions. Bone toggles are likely to have been common throughout this period.

Six cremation deposits associated with perforated, flat bone toggles have been radiocarbon dated and have revealed a tight sequence of dates that place their use to between 1880 and 1510 BC.

DAWN McLAREN

when digging at other places. Hence, they may have been aware that they were disturbing or digging through the remains of earlier generations.

The results of the analysis of the contents of each pit are given below. Figure 5.5 shows the pits in plan and in section (in relation to the retaining stones and pyre material), while Figure 5.6 shows the sections through the pits.

Cremation deposit (064): someone collected the burnt remains (2220g) of an adult man, an adult woman and an infant and put them in this pit. Perhaps these three had shared the pyre. One of them may have been wrapped in a shroud held together by a carefully shaped, perforated bone toggle (SF 24; see Figure 5.7 and text box 5.2). The fragments of bone varied in colour from yellow to white to grey to black, which suggests that those who witnessed

the cremation stoked the pyre (Duffy, see Chapter 12 and Archive).

Cremation deposit (043) 1880–1620 BC (SUERC-5324): this pit (025) was dug into the remains of previous generations (see Chapter 3), and it involved a more complex sequence of events. The diggers set this pit next to the first one (064), so close that they clipped its edge.

In its base, they deposited (043) some remains (350g) of an adult who had suffered from periodontal disease (alveolar resorbtion) and spinal joint disease, as evidenced by Schmorl's nodes. Shortly afterward, they put in another deposit (042) of human bone (236g), including the remains of two adults. Then they placed the head of a stone battle-axe (SF 145; see text box 5.3 and Figures 5.8 and 5.9) on top of the burnt bones, and set a fire in the pit which scorched the deposits (042) and perhaps also the battle-axe. Finally, they laid another deposit (041), consisting of the burnt remains of an adult (196g) and a burnt fragment of goat/sheep bone, over the battle-axe.

Then a pyre (036), described above, was built over the pit (025), sealing it (Figure 5.5).

Cremation deposit (026), 1880–1620 BC (SUERC-5325): again digging into the remains of previous generations, someone scooped out this pit (040) and put less than

5.3

Battle axeheads

Battle axeheads are regarded as prestige weapons of the early Bronze Age: mounted on short wooden hafts, they would have made excellent weapons, but an important purpose (if not their main purpose) would have been to show off the status of their owners. They would have required skill and much patience to manufacture; two to three days' intensive work would have been needed to peck, grind and drill one into shape (Fenton 1984, 230), and this would have contributed to their prestige value.

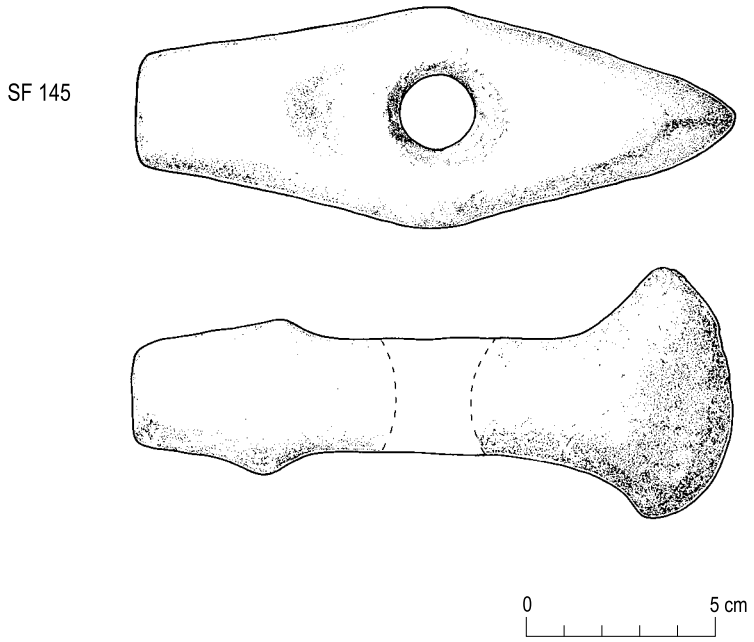
The idea of using this type of artefact was adopted from the Continent, where it had been a characteristic grave good in single burials of the Corded Ware and early Beaker traditions of northern Europe (Case 2004), towards the end of the late third millennium BC.

The earliest British examples of battle axeheads are associated with Beakers and probably date to around 2100 BC. The form of the Eweford battle axehead suggests it dates to *c.* 1900–1700 BC, so it falls within Roe's (1966) 'Intermediate' category. Interestingly, a slenderer, decorated version of this same basic type of battle axehead was found not far from Eweford at Longniddry around AD 1800; like the Eweford specimen, it is described as being of diorite (*ibid*, no 387; Anon 1894, 239–42, fig 5).

Recent radiocarbon dating of cremated human bones associated with several Scottish battle axeheads as part of the NMS Dating Cremated Bones Project (Sheridan in press a; b), and also by Vicky Cummings as part of her Cairnderry project, has confirmed the basic correctness of Roe's overall developmental scheme, and suggests that ëIntermediateí battle axeheads and 'Developed' examples date to *c.* 1850/1800–1600 BC. The date of 1880–1620 BC from the cremated bone that accompanied the Eweford specimen is well in accord with the dating of the kind of urns found in its vicinity (cf Sheridan 2003).

As for whether battle axeheads were an exclusively or mainly male possession (as seems to be the case with early Bronze Age daggers), there are too few well-sexed associated burials for one to be sure, and it is unfortunate that the remains associated with the Eweford West axehead could not be sexed. To judge from the nature of the damage and its overall appearance (Figure 5.8) – the surface weathering is not what one would have expected from normal weathering through groundwater leaching – it seems quite likely that this axehead had accompanied the deceased through the funeral pyre, and that it was slightly damaged by burning.

ALISON SHERIDAN



5.8 The battle axehead from Eweford West.

half the remains (549g) of an adult woman and an infant inside. He or she may have collected the bone from the adjacent pyre (036).

Cremation deposit (039), 1750–1520 BC (SUERC-5319): someone made a small collared urn, incising its collar with chevrons framed between horizontal lines made from two lengths of cord pressed together into the damp clay (see text box 5.4 and Figure 5.10). The partial remains (2485g) of two adults, one of whom was a man, an adolescent and an infant were put in the pot (Figure 5.11: Urn 3). This pit (027) was dug through the remains of earlier generations and also through the blackened remains of the pyre (036), which had burned some time before. The urn was set in the pit.

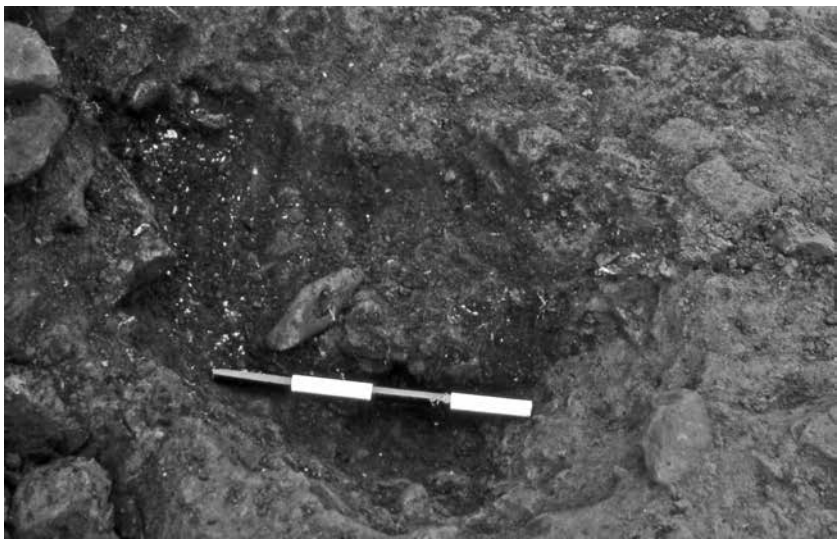
Whether the four people whose bones lay in the pit were cremated separately or on a large pyre together is unclear, but they may have been cremated along with a sheep/goat and a small ungulate, the bones of which accompanied them in the urn. A single unburnt, barrel-shaped bead (SF 142), made from bone (see Figure 5.7), was added to the urn's contents. The bead may have belonged to one of those buried, perhaps originally part of a necklace, or may have been an offering from the people who disturbed the earlier remains.

A few years later, the urn was disturbed. Whoever broke it placed the sherds carefully on top of the bones it had once held. One sherd, overlooked, later became incorporated in the cairn (024) material that later sealed the pit.

Deposit (136): after digging this pit into the remains left by previous generations, someone set a small, empty, bipartite urn on its side and covered it. The potter had decorated the urn's upper body with sloping lines, framed with horizontal lines at the top and bottom, using a z-twisted cord (Figure 5.11: Urn 5; text box 5.4). Sherds missing from its mouth show that the urn had been partially broken before it entered the pit. A sherd from vessel three had been placed within this deposit.

Cremation deposit (034), 1880–1630 BC (SUERC-5355): people returned to the site to dig another pit (032), grubbing up the stones of the earlier cairn as they did (Figures 5.4 and 5.5). They chose a spot close to the pit that contained the collared urn (027), perhaps recalling its presence and who it contained, and as they dug the new pit they disturbed it, smashing the pot.

They set the partial remains (52g) of one adult in the base of the pit, and then set an undecorated cordoned urn



5.9 The axehead *in situ* in the pit.

5.4

The types and uses of cinerary urns

The cinerary urns found in the cairn at Eweford West – of Collared, Cordoned and other associated types – are typical of the styles of urn that were used in Scotland between around 1900 and 1500 BC. They were used to contain the cremated remains of the deceased. Most of those at Eweford West were found upside down; the contents had almost certainly been kept in place by an organic cover, tied over the potsí mouths. These large urns were probably made specially for the burials; their collars and cordons served partly to fix the organic covers and also to make them easier to carry to the cairn. Usually only one person's remains are found in an urn, but sometimes they contain the remains of two or more people. This raises the question of whether those people died at the same time, or whether the bones of one or more were kept aside until someone else in particular died, such as a family member. The urns vary in size, and the reasons for this are also unclear.

In Scotland, the practice of placing cremated remains in cinerary urns was adopted around 2100 BC – a time when cremation was becoming a popular rite elsewhere in Britain and Ireland as well. Thanks to the National Museums of Scotland programme of radiocarbon dating cremated Bronze Age bone, we can now demonstrate that the earliest urns were the so-called Vase Urns (or Enlarged Food Vessel Urns), which resemble larger versions of the vase-shaped Food Vessels that normally accompanied unburnt corpses in cist graves. The Collared Urn – characterised by its heavy, overhanging neck – was adopted from England, probably during the twentieth century BC. The Cordoned Urn was a regional adaptation of the Collared Urn shape, which was being manufactured from the mid nineteenth century until around 1500 BC. Some Cordoned Urns are so similar to some Collared Urns that it is impossible to make firm stylistic distinctions between them. More simply shaped Bucket Urns started to be used perhaps as early as 1700 BC, and continued in use into the first millennium BC. Cinerary urns were not always used in burials of cremated remains: organic containers, such as leather pouches, seem to have been used in some cases.

Grave goods tend to be rare in Bronze Age graves with cremated remains, and at Eweford West the only artefact found in an urn was a single unburnt bone bead. Other deposits of cremated bone from the same cemetery were put into pits without urns but alongside objects that had probably gone through the funeral pyre, including a burnt battle axehead and two burnt bone toggles (which had probably held together a burial garment).

ALISON SHERIDAN

(Figure 5.11: Urn 4; text box 5.4) upside down over them. The urn held the remains (1679g) of two adults under the age of 20, a man and a woman, along with those of an adolescent and an infant. One of them had suffered from spinal joint disease and a compression fracture of the lumber vertebra, perhaps after falling from a height or taking a heavy blow to the base of the back.

Cremation deposit (031), 1880–1680 BC (SUERC-5304): this time, people collected the burnt remains (1738g) of two individuals, one of whom was an adult woman, who had suffered from periodontal disease, bone growth (mandibular tori) and spinal joint disease, as evidenced by Schmorl's nodes. In the pit (028) they put the burnt fragments into a large collared urn, (Figure 5.12: Urn 1; text box 5.4). The potter had taken a z-twist cord and pressed it into the urn's collar, creating three horizontal lines bordering a row of chevrons. Mixed with the bone were burnt fragments of hazelnut shell and 22 burnt rowan fruit stones.

Cremation deposit (122) 1890–1680 BC (SUERC-5326): after an adult woman was cremated, the remains of the pyre may have been left for several weeks, as the bones

5.10 Two of the urns being excavated.

were slightly weathered. Some of the burnt bones (484g) were gathered up and placed in this pit (121).

Cremation deposit (117), 1890–1690 BC (SUERC-5348): after digging this pit (116), someone put a few handfuls of bone (238g) from two cremated bodies in it. One had been an adult under 20, the other an adolescent.

Cremation deposit (144), 1860–1530 BC (SUERC-5328): in this pit (145), someone placed the remains (1233g) of two adults, one of them a man. At least one of them had suffered from periodontal disease and spinal joint disease, and also a trauma to the lower arm and the chest (periostitis of median tibial frag and anterior of two ribs).

On top of the heap of bone, they set a bronze, tanged knife-dagger (SF 308) with its blade pointing to the north-east (see Figure 5.13). The dagger may have been hafted at the time. Analysis of its blade edges and point show that it had certainly been damaged through use (Cowie, see Chapter 12 and Archive).

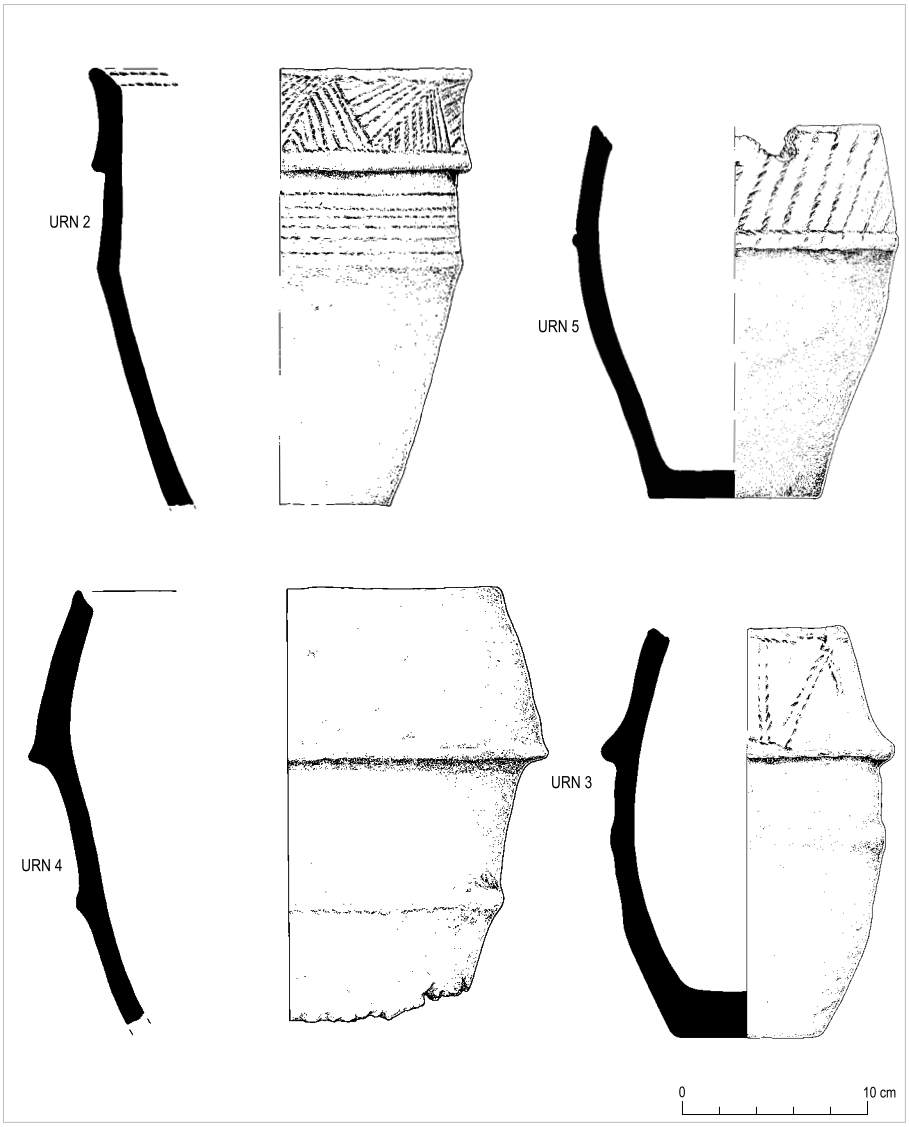
Cremation deposit (119), 1740–1520 BC (SUERC-5327): members of the community dug another pit (118) through the remains of previous generations and placed the partial remains (487g) of a cremated body in it. The person had been a woman aged over 40; she had suffered spinal joint disease, perhaps as a result of a trauma to her upper back when she was younger, which left a compression fracture on the lumbar vertebra.

Stone to hold and bind

At some point during the first part of the second millennium BC, several large boulders (046/084) were pulled into position to form two broadly concentric arcs to the north and south of the pits. Closer examination shows that they were set as a number of short rows on slightly different orientations, which suggests that the arcs were created piece-by-piece over several distinct phases (see Figures 5.4 and 5.14).

Eventually, a stone cairn (024) was created, up to 0.4m in depth (Figure 5.5), that sealed much of the ground surface (082) and many of the cremation-filled pits and hollows (025, 027, 028, 032, 121, 118, 116, 145) that had been dug into it between 2000 and 1500 BC. The cairn seems to have been built over several phases, and ultimately it extended over an area of 20m by 10m. It did not seal other pits to the east (146, 150, 157, 169, 136, 152, 129). Several features (060, 062 and 081) were created in the cairn (024) by pulling stones out to create hollows for deposition.

Burnt human bone and artefacts were heavily scattered throughout the cairn material (024). In some cases, the



5.11 Urns 2–5.

bone deposits appeared distinct and deliberate (071), as if people had pulled stones out of the cairn and placed handfuls of cremated remains in the hollows (073) left by the stones, and dated to 1880–1610 BC (SUERC-5300). For the most part, however, the distribution of the bone gave the impression of having been scattered by hand, like seeds across a field of stones.

The artefacts in the cairn derived predominantly from earlier phases of activity at the site (see Chapters 2 and 4), but it is not clear whether they had been collected to scatter among the stones or whether they had washed in with deposits eroded from the mound to the north. Their consistent distribution throughout the cairn would suggest that they were deliberately incorporated. Perhaps when people dug pits into the remains of earlier generations to hold the cremated remains of their kin, they discovered broken pieces of pottery and pieces of struck flint: recognisable to them as fragments of drinking vessels and broken tools, but strangely different from the ones they now used daily.

Cremation deposit (062): someone created a small hollow by pulling stones out of the cairn (024), and in it placed the partial remains (403g) of three people: one was an adult, while the other two were young children less then five years old. The cremated remains were then covered with stone, consumed within the cairn. The

surface condition of the bones suggests that they had weathered after cremation, perhaps having been left exposed on the extinguished pyre for several weeks.

Cremation deposit (061), 1880–1530 BC (SUERC-5349): members of the community dug another small hollow (060) by pulling stones out of the cairn (024). In it they put the partial remains (2666g) of two adults, a man and a woman, and covered them with stones.

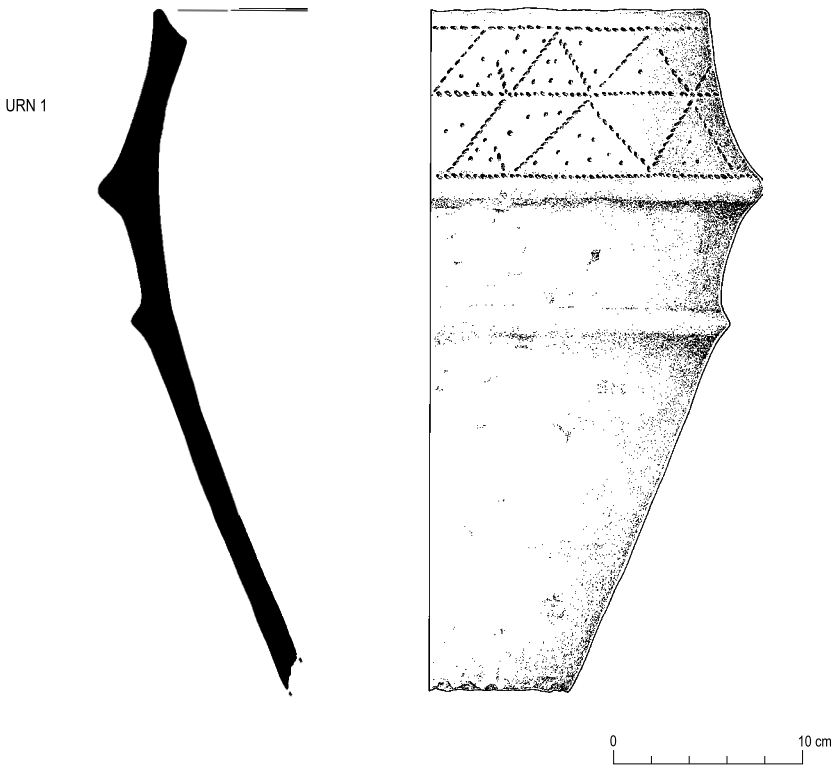
The predominantly grey-black colour of the bones shows that they were incompletely combusted. The pyre may have burnt under stormy skies, its flames quenched by a downpour. The condition of the bones also suggests they were left exposed to the elements for several weeks before being deposited in the hollow.

Cremation deposit (082), 1750–1520 BC (SUERC-5354): people again pulled stones out of the cairn (024) to create a hollow (081). This time they placed the partial remains (3599g) of four individuals in it, three adult men and an adolescent, then hid the remains beneath stone. At least one of them had had spinal joint disease, as shown by bony growths (osteophytes), and iron deficiency anaemia (cribra orbitalia), as is evidenced by changes to the skull's surface. One skull fragment bore a small, linear score; he had received a cut on the head at or around the time of death from a sharp implement, perhaps a bronze or flint knife. Whether this indicates a violent death or the defleshing of the body is not clear.

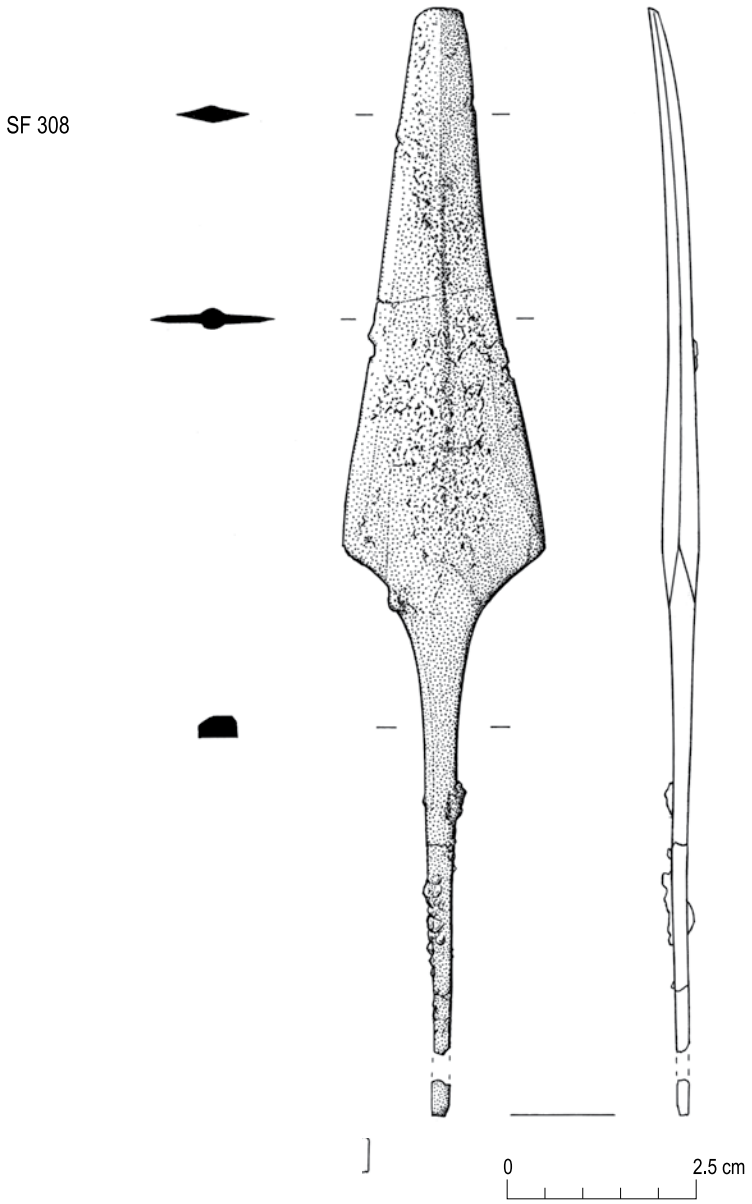
A burnt bone toggle (SF 42–3) lay among the cremated remains (see Figure 5.7 and text box 5.2). It was a finely finished piece, lozenge-shaped, which originally had 14 perforations in three rows. It may have come from a shroud fastened around one of the corpses. Its burnt condition shows that it passed through the pyre with the body. Six burnt bird cherry stones may have also been placed deliberately in the hollow, or on the pyre as an offering.

The cremated remains of these people were again left outside to weather before being placed in the hollow.

Cremation deposit (154) 1890–1680 BC (SUERC-5330): moving away from the cairn, the area which had been favoured for several generations, someone dug a pit (150) further to the east and in it placed the burnt bones (806g) of an adult who had suffered from periodontal disease, as evident by alveolar resorbtion. Several



5.12 Urn 1.



5.13 The bronze tanged knife-dagger.

generations later, as others were placing bones in a small pit (157) nearby, they scattered burnt animal bone across the surface of the earlier pit (150) and it became mixed with its original contents. Specialist analysis has identified that fragments of sheep/goat tibia from both pits (150) and (157) conjoin (Smith, see Chapter 12 and Archive). The mouth of the earlier pit was scorched orange, perhaps from a fire or contact with hot rocks.

Cremation deposit (148): when people dug this pit, they found the broken remains of a small Beaker urn (BP 5; see Figure 4.21 in Chapter 4) and pottery sherds from several other vessels, which previous generations had disturbed. They placed (149) the partial remains (512g) of two adults, one of them a male, in the pit. One of the adults had suffered from periodontal disease, as evidenced by alveolar resorbtion. They placed part of a copper alloy awl among the bones (SF 98; not illustrated), along with the broken urn and the other sherds (see also Chapter 3).

Cremation deposit (168), 1880–1620 BC (SUERC-5356): the pit (169) was dug to hold a medium-sized collared urn (Figure 5.11: Urn 2; text box 5.4). The potter had decorated the vessel's rim bevel, collar and neck with a z-twisted cord, and the collar with a continuous chevron pattern between horizontal lines.

Before the urn was set upside down in the pit, it was filled with the remains (1426g) of an adult woman. She had suffered from periodontal disease, as evident by alveolar resorbtion, and changes to the skull surface show iron deficiency anaemia (*cribra orbitalia*) in her lifetime.

Cremation deposit (153), 1880–1630 BC (SUERC-5532): someone placed the partial, weathered remains (728g) of an adult in the base of this pit (152).

Cremation deposit (131), 1690–1520 BC (SUERC-5350): a community returned to the place where, for the past 30 generations, people had placed the remains of their kin in the ground. The bones they carried were incompletely combusted, as attested by their predominantly grey-black colour. Perhaps rain had quenched the pyre.

They dug a small pit (129) and in its base they placed the remains (778g) of an adult man. They heated stones, possibly taken from the nearby cairn, and put these on top of the bone, sealing them with heat and stone and scorching the mouth of the pit orange.

Cremation deposit (147), 1430–1210 BC (SUERC-5329): someone returned to place the partial remains of a man (670g) in another pit (146). His bones had been burnt on a pyre, but unlike all the others they show no signs of having warped. This suggests that the corpse was not fleshed when it was cremated; it may have been left exposed for the flesh to rot (excarnated), or it may have

5.14 The retaining stones at Eweford West.

been more actively defleshed. A slightly burnt flint scraper (SF 312, Figure 5.15), which may have been on the pyre, was placed amongst the bone. Again, hot stones were set on top of bone, scorching the mouth of the pit.

Cremation deposit (156) 1380–1120 BC (SUERC-5334): for the last time, people collected some of the remains (1063g) of an adolescent and a child (aged 4–10) from a pyre and brought them to Eweford. The remains were mixed with burnt sheep bone, some of which scattered across the surface of an earlier deposit (150). The pit (157) they dug at this point was the smallest yet.

Pencraig Wood (1500–1250 BC)

At Pencraig Wood (Figure 5.1), the team excavated features created between 1500 and 1260 BC at a place that had seen activity several hundred years before (see Chapter 4).

In the early second millennium BC, someone or several people came back to the spot and dug a pair of pits (Figure 5.16). They lined one of the pits (012) with stones and placed the partial burnt remains (320g) of at least two people, an adult and an infant, in the pit. Mixed with the burnt bone were traces of burnt hazelnut shell, hawthorn seed and cleaver seed (011), perhaps also set alight on the pyre. A radiocarbon date of 1500–1310 BC (SUERC-6889) was obtained from hazel (*Corylus*) charcoal, while cremated human long bone produced a radiocarbon date of 1440–1260 BC (SUERC-7160). Next to this pit they dug another (014), which they also lined with stone. It contained some oak charcoal, but no bone.

Another intimately associated pair of pits may relate to this time, as their character indicates a similar practice. In one pit (026) lay the remains (666g) of two individuals, an adult and a child, along with oak charcoal. Its companion pit (048) was dug close by and contained alder, hazel and oak charcoal. It is possible, however, that these features relate to an earlier phase of deposition during the third millennium BC (see Chapter 4).

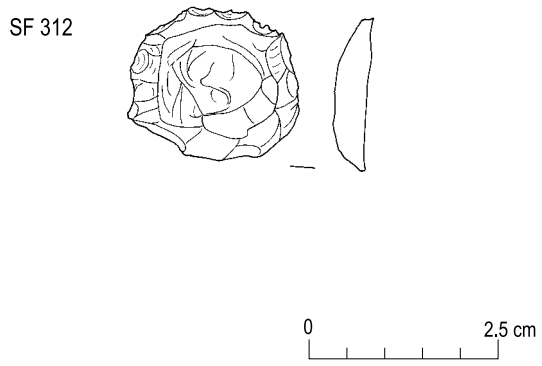
People came to this spot to dig other pits during the early second millennium BC. About 19m to the north of the stone-lined pits (012 and 014) was another pit (035) that held an oak post; the pit contained a post-pipe rich in oak charcoal (034) (Figure 5.16). This pit (035) was backfilled with a deposit (019) containing hazelnut shell, oak, blackthorn and hazel charcoal. A sample of hazel (*Corylus*) charcoal produced a radiocarbon date of 1460–1290 BC (SUERC-6892).

The excavated features evoke a short period during which people were leaving small quantities of human remains at Pencraig Wood. It is possible that the timber upright in pit (035) marked the location, forming a focus for rites relating to these acts of deposition.

Discussion

About 4000 years ago at Eweford West, a community commenced a tradition which continued at the same place, albeit perhaps intermittently, for about 30 generations (600 years). Superficially, it appears that these subsequent visitors to the site maintained the basic tradition of depositing burnt human remains in pits around an earlier mound. However, closer scrutiny of the excavated evidence shows that their acts of deposition expressed four variations on this tradition. Attribution of these variations to discrete phases must remain tentative, as it is difficult to establish the chronological sequence at the site with confidence. Spatial differences in the record do show that different variations were favoured in different parts of the cemetery.

The first tradition involved the digging of pits into the remains of earlier generations at the southern side of an earlier monument. As well as placing human remains in these pits, people frequently put artefacts into them. Most of the pits that may relate to this phase were dug to the south of the mound, but two others containing urns (169 and 136) were created further to the east. In one case (136), the act of deposition was distinctly different: an urn was placed on its side in a pit, with no burnt bone. It is



5.15 The burnt flint scraper.

also during this phase that we have the only evidence for cremation having taken place on the site; in subsequent phases, the pyres were built further away, somewhere beyond the excavation trench.

In a distinctly different, second tradition, later generations covered these earliest pits with stones. The fact that they deliberately incorporated artefacts and fragments of the dead into the cairn material suggests that they imbued this act of capping or sealing with further potent meanings. This tradition appears to have lasted for some time. The large stones which retained the cairn material had been pulled into place in several distinct rows and, although we cannot be certain of the timespan, these seem to represent different events. Indeed, it is not clear whether each row was built as a single event or whether it grew intermittently, before changing circumstances required a new row. We could perhaps even imagine people adding a new stone to a row each time they left a new deposit.

In a third development in tradition, still later generations began to pull out stones to create hollows in the cairn and to put burnt human bone in them. In contrast to the earlier deposits, which now lay beneath the cairn, these were not accompanied by deliberately placed artefacts. One artefact, the bone toggle from pit (081), was probably burnt with the body during the mortuary rites, so its presence is incidental. It does, however, show that bodies were sometimes wrapped in shrouds for cremation after the cairn was built, as well as before it.

The pits along the eastern edge of the arc suggest another distinct development in tradition. Like the deposits described above, they were not capped by a substantial layer of cairn material; indeed, people seem to have moved away from the cairn to create them.

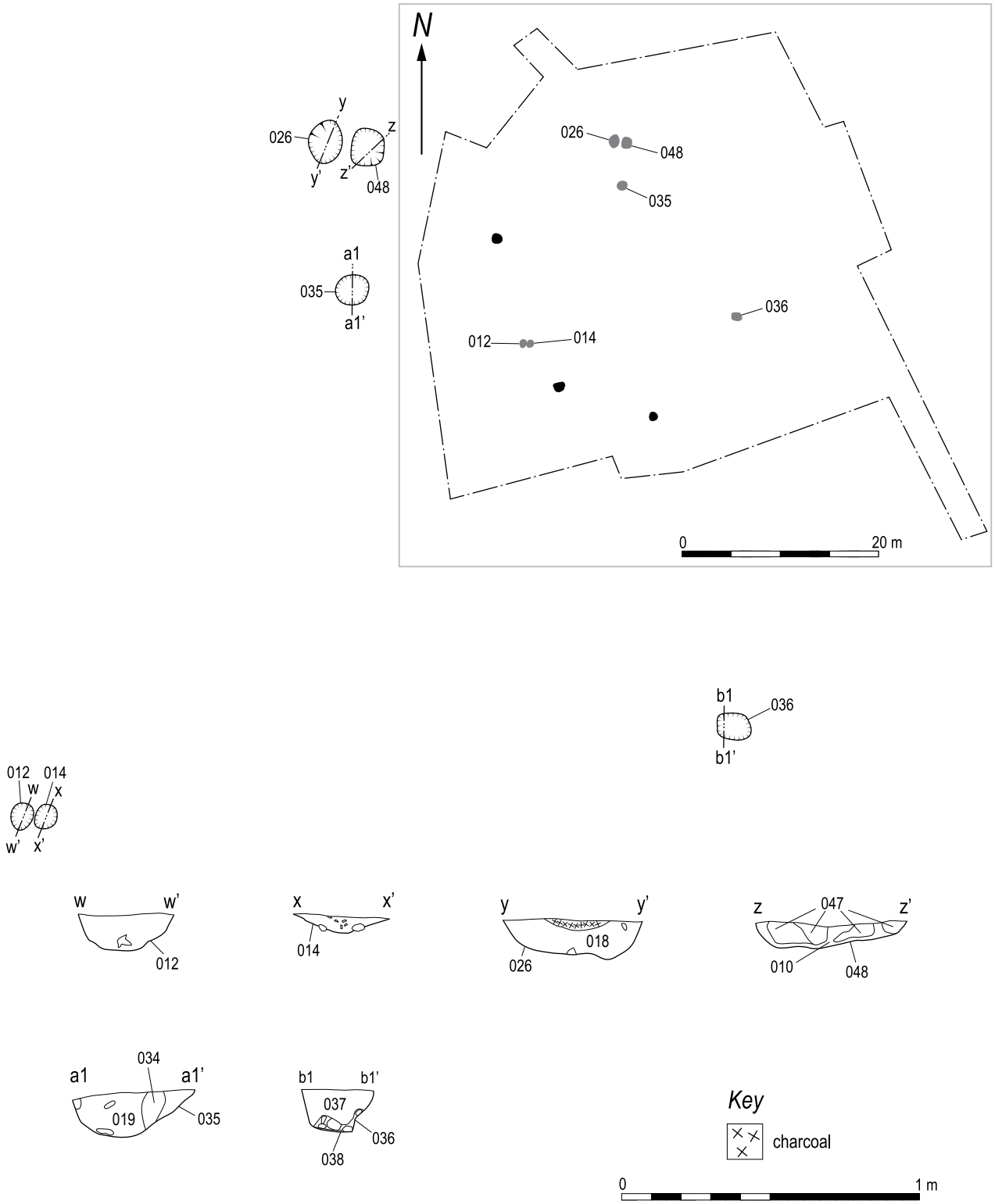
In a fourth variation on the traditions practised at Eweford, people set fires or hot stones at the mouths of three pits (146, 129, 150), scorching them. The radiocarbon dates (1890–1680 BC (150), 1690–1520 BC (129) and 1430–1210 BC (146)) show that this was done intermittently over a long period, and at the same time as other variations were being practised. This highlights how, at different times, in different sets of circumstances, particular practices were considered more appropriate than others. Digging pits and placing cremated remains in the eastern part of the site sometimes involved the use of fire, but need not always have.

We have already noted the bipartite urn (Urn 5), which lay on its side in the eastern part of the pit distribution (136). The fact that it was incomplete, with sherds missing from its mouth, reveals another aspect of its biography. Whether the damage took place through use of the vessel is not clear. The same area contained the broken remains of Beaker vessels associated with cremated human remains. We can suggest, therefore, that another variation in practice emerged in the eastern area of the site, in how people treated the remains of previous generations when they discovered them in the course of digging new pits.

These variations in practice between the different areas are striking. The eastern part seems to have been favoured in the latest phase, its use dying out with one last act of deposition during the second millennia BC (see, however, Chapter 4). The size of this pit (157) (1390–1210 BC) suggests a lack of conviction about its creation; perhaps those who created it felt uncomfortable about digging there, or hesitant about following the old traditions.

The acts of deposition at Pencraig Wood took place about the same time that people at Eweford were avoiding the cairn, during the second half of the second millennium BC. At Pencraig Wood, the two pairs of pits (012/014 and 026/048) seem to indicate that people here were practising other variations in the same general tradition. Here, they placed small quantities of burnt human bone in one of each pair, and hearth waste (perhaps along with other organic remains which decayed away) in the other. It is particularly striking that both deposits of human bone contained the remains of an adult and a child or infant. The material they placed in the companion pits might have been tokens from the funeral pyres or from hearths used in the funerary rites. These acts of deposition may have been carried out near a timber upright that marked the hillside as a significant place.

At Pencraig Wood and Eweford, communities were choosing how and where to create pits and deposits according to what they believed was appropriate at the time. The fact that the deposits contained mainly human



5.16 The features at Pencraig Wood in plan and section.

remains, in common with other excavated cremation 'cemeteries', tends to colour how we view their meanings; they are traditionally thought of as burials (for example, Watkins 1982; Cressey and Sheridan 2003). We as archaeologists tend to see these burials as the ultimate goal of a technological process, one that involved using a pyre to convert the dead to cremated bone. We may consider how the body was treated in terms of mortuary ritual and funerary ritual, but ultimately, in the dominant view, these acts are considered as leading to burial in the sense that we understand it today.

However, certain aspects of human practice at Eweford and Pencraig Wood differ distinctively from modern burial practice. Clearly, only a small proportion of the people who lived during this period were treated in this way after death (Ashmore 2001, 3). Those selected for the pyre were not buried as individuals; instead, the living transformed their bodies through (in some cases) excarnation or defleshing, burning them on the pyre, selecting some of the burnt bone and careful depositing it in pits or vessels prepared for the purpose. These acts of transformation broke up the bodies of individuals and mixed them with fragments of others. The fact that the cremation deposits only ever contained parts of individuals suggests that communities were using their remains in deliberate, particular ways, some of which involved depositing them at places such as Pencraig Wood and Eweford. What happened to the rest of these individuals' remains will always remain unclear, especially if we consider these acts of deposition in isolation.

Detailed examination of the acts carried out at Pencraig Wood and Eweford has shown how long they continued within the same general tradition and also how much they varied. There must have been many variations in each case before death, in the identities and biographies of the individuals. Some may have been ill for long periods, others dying suddenly in tragic or inauspicious circumstances. Bodies may have been excarnated or defleshed, but infrequently. They may have been combined on the pyre or cremated individually. In some cases, artefacts, fruit and animals (or at least joints of meat) were also placed on the pyre, while in other cases objects were added to collections of bone after cremation. Sometimes cremated remains were left to weather, while others were gathered rapidly and put in pits. The numbers, age and sex of individuals represented in the deposits varied widely, as did the ways they were combined; the proportions of each individual's bones also varied. In short, it is clear that people were not following a strict set of rules in the ways they treated their dead. They were making complex choices about what to do and how to proceed.

If their acts were not simply burial, what did they mean, and what lay behind the choices they made? We can only answer these questions by placing their choices and acts in a wider context, which includes a consideration of how communities engaged in the different social arenas (such as the house, the field, the forest) in which they lived at the time (see Chapter 9). This context should also include the cosmological landscape, made up of beliefs and memories of places and events, which existed through story and ritual and which must have framed these acts of deposition. Only then may we begin to understand the uses of bones and beads.

Chapter 6

Emerging communities: Excavations at Howmuir, Eweford Cottages, Biel Water, South Belton and Thistly Cross, with features from Pencraig Hill and Eweford West (1910 BC–AD 340)

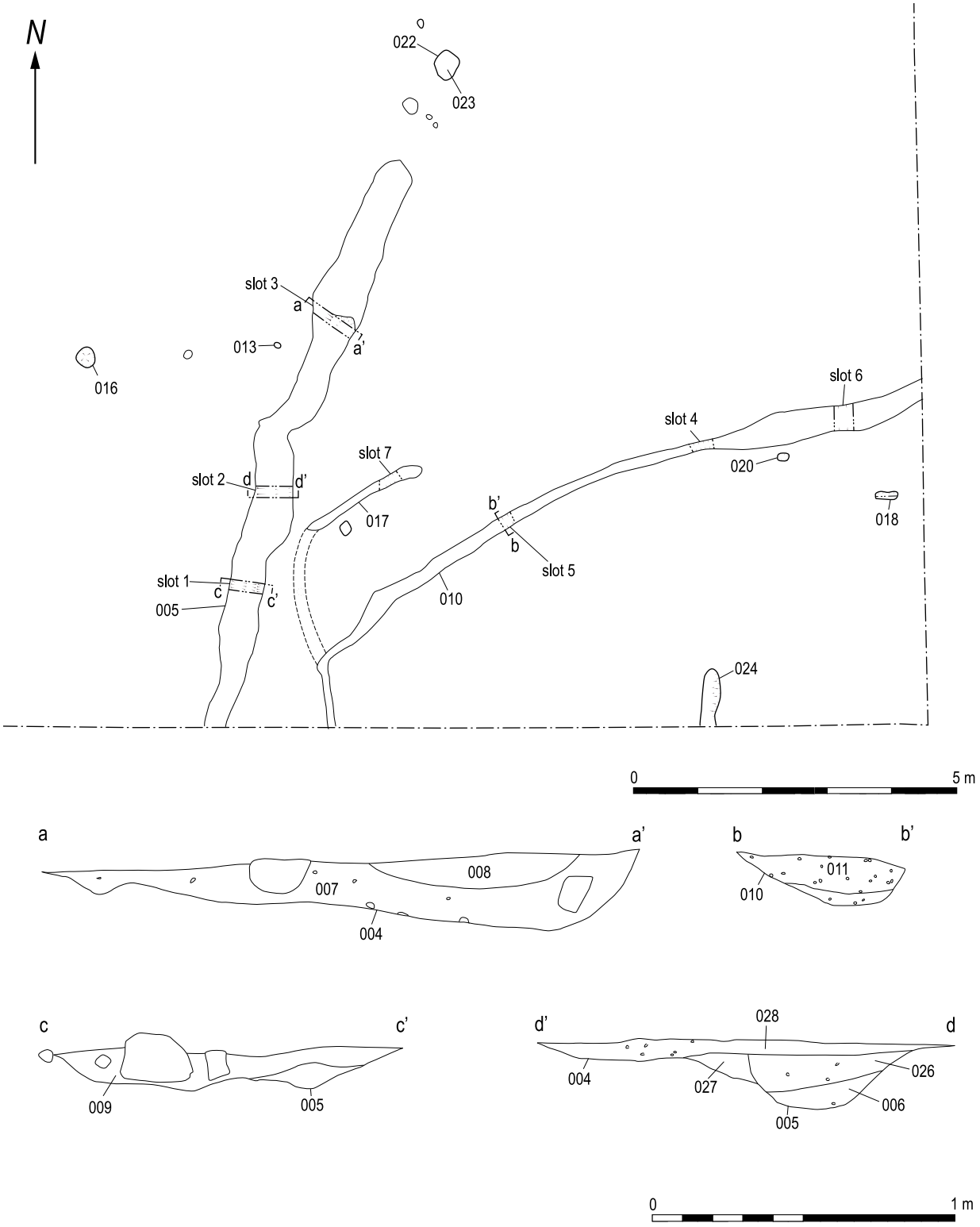
LORNA INNES
with a contribution from Kirsteen McLellan

Introduction

The excavations along the route of the A1 investigated several sites which together provide evidence for human settlement in the Lothians from the mid second millennium BC to the early first millennium AD: ditches at the margins of a probable settlement at Howmuir; midden-filled scoops at South Belton; the remains of a small homestead at Biel Water; the stone footings of a structure at Thistly Cross, and part of a large, enclosed (and later unenclosed) settlement at Eweford Cottages (Figure 6.1). During the same period that some of these existed, two discrete acts involving the burial of human remains were carried out at the Neolithic mortuary sites at Eweford West and Pencraig Hill.

The combined evidence from these sites illuminates the nature of settlement in mid second millennium BC to early first millennium AD East Lothian, as well as the production and uses of material culture, the processes of enclosure and the demise of enclosure as a useful concept. The evidence also throws further light on the nature of the environs and the settlement pattern during the period of Roman military activity in the vicinity.

6.1 Map showing the locations of Howmuir, South Belton, Biel Water, Eweford Cottages, Eweford West and Pencraig Hill.



6.2 Plan of Howmuir, with sections through the ditches (below).

Howmuir Farm

Kirsteen McLellan

In the mid to late second millennium BC, a community living at what is now Howmuir Farm dug a group of shallow ditches and pits (Figure 6.2). Straight, modern field drains ran across the trench at intervals of 4m, and the archaeological features were heavily truncated. They probably originally formed part of a larger enclosure or field system which extended beyond the edges of the A1 corridor.

In the earliest event at the site, someone dug a small pit (013). It may have held a post which later burnt (012), or it was eventually filled with charcoal from a hearth where mainly oak was burnt, as well as hazel and cherry type woods (Miller and Ramsay, see Chapter 12 and Archive). The hazel (*Corylus*) charcoal produced a radiocarbon date of 1910–1690 BC (SUERC-7532).

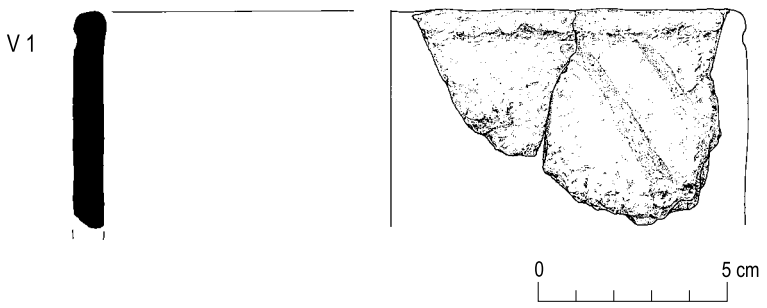
The site's occupants also dug a linear ditch (004/005) running down slope from south to north; it extended into the excavation trench for 10m (Figure 6.2). They seem to have varied its width or dug it in segments, as the ditch expanded and contracted along its length. The ditch was up to 0.85m wide and, in its truncated state, it survived up to 0.25m in depth. Samples from its fill produced a calibrated range of dates that only just overlapped with the hazel from the putative post (see below), but the ditch had lain open for some time before it filled up, so it may have been dug while the post was standing.

While the ditch lay open, sediments washed in from the surrounding area. The portion of it excavated in slot 2 (Figure 6.2, d-d') provided evidence for natural silting and a re-cut. The fill (027) of the original cut (004) was an orange silty sand; the secondary cut (005) was filled with greyish-orange sandy silt (006) and light pink-orange silty sand (026). It appears that, although the ditch was allowed to silt up naturally, it was cleaned out at least once, creating the re-cut. The separate fills (006, 026) of the secondary cut suggest that it silted up over distinct phases, perhaps related to discrete episodes of cultivation further up slope. By the time the final silt (028) accumulated over both the original and secondary cut, the ditch had gone out of use.

Micromorphological analysis found tiny fragments of bone and pottery in the silts, which probably washed in as a result of cultivation of the surrounding land. Variability in the sorting of the silts indicates episodes of different energy in the soil movement, pointing to discrete periods of ploughing and perhaps to times when the land lay fallow (Simpson, see Chapter 12 and Archive).

As the ditch silted, charcoal (predominantly oak, but also hazel, birch and cherry type; (Miller and Ramsay, see Chapter 12 and Archive) washed in, perhaps from nearby domestic occupation or from middening of the agricultural fields. Cherry type (*Prunoideae*) charcoal from the silt (009) in slot 2 produced a radiocarbon date of 1680–1490 BC (SUERC-7534), while hazel (*Corylus*) from the same silt produced a date of 1610–1410 BC (SUERC-7533). If the ditch had been dug around the same time as the felling of the oak that filled the pit (013), it may have been kept open for several generations before it fell into neglect. Alternatively, and perhaps more likely, the ditch may relate to settlement several generations later than that contemporary with the pit.

After the ditch had partly silted up, hearth waste was put in the northern segment, appearing during the excavation as a dark brown-grey silt (008) that stood out against the paler, cleaner silts. It contained quantities of oak charcoal, along with some derived from willow (Miller and Ramsay, see Chapter 12 and Archive). Willow (*Salix*) charcoal from the dumped material was dated to 1690–1510 BC (SUERC-7531), while hazel (*Corylus*) charcoal from the same deposit produced a date of 1680–1490 BC (SUERC-7529).



6.3 The decorated vessel (1) from Howmuir.

It (008) also contained 17 sherds from a single pottery vessel, two of them conjoining rimsherds (Figure 6.3). The vessel is typical of the Middle Bronze Age domestic pottery found on unenclosed platform settlements in southern Scotland and northern England (MacSween, see Chapter 12 and Archive). It was decorated with incised horizontal and diagonal lines. Black organic encrustation on its surface shows that it was probably used for cooking. Again, this suggests that those who made the ditch were living nearby and, on at least one occasion, used it to hold their domestic rubbish.

To the west of the ditch, the occupants dug two smaller ditches (Figures 6.2 and 6.4). The longer ditch (010) ran into the trench from the south and turned to snake north-eastward; a much shorter ditch segment (014) ran parallel to this, between it and the main ditch (008). The shorter ditch (014) was more ephemeral, and no stratigraphic relationships survived between the features to demonstrate their relative chronology. Both of these smaller ditches were filled with clean, silty sediment: the longer ditch (010) with pale yellow-grey silty sand (011) (Figure 6.2, b-b'), and the short parallel segment (014) with light brown-orange silty sand (015). These also seem to have been left open, perhaps to drain water from the surrounding fields and keep the arable areas dry.

The results of micromorphological analysis of the ditch fills indicate that crops were being cultivated close by, and that this nearby cultivation was intensive enough to destabilise the soils and cause the ditches to silt up (Simpson, see Chapter 12 and Archive). The relative absence of wood charcoal in the sediment suggests that the area had long been cleared of woodland; if trees were being cleared and burnt while the ditches lay open, more charcoal would have washed into the fills.

6.4 The Howmuir ditches under excavation.

A further phase of activity at Howmuir is suggested by an outlying pit (016), from which a sample of willow (*Salix*) charcoal (017) produced a radiocarbon date of 900–780 BC (SUERC-7530). Palaeobotanical analysis of the fill found oak (*Quercus*) charcoal predominant, with smaller quantities of willow (*Salix*) (Miller and Ramsay, see Chapter 12 and Archive). Several other small, scattered features (018, 020, 024) were not dated.

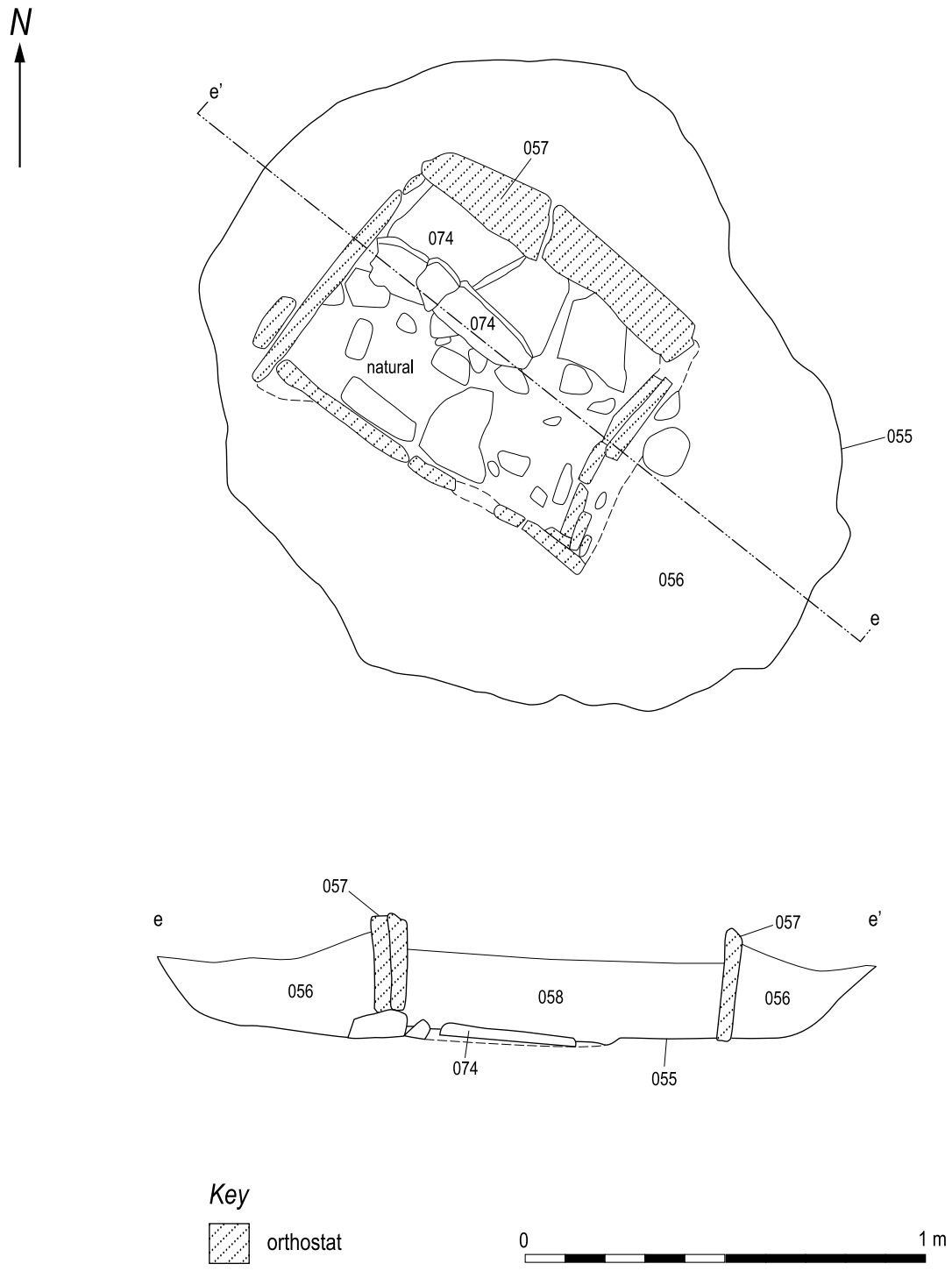
Eweford West and Pencraig Hill Cists (760–390 BC and 170 BC–AD 30)

In the mid first millennium BC, people gathered at an ancient place at Eweford West (Figure 6.1). The monument had been a focus for ceremony for millennia, but this more recent event was the first to leave archaeological traces in over 500 years. The group met beside an earthen mound (see Chapter 2), still a prominent feature in the landscape despite its having been eroded and scalped in the 3,000 years since it was built (see Chapter 4).

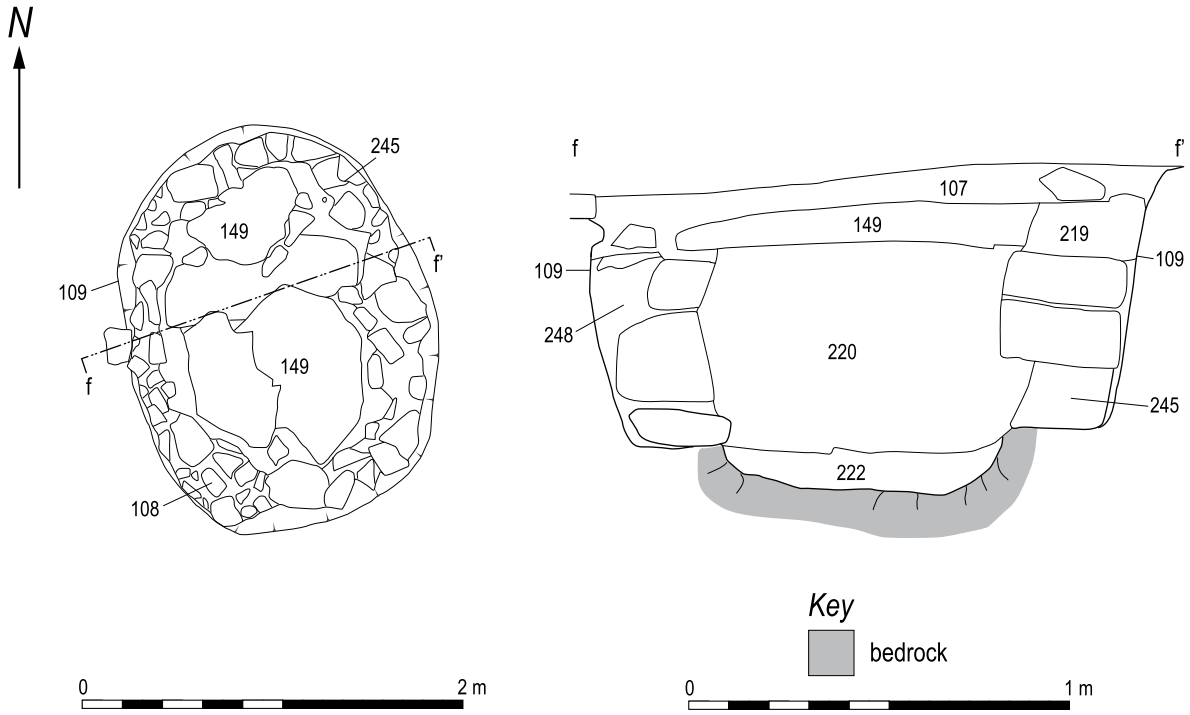
They came to the mound to set a cist into its surface, or possibly to re-use one that had been dug earlier. They must have determined exactly where to place it in relation to the mound and its former monumental features, which they seem to have known about in detail. The stone box they created was too small for a crouched inhumation, but big enough to hold remains from a funeral pyre.

They first dug a sub-rectangular hole (055) into the earth (217) that formed the natural bank on which the mound had been built (Figure 6.5). They set substantial slabs of white/grey stone along the north-eastern side of the cut, lining the rest of it with red slabs (057). Then they backfilled (056) some of the excavated material to fix the slabs in place. They scattered a little burnt human bone across the base of the cist and then set paving (074) over the northern half of the base. Finally, they filled the cist with material (058) gathered from the remains of a pyre: charcoal from oak and other local trees (Miller and Ramsay, see Chapter 12 and Archive), along with the weathered, cremated fragments of an adult's skeleton and a child's – mainly fragments of the craniums and long bones (Duffy, see Chapter 12 and Archive). A fragment from the adult's femur showed that he or she had died between 760–390 BC (SUERC-5287). Mixed among these remains were nine pieces of chert or flint, including a scalene triangle (see Chapter 2), and two sherds of abraded Beaker pottery (see Chapter 3).

At Pencraig Hill, several centuries later, a similar act took place when a group gathered at an ancient mortuary site to dig a pit and build a cist (Figure 6.6). As at Eweford West (Figure 6.7), they chose the location for the cist



6.5 The cist at Eweford West in plan and section.



6.6 The cist at Pencraig Hill in plan and section.

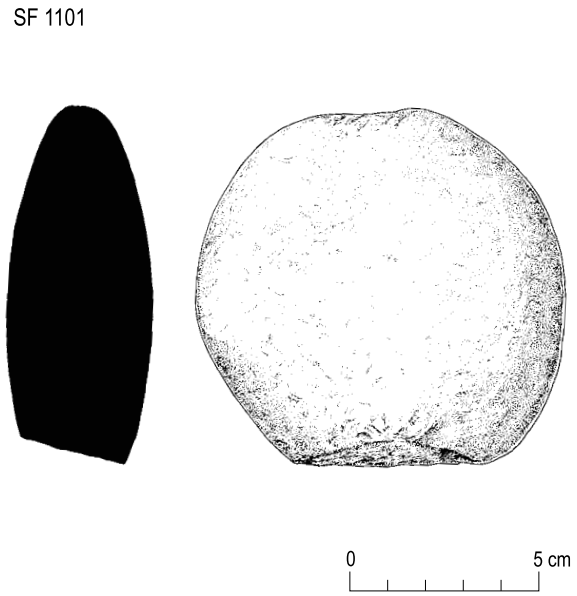
quite precisely in relation to the earlier monument. The latter had stood for millennia (see Chapter 2), and they must have known it well. The group began by digging a sub-oval cut (109) with a roughly U-shaped base; they expended a great deal of effort in this, levelling the bedrock at the base of the pit. Then they set three courses of stone blocks (245) around the edges to line it. Although no bones were preserved on the cist floor, they had probably placed a human body inside it, or least human bones, on the grey brown silty clay (222) that formed the floor. Analysis of phosphate content in samples taken on a grid across the fill showed levels consistent with its having held bone.

The cist floor was covered with soil (220) that included charcoal and burnt cereal from a fire, and fragments of burnt and unburnt human bone. Analysis of the bone has demonstrated that the burnt bone (19g in total) is predominantly long bone (14.7g) from one individual at least 15 years of age; 10.9g of the unburnt bone (21g in total) is identifiable as deriving from the fibula and tibia of a person over 15 years old (Marquez-Grant, see Chapter 12 and Archive). One surviving fragment of bone produced a radiocarbon date showing the person had died between 170 BC and AD 30 (SUERC-7665). Also among the soil were two possible hammer-stones (SF 31 (not illustrated) and SF 1101; Figure 6.8), which could have been used to dress the stone blocks for the cist lining, and a small cylindrical piece of ironstone which may have been an amulet (Sheridan, see Chapter 12 and Archive). Finally, they sealed the cist, setting four slabs (149) over the burial soil and rounded stones (108) to fill up the hole. After it was sealed, mid-brown silty clay (219) formed around the capstones and in the upper part of the cist.

Other activity may have taken place at Pencraig Hill, involving the working or discarding of cannel coal. A

6.7 The Eweford West cist during excavation.

triangular fragment of possible cannel coal, which had been perforated, was discovered in the uppermost fill of the cist (107). Another worked piece of cannel coal (SF 21) would also appear to be intrusive to the fill of the early Neolithic palisade trench (118) that defined the mortuary enclosure (see Chapter 2). This piece is heavily tool-marked (see Figure 10.8, text box 10.1), and has affinities with Iron Age working debris from the manufacture of rings (Hunter, see Chapter 12 and Archive).



6.8 A hammerstone (SF 1101) from the Pencraig Hill cist.

South Belton

At South Belton (Figure 6.1), two large, irregularly shaped scoops were dug, about 20m apart, and eventually filled with midden material. A radiocarbon date indicates that this took place in the mid first millennium BC, perhaps about the same time that the enclosed settlement at Eweford Cottages originated, and several generations before the homestead at Biel Water was occupied.

One of the scoops (A) (009) measured 5.4m wide by 3.4m, and about 0.6m deep (Figure 6.9). Those using it laid pebbles in its base to form a compact floor (006); they also dug a small, shallow pit (011) in its base (not illustrated).

Then they began dumping rubbish (005) into the centre of the scoop, sealing the pit and the pebble floor, and followed this with another layer of midden (004) that filled the entire scoop. The contents of the midden indicate something of the daily lives of the people who dumped it. They were burning alder, blackthorn, oak, willow and elm (Miller and Ramsay, see Chapter 12 and Archive). They were eating cattle, pigs, sheep/goats and other mammals (Smith, see Chapter 12 and Archive), as testified by burnt and unburnt fragments of bones; one of the bones (SF 30) bore butchery marks. They tossed (or lost) a broken rectangular whetstone (Figure 6.10: SF 6) into it as well (McLaren and Hunter, see Chapter 12 and Archive). Lithics, including knapping waste, scrapers and microliths, also found their way in, but at least some of this material is left over from Mesolithic activity in the area (Pannett, see Chapter 12 and Archive), and probably was incorporated incidentally.

Blackthorn type (*Prunus spinosa*) charcoal from the lower midden layer (005) produced a radiocarbon date of 760–400 BC (SUERC-8199), a date range broadly consistent with the whetstone (MacLaren and Hunter, see Chapter 12 and Archive) and animal bone assemblage (Smith, see Chapter 12 and Archive; text box 6.1). Hazel (*Corylus*) charcoal from the upper midden deposit (004) gave a more anomalous date of 5210–4840 BC (SUERC-8198), further suggesting that people had been active here in early prehistory and that the remains of their activities became incorporated in the midden (see Chapter 2). The upper fill of the midden (004) also contained large stones, which could have derived from a collapsed stone structure in the vicinity, of which no other trace survives.

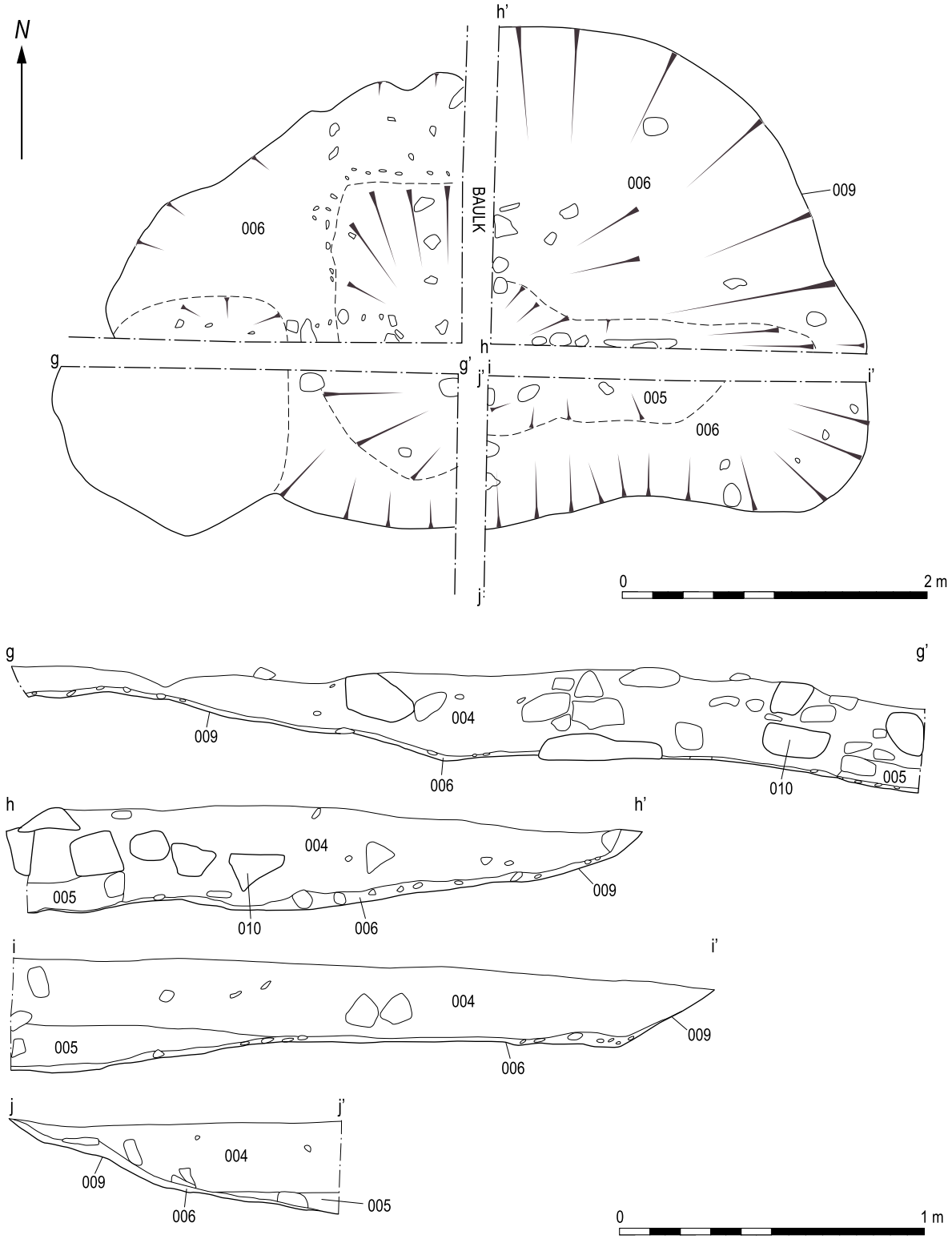
The second scoop (B) (007) was slightly smaller and much shallower (Figure 6.11). Whoever occupied the area in the mid first millennium BC also filled this with their rubbish (003), over cobbles (008) that seemed to have tumbled or been tossed rather than been laid in the scoop. Like the other scoop (A), it contained charcoal from hearths and a little burnt cereal.

There was modern glass in scoop B, and unburnt seeds throughout the fills of both scoops. This indicated some degree of modern disturbance, probably through ploughing.

Biel Water

The site excavated at Biel Water may have been a small homestead, perhaps inhabited by one family that worked the land around it (see Figure 6.1 for location). It consisted of a probable dwelling (the remains of which were not excavated due to time constraints) and a smaller building or working area, all enclosed by a palisade (Figure 6.12). It was occupied before the ditches of the Eweford Cottages enclosed settlement began to fill up (see below).

To enclose the homestead, the occupants dug a trench (008) in an oval shape, measuring about 22m long by 15m across, leaving a gap for an entrance on the east. At its



6.9 Scoop A at South Belton in plan and section.

northern terminal, they dug the trench about 0.8m wide and 0.24m deep, giving it a gently curving profile, while on the south-west it was slightly narrower and deeper. The trench may have lain open for a while, accumulating a silty layer (007) in its base, along with a cow's tooth. Then upright timbers were set in it, their bases braced with packing stones that clustered at regular points along the length of the palisade trench. Excavated material, consisting of mid brown orange sandy silt (003), was backfilled around the posts, and a roughly retouched flint scraper (SF 39) and a large sherd of pottery (SF 4) were incorporated in the fill.

Inside the enclosure was an area of sediment, up to 8m across, which was clearly distinct from the surrounding natural subsoil and may have related to the remains of a structure (005). In addition to this putative structure, which was not excavated, the occupants created another, smaller building about 5m in diameter inside the palisade. They scooped out a circular area (012), giving it steep sides and a flat base to form the floor, and they appear to have built a low stone wall (009) around the edges to enclose it (Figure 6.12). Their activities inside it built up an occupation layer (010). Trampled into it were the remains of their fires, cereal parching episodes

6.1

Animals at the later prehistoric A1 sites

Animal bones were recovered from four sites along the route of the A1: Eweford Cottages, Phantassie, Biel Water and South Belton. Although most of the bone was poorly preserved, and much of it was burnt or completely calcined, it was possible to identify the bones of several different species. Large domestic mammals dominated all of the assemblages: cattle, sheep/goat, pig and horse were all identified, although only at Eweford Cottages were all four present at the same site. It is not surprising that pigs and horses were absent from Phantassie and Biel Water respectively, given the poor state of bone preservation and the small sizes of the assemblages.

Table 6.1 Animal remains from the later prehistoric A1 sites

Eweford Cottages	*Phantassie*	*South Belton Ford*	*Biel Water*
cattle	cattle	cattle	cattle
sheep/goat	sheep/goat	–	sheep/goat
pig	–	pig	pig
horse	horse	–	–
large ungulate	large ungulate	large ungulate	large ungulate
small ungulate	small ungulate	small ungulate	–
–	ungulate	ungulate	–
indeterminate mammal	indeterminate mammal	indeterminate mammal	indeterminate mammal
small mammal	small mammal	small mammal	small mammal
–	–	field mouse	bird: Corvid

It was difficult to determine age at death in most cases because of the small size of the surviving fragments. However, dental evidence from Phantassie showed that immature and young adult cattle had been killed, while young pigs had been killed at Eweford Cottages and Biel Water.

The bones also provide some evidence for the appearance of the sheep: a fragmentary sheep skull from Phantassie, although incomplete, showed evidence of having borne horns. Another skull fragment from Phantassie bore a single small horn core and was probably from a female sheep.

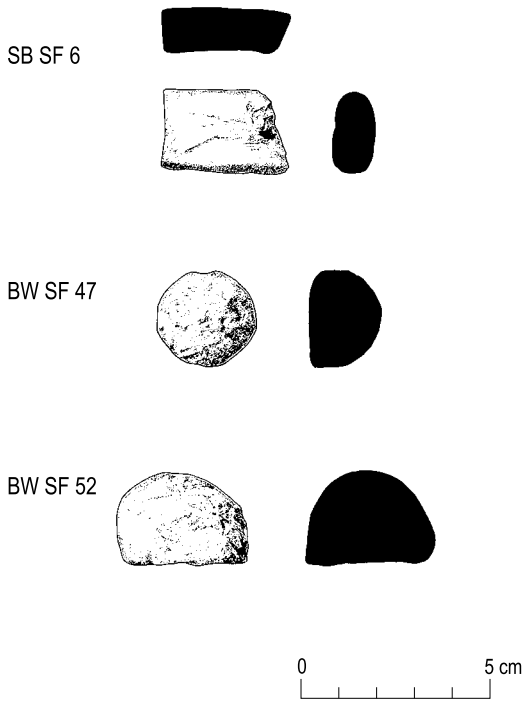
Some of the bones from Eweford Cottages, Biel Water and South Belton had been cut using metal tools. The most striking example was a cattle first phalange (toe bone) from Eweford Cottages. Seven parallel hack marks on the anterior surface of the bone, probably made by a heavy blade such as a cleaver or axe, were interspersed with five thinner, parallel knife cuts, also made by a metal blade. Some bones from Biel Water still bore traces of having been gnawed by carnivores, such as dogs or foxes, probably after having been thrown into an open rubbish pit.

The bones provide the only evidence of the animals which contributed to the local economy at all four sites. Exploitation of domestic rather than wild animals seems to have been the norm. However, although deer bones were absent from the sites, deer were probably hunted. At the nearby Iron Age site of Broxmouth hillfort, a substantial assemblage of well-preserved animal bones provide a good comparison for the material from the A1. At Broxmouth, the bulk of the assemblage was from domesticated animals, mainly cattle, while deer were relatively sparse (Barnetson 1982, 101–5). Similarly, during the Iron Age phases at Castle Park, Dunbar, the assemblage was dominated by cattle and sheep/goat bones with only a few deer bones (Smith 2000, 195). The same proportions occurred in the animal bone at Fishers Road East and West, Port Seton (O'Sullivan 2000, 54; Hambleton and Stallibrass 2000, 148). Exploitation of wild species does not, therefore, seem to have been widespread in East Lothian at this period, implying that communities were managing their domestic livestock in ways that met their protein requirements. A further factor in the apparently rare killing of wild mammals such as deer and wild boar in the East Lothian Iron Age may have been agricultural pressure on their habitats.

CATHERINE SMITH

and meals: fragments of charcoal from birch, hazel and oak, hazelnut shell and heavily burnt cereal grains (Miller and Ramsay, see Chapter 12 and Archive). Hazel (*Corylus*) charcoal from the floor produced a radiocarbon date of 410–200 BC (SUERC-8197). Also pressed into the floor deposit were burnt and unburnt bones of domestic cattle, pigs, other ungulates and the mandible of a crow or rook (*Corvus corvus/frugilegus*) (Smith, see Chapter 12 and Archive). There was evidence of butchery on one rib shaft fragment (SF 51), which bore a thin knife cut.

Later, the putative wall collapsed or was deliberately destroyed, and pitched boulders (016) covered the floor (010). The inhabitants did not bother to clear the stones away, but dumped organic rubbish over them that built up as a silty midden layer (001). This also contained charcoal from birch and oak, along with burnt cereals and burnt and unburnt bones of domestic cattle, sheep/goat and other ungulates. Notably, one cattle tarsal bone (a naviculo-cuboid) had a hole (*c.* 10mm diameter) pierced through it and two knife cuts on its anterior surface. The inhabitants also left behind sherds of pottery from at least three vessels, including a large, barrel-shaped pot (Figure 6.13: V 1); a stone ball (Figure 6.10: SF 47), perhaps a gaming piece or a slingstone, and a broken grinder (Figure 6.10: SF 52) (McLaren and Hunter, see Chapter 12 and Archive). They seem to have used the former structure as a midden pit, leaving it open to the elements and to scavengers like foxes or dogs; two fragments of bone (one from 010 and one from 001) had been gnawed by carnivores (Smith, see Chapter 12 and Archive). Two fragments of birch (*Betula*) charcoal from the midden layer yielded identical radiocarbon dates of 390–190 BC (SUERC-8192 and SUERC-8196). The similarity in calibrated ranges between these dates and that from the occupation deposit (010) suggests that the wall collapsed and the scoop filled with midden soon after it was abandoned.



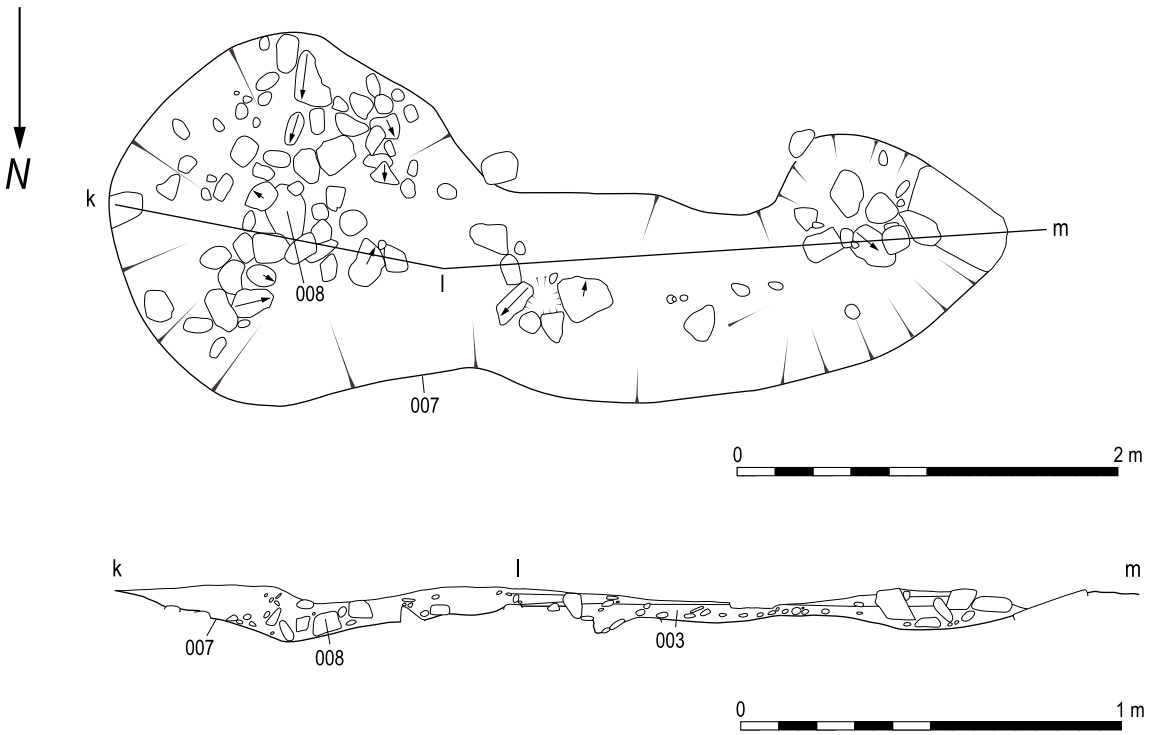
6.10 The heavy stone implements from South Belton and Biel Water.

At some point, the occupants also removed the palisade. A band of dark silt (013) along the base of the cut on the south side suggests that they deliberately demolished it, perhaps rocking the posts back and forth to remove them. This would have left only the rotten bases in place, with the clusters of stone packing lingering in the upper fill.

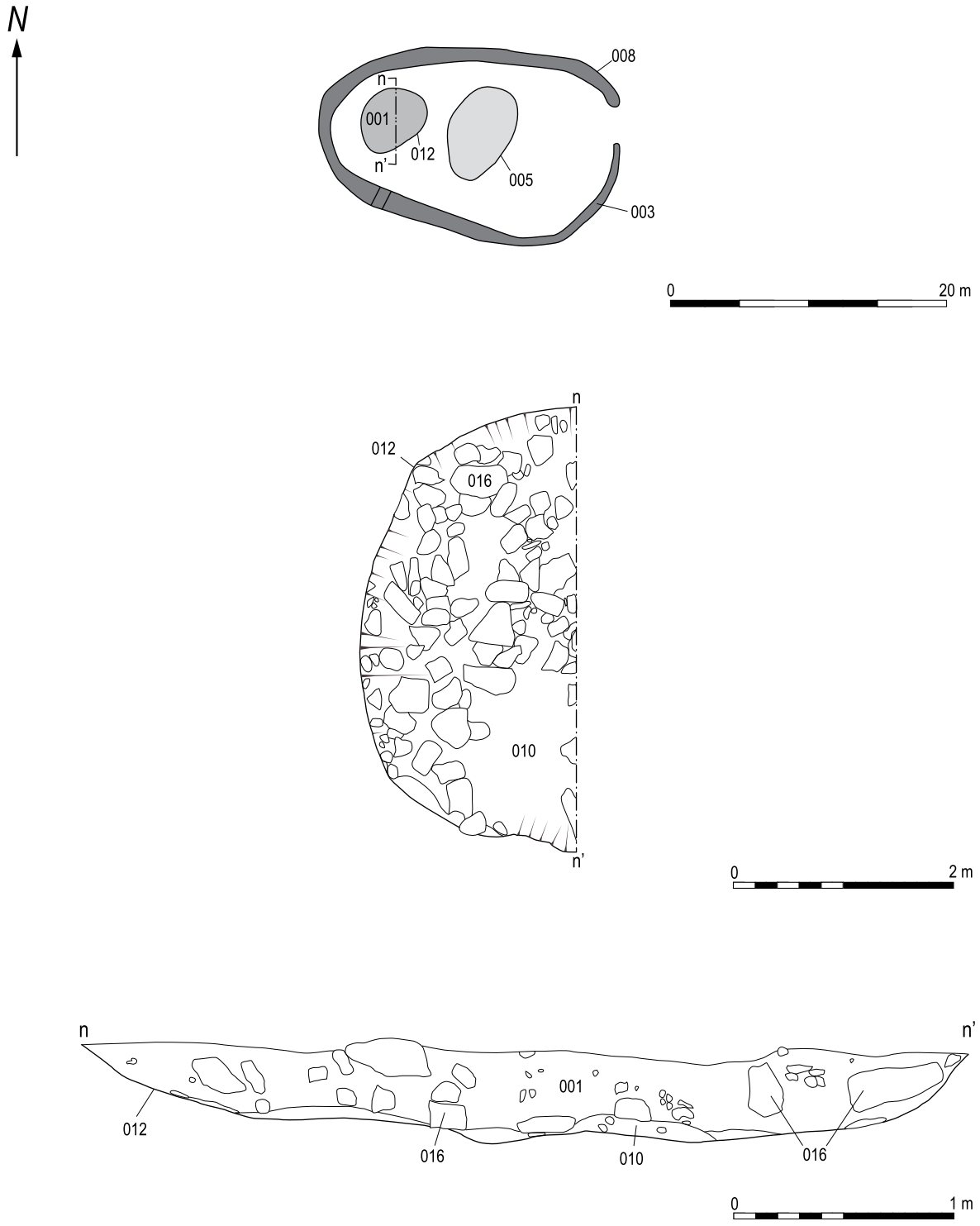
Thistly Cross

Located *c.* 500m to the east of South Belton (Figure 6.1) were the partially surviving stone footings of a single structure, built in a natural hollow. At the base of the hollow, an area of approximately 12m by 6m (016) had been excavated and filled with stones to form a metalled surface (010). The structure had been built on this stone surface, which may have then served as a yard (see Figure 6.14).

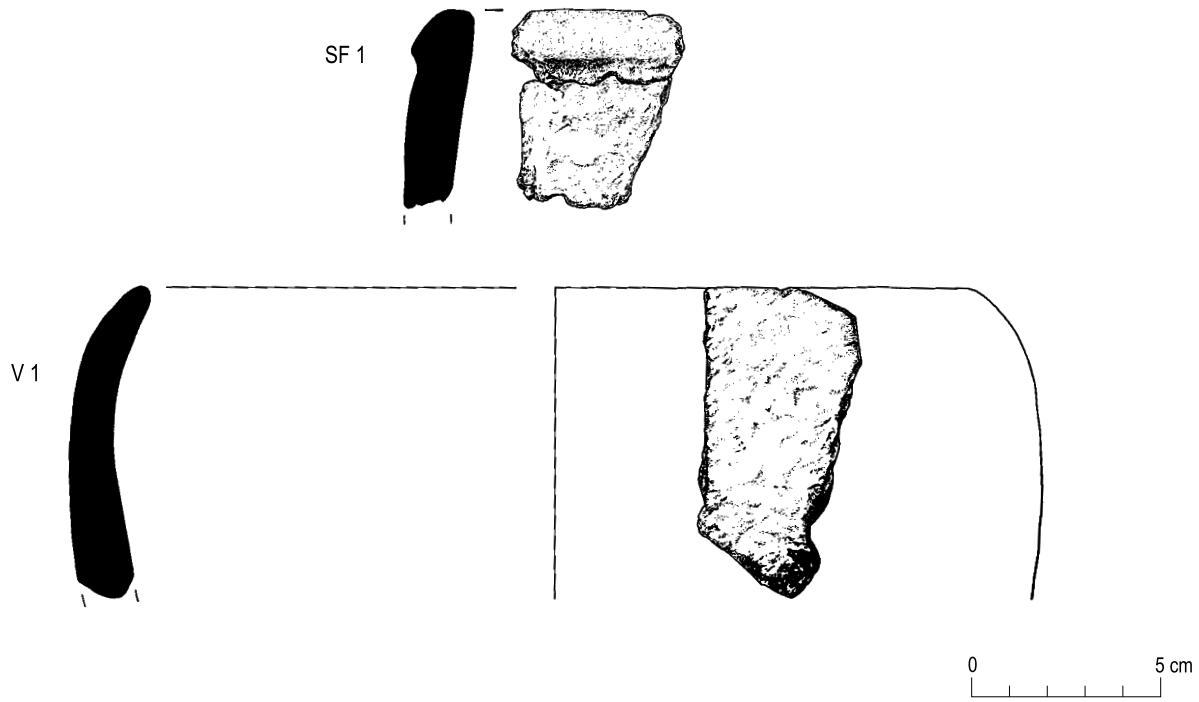
The remains of the structure may have been partially robbed out or damaged by ploughing. They comprised a length of wall (1) with outer facing stones (002/018) and a rubble core (003), which could be traced for 4m. Another double-skinned wall (2) ran parallel to this, 1.2m to the east. Traces of what may have been a third wall (3) were evident at the southern end of walls 1 and 2, with the



6.11 Scoop B at South Belton in plan and section.



6.12 The Biel Water enclosure (top), showing the scoop (012) in plan and section.



6.13 The pottery from Biel Water and Thistly Cross.

remnants of a wall face (019) and rubble core (007 and 020) surviving. On balance, the structure was probably sub-rectangular in shape and it may have had an internal division, represented by wall 2. Incorporated into wall 1 was a stone with a pecked-out hollow (Figure 6.15: SF 2) that may have been used as a mortar (McLaren and Hunter, see Chapter 12 and Archive).

Between walls 1 and 2 there survived traces of an occupation deposit (009); its presence suggests that the walls were contemporary. Ten sherds of pottery were found in the deposit, and these probably derive from four different coarse pottery vessels (Figure 6.13: SF 1). One had a distinctive bevelled rim with a slight finger-tip groove beneath (MacSween, see Chapter 12 and Archive). The exterior and interior surfaces of these sherds are variously sooted, suggesting that they were used for cooking.

To the east of wall 2 was a layer of stone (014), which may represent rough paving (Figure 6.14). It was unclear whether this related to a second phase of the structure's use, or whether the difference in deposits to either side of wall 2 reflected different rooms or cells in the structure.

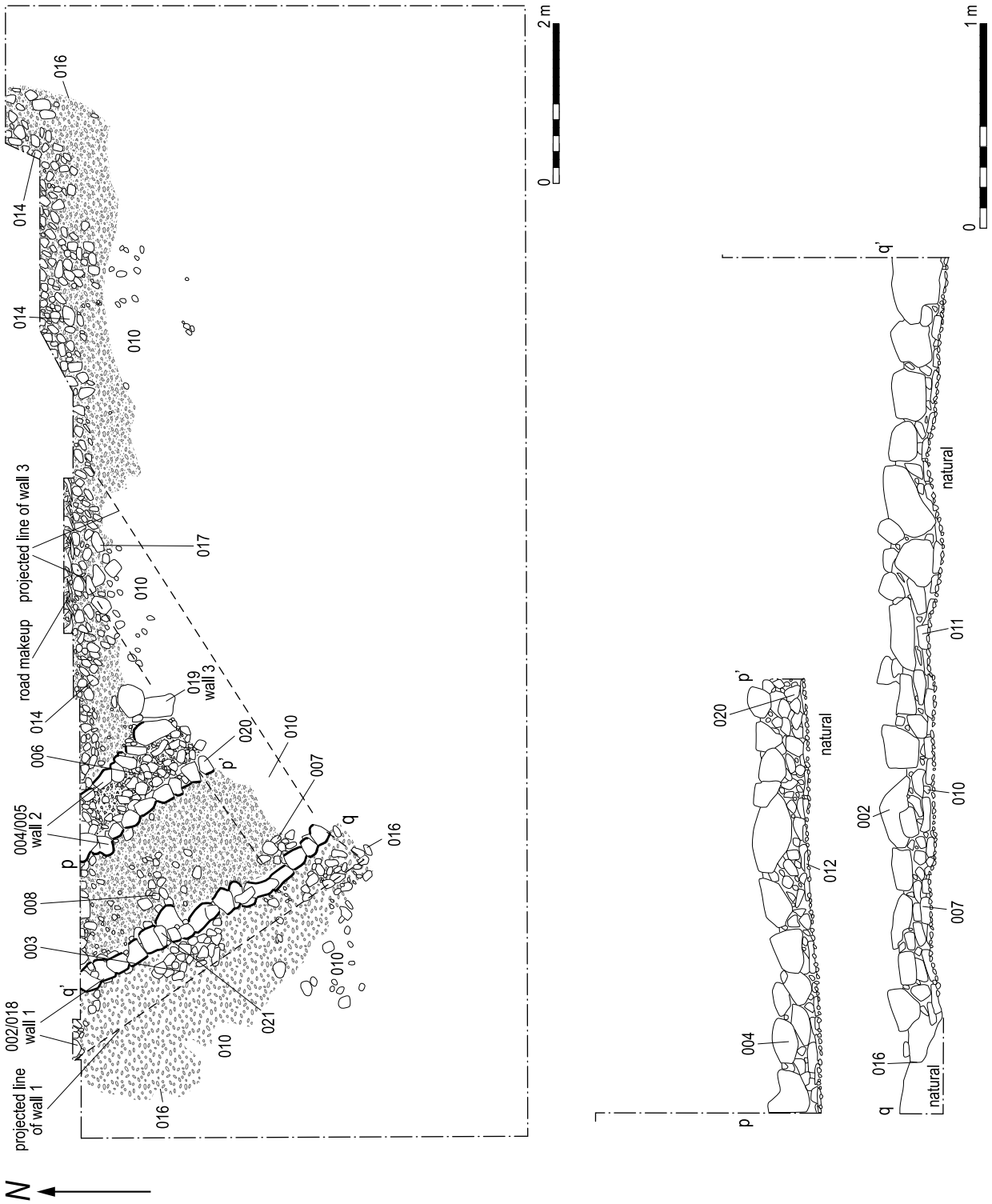
Investigation around the structure established that it was probably unenclosed, with no traces of a palisade or ditch. While no dating evidence was recovered, the nature of the pottery suggests a later prehistoric date.

Eweford Cottages Settlement

About 400m to the east of the Eweford West mortuary site, a large enclosed settlement existed from the later first millennium BC (Figures 6.1 and 6.16). Excavation of a small slice of the enclosure's western edge yielded evidence for its origins, for the infilling of its ditches and for a later period of settlement.

The enclosed settlement (390–200 BC)

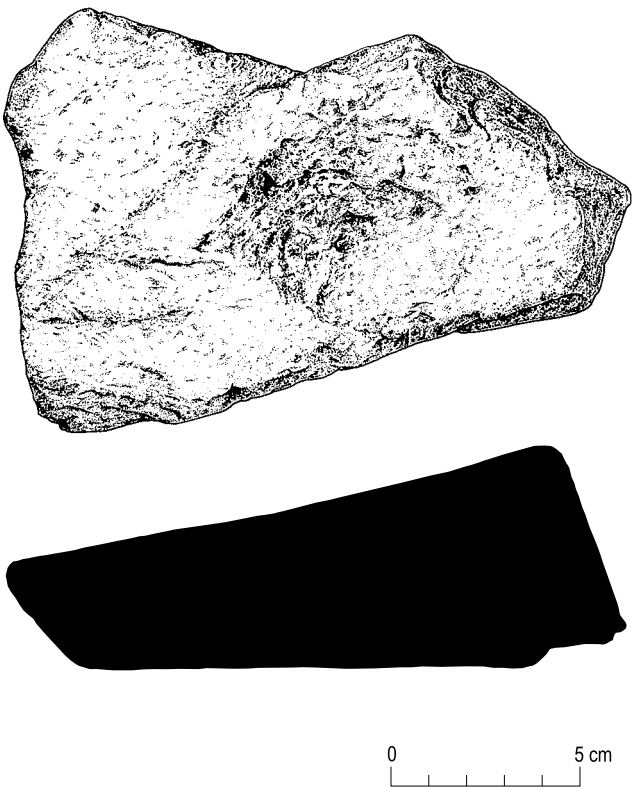
The group that created the enclosed settlement at Eweford Cottages chose a slight natural rise. Cropmarks indicate that they defined the settlement by digging at least two concentric ditches, about 5m apart, to form a roughly circular enclosure that measured about 60m in diameter (Figure 6.16). Other lengths of ditch along the perimeter are also evident in the cropmarks visible on aerial photographs, so there may have been phases when new ditches were dug and old ones refurbished or abandoned. The excavations examined only the western edge of the enclosure, which lay outside the scheduled area and



6.14 The structure at Thistly Cross in plan and section.

beneath a C-category road, revealing evidence for the cutting and infilling of the outermost ditch and for later settlement activity.

Here, the early inhabitants of the settlement dug the lengths of ditch that defined the enclosure's western entrance; the excavation trench exposed the ditch terminals on either side (Figure 6.17). They excavated the ditches (A (009) and B (100)/(120)) up to 2m deep and more than 3m wide at the terminals (Figure 6.18). When the diggers reached the base their heads would have been below ground level, and they would have had to throw the spoil out over the sides or pass it up to helpers in baskets or buckets. In the terminals they created narrow, flat bases, but further along they dug the bases into 'V' shapes. The excavation of the inner and outer ditches, if they were contemporary and dug consistently to this depth, must have taken many days of hard labour to create the entire enclosure.



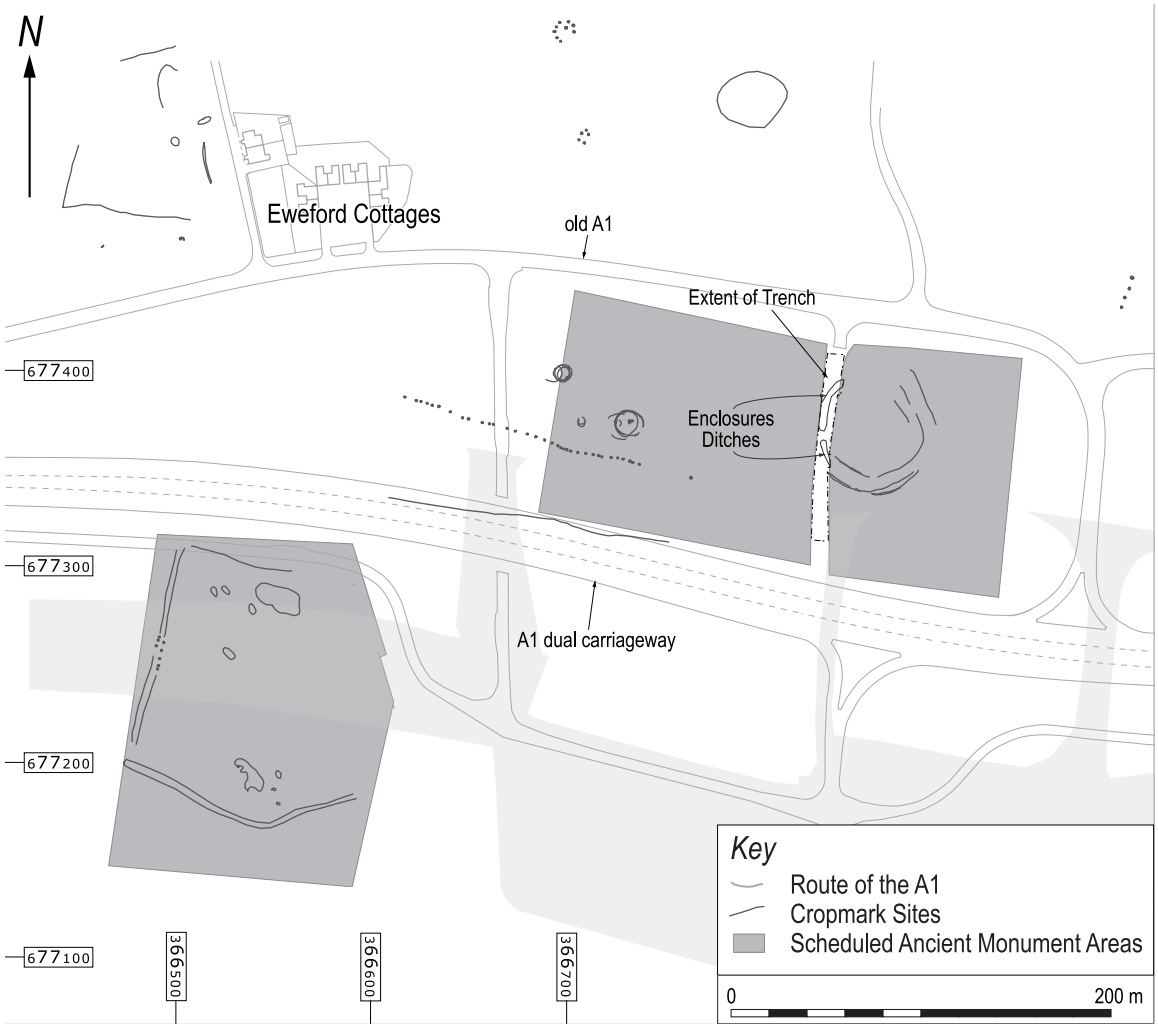
6.15 The pecked stone from Thistly Cross.

Radiocarbon dates indicate that people dug these ditches sometime before the third or fourth century BC (see below). The terminals flanked an entrance about 4m wide, broad enough for carts and people to pass easily. The entrance was placed to look west, toward the ancient mortuary site at Eweford West and the massif of Traprain Law. No evidence was found for a gate. In choosing its position, the enclosure's occupants may have considered physical factors such as prevailing winds and drainage, but other, more esoteric factors such as superstition or local politics might have also played a part. It is not clear from the cropmarks whether the enclosure had another entrance.

The builders of the enclosed settlement also set stone kerbing (122) (slot 9) and (139) (slot 10) along the inner edge of the northern ditch (B) (Figure 6.19). This may have been set to stop erosion at the edge; alternatively and more likely, these were the footings for a rampart, with the excavated spoil heaped against them to mark the enclosure above ground as well as below it. The excavated portion of the ditches had been truncated and disturbed by later activity, making it difficult to establish with certainty whether the kerbs related to a rampart.

The occupants of the Eweford Cottages enclosure kept the outer ditches open for a period of time; this would have involved regularly clearing out rubbish and silt that accumulated in them. The excavations found slight evidence for this kind of maintenance in the form of a possible re-cut in ditch A, as evident in slots 5 (045; Figure 6.18, t-t') and 6 (036) and also in slot 5 by a possible primary silting (131) of the re-cut (Figure 6.18, u-u'). Eventually, however, the occupants began to neglect the ditches, allowing the sides to weather and erode. Their bases filled with sandy silts that washed in and were not cleaned out; (037)/(129)/(131)/(042)/(043)/(049)/(051) in ditch A, and (098)/(096)/(088)/(113)/(114)(115) in ditch B. Two samples of birch (Betula) charcoal recovered from these early silts, (096) in ditch B and (037) in ditch A, produced identical radiocarbon ranges of 390–200 BC (SUERC-8172, SUERC-8178), showing that this neglect began in the third or fourth century BC.

As the silts accumulated, they captured fragments from the daily life of the settlement. Small pieces of bone from cattle and horses (Smith, see Chapter 12 and Archive) washed into the earliest silts (129)/(131) in ditch A.

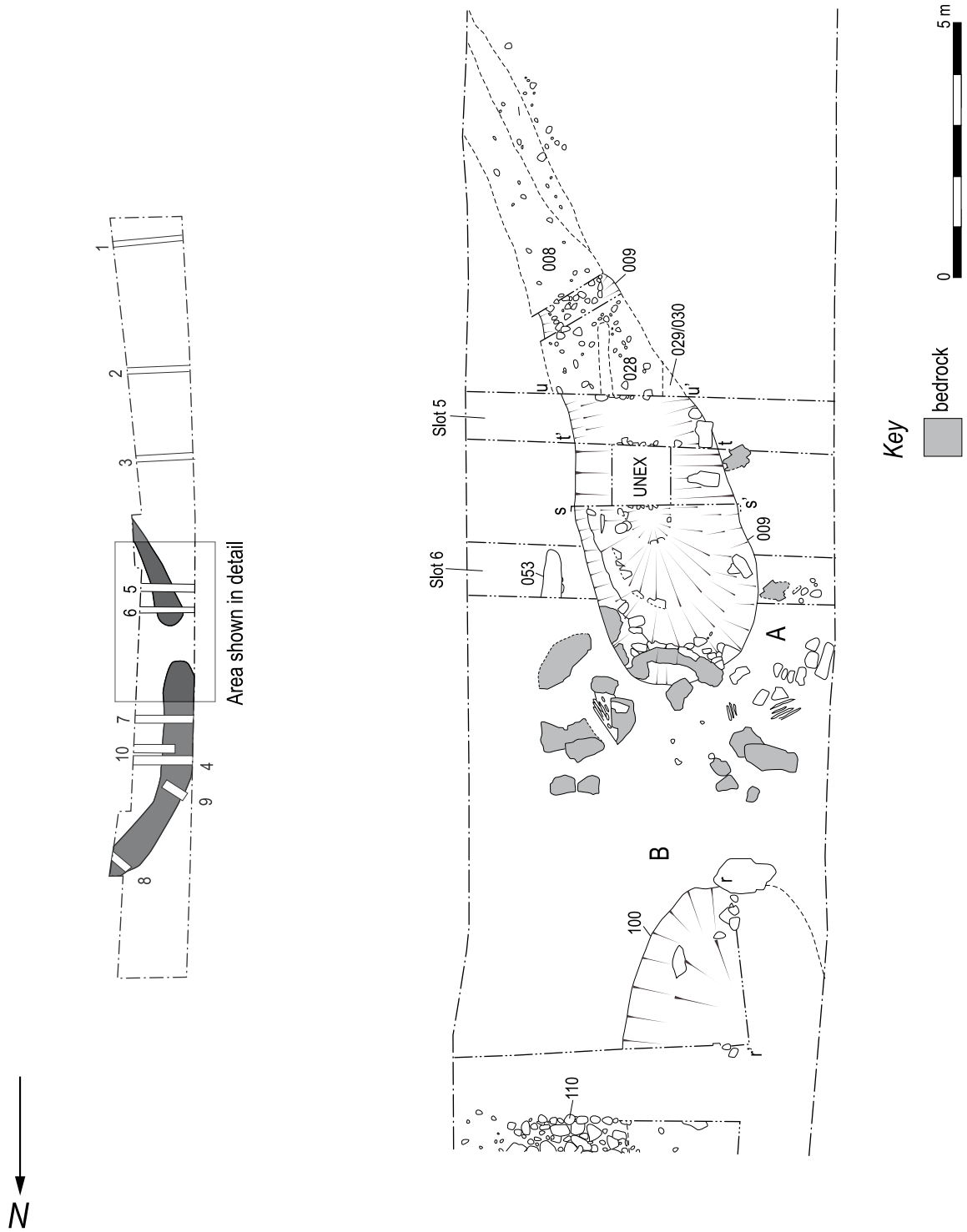


6.16 Cropmarks and scheduled areas at Eweford Cottages and in the vicinity.

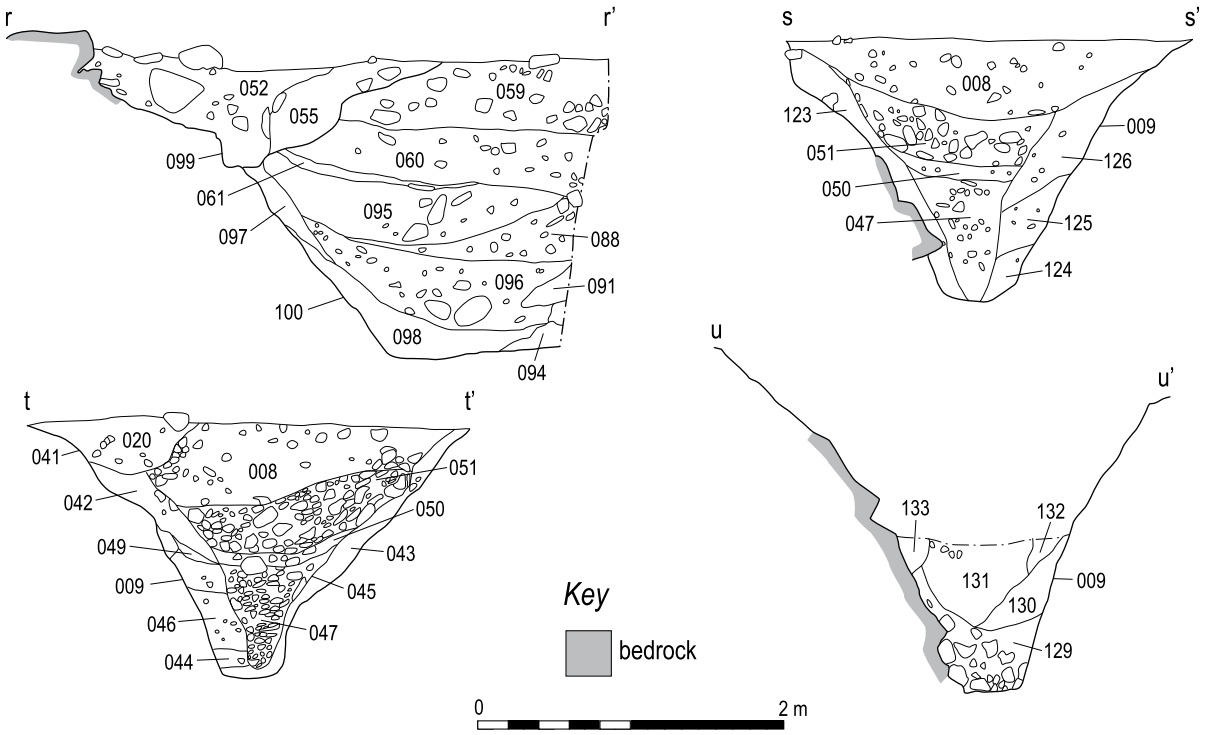
On windy days, pollen from nearby fields and charcoal from domestic hearths blew into the ditches, lodging in the damp sediment. The charcoal, which came from birch, hazel, heather and oak, show that the inhabitants were gathering fuel from local, mixed deciduous forests and heathland (Miller and Ramsay, see Chapter 12 and Archive).

After the silts had built up to a depth of a metre across most of the ditches (and up to 2m in the ditch A terminal), the settlement's occupants altered the way they were treating the ditches. Rather than simply allowing them to silt up naturally, they began to fill them in deliberately. In doing so, they effectively erased the enclosure that had defined their settlement. Particle size, magnetic susceptibility and phosphate analysis of the lower and upper ditch fills confirmed the on-site interpretations: the lower fills accumulated naturally, through silting, while the upper ones were the result of human activity and derived from occupation waste and manure. These analyses also suggested that both ditches filled in at the same time, as their fills were very similar (Wilson, see Chapter 12 and Archive).

To fill the ditches, the inhabitants gathered midden material and dumped it in them. The midden dumps were all quite similar (see sections, Figure 6.18), consisting of dark brown to black sediment, rich in fragments of bone, burnt cereals, pottery and charcoal ((008) and (071) in ditch A and (095), (061), (060) and (059) in ditch B). The fact that relatively little occupation debris had washed into the earlier, incidental fills suggests that the occupants stored their rubbish in other places, somewhere away from the ditches, before they re-used it in this particular way.



6.17 The excavated ditch terminals at Eweford Cottages enclosure.



6.18 Sections through the ditches at Eweford Cottages enclosure.

Sherds representing six different vessels (Figure 6.20: V 1, 3, 5, 7) were found in the fills of ditch B, all of them from bucket-shaped vessels (MacSween, see Chapter 12 and Archive). One vessel (3) was decorated with a series of dots around the lip and a groove below. Another vessel (7, Figure 6.20) was represented by a sherd from a deposit (107) sealed beneath paving (104) next to the open ditch. Many of the sherds bore evidence of sooting and residues, suggesting they had been used for cooking.

In ditch A, pottery sherds representing three different vessels (V 9–11), were found in the uppermost midden fill (008) (see Figure 6.20: V 10). These vessels were generally finer than those from ditch B, and may indicate a chronological distinction (MacSween, see Chapter 12 and Archive). Blackthorn type (*Prunus spinosa*) and birch (Betula) charcoal from two midden fills (008 and 061) in ditch A, and a grain of emmer/spelt wheat (*Triticum*) from one of the same midden deposits (061), all yielded the same calibrated radiocarbon ranges of 350–40 BC (SUERC-8177, SUERC-8187 and SUERC-8176 respectively). This would suggest that the ditches were filled in over a fairly short period of time, an interpretation supported by the absence of silts between episodes of dumping.

Subsistence and the daily grind

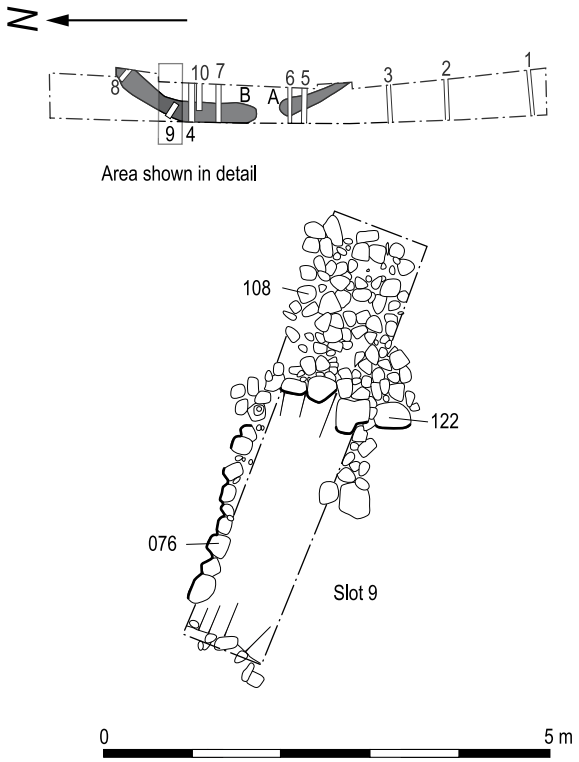
The midden fills yielded abundant information about contemporary life in the settlement. They show what households were burning in their domestic hearths: birch, hazel, blackthorn, alder, willow and oak (Miller and Ramsay, see Chapter 12 and Archive). This would have involved excursions to regenerated scrub woodland in order to cut branches or trees, or to gather sticks from the forest floor. Burnt hazelnut shells, elderberry and rowan seeds show they were also gathering wild fruits and nuts to eat (Miller and Ramsay, see Chapter 12 and Archive).

The fires they tended served other purposes besides cooking food and providing warmth. The midden fills contained burnt cereal grains, including six-row barley (naked and hulled) most abundantly, as well as emmer wheat, spelt wheat and oats. They also contained small quantities of burnt chaff, cereal weeds and the stems and underground twigs from heather plants. These show that people were processing cereals at the settlement – cleaning the grains to eliminate the chaff, then parching them to draw out the moisture and preserve them from fungal attacks (see text box 6.2). The small amount of chaff suggests that this waste was created later in the

process, probably after winnowing (Miller and Ramsay, see Chapter 12 and Archive).

Micromorphological analysis of thin sections through two midden fills (109 and 054) in the ditch B terminal identified the residues of burnt turf (Simpson, see Chapter 12 and Archive), and the botanical analysis of various midden deposits also found carbonised weed seeds from turf that grew on heathland or damp grassland (Miller and Ramsay, see Chapter 12 and Archive). The settlement's inhabitants may have used turves in their buildings, for walls, roofs or even furniture, adding it to their midden or compost heaps when the buildings fell down or walls were refurbished. They may have also collected turf to use in cereal parching.

We can picture someone setting a fire to dry the grain, perhaps spreading the cereal on a rough mat suspended over it and using damp turves to diffuse the heat and prevent the flames from touching the grains. On occasion, the mat would catch fire or some of the grains would slip into the flames and burn. At the end of the day, the fire's attendant would collect the dried grain and add it to the store that would see the settlement through to the next harvest. He would rake out the hearth, gathering up the charred grain, the charcoal and the remains of burnt turves. Thrown on the midden heap, the ashes would mix with animal bones and teeth, organic food waste,



6.19 Plan of the kerbing (122) along the inner edge of the northern ditch (B).

6.2

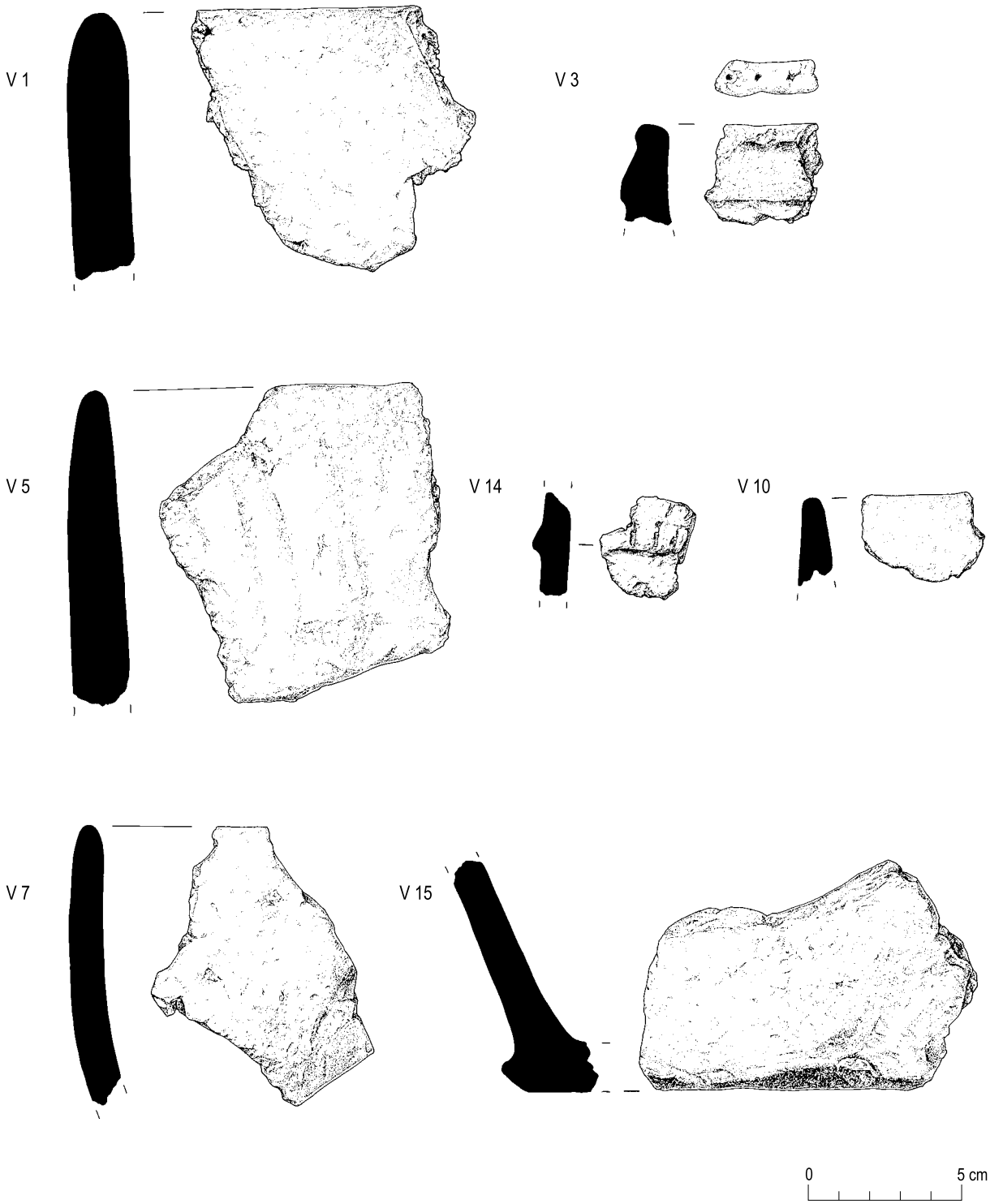
Cereals' transformation from crop to food

Cereal crops go through several stages of processing after harvesting until they finally end up in a form that can be eaten or stored.

Once the grain has been threshed from the stalks, the chaff has to be removed from the grain itself by pounding and sieving. The parching stage involves gently heating the grain to preserve it from mildew, so that it can be stored longer. Evidence of this process can be seen in the form of charcoal from the fuel used to heat the grain, the waste chaff thrown onto a fire and sometimes also burnt grain. Cereals could end up carbonised if the heat was so intense that the grain caught fire or if some accidentally dropped into the parching fire.

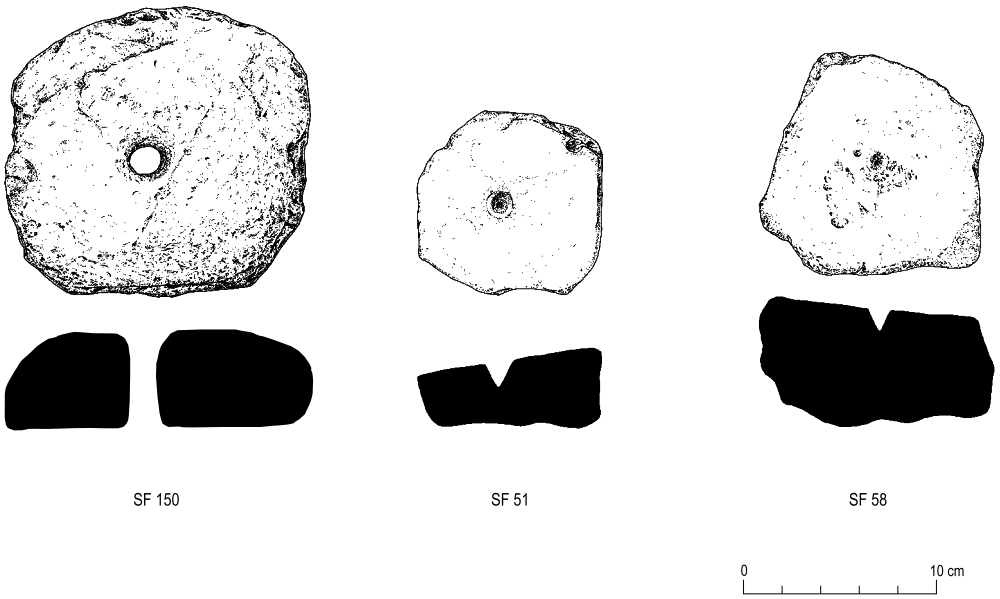
Evidence for parching fires and their associated waste was found at Eweford Cottages and at Phantassie. These carbonised assemblages included an abundance of small heather twigs and underground stems of grasses and sedges, along with cereal grains and occasional fragments of chaff and weed seeds. The heather type twigs and grass/sedge rhizomes may be the remains of turves that had been collected from heathland, either to be used for fuel on the parching fires or, more likely, to damp down the parching fires to prevent the grain from getting too hot and burning, instead of drying. This association of carbonised heathland turves with cereal parching fires was also observed at Fisher's Road West, another Iron Age site in East Lothian.

JENNIFER MILLER and SUSAN RAMSAY



6.20 Pottery vessels from Eweford Cottages.

6.21 Kerbs, walling and stony surfaces sealing the ditches.



6.22 The querns from Eweford Cottages.

sherds of pottery, bits of textile, broken wooden and bone implements. Most of this material would later decay away under the action of aerobic bacterial activity in the site's relatively dry, freely draining silty loam soils.

Animal bones from the midden fills show that cattle, sheep/goats, pigs and horses were consumed at the settlement (see text box 6.1). They would have been butchered for food, and their hides and wool used for clothing and textiles and the bone and antler for tools, pins, toggles and hafts. Some of the animals would have provided milk at certain times of the year, which in turn could have been used to make cheese and butter. The micromorphological analysis of the midden fills also found fine mineral residues, indicating high temperature burning (above 800° C). This is consistent with metal based 'industrial' fuel combustion activity (Simpson, see Chapter 12 and Archive), and perhaps suggests that people were at work smelting and smithing metal at the settlement.

The unenclosed settlement (40 BC to AD 210)

After the ditches were filled in, the settlement at Eweford Cottages began to spread out over the line of the old enclosure. This began sometime after 40 BC.

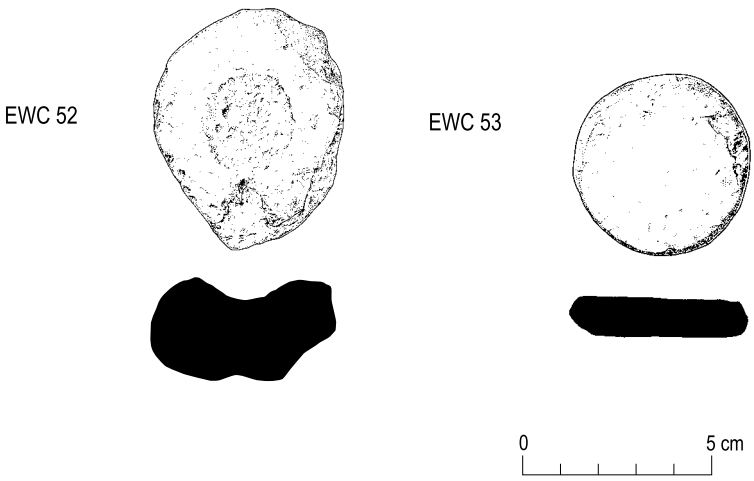
The occupants of the settlement set boulders and smaller stones to form kerbs or wall bases over the filled-in ditches (Figure 6.21). Most of these sealed the northern ditch (B). The two most substantial (079 and 080) ran parallel to each other, with one (079) continuing farther to the north; these may have formed a thick, double-skinned wall which returned to the east at its southern end (as (084)). They laid a short length of kerb (081) to extend south from the corner of this putative structure, and another (076) extending from it across the line of the filled ditch. To the east of the possible double-skinned wall, they laid a spread of sub-angular stones (082) over a sub-rectangular area with an extension to the east. They may have done this to level the ground, and to provide a firm base for a floor (a timber one, for example). Equally, it is possible that the length of stonework (076), which ran on a slight arc across the in-filled ditch, may have been a remnant of a structure pre-dating the creation of the other kerbs or walls (079) and (081).

To the east of these kerbs, they laid an area of paving (104) along the eastern side of the northern ditch (B), respecting its edge (not illustrated). Into the paving they set part of a well-used, bun-shaped rotary quern base (SF 58) (Figure 6.22). Bun-shaped querns are thought to date to the period from the first century BC to the second century AD (Mackie 1972b, 144; McLaren and Hunter, see Chapter 12 and Archive). Other lengths of kerbing or wall bases (128)/(076)/(084) identified during excavation could be the fragmentary remains of other buildings. For example, the kerbing (128) could represent the fragmentary remains of a double-skinned structure; its arc could be related to the kerb (076), together forming a small, sub-circular structure *c.* 5m diameter. The settlement's inhabitants may have rebuilt structures at different times in the same area, robbing out walls and re-using stones for new ones, so the excavated picture

6.23 The possible house platform and paving sealing the northern ditch, in plan and section.

may be the result of piecemeal, ongoing building activity. Later activity on the site, particularly its metalling for a road before the construction of the modern C-category road, truncated and compressed the stony features and made their phasing difficult to untangle.

At the northern end of the excavated area, the occupants dug a broad scoop (119) up to 0.5m deep across the line of the old ditch, truncating the upper fill (113) (Figure 6.23). They created a flat base and vertical edges, perhaps to serve as the foundation for a house platform. While the scoop stood open, the sides slumped and silted slightly (121)/(118) after bursts of rain. As people carried out their everyday activities inside it, they created an occupation deposit (103) rich in birch, hazel and heather charcoal, burnt cereals and animal bone. A grain of six-row barley (*Hordeum vulgare sl*) from it produced a radiocarbon date of 60 BC–AD 90 (SUERC-8182), while a fragment of hazel (*Corylus*) charcoal yielded a date of 40 BC–AD 140 (SUERC-8181). After this layer had built up, they dug a large pit (127) into it. It held a reddened, heat-affected slab, which may have served as a hearth.



6.24 The stone mortar and disc from Eweford Cottages.

Later, they sealed the floor layer and the pit with flat stones to form an area of paving (021) about 3m by 2.5m in extent. Into it they set the upper and lower elements of two old, well-used rotary querns (Figure 6.22: SFs 50 and SF 51), side by side. As they continued to use this area, they built up a layer of black-brown silty sand (101) over the paving stones, scattering their food and hearth waste into it: bones of sheep/goat and pig (Smith, see Chapter 12 and Archive), both burnt and unburnt; birch, hazel, oak and heather charcoal, and burnt cereals (Miller and Ramsay, see Chapter 12 and Archive). They also discarded a small, polished bone implement (SF 28; not illustrated), a stone mortar (SF 52) and a stone disc (SF 53) that might have been used as a palette (McLaren and Hunter, see Chapter 12 and Archive) (Figure 6.24). Sherds of pottery from two different bucket-shaped vessels (V 12 and 15) were also found in the layer (Figure 6.20: V 12). A grain of hulled six-row barley (*Hordeum vulgare var vulgare*) from the occupation deposit (101) produced a radiocarbon date of 40 BC–AD 210 (SUERC-8186). A stone setting (135) along the deposit's southern edge could represent the remnants of the structure's wall.

The people that began building these new elements of the settlement may have been the same ones that filled in the ditches. A sherd of pottery found in the uppermost midden fill (059) of terminal B came from the same vessel (V 1, Figure 6.20) as another sherd found between two stones of the overlying kerb (081). This would suggest that, soon after they finished filling in the ditches, the settlement's inhabitants began to build on top of them. The radiocarbon date ranges from the later deposits point to this phase of the settlement having continued for perhaps two centuries.

Probably in the early modern period, a millennia and a half after the inhabitants had abandoned the settlement, rounded stones (028) were laid to form a metalled road over this western edge of the enclosure. The stones used were similar to those that formed the surfaces and structural elements of the post-enclosure settlement, complicating the archaeological record. Finally, the modern C-category road was built over this road, truncating the earlier archaeological remains in some places, particularly to the north.

Discussion

Lothian's small farming settlements in the mid to late Iron Age

Most of the archaeological remains treated in this chapter relate in some way to settlements. The ditches at Howmuir may have represented the boundaries between a dwelling and its surrounding field systems. The single post, which may have stood while the ditches silted up, hints at structural remains in the vicinity. The discrete dump of pottery and the palaeobotanical evidence suggest that the ditches lay on the margins of a settlement, probably comprising timber structures, from which the pottery derived. While the ditches' infilling during the second

millennium BC involved some disposal of refuse, they were mainly silting up naturally with sediment that washed or blew in from the surrounding fields. The small pit dating to the mid first millennium BC hints that Howmuir continued to be a focus of activity, albeit perhaps intermittently.

A clearer impression of settlement comes from the remains dating to the late first millennium BC to early first millennium AD at Eweford Cottages, Biel Water, South Belton and Thistly Cross. At Biel Water, unburnt and burnt animal bone fragments had been incorporated into a charcoal-flecked floor deposit. When these are considered with the evidence of butchery on one piece of bone, it suggests that households were processing and cooking meat in or around the building. The presence of a possible gnawed bone in the floor deposit also suggests that a dog had lurked inside. The collapsed stonework which sealed the floor deposit indicates that the scoop had been enclosed by a low wall, perhaps the footing for a more substantial timber and/or turf structure of which no further trace remained (see Figure 6.25). After the structure had been abandoned, people apparently continued to live close by, as they began dumping refuse in the pit. Fragments of pottery and a possible stone gaming piece were flung into it, along with further burnt and unburnt animal bone remains. The settlement may have housed a family group who were practising pastoral agriculture. Such small farmsteads may have been more common in the middle of the first millennium BC, precursors to larger, amalgamated, enclosed settlements such as Eweford Cottages.

A similar use of scoops for dumping refuse is evident at South Belton. The pits there were filled with fragments of burnt and unburnt animal bone, one of which showed evidence of butchery. Associated with these remains was a broken whetstone, perhaps used to sharpen the butcher's knife.

At Thistly Cross, we perhaps have a glimpse of the kind of domestic context from which the refuse at South Belton derived. Sherds from several pottery vessels were incorporated in the floor of what may have been a small room in a building. Although the structure is undated, the remains at Thistly Cross are comparable in character to the stone kerbing (079, 080 and 128) at Eweford Cottages and the pottery is consistent with a later prehistoric date.

Eweford Cottages and the evolution of enclosure

The origins and lifespan of the settlement at Eweford Cottages (Figure 6.26) coincided broadly with those of several other excavated enclosed (and later unenclosed) settlements on the Lothian plain, including Broxmouth (Hill 1982b), Fishers Road East and West (Haselgrove and McCullagh 2000) and St Germains (Alexander and Watkins 1998). The Eweford Cottages settlement appears to have originated as an enclosure rather earlier than Fishers Road East and West, but probably well after the creation of Broxmouth's substantial ditches and ramparts; the sequence at St Germains is not dated. Recent excavations by Durham University at a number of large enclosures around Traprain Law have also produced interesting results (Haselgrove forthcoming). Excavations at Standingstone established that an open settlement existed there during the mid to late first millennium BC, on the site of a late second millennium BC enclosed settlement (Haselgrove, pers comm). At Knowes, an enclosed settlement was established in the later centuries of the first millennium BC; the ditches were filled in and a scooped complex of stone-built structures existed by the early centuries of the first millennium AD (*ibid*). At Whittinghame Tower, the ditches of another enclosed settlement were out of use by the early first millennium AD, when a scooped

6.25 Reconstruction of the homestead at Biel Water.

complex with cobbled surfaces was built on the same site (*ibid*).

The creation of many of these large enclosures, with their deep ditches and in some cases ramparts, coincided with a period of extensive woodland clearance in southern Scotland (Innes and Shennan 1991; Dumayne 1993). As forests gave way to more open ground for agriculture, perhaps Lothian communities felt a need to create their own sense of enclosure around the places where they lived, as well as find uses for the trees they were felling. Enclosures would have increased control over who entered and left the settlement and how they did this, and may have been linked to communities' defining themselves in stricter terms. The very act of creating these enclosures would have made considerable demands upon labour and time (Haselgrove and McCullagh 2000, 186), demands that may have been met through communal efforts, or through the calling in of social or economic obligations, or even through slave labour. These and other issues related to later prehistoric domestic architecture are addressed more fully in Chapter 10.

A picture emerges from the botanical, bone and artefactual assemblages at Eweford Cottages of a settlement with a mixed farming economy. Those living here grew, cleaned and ground grain, and they butchered livestock inside or close to the enclosure. They may have practised some kind of metalworking at high temperatures, perhaps to make or repair their own tools. By implication, they may have also woven cloth, worked hides, made cheese and other dairy products and even pottery, but the excavations produced no direct evidence for these activities. They would have spent time regularly gathering fuel, both wood and turf, possibly at the same time as they were clearing land for crops. The greater proportion of oak in the botanical assemblage (in comparison to the later site of Phantassie; see Chapter 7) supports the interpretation that they were clearing older forests at this time.

The seasons and agricultural cycles would have governed their routines to some extent, as would have their belief systems (Barrett 1989a, 115). When they filled in the enclosure's ditches using rubbish created and stored up in their daily lives, they fundamentally

6.26 Eweford Cottages enclosure under excavation.

changed the nature of their settlement, and this must have expressed a change in how they perceived it themselves. The curation and re-use of midden material in this period is a phenomenon observed at other sites in the area (including Phantassie, see Chapter 7; Alexander and Watkins 1998, 248; Hill 1982b, 150; Haselgrove and McCullagh 2000, 78–9, 173). It may have been rooted in particular beliefs, and it is worth addressing in more detail (see Chapter 10). The inhabitants of the later, open Eweford Cottages settlement may have found other ways to express their beliefs, such as setting old quernstones into new floors or buildings.

The same mixed farming economy seems to have endured at the settlement during its open phase. The inhabitants do not seem to have changed the ways that they interacted with their physical environment, nor shifted their attention to different resources. They continued to process grain (including barley and wheat) and to eat domestic livestock (pigs, sheep/goats and cattle).

The filling in of the enclosure ditches, in the last century or two of the first millennium BC and into the early first millennium AD, accords well chronologically with the same phenomenon at other excavated enclosures in the area, including Broxmouth (Hill 1982b) and Fishers Road East (Haselgrove and McCullagh 2000, 172–3). This period also saw the creation of the cist at Pencraig Hill, which lies close to two (as yet undated) large cropmark enclosures at Overhailes (NMRS NT57NE 33) and East Linton (NMRS NT57NE 17). Perhaps whatever was leading to these fundamental changes in settlement enclosure prompted communities living near the former mortuary site on Pencraig Hill to link themselves to the monument, and to ancestral heritage or rights, through this act.

The economic traditions visible at Eweford Cottages had a longstanding history, developing from at least the mid first millennium BC, when the scoops at South Belton were filling up, and they continued in practice at the much smaller homestead at Biel Water. These two sites provide valuable glimpses into human activity in the environs. The rubbish-filled scoops at South Belton hint at small-scale domestic and farming settlements around the time when ideas for constructing monumental settlement enclosures were gathering momentum and taking effect. The homestead at Biel Water, tucked inside its palisaded enclosure, and the small stone structure within a natural hollow at Thistly Cross, may have been two of many dotting the coastal plain between the large enclosures and the more substantial farmsteads or villages like Phantassie.

The cists: acts of remembrance

The remarkably similar acts carried out at the ancient (fourth millennium BC) mortuary sites of Eweford West and Pencraig Hill raise interesting questions about the ideas and beliefs of communities living in Lothian in the mid to late first millennium BC. Both acts involved digging into these ancient sites, creating formal receptacles and leaving human remains behind, in effect making them part of the monuments. In both cases, the people who did this must have known that the monuments had originally been places concerned with the dead, and they believed it was still appropriate to use them in that way. Also in both cases, they knew where they should set the cists in relation to the footprint of the long-abandoned monuments: at their western edges, in the entranceways. This knowledge had endured through the many generations that had lived and died since the monuments were destroyed, and it also endured over the 200 to 800 years that separated the two acts. This in turn suggests that strong oral traditions recounting factual or mythical histories had survived over millennia, though they may have changed considerably with the passage of time (see Bradley 2003; Rowlands 1993). Such histories may have been recalled around the domestic hearth, and perhaps the hearth waste or midden deposited in the cists alluded to that context. The uses and expressions of social memory at these two places are explored further in Chapter 11.

Conclusion

The various excavations discussed in this chapter produced a range of evidence for settlement in later prehistoric Lothian, over a period of perhaps 1800 years. They have afforded glimpses of settlement and domestic activity at different scales – from the simple, midden-filled scoops at South Belton to the enormous enclosed settlement at Eweford Cottages. Similarly, the nature and intensity of people's activities at these different sites varied over time and location.

Pieces of evidence from the individual sites evoke particular moments and scenes: downpours at Howmuir washing ploughsoil down slope into the settlement's ditches; the dismantling of the Biel Water palisade, rubbish filling the collapsed structure, carrion picking over the remains. At Eweford Cottages, the rhythms of the settlement over a longer period have emerged, with substantial building projects, the redefinition of boundaries and the settlement's expansion and contraction over hundreds of years. The longer-term and daily rhythms glimpsed here echo those uncovered in even more detail at the excavated site of Phantassie, discussed in Chapter 7. Chapter 10 probes the evidence from these and other excavated sites in the region to understand them in the context of contemporary society.

Chapter 7

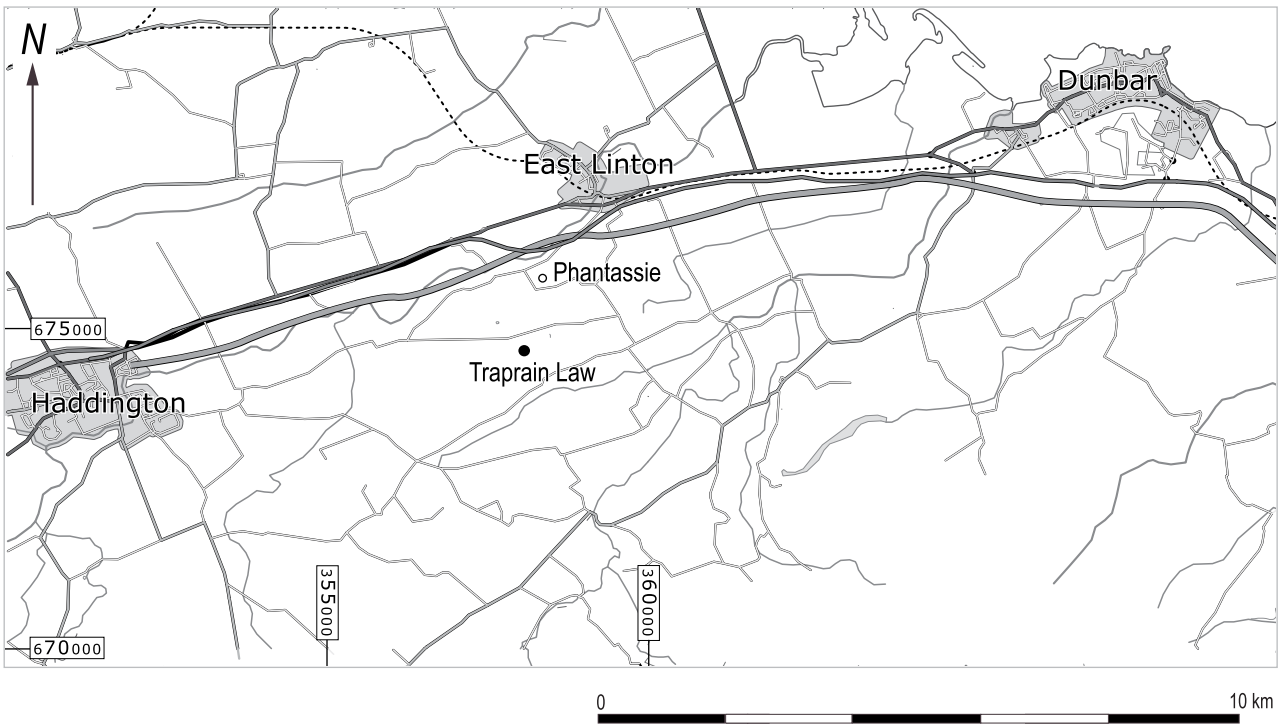
Everyday life on a Lothian farm: Excavations at Phantassie (210 BC–AD 340)

OLIVIA LELONG

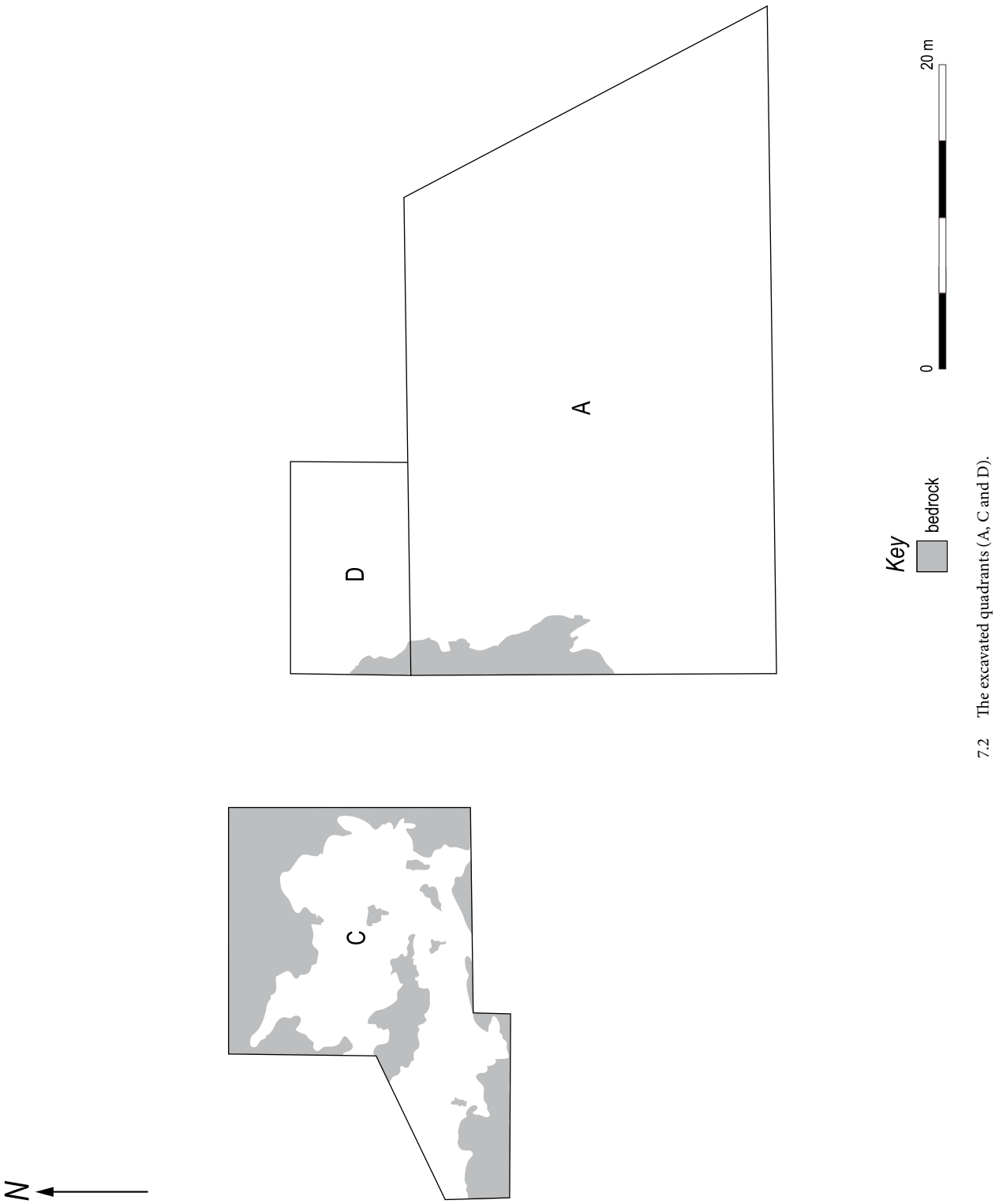
Introduction

At Phantassie, a substantial farming settlement thrived during the last two centuries BC and in the first two or three centuries AD (Figure 7.1). The excavation uncovered five broad phases for the occupation, construction and abandonment of different parts of the settlement. At least 15 buildings stood at various times during its lifespan, along with cobbled surfaces and pathways, working areas and boundary features. The excavation recovered charcoal, carbonised cereal grains and bone – both animal and human – as well as over 700 artefacts, including coarse pottery, stone tools, iron implements, copper alloy ornaments, glass and shale bangle fragments and industrial waste. Sixty radiocarbon dates were obtained from charcoal, bone and carbonised cereal grains from across the site and through the stratigraphy. The calibrated dates range mainly from 210 BC to AD 420, with the settlement's main period of occupation falling in the first and second centuries BC and the first and second centuries AD.

In this chapter, these different types of evidence are woven together to create a picture of Phantassie as it evolved in the late and early first millennia BC to AD.



7.1 Map showing the location of the site at Phantassie.



7.2 The excavated quadrants (A, C and D).

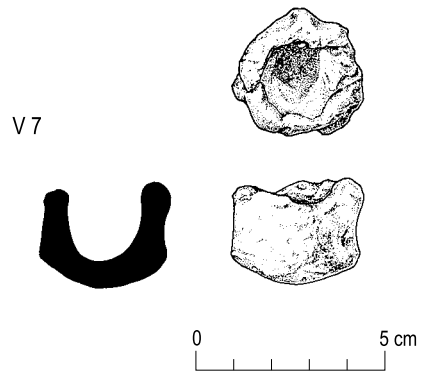
Excavations at Phantassie

The geology at the site played a significant part in determining its character, both in terms of the layout of the settlement and the survival of its archaeology: the bedrock, an extrusive basalt, lay close to the surface. In the centre of the settlement, this bedrock lay directly beneath the topsoil and the hillwashed silts, dividing the main domestic area (Areas A and D) from one containing outbuildings, a midden store and an area of hard standing (Area C) (Figure 7.2). The settlement huddled around this bedrock hump, its traces lying in natural, artificial and enhanced scoops in the rock, over sterile boulder clay or in some cases directly on the rock.

It was possible, during the excavation, to identify the results of many individual acts of construction, modification and deposition, and the sequence in which these happened in different parts of the site. However, for the most part these acts did not seem to fall into discrete, well-defined phases that applied across the whole site. Rather, the excavated evidence gives the impression of the settlement's piecemeal, constant development: buildings were constructed, then they were modified or fell out of use, and new ones were sometimes built over them; certain areas saw intensive activity and were later abandoned, or went out of use for a time; other areas were kept clean in some periods and became midden dumps in others. In order to make the story of the site easier to follow, the narrative is divided in a way that corresponds to the main phases of building or deposition, as evident through the stratigraphy and to some extent the radiocarbon dates. However, the reader should bear in mind that each component of these broad phases represents a moment or a period of time in the continuum of the life of the settlement.

During excavation, occupation deposits were identified as those that built up incidentally, as a result of everyday activities; midden deposits were identified as those resulting from everyday activities, which contained a high proportion of refuse (including both organic and inorganic material), and which were deliberately allowed to accumulate or were collected and piled up over time (see Needham and Spence 1997). References to charcoal, cereal and seed types below draw on the palaeobotanical analyses of samples from the excavation by Miller and Ramsay (see Chapter 12 and Archive), and references to animal species draw on analyses by Smith (see Chapter 12 and Archive). MacSween's analysis of the pottery (see text box 7.1) and Hunter and MacLaren's analysis of the other finds form the basis for comments on these types of artefact (see Chapter 12 and Archive).

Very small amounts of burnt human bone were also discovered in 42 of the excavated deposits. In most cases where this bone occurred, it is mentioned below, with the quantity given in grams and comments based on the work of Duffy and Marquez-Grant (see Chapter 12 and Archive). Many of the contexts where bone appeared were deposits interpreted as occupation layers or midden deposits. The wide and fairly consistent distribution of human bone, along with a late first millennium BC radiocarbon date for one fragment, point to its having been deliberately brought into the settlement for particular uses, such as incorporation in re-deposited midden; in some cases, it may have drifted from places where it had been deliberately deposited to become part of other, more incidental occupation deposits. This phenomenon deserves particular attention, and it is addressed in more detail in the final section and in Chapter 10.



7.3 A thumb-pot (V 7).

Phase 1

Light buildings in a yard, and cooking fires

The first people to occupy Phantassie in later prehistory chose an area of level ground above the 60m contour, to the east of the bedrock hump. This area, referred to throughout as the settlement platform, continued to be the focus of habitation throughout the life of the settlement. The first inhabitants left structural fragments and trampled ground surfaces, which were exposed only in the western part of quadrant A (Figure 7.4). As exposed, the structural fragments survived as a cluster of slight, straight and arcing lines of stone (474) and (450), with other ephemeral lines of stone (473) and (344) running at right angles to them (Figure 7.5). These lines of stone were only revealed in a sondage excavated through a later, massive wall base (100) that sealed them, so their original extent could not be established. They may have supported light, stake-built walls (although no stake-holes were identified in the sondage). A fragment of daub (SF 566) found close to them may have fallen from a clay-

plastered, wattle wall that stood on one of the stone bases. A scattering of charcoal, cereals and animal bone around the stone bases probably related to the use of the structures they represent.

The earliest ground surfaces on the site may date to this initial phase of activity. Those to the south and east of the structural fragments consisted of pink clay (405/420/353/301/451/398/424//317), weathered from the bedrock

7.1

The later prehistoric pottery from Phantassie

The pottery assemblage from Phantassie is the largest of the pottery assemblages recovered from the later prehistoric A1 sites. It consists of 350 sherds which represent up to 192 vessels, but this is almost certainly an over-estimate of the number of vessels because of variations in fabric, sooting and colour across any one pot.

While complete vessels could not be reconstructed, it appears from the larger sherds that many were either large, bucket-shaped pots (for example, V 51) or large, barrel-shaped ones. There were also smaller vessels, like V 24, which had an interior bevel on its rim and an everted lip; V 42, which had an inverted profile, and a small thumb-pot (V 7), which may have been made for or by a child (see Figure 7.3).

The condition of the pottery is very variable, ranging from sherds in a fairly fresh condition to sherds with edge and surface abrasion and sherds which were badly abraded and rounded. The most common fabric is sandy or fine sandy clay containing 10–20 per cent rock fragments. This fabric mix does not seem to have changed much throughout the settlement's period of use.

The pottery was made by the coil-construction method, usually with a diagonal junction between the coils. The pots' surfaces were generally finished by smoothing with a wet hand, leaving light wipe marks. Most of the sherds have fired grey, with brown or red surfaces or margins. This indicates a short firing on the domestic hearth which has oxidised only the surfaces of the vessel.

Decoration was noted on four pots from Phantassie, in all cases consisting of incised lines. The sooting and residues observed on many of the vessels indicate their use as cooking pots, with the exterior residues around the lips of some probably the result of liquids' boiling over. The band of sooting around the top of other vessels (for example, V 1) could indicate contact with fuel during firing.

The pottery from Phantassie is typical of the later prehistoric pottery recovered from sites throughout southern Scotland and northern England – for example, from Broxmouth hillfort near Dunbar (Cool 1982), from the recent excavations at Traprain Law (Rees and Hunter 2000) and from the ditched enclosure at St Germains, Tranent (Alexander and Watkins 1998).

Cool's analysis of the pottery from Broxmouth suggests a chronological split between Type I pottery, thought to date to the second half of the first millennium BC (although Cowie (2000, 137) has argued that its currency extended into the early first millennium AD), and Type II pottery, which was thought to date from the first century AD. Type I pottery consisted of thick-walled (*c.* 20 mm), bucket-shaped vessels with plain or occasionally in-turned rims, and rim diameters of 250–350 mm, made of fabrics with a coarse rock temper. Type II vessels were smaller, with bucket or barrel forms, thinner walls and finer fabrics.

Although numerous sites have produced broadly comparable material, there has been little opportunity to refine the chronology put forward by Cool. The emerging picture is that the later prehistoric pottery from the area consists of very simple forms, probably closely related to function and changing little with time, although only the construction of a radiocarbon-dated sequence will allow us to say this with certainty.

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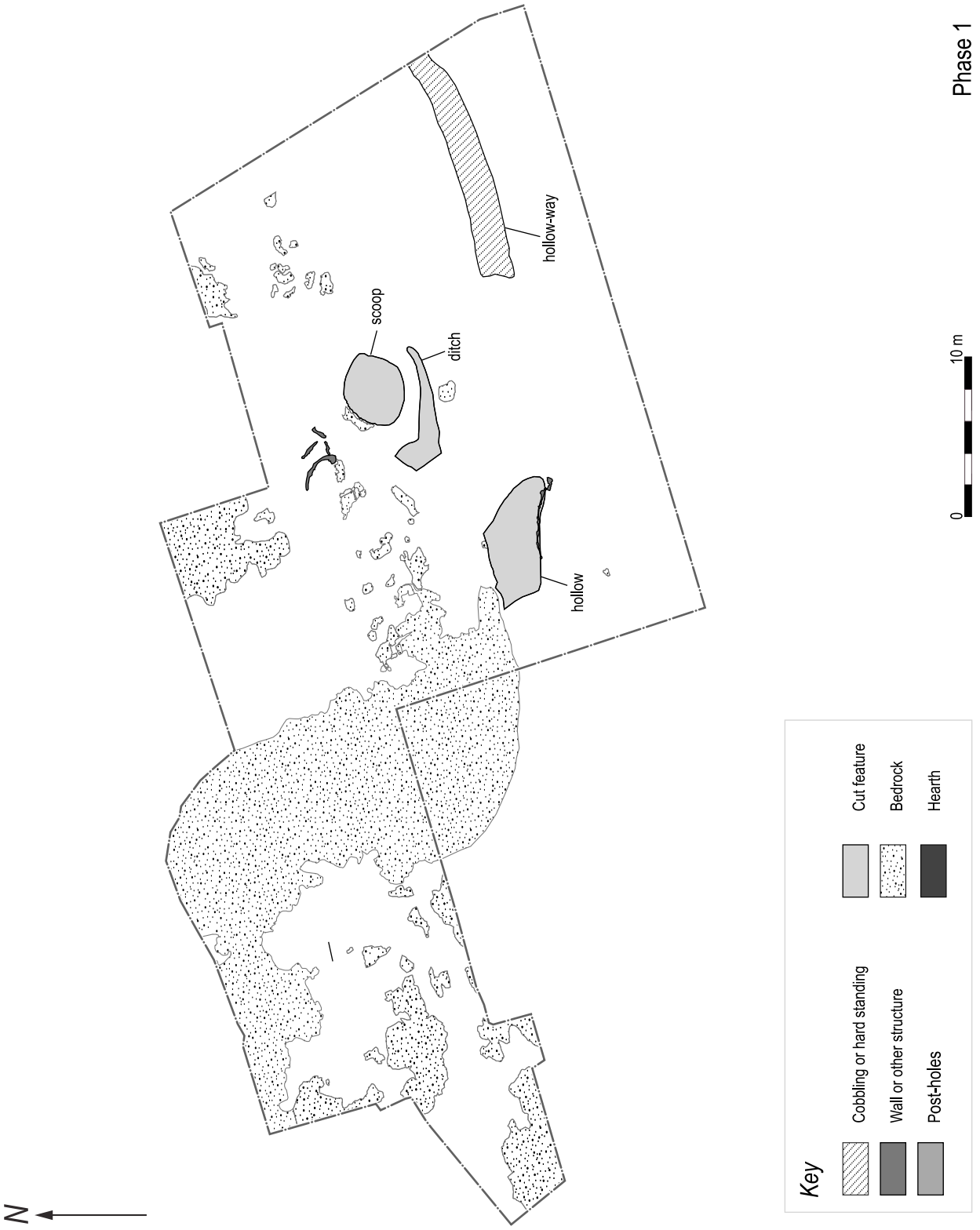
7.4 The earliest phases under excavation.

just beneath; some of these (301)/(398)/(317) contained cattle teeth and burnt ungulate long bone fragments, as well as human bone (3.3g). The early ground surfaces to the south and west consisted of firm, yellow-orange clay silt (410/412/160/329/189/408/157), and these were trampled and mixed versions of the sterile boulder clay (030) below.

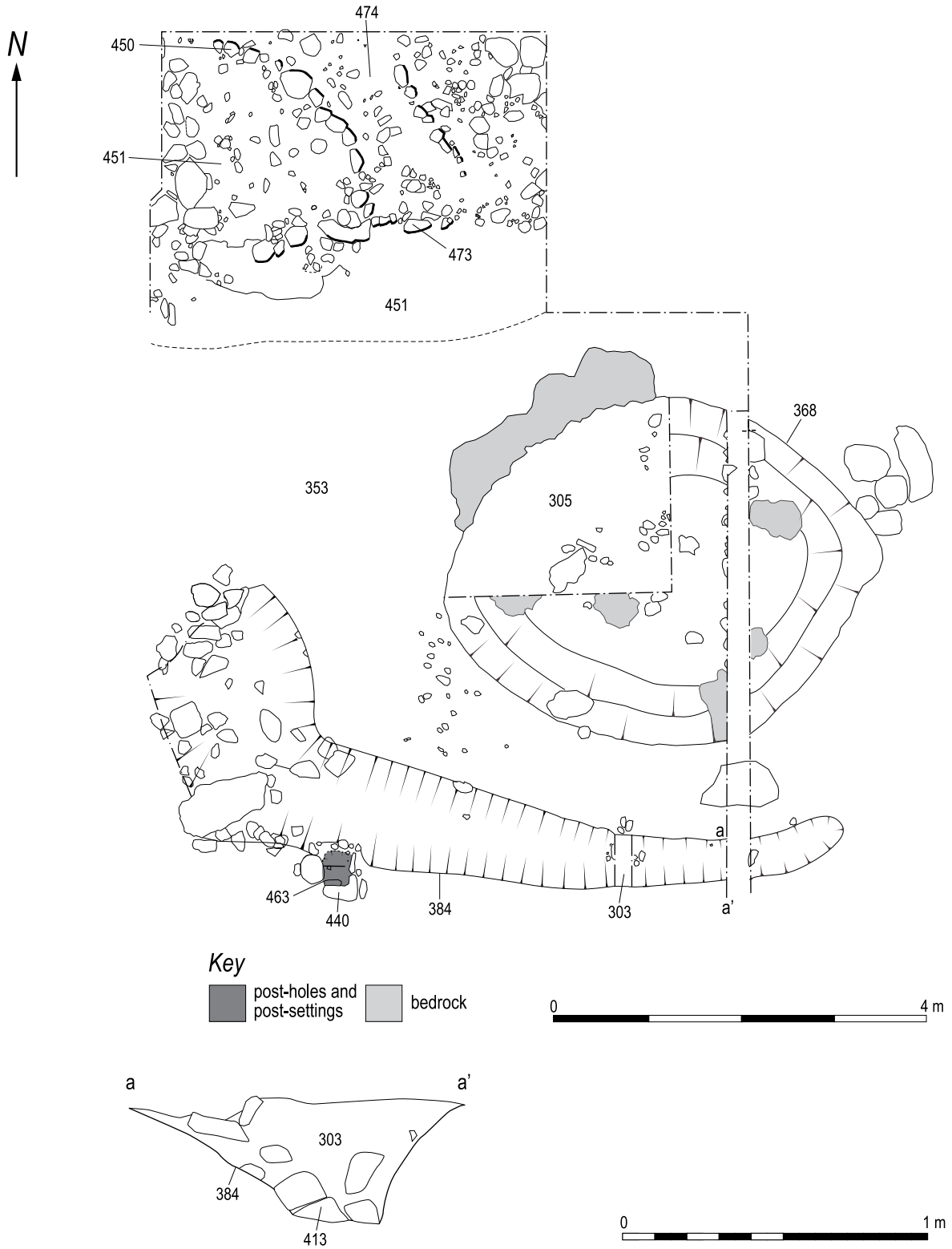
Other features may relate to the farmstead's inception. In its early phases, a large, shallow scoop (368) existed, about 5m across but only 0.35m deep (Figure 7.6). It may have been created by the trampling and wallowing of livestock. It contained stones and midden material (305)/(306), including hearth waste, pottery and human bone (2g), which also could have been introduced through animals' trampling. The inhabitants of the site dug a short ditch (384), about 7m long and 0.35m deep, to curve around the south and west of the scoop. They set stones (483) in its base, probably to support a fence or palisade, and backfilled it (presumably around the base of the standing fence) with more midden material that, two millennia later, appeared as dark grey-brown clay silt (303) containing burnt heather and some cereal grains. The fence would have created a yard that partly enclosed the scoop and the slight structures.

The inhabitants may have had cooking or parching fires in the southern part of area A. The fires left a spread of black silty clay (388) full of birch, hazel and heather charcoal, burnt animal bone and pottery, human bone (0.5g) and grains of wheat, naked barley and six-row barley. A grain of barley (*Hordeum vulgare sl*) from the clay produced a radiocarbon date of 350 BC–AD 10 (SUERC-5620). A hollow way (478), evident as a broad, shallow, linear hollow, led into the settlement from the east, leading directly to the site of these fires. This track may have been worn down as people regularly walked and rode to and from their fields or the forests or other settlements.

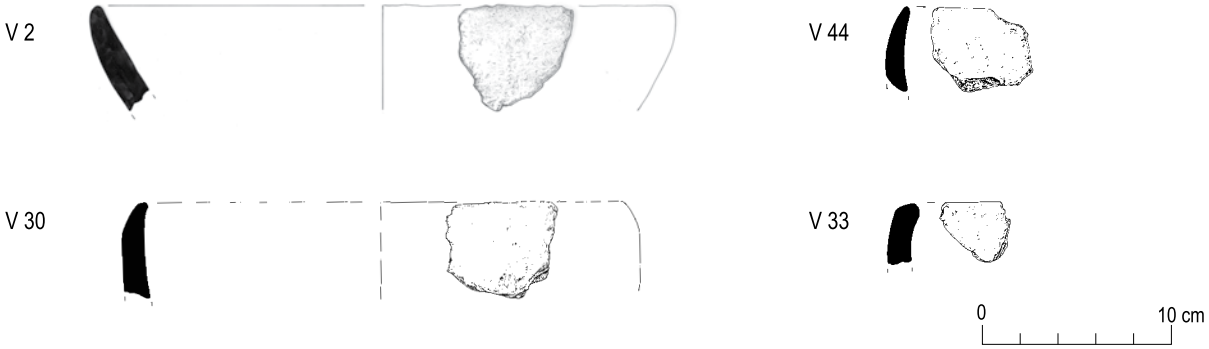
Also about this time, the inhabitants scooped out or wore down a broad, shallow hollow (132) to the south-west of the fenced-off yard, next to the bedrock hump. They set stones (037) along its southern edge to partly enclose it; this putative structure may have been more substantial originally and was probably later robbed for stone, as only a few of its stones survived into later phases. Into the base of the hollow, they trampled flecks of charcoal, daub and pot sherds, along with teeth from horses and other ungulates, burnt sheep/goat bone and human bone (1.6g). Birch (*Betula*) charcoal from a lower fill (308) dated to 180 BC–AD 20 (SUERC-5518).



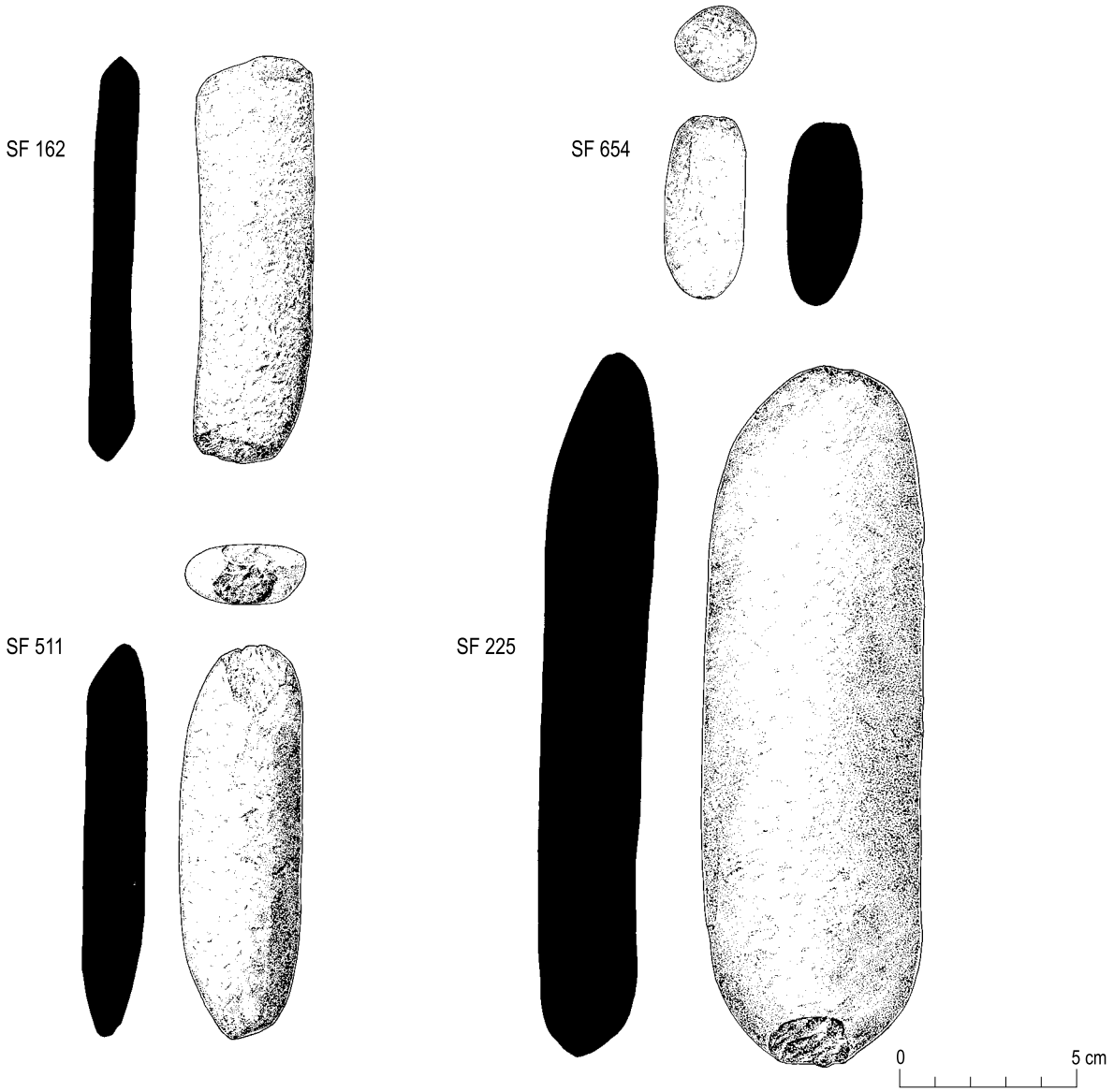
7.5 The phase 1 features at Phantassie.



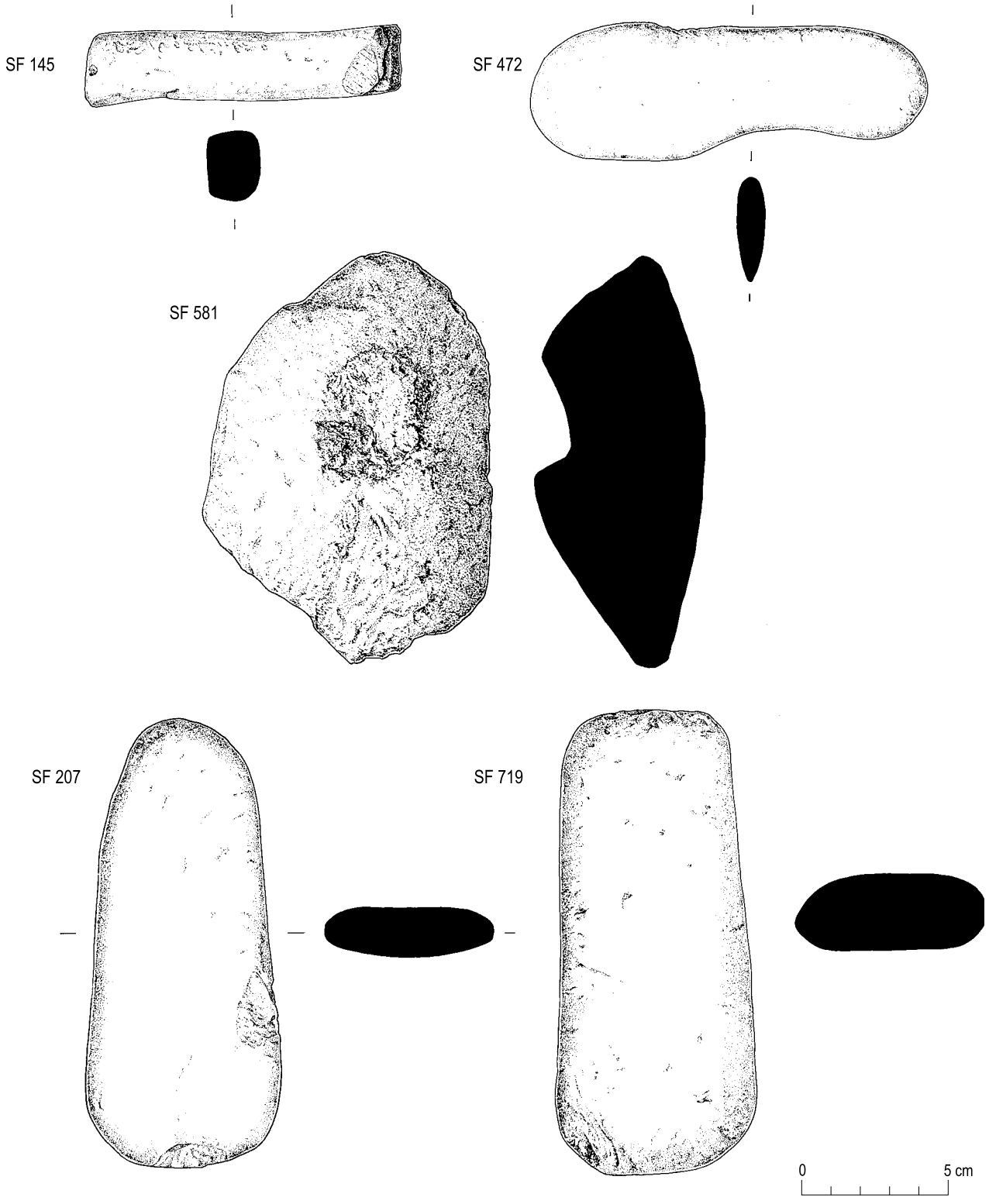
7.6 The phase 1 ditch, scoop and early structural features.



7.7 Pottery from phases 1 and 2.



7.8 Hammerstones, pounders and a whetstone.



7.9 Whetstones and a mortar.

7.10 The phase 2 features at Phantassie.

Because of the limited investigation of earliest deposits and also because of the intensity of later activity in the settlement, our picture of this earliest phase of occupation is somewhat imprecise and certainly incomplete. However, artefacts indicate the domestic nature of this phase of occupation. Sherds of pottery from nine pottery vessels were found in various phase 1 deposits (Figure 7.7), many of them trampled into the early ground surfaces (V 2), in the fill of the ditch (V 44) and in the ashes of the hearth (V 30). The ditch fill (303) also contained a polisher (Figure 7.8: SF 511).

Phase 2

From the second or first century BC, those living at Phantassie began to build more substantial buildings, pathways and boundaries in stone, defining the physical parameters and patterns of movement in the farmstead more formally (Figure 7.10).

A sub-rectangular house [1] in a yard

To the east of the bedrock hump, on the northern edge of the level ground, the inhabitants of Phantassie built a large sub-rectangular structure [1] (Figures 7.11, 7.12 and 7.14). It had a rounded (and, by the time of excavation, poorly defined) northern end, while its southern end was built over the in-filled trench (384). It survived best on its eastern side, where it proved to have a complex history (Figure 7.13). Its builders constructed the eastern wall (311) on the existing ground surface (424), setting slabs and boulders end-to-end to form two parallel wall faces. They packed the gap between these faces with midden material (354), which contained iron-working waste, human bone (0.1g) and rake-out from hearths where heather, birch, hazel and barley had been burnt. The northern end of the wall seemed to curve around to the west, perhaps defining a small yard or antechamber that abutted the bedrock, but later disturbance made this difficult to establish with certainty. A similar wall (105)/(459) ran parallel to the eastern one, defining the building on the west, but it survived less well.

At least one post (about 70mm in diameter) stood in the midden-filled core of the eastern wall, within a post-setting (434) framed by stones, with large pot sherds packed around its base. Other posts may have stood elsewhere along the building's walls, but time did not permit the discovery of more settings. The building's superstructure was probably of turf or timber, with posts supporting a thatched roof. Against the outer side of the eastern wall (311), a wedge of sticky, dark grey-brown clay silt (465) built up, possibly remnants of a turf superstructure.

Later occupants of the house thickened its eastern wall (Figure 7.13), perhaps to provide extra support for a boundary wall constructed against it (see below). They packed midden material (126) against the original wall face and faced it with an outer skin of large slabs, setting some of them upright in a cut (477) which they filled with hearth waste rich in burnt cereals and charcoal, including oak, birch, heather and many pieces of 12-year-old hazel roundwood. The hazel wands may once have been woven into a wattle panel that later burned – perhaps it was flung on a hearth when it began to fall apart or caught fire, accidentally, where it stood. The uniform thickness of the roundwood pieces suggests that the inhabitants were coppicing hazel to produce wands for building projects (Miller and Ramsay, this report). One of the hazel fragments produced a radiocarbon date of 110 BC–80 AD (SUERC-5490).

It appears that people entered the house from the south-east, through a door that swung on a post that stood in a deep, stone-packed post-hole (453)/(454)/(455). Bits of burnt heather and cereal found their way into the post-hole, scattered or swept as people moved out of the building over a lightly metalled surface (352) to the north of the in-filled trench (384).

Inside, the building was divided in two by a ridge of degraded bedrock (460) that ran across it; this could indicate where a partition had divided the interior, with the bedrock worn away to either side of it through use. The inhabitants trampled cereal grains, charcoal and flecks of burnt clay into the earthen floor. They may have swept it regularly, clearing away broken pieces of pottery (V 189 and 191) and animal bone from their meals, although there was no concrete evidence for discrete episodes of sweeping or trampling. They pressed small cobbles (461) into the floor to make it harder-wearing, with a band laid across the doorway to form a rough threshold. Only two portions of the floor deposit were excavated. From these samples, it seems that the southern part of the floor (362) was rather dirtier; it produced more charcoal, burnt animal bone and burnt human bone (1.2g). The northern part (361) produced relatively more cereal grains (as well as fragments of burnt human bone (0.5g)). This could be because the southern part lay closer to the door and the inhabitants walked over it more often, perhaps carrying hearth waste in a basket, from which flakes of charcoal sometimes sifted out to lodge in the floor. It is also possible that midden or other material was imported to repair the floor.

Charcoal from a putative hearth scattered less densely over the area to the west, which seemed to lie outside the building and was covered in firm reddish sand (369) with rough cobbling (365) set into it. A hearth (312) lay against the edge of the bedrock in this area, consisting of small, closely set slabs that were reddened by heat; little charcoal was found around it, so either highly oxidising fires burned here or the residues had been carefully cleaned out. To the

7.11 Plan of Structure 1, the boundary wall and the palisade ditch.

north, some short lengths of walling (112 and 182) may have defined a woodshed or other outbuilding.

A yard for Structure 1

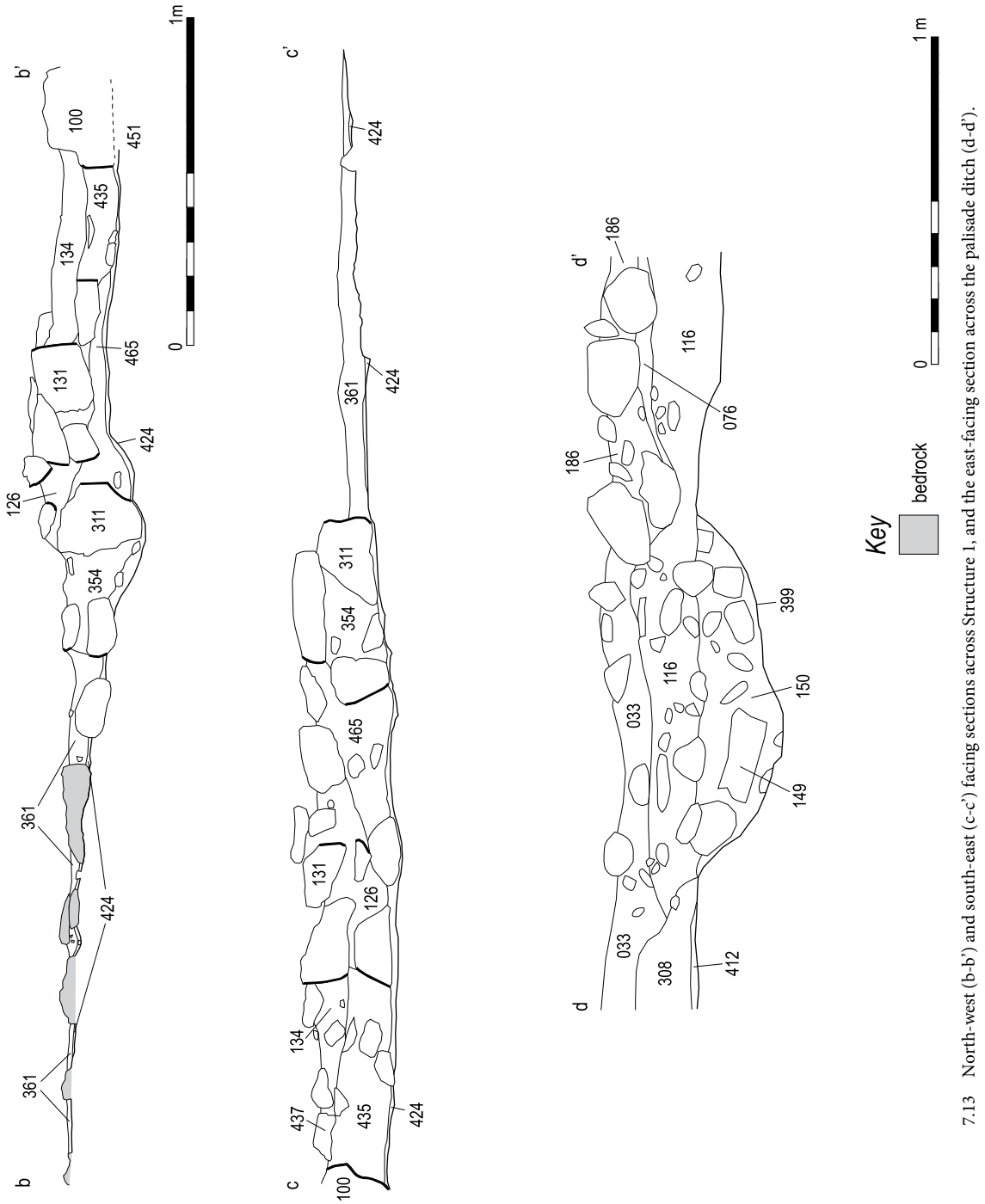
The occupants of Phantassie appear to have partly enclosed the house with another fence or palisade (Figures 7.10 and 7.11). They dug a shallow trench or ditch (399)/(439) that ran eastward for about 20m from the bedrock hump, skirting the building's southern end and running parallel to the filled-in ditch (384). They left this new trench open for a while, and its sides weathered and the base filled with silt and gravel (442). Later, they filled it with midden material (150)/(409), scooping up charcoal from birch, willow, hazel, heather and blackthorn type trees, as well as burnt cereal grains, pottery sherds, a cattle mandible and teeth and other burnt animal bones, and human bone (2.4g). Clusters of stones (149) along the length of the trench may have supported a wooden fence, with the midden helping to hold it in place, and a stone-lined post-hole (464) dug into the fill of the old northern ditch may have also supported it. The fence may have provided protection from the wind, or kept stock away from the house. Several kinks and bulges along the line of the trench suggest it was made in four segments.

A cereal grain from the eastern fill (438) of the ditch produced a radiocarbon date of 200 BC–AD 30 (SUERC-5636), while birch (*Corylus*) charcoal from its western fill (150) was dated to much later, 20 BC–AD 210 (SUERC-5637). The latter material may be intrusive, given the dates from material that sealed the ditch (see below), but the overlap in the calibrated ranges could still suggest that the ditch was filled in the last decades BC or the first decades AD – which accords with the first century BC/AD date for the thickening of Structure 1's wall. Although there was no direct stratigraphic relationship between the shorter northern trench and the longer southern one, the fact that the former lay beneath Structure 1 while the latter respected it suggests that they relate to different periods.

A cobbled, gated path and a wall

The occupants of the farmstead created a path that led northward to Structure 1 (Figure 7.10). They appear to have left an entrance through the palisade, indicated by a gap in the packing stones (149) where the path crossed the ditch. The path was about seven paces (6.7m) long, and wide enough for one person to walk with plenty of room on either side. It was floored with cobbles (468), with a

7.12 Structure 1 during excavation.



7.13 North-west (b-b') and south-east (c-c') facing sections across Structure 1, and the east-facing section across the palisade ditch (d-d').

7.2

The querns from Phantassie and Eweford Cottages

The Phantassie querns are an interesting assemblage. All are bun-shaped rotary querns, consistent with the later Iron Age date of the settlement.

Table 7.1 Characteristics of the Phantassie querns. An asterisk indicates an incomplete quern

SF no	*Diameter (mm)*	*Height (mm)*	*Handles*	*Decoration*	*Notes*
72	354	88	2 horizontal	Socket	
231*	?	126			Unfinished quern
398*	400	57	1 slot	-	Unusual slot
495*	*c.* 364	70	2 horizontal 1 vertical	-	
508	343	107	1 horizontal 1 vertical	Collar	
563*	392	85	1 horizontal	Quarters; one radial, one cup-marked	Socket worn through

Interestingly, one of the querns was unfinished. All the others had seen heavy use, with polishing on the grinding surfaces and handle slots worn through. In three cases, the handle socket had been replaced; with two of these querns, whoever was using them eventually switched to vertical handles. This is similar to the picture from several other sites (for example, St Germains, Traprain Law, and the Dod; Alexander and Watkins 1998, 222, illus 12; unpub.; Cool 2000, 305–7). It seems that querns were usually heavily used before they were discarded for grinding corn. At Phantassie, most of the querns were re-used in walls and paved surfaces (see Figure 7.18).

A surprising number of the finished Phantassie querns (three out of five) are decorated. One has a pecked band around the feeder pipe to create a low collar, another has radial lines, raised areas and circular hollows, while the third has circular hollows around the handle socket. Querns are rarely decorated – we know of only about 30 other Scottish examples, from a dataset of several hundred – and the proportion at Phantassie is remarkable. Parallels for the decoration are discussed in the full report (McLaren and Hunter, Chapter 12). However, it is notable that there are two other local examples of bun-shaped querns with cup-marked decoration, from Traprain Law and Broxmouth (both unpublished, and held in the National Museums of Scotland), a style which is otherwise rare. Although the decoration is not exactly the same, this seems to be a related decorative style, suggesting a regional type.

The excavations at Eweford Cottages also produced rotary querns, with three intact but heavily used stones (an upper and two lower quern stones) re-used in paving. The incorporation of large stone tools, especially quern stones, in structural elements is a common feature on Iron Age sites; there are plentiful East Lothian parallels, for instance from Traprain Law, St Germains and Dryburn Bridge (for example, Cree 1924, 247; Alexander and Watkins 1998, 222, illus 12, 18:12; Dunwell forthcoming). Hingley (1992, 32) has discussed the likely symbolic significance of the re-use of quern stones, suggesting their placement within structural features or settlement boundaries had a symbolic as much as a functional role. The positioning of re-used querns at Eweford Cottages and Phantassie had clear functional aspects, but this does not rule out symbolic aspects as well.

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double-skinned stone wall base (337) along its western edge. Near its southern end, a shallow, stone-packed setting (343) supported a post, while another post stood at its northern end in a post-hole (358) surrounded by a flat, oval stone setting (336).

From here, a curving length of walling (315; Figure 7.11), again with two faces and surviving to two courses high, continued along the western side of the path and the eastern side of the hollow (132) that had filled with trampled occupation debris in a previous phase. The stone wall base may have supported a hurdle fence along the western side of the passage, or it may have originally stood higher and been robbed at a later date. The posts at either end may have supported gates, or wattle panels along the passage's east side. Another post-setting (382) along its western side, beside a gap in the wall (337) where it joined the hollow, may have supported a gate leading westward, or a light wall that enclosed the hollow.

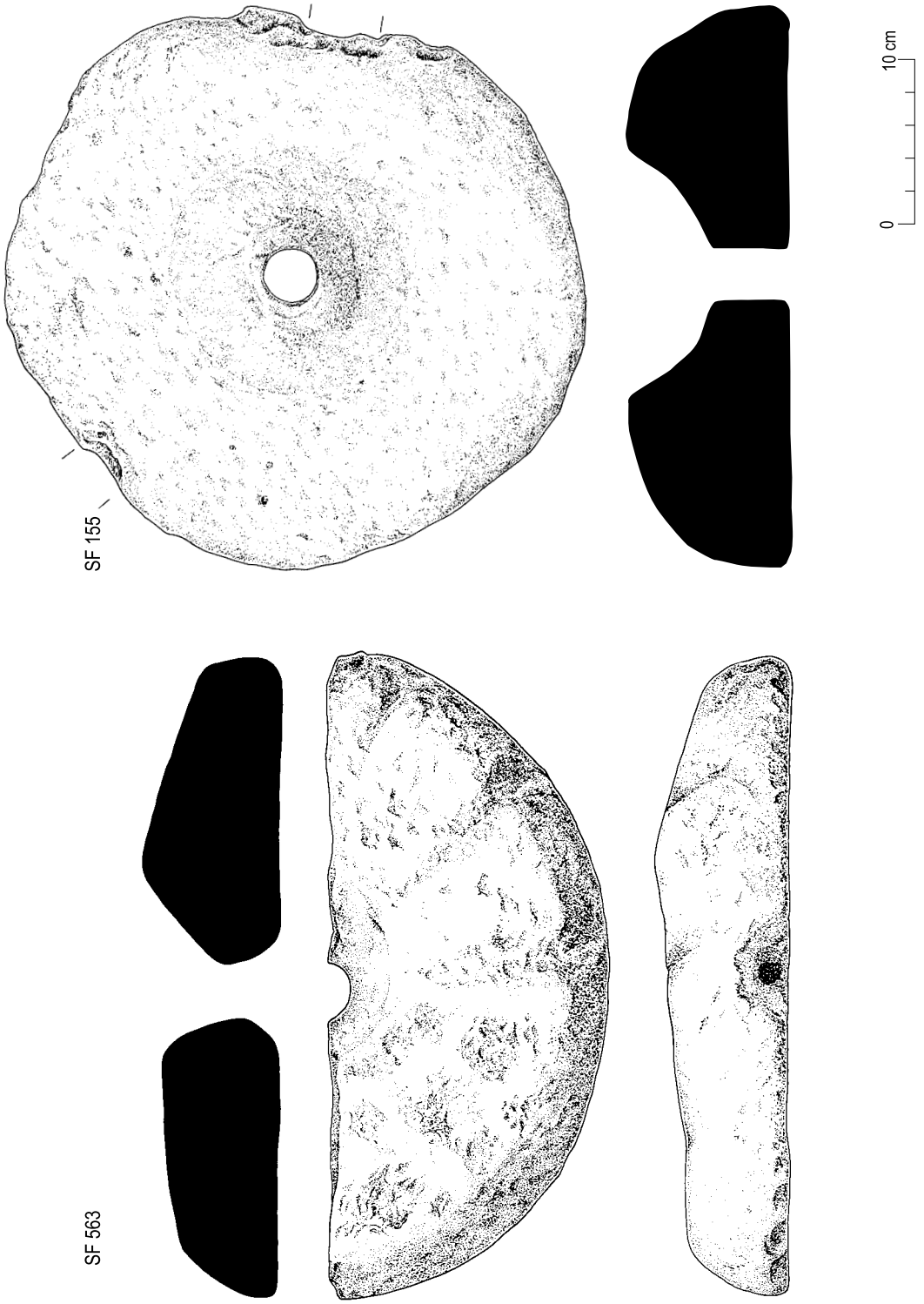
A long-lasting stone boundary

After they had built Structure 1, the inhabitants of Phantassie defined the heart of their settlement in a monumental and ambitious way. They further enclosed the area of their buildings and formally defined the space they inhabited, an arrangement which would endure through the life of the farmstead. Using large boulders up to 0.5m across, some water-worn and apparently taken from a river bed, they built a massive wall base or revetment around the settlement platform, laying the stones only one or two deep but about 1.8m across (Figure 7.15). They built it to run eastward (100) for 14m from Structure 1, then turned a rounded corner and extended it for another 4m to the south (088). For at least part of this latter stretch, the builders made a shallow cut (421) into the existing ground surface (160) and onto bedrock to level the ground.

The breadth of the structure and its relatively flat surface suggest that, in addition to defining the heart of the settlement, it may have been a working area or provided hard standing for cattle to the east of Structure 1. Three shallow post-settings (166)/(099)/(323) in the stonework may have held posts that supported a fence along the north side, which would have sheltered the platform from northerly winds. Near the inside curve of its corner, the builders laid part of a well-used, upper bun rotary quernstone (Figure 7.16: SF 563). The upper surface had been decorated with radial lines and pecked

7.14 Reconstruction of the farmstead during phase 2.

7.15 Plan of the eastern part of the boundary wall and areas of hard standing.



7.16 Querns from phase 2.

circles, and it had been laid with the decoration showing (see text box 7.2).

The inhabitants built this stone boundary to respect the large scoop (368), meaning that the latter may still have been a focus for wallowing livestock at this stage, and laid cobbling (379) between the scoop and the boundary. The boundary and the putative fence supported in the southern trench (399) would have formed a small, square, open yard adjoining Structure 1 on the east (see Figure 7.14). One would have entered the yard from the south-east, and from here had access to the door of the building.

Hard standing for cattle, and a gate

The lower ground to the east of the boundary wall (100)/(088) may have been given over to cattle. It was covered with large, flat boulders, laid one stone deep over an area about 8m square, abutting the boundary wall (Figure 7.15). If the eastern leg of the boundary (088) had originally provided hard standing, then this represented its extension, suggesting the farmstead began to keep more cattle as time went on.

Where the bedrock outcropped close to the surface, the boulders had been fitted around them, probably to level up the uneven natural surface and create areas of hard standing. There was a linear gap through the two areas of hard standing ((124) to the east and (125) to the west), and at the southern end was a ditch (429) that had been lined or revetted with stones (325). When it was excavated, rubble (430) was found lying against the revetment, and this may have been a collapsed wall that stood above ground. Although only part of the ditch was excavated, the upper stones of the putative collapsed wall (430) continued in an arcing line to the west and curved sharply to the east, perhaps indicating the line of the ditch. Barley (*Hordeum vulgare sl*) from a layer of clay sand (431) that formed over the rubble within the ditch yielded a radiocarbon date of 160 BC–AD 80 (SUERC-5634), while birch (*Betula*) from a later silt (326) produced a date of AD 0–220 (SUERC-5627). The stone-lined ditch and putative wall may have kept stock from straying off the hard standing.

To the south of here, where the hollow-way (438) led into the farmstead from the east, this generation of Phantassie dwellers created what may have been a more formal entrance. They laid well-defined areas of paving (355)/(356)/(155) over the western end of the hollow way (438) and the eastern end of the southern ditch (399), with a large stone post-setting (357) against the north side of the paving (not illustrated). So little of this stonework was exposed during excavation that its interpretation is difficult, but it could have supported a gate leading into the farmstead. What is clear is that the upper stone of a heavily used bun rotary quern (SF 155), with pecked decoration around its socket, was set into the southern paving (155) (Figure 7.16).

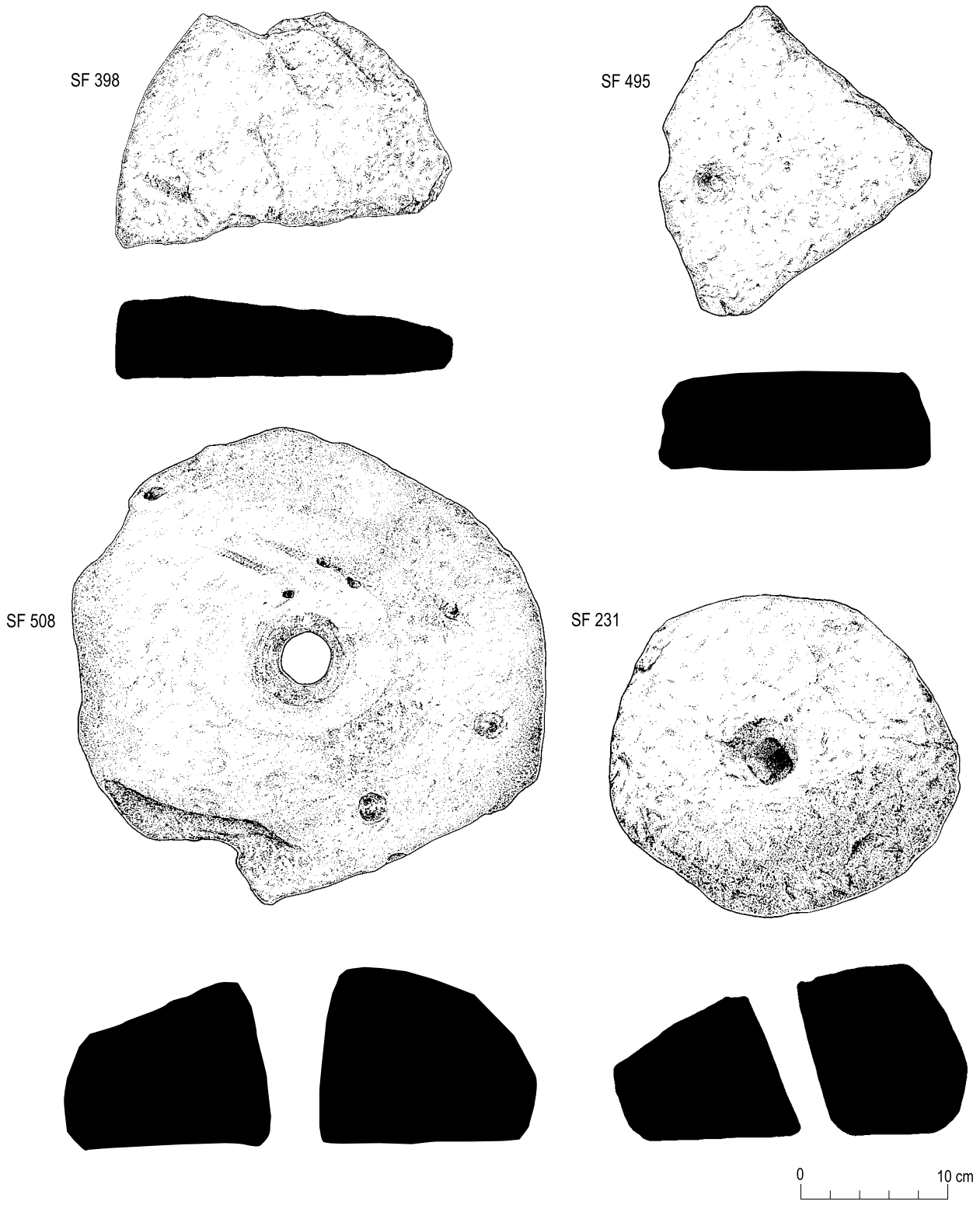
A frame and fire for parching grain (Structure 2)

To the west of the cobbled path and south-west of the building [1] in its yard, an enigmatic set of features may have been associated with the drying of grain over fire (Figure 7.10). They consisted of an arrangement of three post-holes or pits: a large post-pit (111), its base packed with stones to support a post, had a fill (031) containing burnt human bone (0.4g); a smaller, slab-covered pit lay immediately to the east (426) of this (and contained 2.2g of human bone), and another stone-packed post-hole (377) lay 3m to the west. These features are collectively termed Structure 2. A spread of scorched, pink-orange silty clay (110) built up around the pit and post-holes, rich in heather charcoal and heavily burnt cereal grains, including six-row barley – as well as pot sherds and a little human bone (0.1g). The burnt spread also partly covered a filled-in, shallow, curvilinear ditch (117) which disappeared beneath the southern baulk, and was perhaps a foundation trench for an earlier building.

Activity in this area could have involved cereal parching, from the relative abundance of burnt cereal grains and heather charcoal scattered here (Miller and Ramsay, see Chapter 12 and Archive). The large post-hole and the smaller one may have supported a frame that suspended cereal over a fire, allowing it to dry gently; the role of the slab-covered pit is unclear, but it appears to have been contemporary with the post-holes. The radiocarbon dates from these features form a tight suite: barley (*Hordeum vulgare sl*) from the scorched deposit (110) dated to 110 BC–AD 80 (SUERC-5502); birch (*Betula*) charcoal from the post-pipe (163) in the large post-pit (111) dated to 160 BC –AD 70 (SUERC-5501), and birch charcoal from the fill (423) of the slab-covered pit (426) dated to 150 BC–AD 80 (SUERC-5629) – calibrated ranges that coincide with the cutting of the hazel roundwood that was eventually used in Structure 1's thickened wall.

A light enclosure (Structure 3)

Radiocarbon dates suggest that, around the same time, an ephemeral structure [3] stood to the north of the sub-rectangular house [1] on ground that sloped down from the settlement platform (Figure 7.10). Two curvilinear stoney spreads (060 and 062) defined it, and had perhaps held a light, stake-built wall in place. The firm, dark brown sticky matrix (061) of the stones may have been remnants of turf cladding. Sherds from five pots were found in it (Figure 7.7: V 33), along with a little human bone (0.1g). Hazel (*Corylus*) from the wall's matrix (061) produced a radiocarbon date of 100 BC–AD 130 (SUERC-8196). Inside the building or enclosure, a compact floor surface (127)



7.17 Querns from phases 3 and 4.

contained sherds of pottery (V 145) and part of a shale bracelet (SF 357; see text box 10.1, Figure 10.8). Outside to the east, the builders laid slabs (097) to fit snugly around a lump of bedrock, creating a level surface. Part of a copper alloy trumpet brooch was found on the slabs (Figure 7.27: SF 188).

A midden store (Structure 4)

About 30 paces to the west of the site of the sub-rectangular structure [1], and down a slight slope, the farmstead had another, separate part that seemed to be the focus of agricultural activities rather than dwelling (Area C).

Here, the bedrock dipped to form a large hollow. The inhabitants of Phantassie seem to have enhanced this, chipping away the rock in straight, nearly vertical faces, creating a sub-rectangular hollow about 0.5m deep, 6m east to west and 4m north to south. Its base was undulating, irregular and weathered, and no cut marks could be identified with confidence during excavation, but the hollow's regular shape and the way it was used suggested that it had been modified. They built stone wall bases along the east (241) and west (251) sides of the hollow (Structure 4), and some of the boulders used derived from bedrock and had, perhaps, been quarried from the hollow itself (Figure 7.19). Over a period of several generations, the inhabitants of the farmstead dumped their rubbish into the hollow (the evidence for this is discussed further below). A light wall stood around the south and west sides of the hollow. It probably consisted of wattle-and-daub (see Phase 4 below), supported on uprights that were bedded in the underlying midden and supported by an arc of stones (235)/(246). A gully (270) led out of the hollow for about 5m to the west; its base was packed with stones (269), and it may have allowed water to drain out. Another stone-filled gully (278) on the north-east may have served a similar purpose.

When the inhabitants were first using the hollow as a midden store, they made a hard surface (253) of small stones, packed around lumps of bedrock and edged with boulders, on its east side. This level area lay closest to the settlement platform. The passage of feet formed a layer of dark brown sandy silt (252) over the stones, with abundant heather charcoal and a cattle tooth trampled into it. Later, they set a line of slabs (254) that descended into the hollow to a large, firmly set pink slab, flanked by two upright stones. This formed rough steps down into it, and they laid small cobbles (262), with another boulder kerb (264) bordering these and an area of paving at the top of the steps, sealing the stoney surface (253).

A post-built structure [5] and a small cell [6]

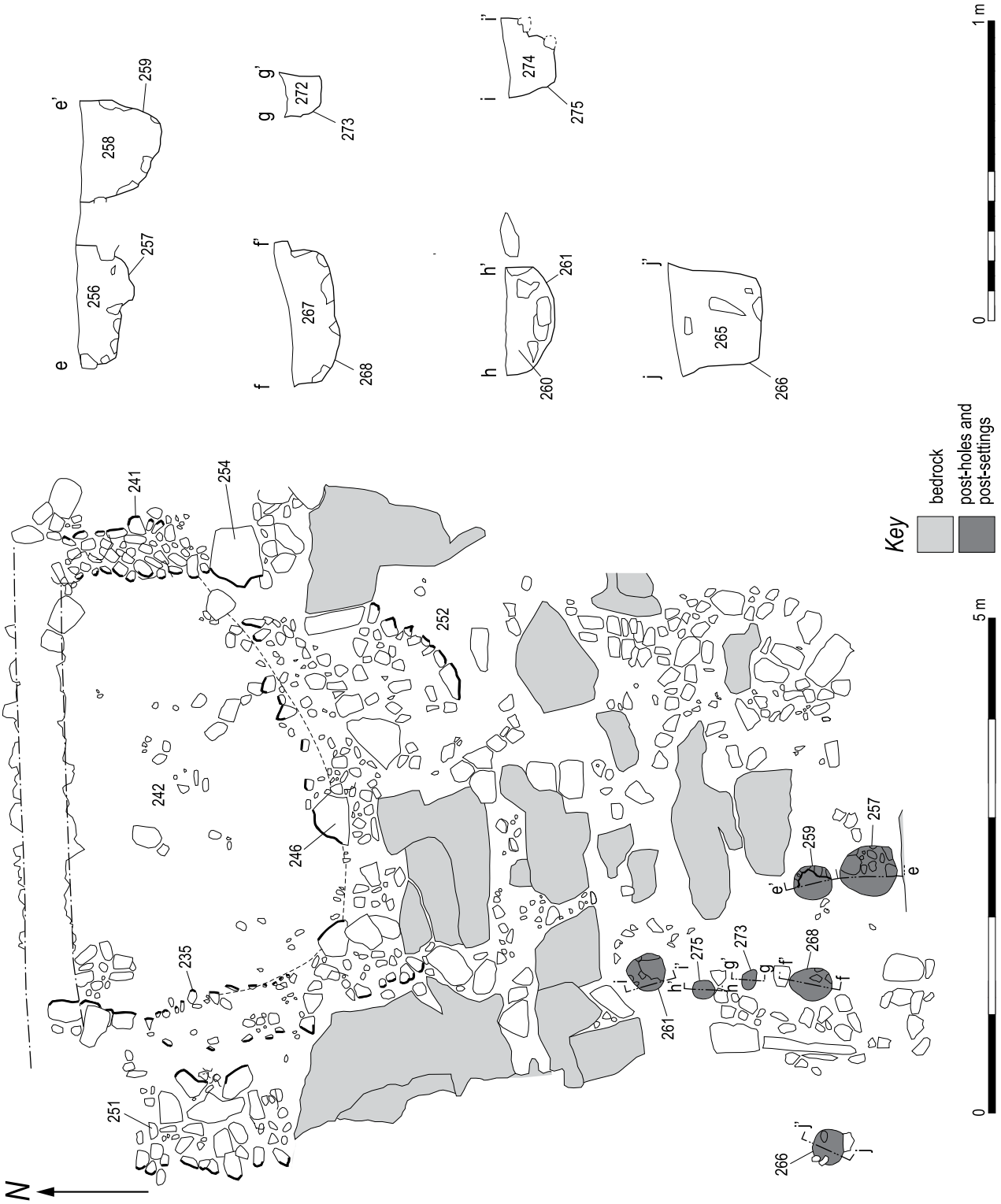
Directly to the south of the midden store, on level ground between outcropping bedrock, was a post-built, T-shaped or narrow rectangular building (Structure 5) (Figure 7.19). Two posts in stone-packed post-holes (259 and 257) formed a line that ran parallel to four posts, set in large, packed post-holes (261 and 268) at either end with two smaller pits (273 and 275) between them. A seventh post stood in a post-hole (266) farther to the west again. The fills of these post-holes and pits produced about 4g of heather charcoal along with birch, hazel and cereals, and cremated human bone (2.4g). A grain of six-row barley (*Hordeum vulgare sl*) from the fill (267) of one post-hole (268) produced a date of 100 BC–AD 90 (SUERC-5531), while hazel (*Corylus*) from another (256) dated to 170 BC–AD 50 (SUERC-5530).

7.18 Quern (SF 508) built into a post setting in Structure 7.

To the south-west of the midden store was a small cell [6], defined by a semi-circular stone kerb or wall base built against an outcrop, which may have been in use at the same time (Figures 7.20 and 7.21). This cell seems to have been abandoned for a time, because a deposit of sandy silt (234), containing hazel and heather charcoal, burnt human bone (2.4 g), sherds of pottery and a broken bone point accumulated over the wall base. The cell was later rebuilt with another stone kerb (219) that echoed the earlier one but lay slightly outside of it. Hazel (*Corylus*) charcoal from the silty deposit (234) produced a radiocarbon date of 170 BC–AD 30 (SUERC-5506), providing a terminus post quem for the rebuilding of the cell.

Phase 3

During the decades that followed, the settlement platform at Phantassie became a busier, more crowded farmstead, perhaps as generations multiplied or their farming grew more productive. From the spatial and stratigraphic relationships between the new buildings, it is possible to reconstruct how the settlement grew on the ground surfaces that had built up during previous lifetimes (Figure 7.22).



7.19 Plan of Structures 4 and 5, with sections through the Structure 5 post-holes.

7.20 Plans of the earlier (top) and later phases of Structure 6.

A rubbly, cellular building [7]

Probably the first new building was a cellular structure [7]; the others grew up around it. It had thick, rubbly wall bases (054)/(089)/(153)/(482) that defined an irregularly shaped, roughly oval building, measuring about 6m north/south by 4m wide and nestling into the massive stone boundary (088) and the hard standing (125) (Figure 7.23). The walls seem to have had recesses, perhaps for storage. Two large stone post-settings, one (065) against the south end and another (161) against the east side, would have helped to support the roof. Into the latter, the builders set the upper stone from a decorated, well-used rotary quern (SF 508) (Figures 7.17 and 7.18; see text box 7.2). A third post stood in a stone-packed post-hole (349) at the building's north end. The brown clay silt matrices (053)/(063)/(193) of the walls may have been the remnants of an organic superstructure that stood on the wall bases. People entered the building through a doorway on the south-east, through a porch or a gate supported on posts that stood in two small, stone-packed post-holes (390) and (444) (Figure 7.24).

Although the interior was relatively clean, excavation found a few clues of what people did inside it; it may have been a workshop. Just inside the entrance, a small, shallow pit (327) was full of fragments of degraded shale (302), so people may have been shaping shale into bangles or other objects here. As they swept the chips of shale into the pit, the broom caught burnt cereal grains and pieces of industrial waste as well. On the eastern side of the interior, a slab (338) lay flat on the floor against the wall, surrounded by a thick deposit of blue-green clay (339), with small stones set on edge around it. This might have had an industrial function, perhaps forming the base of a quenching tank used during metalworking.

In the northern part of the building, cobbling (340) covered the midden that filled the large scoop (368) of the earlier occupation. Beside this, larger stones (090) extended inward from the wall, creating a bay or cell. Bits of burnt human bone (2.7g) and the molar of a large ungulate got caught in the soil matrix (194) that built up between the stones.

A broken iron linch pin from a chariot or cart (SF 588; Figure 7.25), decorated with strips of inlaid bronze, also lay between the stones. It may have been quite old when it was brought into the house: J-shaped linch pins are usually thought to date to the third to the first centuries BC (see text box 7.3; Hunter, see Chapter 12 and Archive). The paving in which the pin had become caught sealed the upper fill (335) of the large scoop, and cherry type (*Prunoidaea*) charcoal from that fill dated to 40 BC–AD 130 (SUERC-5529); this provides a *terminus post quem* for the linch pin's deposition which is slightly later than the usual date range for these objects. It could have fallen from an old chariot and been kept as an heirloom, with the intention of recycling the metal.

Metalling the hollow way

The occupants of Phantassie were still walking and riding into the settlement on the long-established track (478) that led into it from the east, along the contour (Figure

7.3

The chariot linch pin from Phantassie

One of the most striking and unusual objects from Phantassie was a decorated iron linch pin, the first of its kind from Scotland (Figure 7.25). This would have secured a wheel on a chariot. It is J-shaped, about 143mm high, tapered to fit through a hole in the axle, and with a loop (now broken) to tie it in place. It is made of iron, and the head is decorated with two inlaid strips made of bronze with a trace of lead.

Although J-shaped linch pins are known from southern Britain (for example, from the recently excavated chariot burial at Wetwang in Yorkshire; J D Hill, pers comm), there are no close parallels for this one. Chariots were exclusive vehicles during the Iron Age, and the decoration of this linch pin suggests it was an object of some status, although it had broken and been discarded. While this is the first Scottish example, there must have been more in use in Scotland; our picture of Iron Age iron is very partial due both to its poor survival and to our ancestors' frustrating aversion to burials and hoards at this period. Related pins elsewhere suggest a third to first century BC date (see Archive Report for details).

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7.22). The passage of feet, hooves and wheels had worn the boulder clay away into a slight hollow, and in wet weather it was probably slippery and treacherous. To firm up the ground, they spread a layer of small rubble (072) along it, and toward the east (at the edge of the excavation trench) they built a kerb of boulders along its upslope side. This created a metalled track about two metres across, wide enough for a farm cart or chariot, or for two people to walk side by side with room to spare.

With time and traffic, the stones became firmly packed together in a matrix formed from the dirt and detritus of daily life (073). Mud that clung to wheels, shoes and hooves became trampled into the soil between the stones. Sherds of pottery from 15 different vessels (Figure 7.26: V 24), as well as many smaller fragments, scattered over the stones, along with pieces of charcoal (hazel, heather, birch), burnt cereals, and burnt animal and human bone (3.3g) – perhaps shaken out of carts heaped with midden that were heading for the fields. If the paving (355)/(356)/(155) and large post-setting (357) at the track's western end had formerly supported a gate, it had fallen out of use by this time: the rubble surface of the metalled track spread over it. A slight wall base (075) along its northern side may have defined the approach toward the cellular structure [7]. The orange-brown sandy silt (074) that formed around it contained a concentrated scatter of human bone (18.5g) and sherds from three pots.

A covered porch [8]

As people entered the farmstead along the track from the east, they now passed between two short walls that seem to have formed a porch (Structure 8; Figure 7.23). Its north wall was supported on two posts, seated in post-holes (380) and (385), with stones jammed into both to keep the posts upright (Figure 7.24). A line of boulders (347) beside the posts formed the wall base. People leaving the cellular structure [7] might have turned south and entered the porch through a door that swung on a pivot hole in the large, flat stone at the wall's eastern end. Two posts also supported the wall on the southern side of the porch (Figure 7.24), with rubble (068) like that making up the track laid around their bases.

After the track had been in use for some time, the occupants of Phantassie improved the porch, setting large slabs to form two areas of paving, (052) to the west and east (067). The western paving (052) extended north to the wall of structure 7, so the porch clearly abutted that building. The paving also led people directly into a concentric structure [9], and to a fire that burned at its centre.

A concentric house [9], and a fire for parching grain

Whoever designed Structure 9 built in concentric arcs. The building had a wall base defined on the west and south

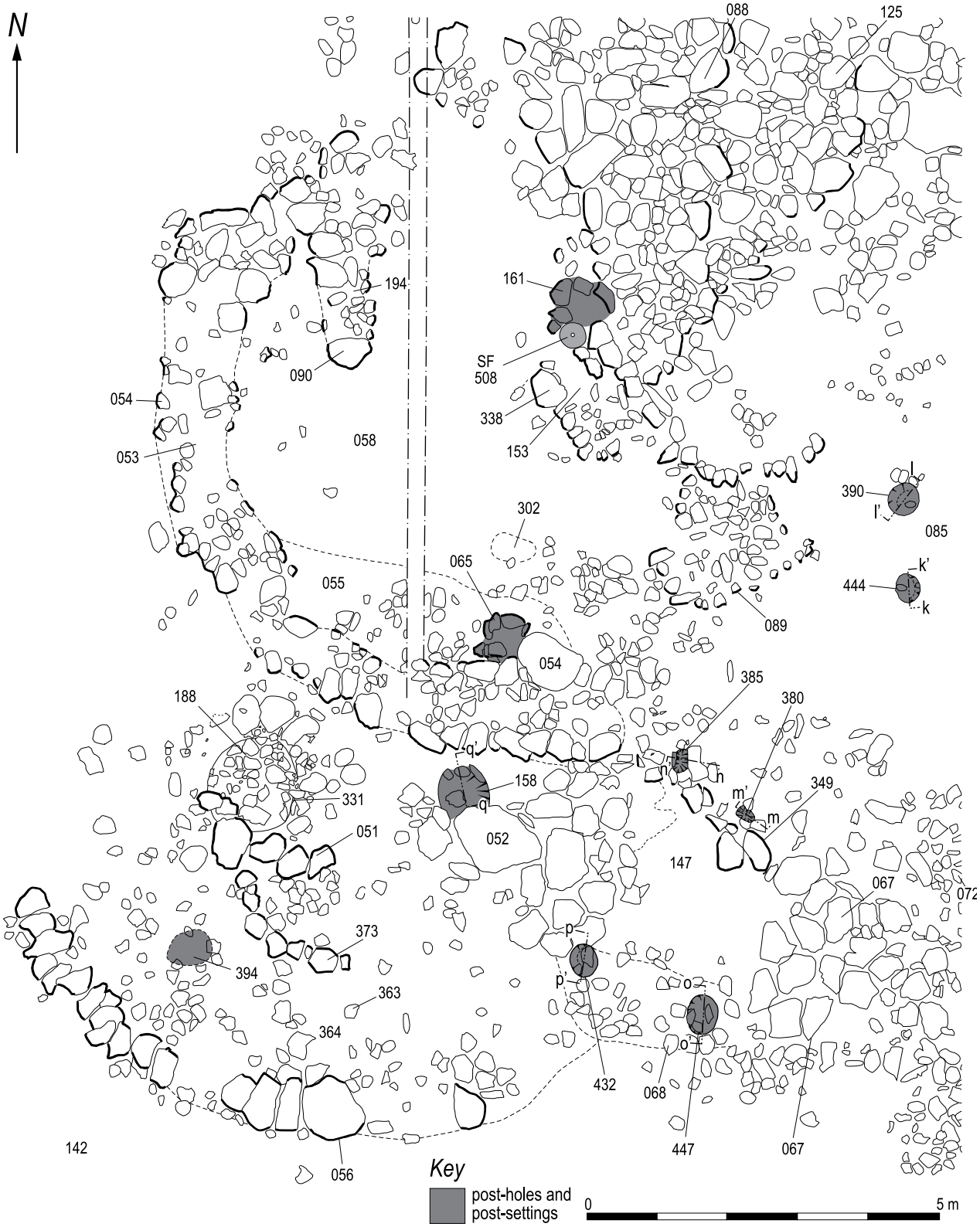
7.21 Structure 6, with the kerb of the earlier phase exposed in the background.

by an arcing line of slabs and boulders (056), curving between the paved porch (Structure 8) and the cobbled passage that led to Structure 1 (Figure 7.23). Where the building abutted the porch [8], a large post stood in a pit (158) packed tightly with stones (159) (Figure 7.24), and another stood in a smaller post-hole (413) close to the wall of the cellular building [7]. Another post-hole (394) in the south-west interior may have formed part of an arc of posts that would have supported a steeply sloping roof. Structure 9 might have been a semi-circular lean-to against the cellular building [7] and the porch [8].

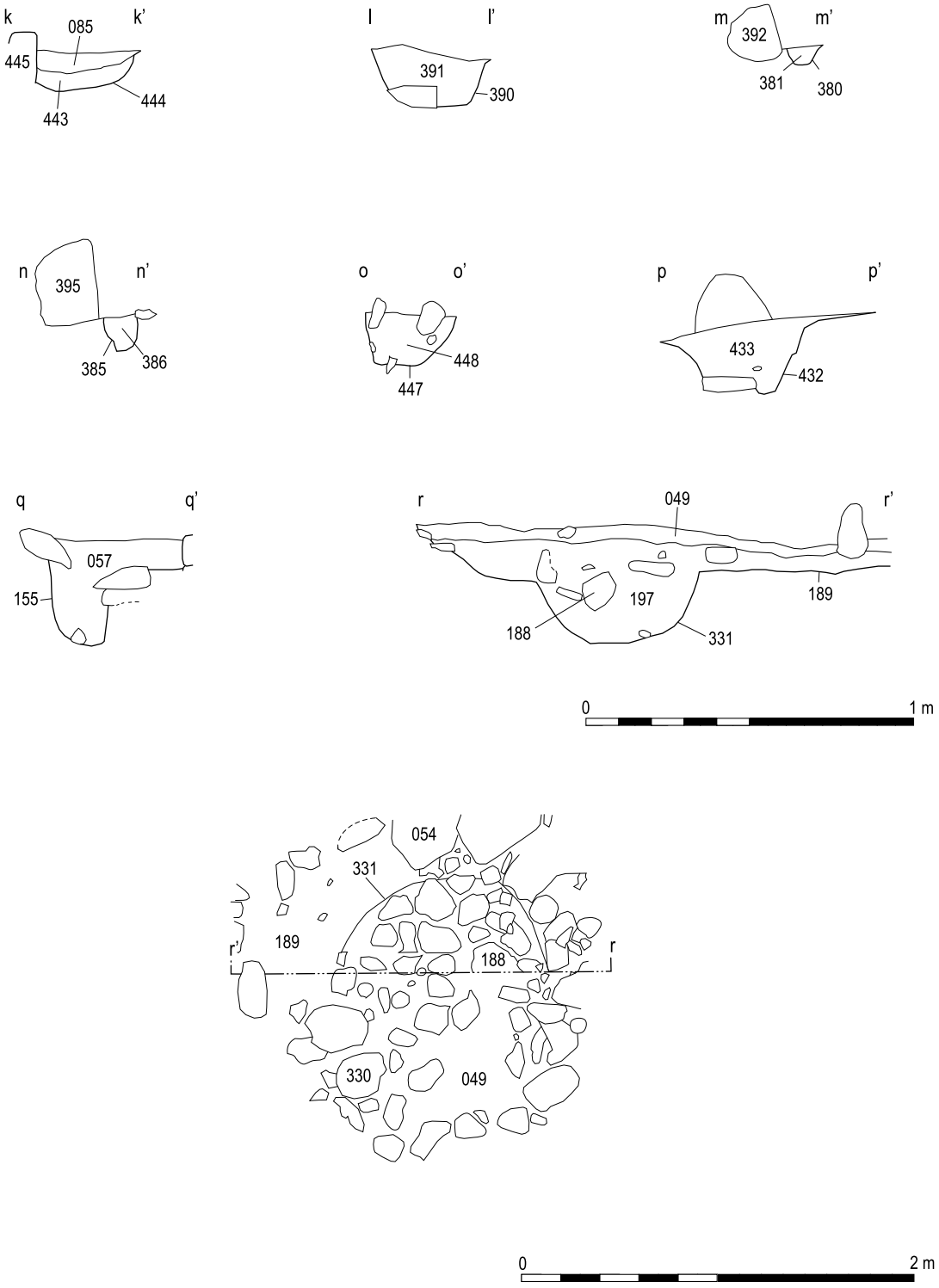
Inside was a fire-pit (331), suggesting that Structure 9 served as a house. A curving, stone wall base (471) sheltered the hearth on the north. Boulders and slabs formed a tight setting (330) around it to the north, while another setting (373) defined the hearth area to the south (Figure 7.24). The hearth settings may have served as benches, on which those tending the fire could perch or rest pots. A firm layer of dark brown, charcoal-flecked silty sand (364) accumulated inside the house, and burnt cereal grains, heather charcoal and a little human bone (0.2g) scattered and were trampled into it.

When the pit (331) was excavated, it was found to be packed with stones (188), most of them heat-affected (Figure 7.24). The lower stones lay in a matrix of dark brown clay silt (197), full of heather charcoal and burnt cereal grains and a little (0.4g) human bone. This combination suggests that cereals were parched over the pit. If it had contained stones and smouldering heather twigs, the heated stones would have given off a more diffuse heat than flames. A wattle platform could have stood over the pit, with the grain spread on it to dry. Sucking moisture out of the grain in this way, the farmers at Phantassie would have been able to keep it through the months that followed harvest without its going mouldy.

7.22 The phase 3 features at Phantassie.



7.23 Plan of structures 7, 8 and 9.



7.24 Sections through the post-holes from Structure 7 (k-k', l-l'), Structure 8 (m-m', n-n', o-o', p-p') and Structure 9 (q-q'), and the Structure 9 fire-pit in plan and section (r-r').

7.25 The linch pin from Structure 7.

When the grain was parched, they would have gathered it up, perhaps storing it in clay pots until it could be ground into flour. With each parching, some of the cereal grains would have fallen into the embers or scattered around the fire. If the inhabitants regularly cleaned out the pit, sweeping up detritus from the floor around it, they may have scooped the rake-out into baskets and carried it out through the porch [8] and along the track to a midden dump. As they passed through the porch, they dropped cereal grains and fragments of charcoal. These found their way into the post-holes on either side (as did human bone (0.2 g)), knocked there by passing feet or a heather broom, and some of it fell between the paving stones. Structure 8 contained the greatest concentration of charcoal (particular heather) and cereal grains on the site.

Cherry type (*Prunoideae*) charcoal (189) sealed beneath the wall (056) of Structure 9 produced a radiocarbon date of 20 BC–AD 210 (SUERC-5639), while hazelnut shell (*Corylus avellana*) from the fill (057) of the large post-hole dated to 50 BC–AD 120 (SUERC-5488). On balance, it seems likely that the building was constructed during the first century AD. The settlement was in flux, in terms of the buildings that made it up and what its inhabitants did there; as new buildings rose up, others went out of use. The settlement became, at least for a time, a smelly place (see below), and eventually a more crowded one.

Enclosing the cobbled passage

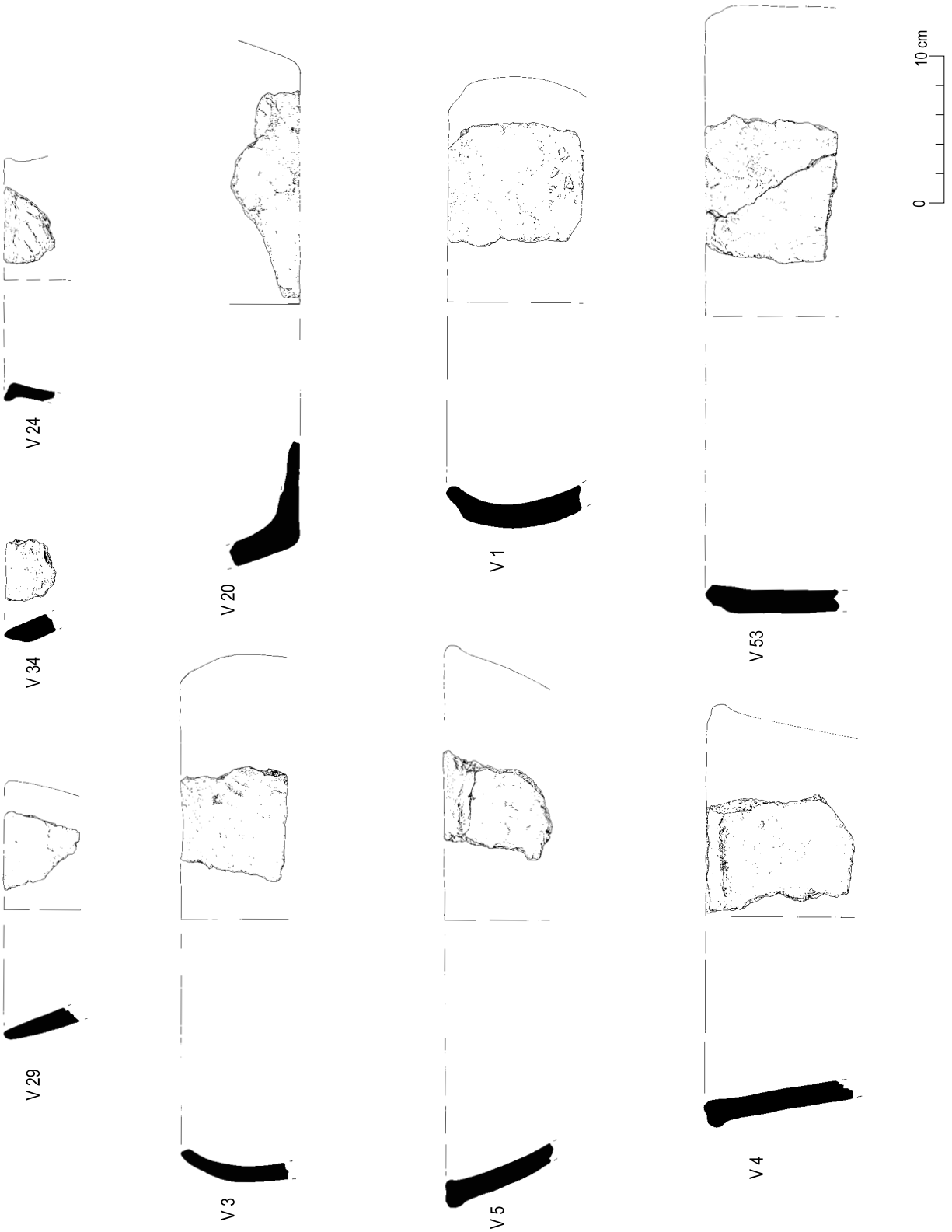
The inhabitants of Phantassie also enclosed the long, cobbled entrance passage that led to the west side of the sub-rectangular building [1] (Figure 7.22). They built a low, stone wall base (316) along its eastern side. On the south, this wall terminated at a large, flat, pink boulder that lay just north of Structure 9, opposite a gate or fencepost that stood in a post-hole (358) surrounded by a paved setting (336). This new wall ran for about 3m to the north, parallel to the wall (315) that defined the western side of the passage. Its northern end joined the western wall (105) of Structure 1 and ran on the same alignment as it. This created a passage that was sheltered on both sides, perhaps with hurdling supported on the wall bases, which would have separated the western part of the farmstead from the new buildings [7, 8 and 9] to the east and south-east.

The sub-rectangular building [1] abandoned, and midden spread over the ground

At some point, people stopped using the sub-rectangular building [1], either allowing it to fall down or deliberately dismantling it. The walls might have consisted of well-dried turf, with hazel, alder or birch wattling; soot-penetrated heather thatch may have formed the roof. These constituents would have made good fuel for fires or rich additions to the compost heap.

After the building was abandoned, it was covered with midden deposits. A thick layer of greasy, dark brown sandy silt (120)/(016) built up over its walls and interior. It covered the area (020) between the cobbled passage, the cellular structure [7] and the concentric building [9]. People kept the cobbled passage mainly clear, but piled midden (020) along one side of it, against the eastern wall (316). Midden spilled over the northern edge of the settlement platform on its far side (134); it filled gaps in the bedrock to the west (128) and built up (116) in the old, enclosed hollow (132) to the south-west of the abandoned building. A penannular copper alloy brooch (SF 435; Figure 7.27) was found in the midden material (116) dumped into the hollow.

The midden spread over this area was full of pieces of broken pottery from at least 14 vessels (Figure 7.26: V 15); burnt bones from cattle and other ungulates; grains of wheat and barley, hazelnut shell and seeds from heathland turf; and charcoal from alder, birch, hazel, willow, oak and blackthorn-type trees. It also contained a scattering of burnt human bone, most of it recovered from bulk samples and therefore probably representing only a proportion of the true content (5.8g in midden (020); 1.9g in midden (120); 0.1g in midden (134); 0.2g in midden (116)). The material listed here is that which was carbonised or robust enough to survive for two millennia in the soil, but the dark and greasy character of the deposits indicates that much more



7.26 Pottery from phase 3.

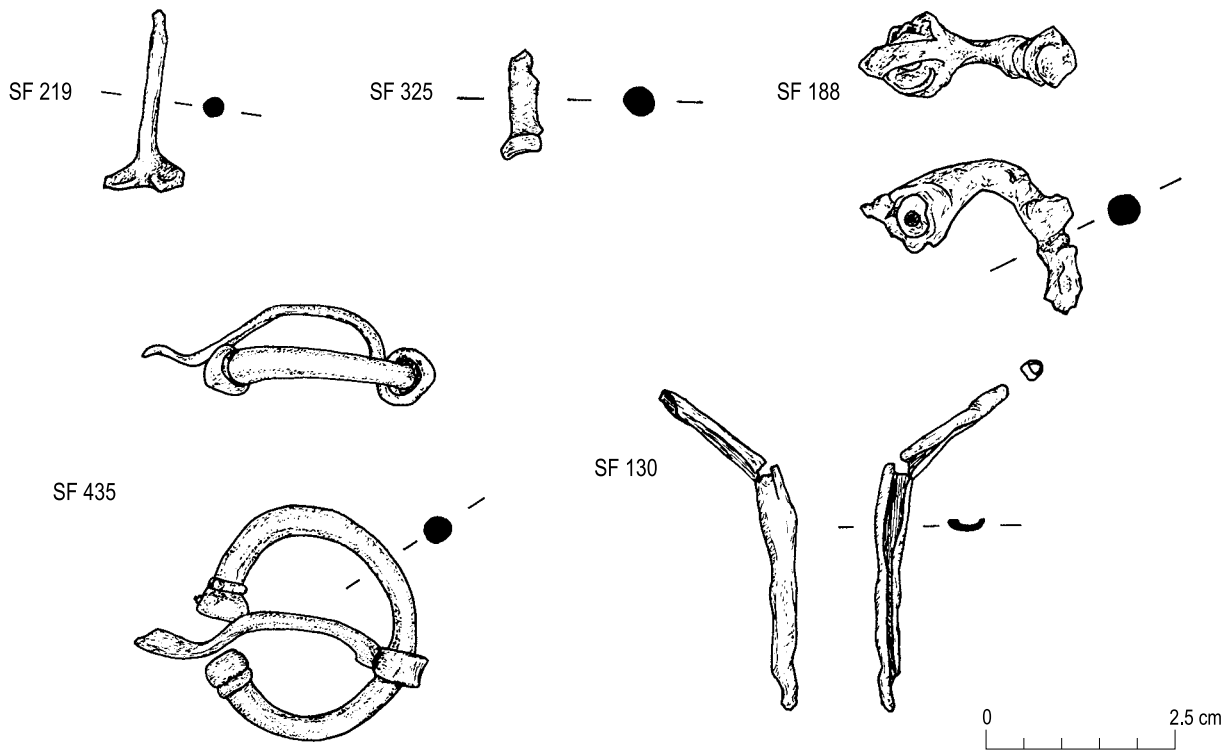
organic matter originally made it up and has since decayed away. Much of the midden probably came from hearths – the remains of meals, fuel (in the form of wood and heathland turf) and the cereal parching process.

As this midden was piling up over the abandoned building [1], someone placed in it an iron draw bar (SF 543), used to make wire for jewellery or chain mail (Figure 7.28, text box 7.4). This bar still had shavings of pure copper and brass stuck in its holes. It was found sitting upright, on end, in the midden deposit (016) just west of the wall of Structure 1. It appeared to have been been deliberately pushed into the soft, rotting matrix.

Radiocarbon dates from carbonised material in the midden range from 100 BC–AD 140. Birch (*Betula*) charcoal from the midden (120) sealing Structure 1 dated to 100 BC–AD 80 (SUERC-5508), a similar range to the hazel from the thickened wall of the structure. Alder (*Alnus*) from the same deposit and hazel (*Corylus*) from midden (020) to the south both produced dates of 50 BC–AD 130 (SUERC-5616; SUERC-5618), while barley (*Hordeum vulgare var vulgare*) from midden (128) to the west dated to 40 BC–AD 140 (SUERC-5497). Hazel (*Corylus*) from midden (170) to the east of Structure 1 dated to 50 BC–AD 130 (SUERC-5522). It is possible that the midden had been accumulating elsewhere for some time (perhaps in the midden store in Area C), and that the dated burnt wood and grain had been dead for some time before they were spread across parts of the farmstead.

The sub-rectangular structure [1] may have been abandoned at any time while the new structures, discussed above, were being constructed, or after they were all standing. The midden deposits that eventually covered the structure respected the new buildings, so all of them had been built by the time midden covered Structure 1, but it may already have been dismantled or been in the process of falling down for some time.

By perhaps the late first or early second century AD, we can picture a farmstead enclosed by a massive, stone-built boundary. A fence or palisade stood atop the boundary along the northern side of the settlement. A metalled track led into it from the east, past areas of hard standing where cattle were kept. At the end of the track, visitors would enter a small, roofed and paved porch [8]. Inside, a door opened to the right, leading to the sheltered entrance of a workshop [7]. Ahead, the porch led into a semi-circular house [9] where a fire smouldered in a pit; if it were autumn, the smell of drying cereals would mingle with the smoke that filled the building. If the visitors stepped off



7.27 Copper alloy brooches and pins.

the track and circled around the porch [8] and the house [9], they would come to a cobbled path that led northward toward the site of an older building [1]. To reach it, they may have had to pass through a gate or two, or between hurdling walls that stood on stone wall bases. To their left, a smaller structure or frame built of posts (structure 2) may still have stood, where fire was also used to parch grain. What they would have seen from the cobbled path depends on when exactly they visited: they might have seen the old sub-rectangular house [1] of a previous generation still standing, or its collapsed roof and slumped turf walls, or stone wall bases stripped of their superstructure, or heaps of stinking midden.

Phase 4

The period of midden spreading ended with the construction of a new suite of buildings over the decaying rubbish (Figure 7.29).

A rambling, paved and cobbled building [10]

The inhabitants of Phantassie constructed a large and (to the excavator) somewhat incoherent building over the partly covered ruins of Structure 1. They collected or quarried over 100 massive, thick slabs (084), along with an old mortar (SF 581; Figure 7.9). Over the walls of Structure 1 and the midden that covered its northern part, they set the blocks close together to form a level, crescent-shaped surface (Figure 7.30). They laid them so that the outer wall skin (131) of the old building was still just visible, running below the east side of the paving, and they chocked small stones above the slabs of the earlier wall to keep the paving stones level. Several gaps around the edges of the paving and an oval slab setting (017) may have held posts to support a roof. A massive boulder (483) beside the oval setting could have provided extra support for a post or could even have served as a seat.

The building (Structure 10) seems to have extended over the area to the west of the paving, although this seems more likely to have been an open yard with a metalled floor rather than a roofed structure, given its breadth and shape. Between the paving and the area

7.4

Fine metal-working at Phantassie

One of the most remarkable finds from Phantassie was an iron draw plate – a precision tool used to manufacture wire for use in fine metal-working. It is a slightly bellied, rectangular bar, 88.5mm long, tapering to a rounded tip, with six conical perforations along its length. These were used to form metal into wire by drawing it through a series of tapering holes of decreasing diameter. Corrosion obscures the details, but the perforations are of varying size, and are tapered such that each would have reduced the wire by between a fifth and a third of its diameter. Draw plates could be used for making wire from iron, copper alloy and precious metals. In this case, copper alloy shavings survive around some of the holes; analysis by Dr Jim Tate (NMS) shows that these comprise both copper and brass.

This is only the second draw plate known from Iron Age Scotland (there is another from Fairy Knowe, Stirlingshire; Hunter 1998a, 357), but there are examples from Iron Age Europe and from the Roman world (Jacobi 1979; Nothdurfter 1979, Taf 16, 266–7; Sim 1997). The holes on all of these are rather larger than the draw plates used in later periods for precious metals. While they could have been used in the manufacture of iron wire for ring mail armour, their main use was probably for non-ferrous metals. Wire was a key component of brooches and chains, although in a Scottish context it was most probably for pins or for links in bigger, more complicated objects. This was a specialist metal-working technology, and the draw plate shows that the inhabitants of Phantassie were using advanced metal-smithing techniques.

The residues on the Phantassie plate are also very interesting. The presence of pure copper and high-zinc brass shows that the smith was exercising careful control to maintain pure metals or clean alloys for producing wire. The brass would have come from recycled Roman material (Dungworth 1996; see text box 10.2).

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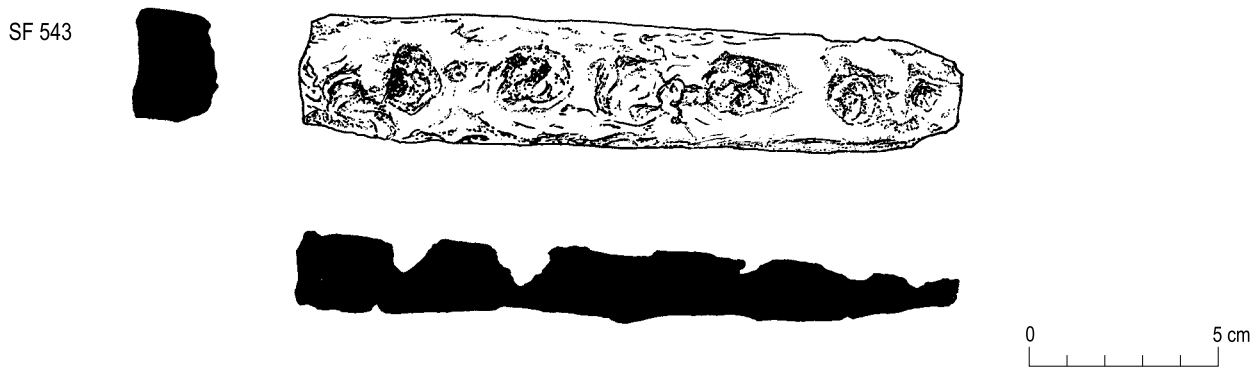


7.28 The draw bar.

where the bedrock rose was a spread of smaller stones (004), mixed with reddish sandy silt (006), that included a whetstone/hammer/pounder (SF 225; Figure 7.8) and sherds from up to five pots (Figure 7.31: V 39). A sharp boundary to these stones on the north indicates where a fence may have stood, although this was otherwise difficult to identify. The builders erected a small post, its base braced with stones (011), against the edge of the bedrock to the west. To the west of the stony spread, they covered the old midden deposit (128) with neat cobbling (135), including part of a broken quern base (SF 398; Figure 7.17). Three stakes (008, 009, 010) set in a line along its edge would have supported a light wall that ran along the bedrock.

They extended this wall through the bedrock itself, cutting a narrow gully (360) into the living rock, and continued it to the south-east with a stone wall base (035) around standing posts (077) and (080) (Figure 7.32). They packed one of the post-holes (077) with stone and also chips of shale, perhaps created through shale-working. This southern section of walling (035) may have enclosed a small porch, with the western wall base (105) of the abandoned building [1] enclosing it to the east. At its entrance, two small, stone-packed post-holes (151 and 309) held posts for a gate or a porch (Figure 7.32).

The cobbled passage led directly to this putative porch. It was still defined on the east by the western wall (105) of Structure 1 and its southward extension (316). Along the northern stretch of the passage, the wall (315) that had defined it on the west had tumbled by this stage, and no one bothered to rebuild it; a trampled ground surface (142). The builders laid fresh cobbles (342) over the southern part of the passage, to the south of the putative gate set in the post-hole (358) and paving (336).

A building with three cells [11]

Next, the occupants of the farmstead built a small, three-celled structure (Figure 7.33), squeezing it in between the rambling structure [10], the cellular building [7] and the boundary wall (100)/(088). This three-celled structure had rubbly walls, similar to those making up Structure 7, with the northern one (096) built atop the boundary wall (100) (Figure 7.34). The central, oval cell was about 7m long. A stone post-setting (351) and a slab-lined post-hole (177) at opposite sides of its long walls would have supported the roof, and a third post-setting (375) lay under rubble (481) at the eastern end; the rubble may have collapsed over it when the post was removed. A smaller cell led off this to the north-east, probably to the building's entrance. It led out onto the boundary wall beside a post-setting which may have supported the door, and the boulders of the wall were worn smooth from the passage of feet.

To the west of the central area was another small cell, squeezed against the edge of Structure 10. What divided it from the central cell was the outer, secondary wall face of the abandoned building [1]; the tops of its stones were just visible in the midden (170)/(171) that had been dumped over them. This generation of builders set rubble against the stones to create a base (169) for a partition wall and extended it into the bedrock to the north by hacking a slot into the rock. Stones resting around the edges of the slot may have been set to support a timber or wattle partition.

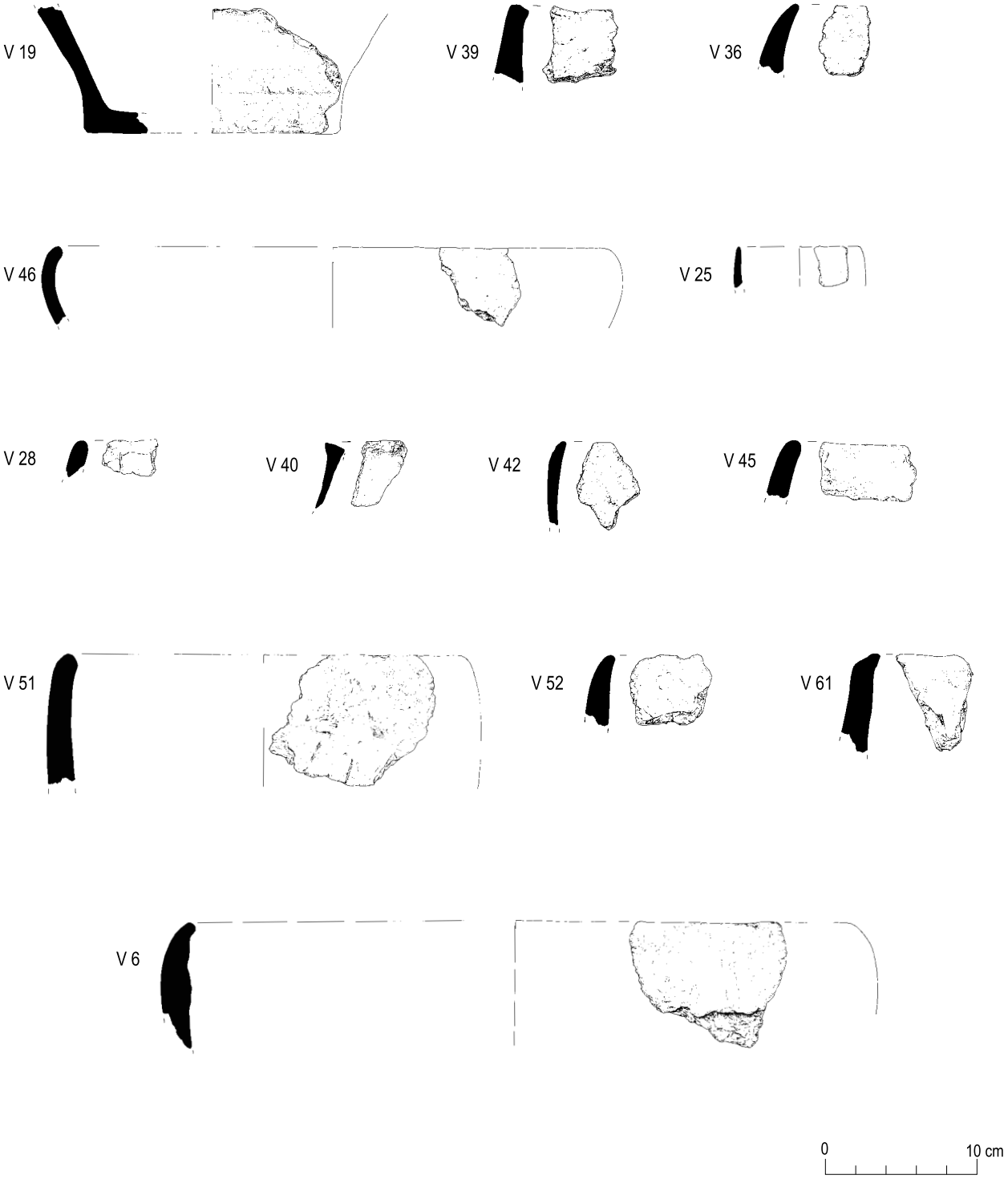
Relatively little charcoal or carbonised cereal was found in the floor (092)/(093) of this structure; it may have been used for storage.

Two small cells (Structures 12 and 13) beside the cobbled passage

As part of this same burst of building activity, the farmstead's inhabitants also built two tiny, semi-circular cells against the eastern side of the cobbled passage (Figure 7.35). They stood against the old wall (105) of the abandoned

7.29 The phase 4 features at Phantassie.

7.30 Plan of Structure 10.



7.31 Pottery from phases 4 and 5.

building [1] and the later eastern passage wall (316), which continued along the same alignment as (105).

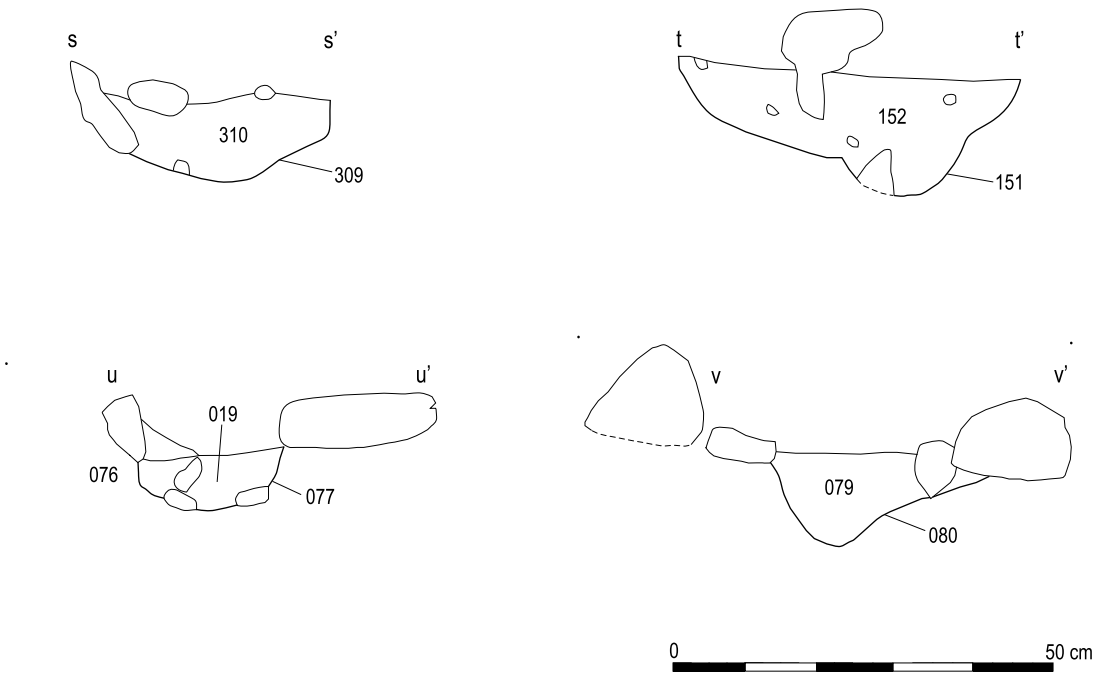
The northern cell [12] was defined by a slight, stoney wall base (081) that formed a tight arc against the earlier walls to the east; its northern end crossed the earlier wall (105) and continued east to join the outer wall face (091) of Structure 11. A doorway led into the cell from the south.

Inside, against its north wall, lay the upper stone of a roughed-out quern (SF 231; Figure 7.17), never finished but with a squarish hole, probably made with an iron chisel (Maclaren and Hunter, see Chapter 12 and Archive). The stone broke while it was being shaped, and its maker may have abandoned it at that point, finding no other use for it. A thumb pot (SF 223; Figure 7.3) lay close by. This had been made simply by pushing a thumb into a lump of wet clay, pinching the sides to thin them and then firing the tiny pot. It might have been a child's toy.

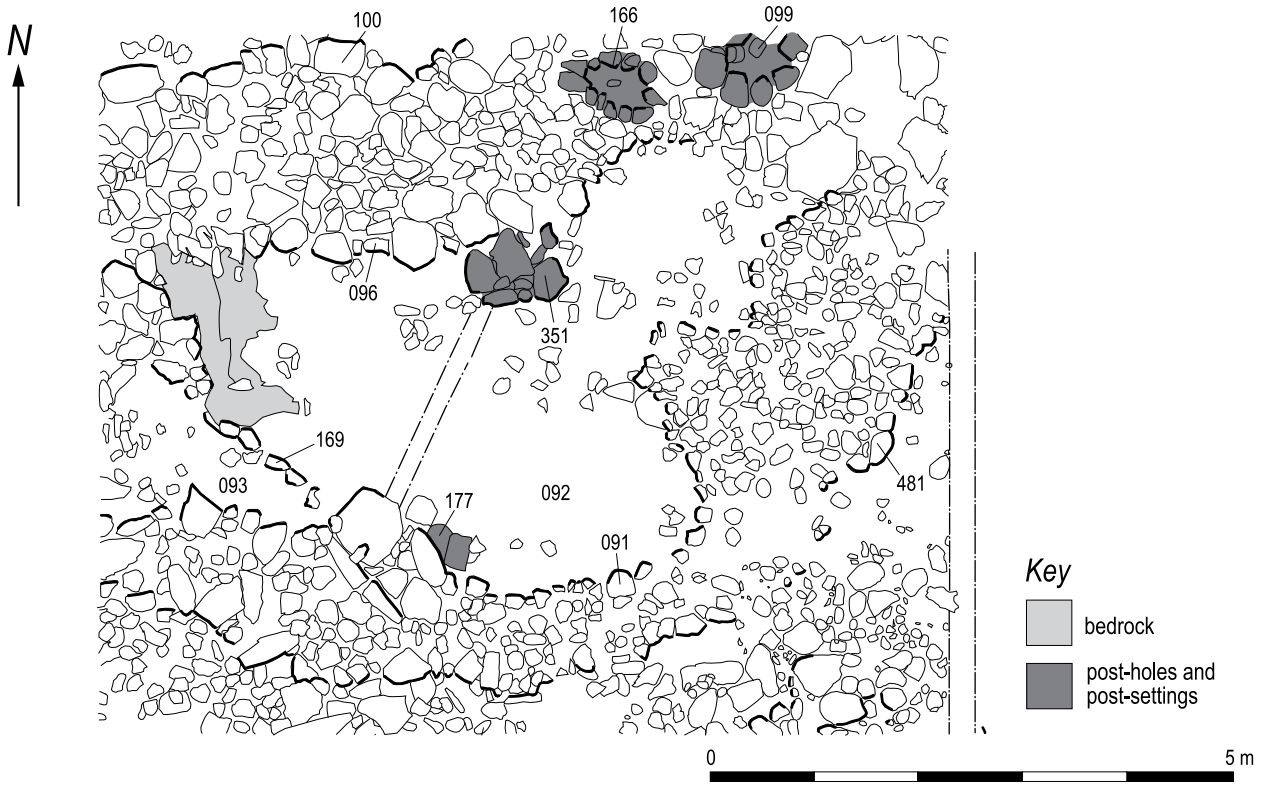
The southern cell [13] stood against the northern one, beside the paving (336) for the putative gate (Figure 7.35). Its construction constricted the passage, leaving a gap just wide enough for one person to pass. It had a similarly slight, stoney wall base (328) with a doorway on the south and a small post-hole (366) just inside the door. Inside, the floor was covered with firm, pink-orange silty clay (199), its colour brightest toward the east, next to the flat pink boulder at the southern end of the passage wall (316). The floor contained heather charcoal and grains of emmer wheat, six-row barley and other cereals too burnt to identify. People may have lit fires on the floor of this cell, reddening the soil and the adjacent boulder, to parch cereal here. The post-hole may have supported a parching frame. Birch (*Corylus*) roundwood charcoal from the fill of the post-hole (367) produced a radiocarbon date of 50 BC–120 AD (SUERC-7345).

Remodelling the hearth and entrance to the concentric building [9]

It is not clear what had defined the northern side of Structure 9 in its original form; some kind of wall must have run between the fire pit (331) and the outer, slab-built wall base (056), but no traces of this were identified during excavation. Now, the occupants of Phantassie built a new wall base (472) straight along this line, sealing the floor layer (364) that had already built up (Figure 7.35). This, with the southern side of the southern cell [13], created a narrow corridor into the building from the west. A post-hole (370) for a door post and some slabs defined



7.32 Sections through the post-holes relating to Structure 10.



7.33 Plan of Structure 11.

the threshold. The door that swung on the post would have given access both to Structure 9 and the cell [13]. The fill of the post-hole (371) contained abundant heather charcoal and some from birch and hazel, along with a little human bone (0.2g).

Inside, the corridor led to the fire-pit (331). This pit was filled with charcoal and burnt stones (188) from previous fires and, from this point on, fires were set on top of the fill. This generation built a new hearth setting (051) around it, partly covering the old outer setting (373) and the residues of the old fires (188). Over time, the rake-out (049) from subsequent burnings built up inside the new hearth setting (051).

Analysis of the samples shows that the fuel used in the hearth also changed. Those who laid the earlier fires had burned mainly heather, hazel and some oak, along with (presumably accidentally) grains of hulled six-row barley and emmer wheat. Those tending the new fires burned a great deal of heather, but also hazel, willow, blackthorn-type and cherry, along with the same cereal grains and hazelnut shells. The carbonised seeds and heather stems show that they were also burning turves cut from heather moorland. Turves would have partly smothered the fire, producing a more gentle heat than open flame or embers. With the pit filled in, people could no longer use the old method of heating stones inside it to parch cereals above; perhaps this later generation decided it was better to use turves than stones, so they did not bother to clear out the pit. Burnt human bone (2.7g) was also found in the rake-out.

Hazel (*Corylus*) from a residue of the earlier fires (197) produced a radiocarbon date of AD 20–230 (SUERC-5520), while wheat (*Triticum*) from the ashes (049) of a later fire was dated to AD 70–240 (SUERC-5511). This suggests that the inhabitants of Phantassie remodelled Structure 9 between the mid first century AD and the early third century AD.

Continued use of the other buildings

Inside the cellular structure [7], a trampled and charcoal-flecked occupation deposit (055) accumulated. It was darker (058) around the walls, perhaps having been swept there from the centre. Abundant heather and a little oak charcoal were found in samples from this deposit, along with sherds from several pots, burnt cereals and human bone (0.3g). A grain of hulled six-row barley (*Hordeum vulgare var vulgare*) from (055) yielded a radiocarbon date of AD 0–220 (SUERC-5496). A clay bead (Figure 7.36:

SF 118) and sherds of pottery (Figure 7.31: V 36 and 46) became trapped in the turf matrix of the wall (054)/(193).

The porch [8] was still in use, but it was no longer swept out; a dirty floor deposit of dark brown fine sandy silt (066) built up inside, between the two areas of paving. This deposit also crept out over the north wall, sealing the stone wall-base and the post-holes, so it appears that this wall (and the putative roof) had been dismantled and that the porch was now open. Again, numerous burnt cereal grains and pieces of heather charcoal built up inside (along with 0.1g of human bone and sherds from three pots). People were probably still parching cereal in the fire-pit next door and carrying the rake-out through the porch.

Part of a pale blue glass bangle (SF 10; Figure 7.37), with inlaid blue and white herringbone decoration, also became wedged between two of the large paving slabs (052) on the porch floor. Perhaps it fell from a basket of midden someone carried over one shoulder, or broke on the owner's arm and, as she gathered up the fragments to toss away, slipped into the crack and was left.

Just before the porch fell out of use, someone dropped a handful of hearth waste from parching fires on the eastern paving (067). It lay on the stone for two millennia, appearing to the excavators as a patch of reddish fine silty clay (070), which proved to be full of burnt six-row barley, emmer wheat, heather charcoal and 0.1g of human bone. A grain of hulled six-row barley (*Hordeum vulgare var vulgare*) from this deposit dated to 50 BC–AD 130 (SUERC-5486), another from the matrix (069) of the south wall dated to 40 BC–AD 140 (SUERC-5645), and a third from the dark brown floor deposit (066) also dated to 40 BC–AD 140 (SUERC-5492).

Plinths and post-holes for parching grain? (Structure 14)

Away from most of the buildings, in the southern part of the farmstead, the post-holes and burnt sediment (110) that had made up the possible parching frame (Structure

7.34 Structure 11 during excavation.

7.35 Plan of Structures 9, 12 and 13 and the cobbled passage during phase 4.

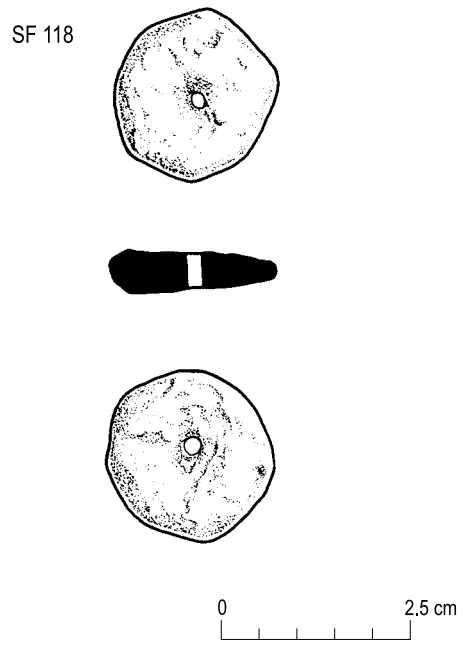
2) were covered over in this phase. Spreads of dark brown sandy silt (040 and 024) built up over them, with sherds of pottery from four pots, scattered cereal grains and charcoal, burnt animal bone and human bone (2.9g). A grain of six-row barley (*Hordeum vulgare sl*) from one of the spreads (024) yielded a radiocarbon date of 60 BC–AD 120 (SUERC-5500). Sometime after it accumulated, the occupants of Phantassie built two enigmatic stone features over the occupation deposits here.

Both were oval features, possibly plinths or platforms, made of flat stones set close together (Figure 7.38). The larger, eastern one (025) measured about 2.6m by 2m across, with a notch in its western side. A post stood in a large post-hole (108) set in the northern edge of the plinth, and a smaller one (191) stood just to its north-west. Abundant heather charcoal, along with birch and hazel charcoal and human bone (0.7g), was recovered from the larger post-hole's fills (026)/(109). The western plinth (039) was smaller, with a post (114) in a notch at its north-west edge and another post-hole (121) beside it. Three other post-holes or small pits (184, 183 and 314) lay to the north of the plinths.

Cereal grains and heather charcoal found their way into most of the post-holes making up these configurations (collectively called Structure 14). The plinths and post-holes may have supported parching or drying frames for cereals. A tiny pounder (SF 654; Figure 7.8) found in the fill of the western plinth's post-hole (041) could suggest that people prepared food in the area.

Filling the midden store

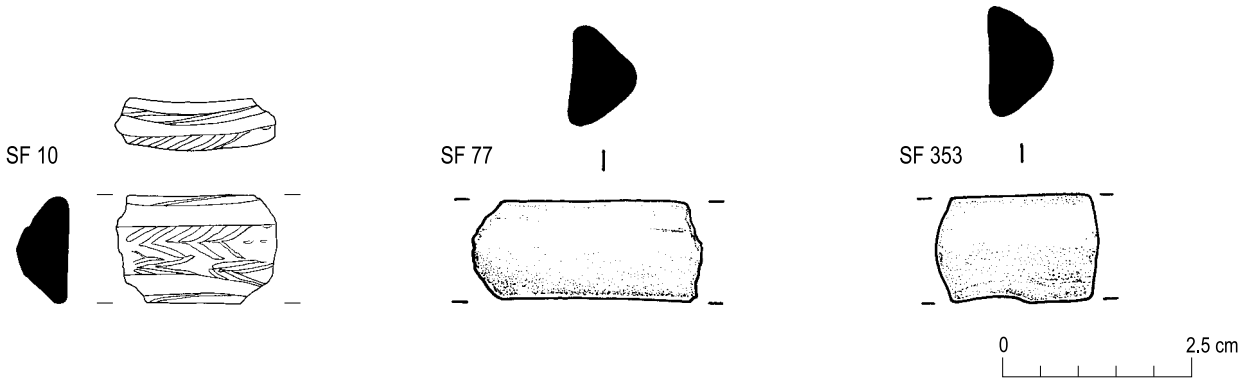
The inhabitants of Phantassie continued to dump rubbish into the enclosed bedrock hollow (Structure 4) in Area C, at least into the second century AD. The lower (245) black, greasy midden deposit was full of large sherds from bucket-shaped pottery vessels, the teeth of cattle and other ungulates, burnt human bone (0.7g), burnt cereals and hazelnut shell. It was rich in charcoal from fires where mainly heather (but also hazel, ivy and oak) had burned. The upper midden deposit (242)/(224)/(237) contained even more pieces of recognisable detritus, including large sherds of pottery (Figure 7.26: V 3, 4, 5, 29, 34), worked flint and quantities of hearth waste, with much more hazel charcoal than elsewhere in the settlement (where heather charcoal was most common). Fragments of an iron knife (SF 430) and ard (SF 494) were found in the midden and on the trampled surface outside it (Figure 7.39). The midden also contained burnt human bone (1.2g) and some animal bone, mainly teeth from cattle and other ungulates. Micromorphological analysis of samples from the midden deposits confirmed the interpretation that the material was being composted. It also identified residues from manure-impregnated turf, which may have been used as bedding for animals and tossed here when byres were cleaned out (Simpson, see Chapter 12 and Archive).



7.36 The clay bead from Structure 7.

If people were dumping rubbish into the hollow until it was needed for other purposes – for fertiliser, for example, or for spreading over parts of the farmstead during phase 3 – then they would have periodically cleared it out, shovelling the rubbish into carts or baskets but probably leaving some behind each time. Both the hazel (*Corylus*) charcoal from the upper midden deposit (224) (350–40 BC (SUERC-5498)) and the apple type (*Maloideae*) charcoal from the lower deposit (245) (160 BC–AD 70 (SUERC-5528)) may have been left over from earlier phases of accumulation. Later radiocarbon dates and a well-sealed Samian sherd suggest that most of the midden built up in the second century AD.

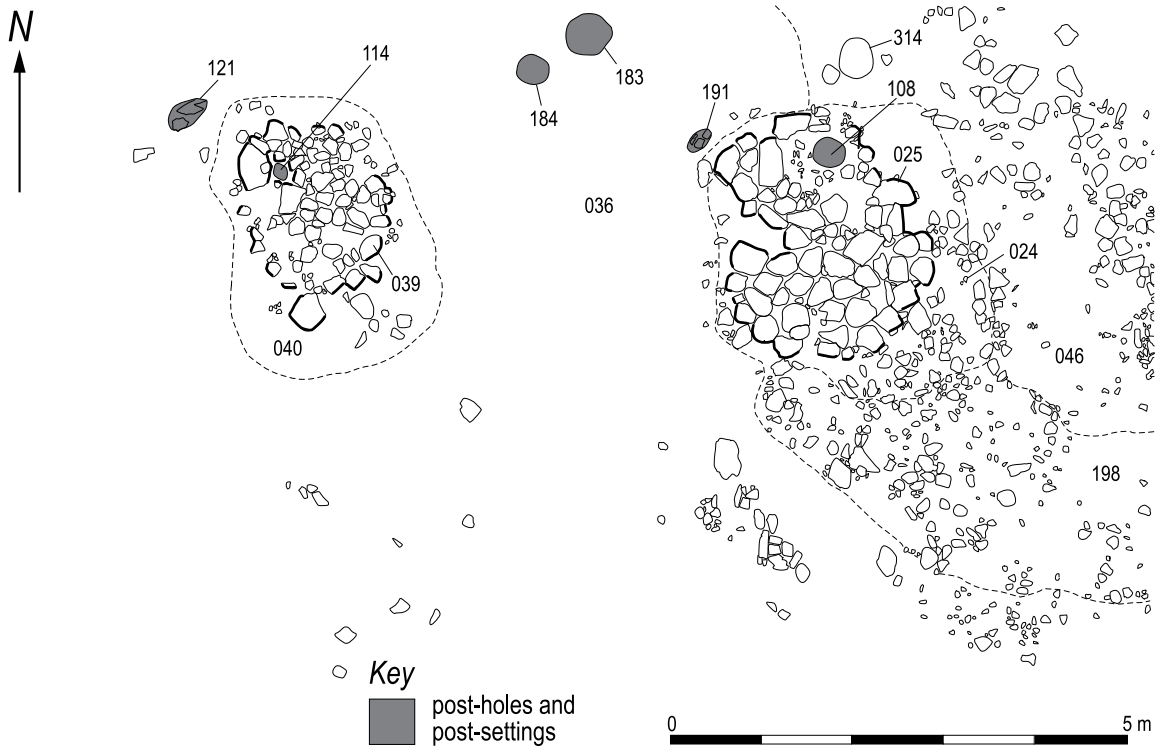
At the very base of the lower midden deposit (245) there lay a sherd from the rim of a plain Samian bowl, made in Central Gaul during the second century AD, with trailed barbotine decoration in the shape of a leaf (Wallace, see Chapter 12 and Archive) (SF 622; see text box 10.2, Figure 10.9). Blackthorn-type (*Prunus spinosa*) charcoal from the upper midden deposit (242) dated to AD 20–240 (SUERC-5517) and a grain of six-row barley (*Hordeum vulgare sl*) (SUERC-5499) to AD 20–230, while barley (*Hordeum vulgare sl*) from the lower midden deposit (245) dated to AD 20–220 (SUERC-5700). On balance, the evidence suggests that the main phase of midden accumulation was during the second century



7.37 Glass bangle fragments.

AD, although some of it may have formed earlier or later. The conflicting chronological evidence provided by the Samian sherd's stratigraphic position and the radiocarbon dates highlights the need to understand how deposits have built up and been modified, rather than relying purely on diagnostic artefacts or even dates.

At some point the wattle-and-daub wall bedded in stones (235)/(246), which had enclosed the midden store, burnt down: pieces of burnt wattle-and-daub (SF 401) were found in the matrix of the stones on the west side. Hazel (*Corylus*) charcoal from the matrix (235) produced a radiocarbon date of AD 20–220 (SUERC-5507). The close correspondence between the dates for carbonised material from much of the midden would suggest that



7.38 Plan of the plinths and post-holes of Structure 14.

these last deposits accumulated within a relatively short period of time, and were not cleared out before the occupants of Phantassie turned the site of the midden store to a different use.

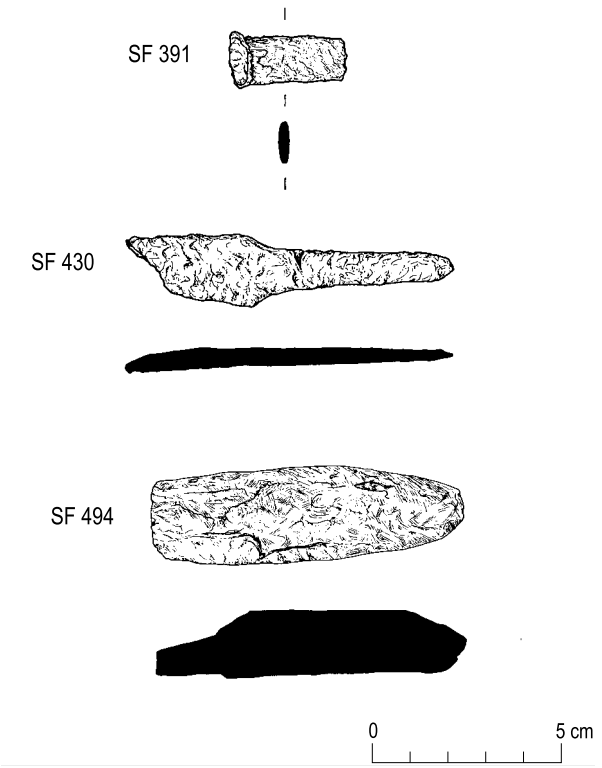
Cobbled surfaces and outbuildings (Structures 15, 16 and 17)

During or after the second century AD, the inhabitants ceased to pile up midden in the hollow and did not clear out its contents. Instead, they sealed it with well-laid cobbled surfaces (Figure 7.40). They created five contiguous areas of cobbling (212)/(213)/(202)/(214)/(206), differing in character from each other. They laid the largest area (206) over the west side in an irregular trefoil shape; the other, smaller cobbled surfaces extended east from here. Along the eastern edge of the midden, they built a stone wall-base (204) which turned westward in a sharp corner at its southern end (as 203), defining a rectangular enclosure (Structure 15) around part of the filled-in hollow. The rough steps (254) of the earlier phase were kept, and led through this wall. The inhabitants laid another, semi-circular area of cobbling (207) to the east of the former midden and the steps, and built a slight stone wall (209) to curve around the whole area on the east, at the base of the bedrock slope, perhaps defining a yard. They set other patches of cobbling (284) to the west of the midden, filling a gap in the bedrock and sealing the rock-cut drain (270).

Trampled layers (211)/(222) that built up over and between the cobbles contained burnt cereals and abundant hazel and heather charcoal, as well as a little oak, willow and cherry-type charcoal, and human bone (1.5g).

The post-built structure [5] had gone out of use, and a brown silty sand surface (233) built up over the post-holes; part of a broken quern (SF 495; Figure 7.17) became incorporated in it. A new stoney building [16] was constructed over it, but with some reference to the earlier one (Figure 7.41). A short wall, composed of two faces with a rubble core (231), ran over and on the same alignment as the longest row of posts from the earlier building, with two short lengths of walling (232 and 230) extending east from it, perhaps to define stalls or storage areas. To the west, a spread of cobbling (208) was laid between areas of outcropping bedrock to firm or level up the ground, with a substantial stone partition (216) extending between areas of bedrock to the west again. A whetsone/hammerstone (SF 207; Figure 7.9) was found among the stones of the wall. On the other (east) side of Structure 16, slabs (205)/(229) were laid to create an arcing wall base, again perhaps to form a bay or stall (Structure 17; Figure 7.41). Hazel (*Corylus*) charcoal from the deposit (239) sealed by these slabs produced a radiocarbon date of 50 BC–AD 120 (SUERC-5512).

The creation of these cobbled surfaces, a yard and small, stone-walled structures may indicate that more animals were being stalled in the settlement at this phase, and so the inhabitants of Phantassie needed more buildings and areas that incorporated hard standing.



7.39 Fragments of an iron bar, knife and ard.

Phase 5

The farmstead's gradual abandonment

Most of the buildings fell out of use in the last phase of the settlement's life, and it gradually became a quieter, less crowded place (Figure 7.42). The paved, rambling structure [10] seems to have continued in use the longest.

After the last fire burned in its hearth, the concentric house [9] was abandoned. Oat (*Triticum*) from the hearth's rake-out (049) produced a radiocarbon date of AD 70–240 (SUERC-5511). A layer of soapy, yellow-brown clay silt (048), containing only enough charcoal to have blown in from nearby fires, built up over the hearth and its setting, the interior and partly over the building's wall base. People tossed large sherds from at least 10 pots into the ruins of the building, along with hazel charcoal, perhaps the remains of burnt wattle panels (Figure 7.31: V 45).

Just across the cobbled passage to the west, a similar

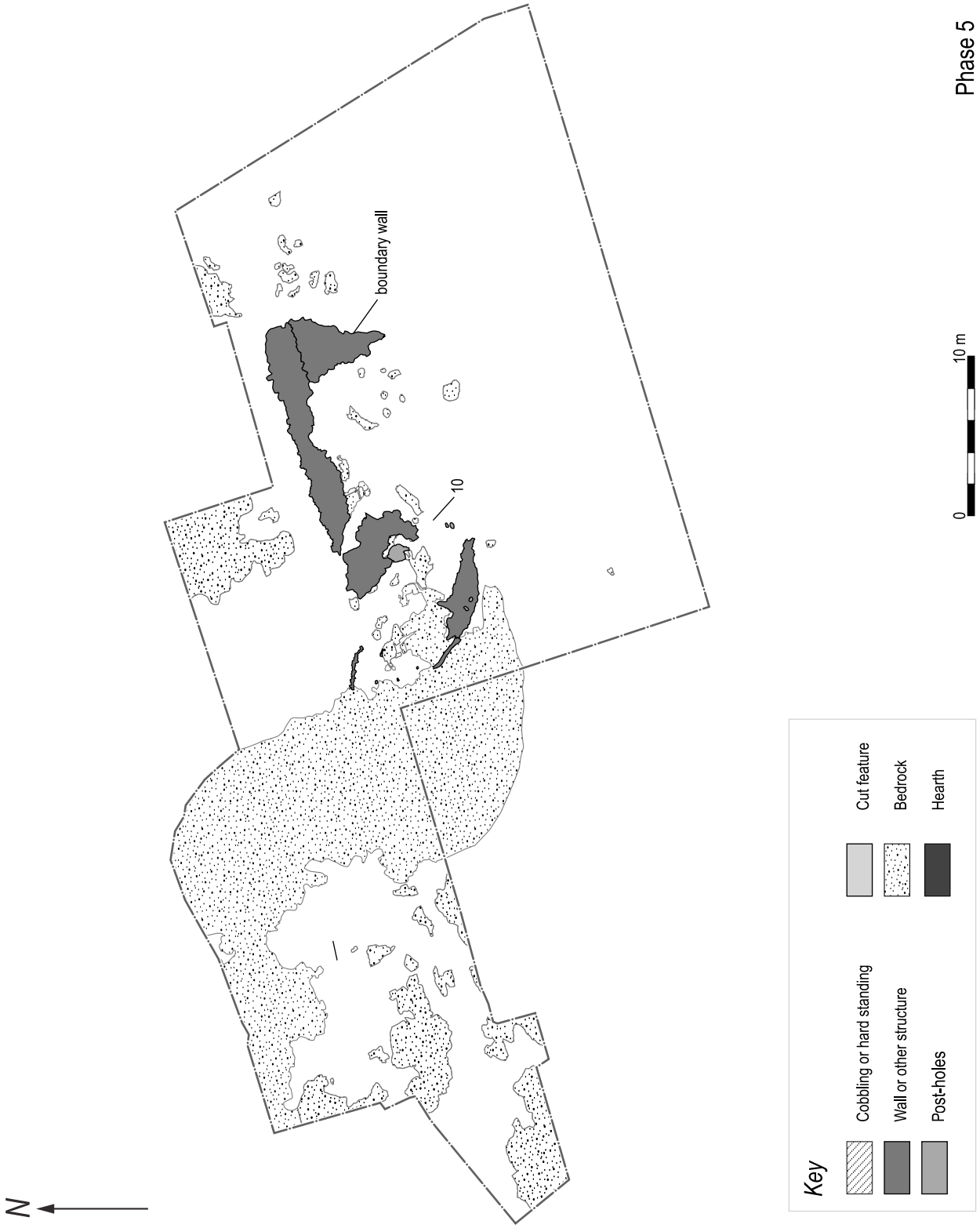
7.40 Plan of the cobbled surfaces and walling of Structure 15.

7.41 Plan of Structures 16 and 17.

layer of post-abandonment sediment (046) built up to the east of the plinths and posts making up Structure 14. The large, conjoining sherds of pottery found in it (from four different pots; Figure 7.31: V 6 and 51) show that people no longer walked regularly over this ground. To the east of the settlement platform, a ground surface (078)/(085)/(086)/(087)/(107) built up over the areas of hard standing (124)/(125). Large sherds from up to 15 pottery vessels, including most of one pot, were found in it, suggesting that this area, too, was no longer regularly used (Figure 7.31: V 40, 42, 52, 55, 61). Fragments of copper alloy ornaments (SF 219, 325, 130; Figure 7.27), part of an iron bar (SF 391; Figure 7.39), glass bangle fragments (SF 77 and 353; Figure 7.37), two spindle whorls (SF 19 and 620; Figure 7.43), and various stone tools (SF 162 and 472; Figure 7.8 and 7.9) found in phase 5 deposits also give an impression of things being casually abandoned as the settlement fell quiet.

Along the passage, the posts that had supported walls or gates decayed or were removed (there were no clear post-pipes indicating decay, although the stone packing remained in place), and the post-holes silted up. A trampled, silty surface (021) built up over the cobbling (342) and paving (336), and the small cells (12 and 13) along the passage fell out of use. Sherds from 10 pottery vessels became incorporated in the floor of the passage (Figure 7.31: V 20 and 297). A reddish brown silty clay (083) formed over and around the tumbled stones (082) of these and the other buildings. The larger cellular building [7] may have continued in use, but the smaller one [11] fell down or was dismantled. A spread of scorched sediment (013) containing burnt human bone (1.8g) lay north of the boundary wall and Structure 11, apparently dumped by someone standing on the wall base, suggesting that the building no longer stood at this point. A fragment of human bone from the deposit produced a radiocarbon date of 360–50 BC (SUERC-9040).

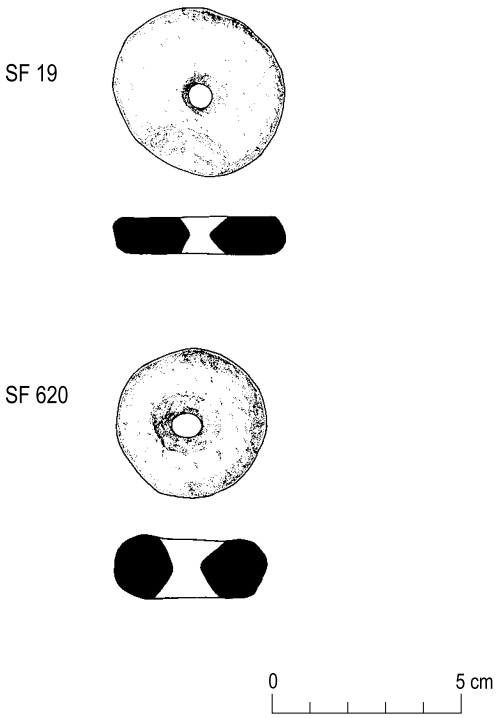
The paved, rambling structure [10] seems to have continued in use longer than the others. Those living on there scattered the burnt bone of sheep/goats and other ungulates, broken pottery from about eight pots, an unfinished shale finger ring (SF 16) and other bits of rubbish on the trampled surface (021) that led to it along the formerly cobbled entrance passage. Alder, hazel and willow charcoal, cereals and human bone (0.5g) were



7.42 The phase 5 features at Phantassie.

found in a dark brown sandy clay (033) that built up against its south-west wall (035). A grain of hulled six-row barley (*Hordeum vulgare var vulgare*) from this produced a radiocarbon date of AD 80–340 (SUERC-5614).

Probably by the mid third century AD, the last occupants of the farmstead had left. The buildings were reduced to their stone wall bases, perhaps with remnants of turf walls slumped over them. Rubbish heaps and the ashes from timbers burnt in final fires marked those parts of the settlement that had already been abandoned during the last years. The remains survived relatively undisturbed by later activity. The survival of discrete occupation deposits and wall lines show that the farmstead stood deserted and decaying until hillwash deposits (005) covered its traces.



7.43 Spindle whorls.

Discussion

The dynamics of the settlement

The farmstead at Phantassie began as a few light structures partly enclosed by a fence, perhaps as early as the second century BC. Over the next 200 to 400 years it became busier and more crowded, until at last it declined and gradually emptied.

After building the first ephemeral structures in the first or second century BC, the inhabitants invested time and effort in building more lasting, substantial things (in phase 2): a sub-rectangular house [1] in a fenced yard, a stone-built boundary and hard standing around the main settlement area, a cobbled and enclosed or gated passage, and a frame perhaps used for parching grain over fire. Later – probably in the late first century BC or the first century AD (phase 3) – a new suite of buildings sprang up, filling the eastern part of the settlement platform. The concentric building [9], with its hearth, may have replaced the sub-rectangular one [1] as the main dwelling, with a porch [8] leading into it and an adjacent cellular building [7] serving as a workshop. At some point during this phase, the inhabitants abandoned Structure 1 and began dumping rubbish over and around it, covering what had been the main focus of earlier generations' lives. The midden deposits produced considerable evidence for what people ate, burned, used and discarded during this time. In deliberately spreading these residues of daily life over the abandoned house, they may have been symbolically marking its death or preparing the ground for a new phase of occupation (see Chapter 10).

When they had finished spreading midden in the settlement, this generation of Phantassie dwellers sealed it and the abandoned building beneath it with a new, large structure [10] formed partly of massive paving slabs and probably also comprising a fenced yard (phase 4; Figure 7.44). They proceeded to fill up other spaces on the settlement platform with small cells, squeezing them into the available spaces. The area to the west of the cellular building [7] remained open throughout, and this may have been a yard during the life of the settlement, a place where goats were tethered, children played or women ground grain. This was the settlement at its most crowded, probably in the first or second century AD. It was also the period when the inhabitants converted the midden store in Area C into new areas of hard standing and outbuildings, suggesting that they were keeping more livestock than before.

Finally, many of the smaller buildings fell down or were dismantled and their sites were used to dispose of rubbish (phase 5). The large paved building [10] stayed in use while its occupants scattered rubbish freely over parts of the farmstead that had been abandoned, but this seemed less deliberate or concentrated than the midden-spreading of the earlier phase. At last, these people left or died and the settlement lay deserted.

On the nature of Phantassie

What kind of settlement was Phantassie? What sort of community occupied it, and what were their relationships to the surrounding landscape and other settlements? The range and quality of the artefacts, the evidence for fine-

quality metalworking, the livestock herds suggested by areas of hard standing and the energy apparently invested in building projects all contribute to a picture of life there. They do not conjure up an image of a high-status community, living a luxurious existence with abundant imported goods and extravagant accommodation, supported and fed by subservient groups. Nor do they suggest an impoverished community, barely scraping by on the edge of starvation. There was no evidence to suggest that the settlement was only occupied seasonally. It also seems unlikely to have been simply a collection of workshops and farm buildings serving a separate settlement, given the quantity of cooking pots left scattered around the site that indicated everyday domestic occupation (see text box 7.1).

Rather, the evidence evokes a picture of a settlement permanently occupied by a working farming community, perhaps the size of an extended family, who were reasonably prosperous in terms of grain and stock. They produced enough surplus to trade for the occasional beautifully decorative object, such as the Samian bowl or the glass bangles (see Macinnes 1989). Its members also had time to devote to craft production beyond what they needed for everyday use, making wire for jewellery or chain mail with the draw bar (see text box 7.4). Over time, the community clearly thrived and grew enough that it needed to expand the domestic and agricultural accommodation with more buildings and hard surfaces.

The palaeobotanical evidence (Miller and Ramsay, see Chapter 12 and Archive) and the character of the wall bases show that the inhabitants were drawing on diverse areas for fuel and building materials, ranging from scrub woodland to moorland to riverbeds. They also had access to raw materials such as recycled metals of Roman origin (see text box 7.3), and to markets or traders for exchanging agricultural surplus and crafted objects for other things they wanted or needed, perhaps exchanged at a centre such as Traprain Law (see Jobey 1976, 193–8).

7.44 Reconstruction of Phantassie during phase 4.

These implied relationships raise questions about the inhabitants' social relations with other communities. Did they live a free and independent existence and, if so, how did they establish and maintain rights to land for grazing, raising crops or gathering fuel? Alternatively, did their existence depend upon the protection of a larger, more powerful community – perhaps one that was simultaneously growing on Traprain Law, or in one of the larger enclosed settlements clustered around the hill – to which they paid tribute or rent for land?

These are questions to which archaeology can provide only teasing, tenative answers, but they are worth asking. Chapter 10 considers the evidence from Phantassie in combination with that from other contemporary sites in the region, and in the context of broader changes in settlement and society, to offer models for social structure that fit the assembled evidence.

Tapestries of later prehistoric life and death

The excavated evidence and the assemblages of artefacts, palaeobotanical remains, animal and human bone have yielded a complex, nuanced understanding of the lives that left these traces, one developed further in the context of other contemporary sites in Chapter 10. We use these remains to explore the ways that Phantassie's occupants defined space through architecture and moved around it, and how this changed during the 200–400 years the settlement was occupied. We examine the evidence for the daily, seasonal and annual routines of life – their farming practices, the animals they raised, butchered and ate, the crops they grew or at least processed and stored to make daily bread, the objects they made for themselves, and those they acquired through trade. We also consider how the inhabitants interacted with the surrounding natural and social landscape: how they exploited woodland, moorland and agricultural land, and their relationships with other settlements, the inhabitants of nearby Traprain Law and the Roman army.

Certain aspects of the site raise other tantalising questions. The excavated remains give a strong impression of continuity during the settlement's lifespan – in the endurance of defining features like the boundary wall for the settlement platform, in the re-use of old walls for new buildings or the continued preference of certain spots for successive buildings. The particular ways that midden seems to have been stored up and then re-used, sometimes spread over parts of the settlement, hints that people saw this as a special kind of deposit with certain appropriate uses; these are also explored further in Chapter 10.

The disparate scatter of burnt human bone across the site also raises questions about memory and belief. The bone represented an estimated minimum of 62 individuals – 19 adults, three infants (0–3 years), another three children and 14 non-adults (Duffy and Marquez-Grant, see Chapter 12 and Archive). While this estimate was based on context, and remains from one individual may have been spread across different deposits, much of the bone was recovered from bulk samples, so it probably represents only a percentage of the true quantity in the deposits. Less than a third of the bone was weathered, and the greatest proportion by far comprised long bone fragments. Only one fragment from the human bone assemblage was both large enough and sufficiently combusted for radiocarbon submission; this, from a discrete scorched deposit (013) outside the large, paved structure [10], yielded a calibrated date of 360–50 BC (SUERC-9040).

Some of the burnt human bone at Phantassie came from midden deposits, but much of it occurred as a scatter in occupation layers – in buildings, around hearths, in association with animal bone or charred cereal grains, in the matrix of the rubble track leading into the settlement. Figure 7.45 shows the distribution of human bone by phase across the site. It is possible that some of the human bone was residual, washed in from a nearby cremation cemetery that was disturbed by Iron Age ploughs. However, given the relatively good condition of much of the bone, its consistent appearance across and through the stratigraphy, and the late first millennium BC date of one fragment, it seems likely that most if not all of it came from people who lived and died during the settlement's occupation, rather than deriving from residual burial contexts. If we accept this as a hypothesis, it has important implications.

The presence of so much human bone hints at complex, meaningful practices contemporary with the settlement, rather than simply incidental incorporation. After they died, perhaps the community's members were cremated, and their burnt remains were dumped onto the midden; most of this would have eventually been spread on the fields, feeding the new crop which would in turn feed the community. Sometimes human remains were put – along with the midden of which they formed part – into ditches or pits or over abandoned houses, perhaps to ensure future fertility or mark a significant transition in communal life.

Numerous pieces of the archaeological puzzle, such as the deliberate uses of querns and midden at this and other contemporary sites, point to the integration of an agrarian view of the world into many aspects of life. These were objects and materials vital to agricultural transformation and regeneration, and the ways they were used expressed ideas about transformation and regeneration in other spheres (see Chapter 10). The way the dead were treated at Phantassie may have been wrapped up in the same world view: in death as well as in life, the community's prosperity and continuity mattered more than individuals' corporal

7.45 Distribution of human bone by phase.

identity.

The presence of bone throughout occupation deposits also suggests that, after being cremated, in addition to being put on the midden, people's remains were scattered in the settlement. Perhaps a handful was scooped up from each cremation pyre and dropped somewhere in the farmstead, so that each member of the community returned to it in fragmented form, to become part of its fabric. In this way, he or she remained physically integrated in the settlement's ongoing social life. The act of bringing a few fragments of each person back in among the living may have kept their contributions alive in the collective memory. A perceived need to re-assimilate the dead into the settlement and the agricultural system might, like the building of boundaries, have also been a way of mitigating against communities' tendencies to fracture and fragment. Chapter 10 explores these ideas further.

Chapter 8

Moving landscapes from sea to hill, *c.* 8500–3500 BC

GAVIN MacGREGOR

Introduction

From the ninth to the fourth millennia BC, the character of life in the Lothians changed dramatically, in terms of society's structure and strategies for subsistence. This chapter explores those changes, drawing on evidence from the sites discussed in Chapter 2 and from other sites in the region (Figure 8.1). Given such long time periods and the data's limitations, the level of resolution is at times coarse and interpretations tentative, but nonetheless the evidence allows an understanding of the changing nature of life during this time. The chapter sets these sites in a wider geographical context, considering other examples where they illuminate the nature of life at this time. This larger picture is also important because those living in the Lothians took part in geographically wider traditions during this period.

The period covered in this chapter has traditionally been seen as one in which people were hunting, gathering and fishing for their livelihoods before the fourth millennium BC. Then, communities increasingly gained access to domesticated livestock and plants which formed the basis for agricultural practices. At broadly the same time as agriculture began to develop in Britain, some began using new forms of material culture, including pottery, polished stone implements and leaf-shaped arrowheads. Around the same period, communities began to construct substantial buildings or monuments, apparently for ceremonial purposes (Kinnes 1992; Bradley 1998).

It has also long been thought that communities were becoming less mobile by the fifth millennium BC, increasingly relying on more predictable coastal resources to minimise the need for movement (see Mellars 2004; cf Armit and Finlayson 1992). Thus, one issue that runs through studies of this period is the variation in mobility or sedentism through time.

The evidence indicates that, in Lothian during the early fourth millennium BC, a society emerged that was bound by certain strict conventional practices. This propensity for convention emerges through the evidence for a particular architectural vocabulary, a strong aesthetic applied to material culture and a distinctive suite of depositional practices.

On the move: Pre-fourth millennium BC

There are a number of sites in the Lothians that date from before the fourth millennium BC. The evidence ranges from finds of single stone tools to more substantial structural remains, and it allows us to interpret the nature of activities at different sites, their landscape contexts and their spatial relationships to each other.

Traces in stone

Given the vagaries of preservation, stone tools are our main source of information for these times, and scatters of tools or the waste from making them comprise most of the sites in the region. They are also sometimes discovered as earlier components of later sites, as at Pencraig Hill, South Belton, Phantassie and Eweford East, West and Cottages (see Chapter 2). The assemblages are mostly made of chert (for example, Clarke forthcoming; Donnelly and Pollard forthcoming; Lawson and Saville forthcoming; Gooder forthcoming), and in some cases flint (Nelis 2004); most have smaller components of stone such as chalcedony, quartz and mudstone. Tool-makers may have acquired raw material through quarrying or collecting it themselves (primary procurement) or through exchanging with other groups or individuals who had procured raw materials (secondary procurement) (see Saville, text box 2.1). The most reliable sources in the vicinity of the Lothians were chert outcrops in the Southern Uplands, where extraction sites have been identified (Wickham-Jones 1986, 6; Warren 2001). It is unclear whether procurement was incidental to other activities, such as hunting cycles that took people to the uplands, or whether it involved travel for the purpose of extraction. It is likely, however, that people associated particular raw materials with particular places in the region.

Key

1 Inveravon	7 Inchtuthil	13 Cowie
2 Morton	8 Claish	14 Bannockburn
3 Carriden	9 White Kirk	15 Mutiny Stones
4 East Barns	10 Ratho	16 Harlaw Muir
5 Biggar Common	11 Doon Hill	17 Dunsyre
6 Cramond	12 Weston	18 Greensmoor

8.1 Map showing the locations of sites mentioned in the chapter.

Once they had obtained the stone, tool-makers would remove the outer skin or cortex, leaving decortical waste. This removal or knapping took place by holding the raw material in the hand or resting it on a surface or anvil and striking it with a hammer-stone (for example, Lord 1993; Edmonds 1995, 10). The core of material revealed could then be worked further, usually by removing flakes or blades. These could be used as they were for different tasks, but they may have been worked further, using bone, wooden or stone implements, to modify their shapes, sharpen their edges and produce distinctive forms of tool. The spots where tools were made would soon have become scattered with broken chips and chunks of stone, and also sometimes abandoned and unused flakes, blades and cores. These places may in time have provided another source of raw material, as people returned and collected abandoned pieces. Repeated visits may have been marked in tangible ways; for example, bipolar technology, with the repeated use of an anvil stone, could have created cup marks like those that featured in rock art in subsequent millennia (see Chapter 9).

Useful stones

During this period in Lothian and elsewhere in Britain, tool-makers were producing a distinctive form of stone tool – the microlith – using a particular method. They worked platform cores to produce long narrow blades, which were in turn worked to produce microliths (see Figure 2.2). They produced microliths in a number of distinctive forms, including crescents, scalene triangles, rods and backed blades (for example, Wickham-Jones 1990; Saville 2004b, 185–8). Although it has long been believed that these different forms were intended for different uses, analysis suggests that this may not have been the case (Finlay 2000). Stone-workers intended microliths to be combined in groups, probably hafted in wooden, bone or antler handles, to form composite tools such as arrowheads, saws or sickles.

Other tool types found among pre-fourth millennium BC assemblages include scrapers, awls and burins, which point to the working of other raw materials. It is difficult to interpret exactly how they were used, as use-wear analysis shows that the form of a tool did not necessarily relate to its function (Finlayson and Mithen 1997; 2000). Scrapers are generally thought to relate to hide working, used to scrape excess fat from the skins' inner sides, but they may also have been used for woodworking (see Saville 2002a, 94 for discussion). Awls were probably used to pierce holes in pieces of leather or bark that could be stitched together using sinews or twine. Burins were chisels for working bone, antler or wood and may have been used to make barbed points (harpoons) and mattocks.

Landscapes, coastscapes and seascapes

Although over the period *c.* 9000–4000 BC there were significant changes in sea levels and coastline (see Chapter 1), then as now the Lothian coast formed the southern side of the Forth estuary. This extensive stretch of coastline, visible from many points inland, reminds us that the sea would not only have provided a medium for travel but also many resources. People were certainly gathering shellfish, as is evident from several shell middens around the Firth of Forth (MacKie 1972a; Sloan 1982); a midden at Inveravon produced a radiocarbon date of 5500–4300 BC (Ashmore 2004). Excavated sites in the wider region show that they were also hunting fish, sea mammals and sea birds.

At Morton in Fife, about 50km north of the Lothian coast by boat, excavation revealed middens that probably date to the fifth millennium BC (see dates and comments in Ashmore 2004), in association with traces of flimsy structures. The bones flung onto the midden heaps show that the occupants fished for cod, turbot, sturgeon and salmon/sea trout. The high proportion of bone from large cod (greater than 1m in length) suggests that fishers were plumbing deeper waters, beyond the immediate infra-littoral zone (Coles 1971, 351–3; however, see Pickard and Bonsall 2004). They were also hunting on ledges and cliffs, indicated by the bones of sea birds such as guillemot, razorbill, gannet, fulmar, shags, cormorants, puffin and gull (*ibid*, 350).

At Carriden, Falkirk, a biserial barbed antler point dating to 5060–4770 BC (Saville 2001; Ashmore 2004) may have been a harpoon used to hunt sea mammals and cetaceans. However, the apparent coastal or riverine distribution of Scottish barbed points may relate more to suitable contexts of preservation rather than function (Saville 2004b, 198). Indeed, differential preservation is highlighted by evidence from Mesolithic sites in European coastal contexts with good organic preservation. Such sites have produced evidence of fish-traps and fences (Pedersen 1995), used in passive fishing, as well as objects used in active fishing such as fish spears, paddles and wooden canoes (for example, Andersen 1995). It is likely that these were used in the Lothians, too.

Making places

Until recently, evidence for settlement structures dating to the period before the fourth millennium BC was non-existent or slight. This lack of evidence has traditionally been interpreted as pointing to hunter-gatherer-fisher groups who were highly mobile, frequently moving from one place to another, who had no need for substantial structures (for example, Wickham-Jones 1994, 11–13). There is, however, increasing evidence for structural

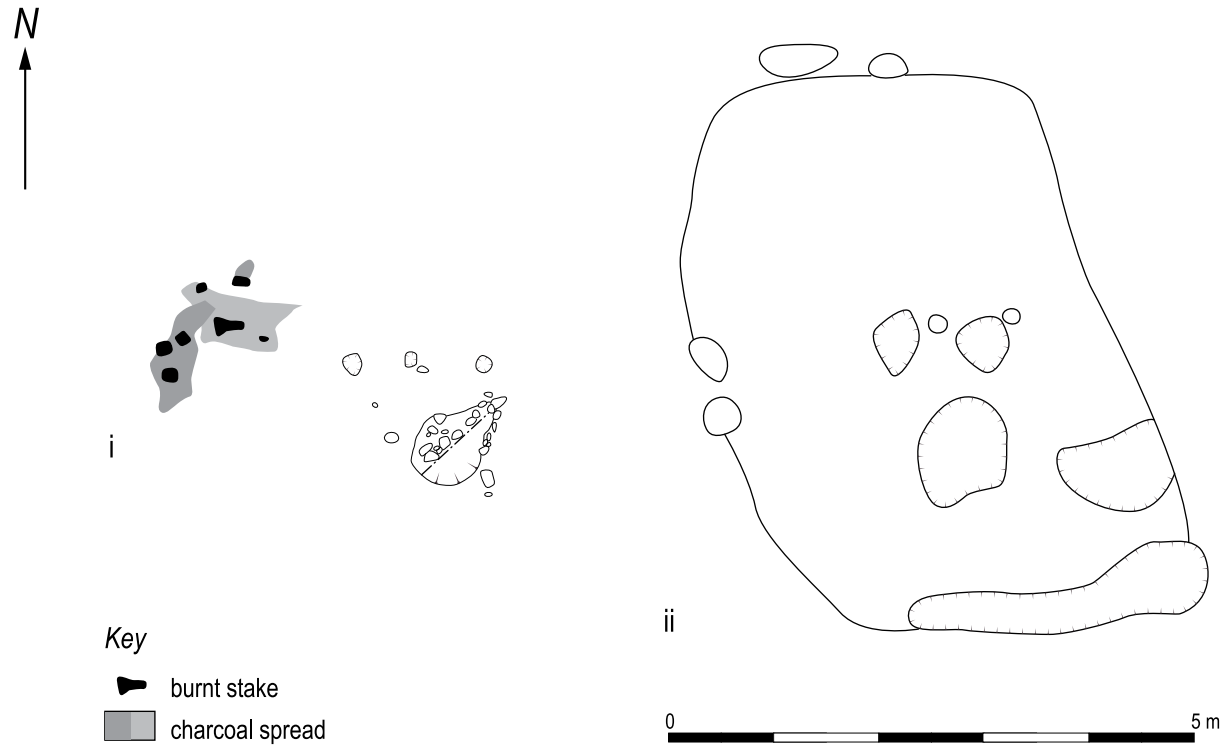
remains in Scotland during this period. Recently, Wickham-Jones (2004) has highlighted the question of whether such remains represent short-, medium- or long-term occupation and whether they were places for dwelling, working or a combination of practices (see also Wickham-Jones and Dalland 1998a; 1998b).

Recent evidence from the region shows that some communities were building substantial structures and may have been occupying them for long periods. One structure has been found at East Barns, near Dunbar, while a similar one has been found further south on the Northumberland coast at Howick. Neither site is fully published, so we must infer their character from interim statements (Gooder 2003; Gooder forthcoming; Waddington *et al* 2003; Waddington and Passmore 2004).

In each case, the builders set the structure in an oval/circular scoop, up to 6.8m across at East Barns (Gooder 2003) and up to 6m across at Howick (Waddington *et al* 2003, 3) (Figure 8.2). At East Barns, 30 post-holes had been set concentrically inside the scoop, and these are interpreted as the remains of a roofed dwelling which was eventually burnt down (Gooder 2003; Gooder forthcoming). There were other apparent occupation deposits in the structure's immediate vicinity. Initial radiocarbon dates suggest an occupation span of 8300–7650 BC (*ibid*). The struck stone assemblage indicates that people were working stone to make narrow blades, including microliths, at the site.

At Howick, the post-holes did not form such regular patterns but were still interpreted as the remains of a roofed dwelling hut that was re-built twice on the original footprint (Waddington *et al* 2003; Waddington and Passmore 2004). It may have been occupied for around 150 years (*ibid*, 29). Radiocarbon dates suggest that it was first built *c.* 7800 BC (Waddington *et al* 2003, 6–7). In the centre of the hut were several hearth pits, which contained burnt fragments of hazelnut and the bones of foxes, birds, seals, wild pigs and wolves or dogs (Waddington and Passmore 2004, 30). Red ochre found inside the hut may have been used for sun block, insect repellent, medicine or body paint (*ibid*, 30–31).

Most Mesolithic sites in Scotland that have substantial structural remains are relatively close to the coast. Using evidence for shoreline levels, Gooder (forthcoming) suggests that East Barns would have been only 350–550m away from its contemporary coast, positioned so that its occupants could best exploit a wide range of resources. Gooder (*ibid*) considers that the structure may have held a more or less permanent settlement, with perhaps seasonal



8.2 Plan of Mesolithic features at Biggar Common (i) and Howick (ii) (after Johnston 1997, 191 and Waddington *et al* 2003, respectively).

movement for some members of the household. In this context, he recognises that such sites were not merely dwellings but also visible monuments to tenure of place.

While there is now some startling evidence for substantial structures dating to before the fourth millennium BC, not all activity of this period left remains of this character; there were other types of occupation that left different traces. For example, a group of 12 stake- and post-holes at Biggar Common may have been the partial remains of a structure (Figure 8.2), sealed beneath a long mound (Johnston 1997, 191–2). Like East Barns, it had been burnt *in situ*; samples of oak charcoal from Biggar Common were dated to 5490–4908 BC (GU-2987) and 5220–4847 BC (GU-2988). No struck stone was associated with this phase of activity, suggesting that the building was used in a different way from the sunken coastal dwellings at East Barns and Howick. At Cramond, a group of stakeholes could be structural remains associated with activity dating to the mid ninth millennium BC (Lawson and Saville forthcoming). These structural remains may have been similar to those at Morton, perhaps consisting of small huts and wind screens.

Other aspects of life at this time are even less readiliy apparent, including how the dead were treated. Disarticulated human remains were scattered in Mesolithic shell middens on the west coast island of Oronsay (Mellars 1987) and some of them may have been deliberately placed (Meiklejohn *et al* 2005), but there is no evidence of formal burial of complete individuals. Instead, people may have left the bodies of the dead exposed (Pollard 1996, 204), perhaps in trees or on rock outcrops, or cast them into rivers or the sea. It is likely that people had complex beliefs and practices that mediated their relationships with animals, landscape and the spirit world, even though those beliefs and practices are not clearly visible to us today.

Deeper rhythms

As Chapter 2 describes, the archaeological work along the A1 expressway found evidence for pre-fourth millennium BC activity in the form of struck stone at seven places, and evidence for activity from the eighth to fifth millennia BC in the form of radiocarbon dates at three sites. These sites of activity clustered on the higher ground around Pencraig Hill and Eweford. The evidence from the region, discussed above, of slight and substantial buildings, midden dumps and scatters of worked stone, allows us to place the A1 findings in wider context and interpret the character of life at this time.

Substantial structures like the one at East Barns may have served as anchors for particular social groups, some members of which moved more frequently around the region (Gooder forthcoming). Less substantial buildings may have been camps for smaller groups over a few weeks or a season at most, while they were away from their base camps. Such smaller camps were built on the coast (as at Cramond) and on the uplands (as at Biggar Common), perhaps as groups exploited different resources and moved between inland and coastal camps. Some groups may have tried to minimise movement, focusing on coastal and marine exploitation, while others may have specialised in upland hunting. The evidence of base camps like East Barns suggests that communities' identities were bound to particular places; in that case, tensions may sometimes have arisen between groups when they met. Such identities and claims to place may also have been marked in other ways, for example through different tool kits or differences in the types of raw materials used or the sources from which they came.

The absence (so far) of evidence for substantial structures during the seventh to fifth millennia BC could indicate that people's relationship with their environment changed during this time; however, it is equally likely that such structures continued to be built and used and that their remains have not yet been discovered. Perhaps such buildings were no longer erected to claim particular places, as lineage had established social groups' rights to ancestral grounds. Alternatively, perhaps it was no longer possible to spend so long at one place, as a system of greater movements of smaller, more mobile social groups had emerged. Later, in the fifth millennium BC, there may have been a shift away from the coast for longer periods of the time (where a greater degree of resource concentration is apparent) and so there was less need for permanent structures in the coastal zone. In such circumstances, the exploitation of inland, upland and woodland resources may have become more important.

As one might expect with such a long time span, the remains dating to 9000–4000 BC do not represent one uniform history of emerging practices (for example, Spikins 2000, 111–12). However, the growing evidence for complexity of practices relating to dwellings, such as East Barns, may mean that there was a growing sense of land tenure.

Creating conventions, altering landscapes: New traditions during the fourth millennium BC

During the first half of the fourth millennium BC, communities living in Lothian and elsewhere across Britain began engaging in a range of radically different practices. These involved creating not only dwellings, but also other structures – communal halls, mortuary enclosures, cursus monuments and long cairns – for particular ceremonial activities that involved new things such as cultivated cereals, domesticated animals and

8.1

Festivities and feasting in prehistoric Lothian

The evidence from many of the A1 sites evokes images of what we might call prehistoric parties – some of them dramatic and others more modest. At Pencraig Hill, small fires were lit in and around a building that contained human remains; later, a cremation pyre was built and burnt, and finally the whole massive timber enclosure was burnt to the ground. At Eweford West around the same time, pyres were also built and burnt, as was the timber façade of an enclosure. At both Pencraig Hill and Eweford West, sherds of pottery were found from Carinated Bowls, which might have held food or drink that was shared among people using the monuments.

At Eweford East, long lines of big posts were built and then burnt down, probably in sections over time. At Overhailes, sherds of pottery and fine flint tools that had come from eastern England were put into the ground, along with ashes scraped up from a fire. Vast quantities of burnt cereal were scattered around the ancient mound at Eweford West. Both here and at Pencraig Wood, people came again and again to put cremated human bone into the ground, sometimes lighting fires as they did so and often placing highly decorated pots or fine stone or bronze objects with them. At both Eweford West and Eweford Cottages, stone-lined cists were set into the remains of much earlier ceremonial monuments and filled with hearth waste and human remains. At Phantassie, cremated human remains were scattered in the farmstead, and midden was spread over an abandoned house.

All of these, to varying degrees, seem to have been special events to those who did or observed them. They were spectacles. They involved doing things beyond what was required for physical survival; they might have referred to or imitated everyday acts, but they were extraordinary in the literal sense of the word. What took place at these sites may have been strictly proscribed by custom or belief.

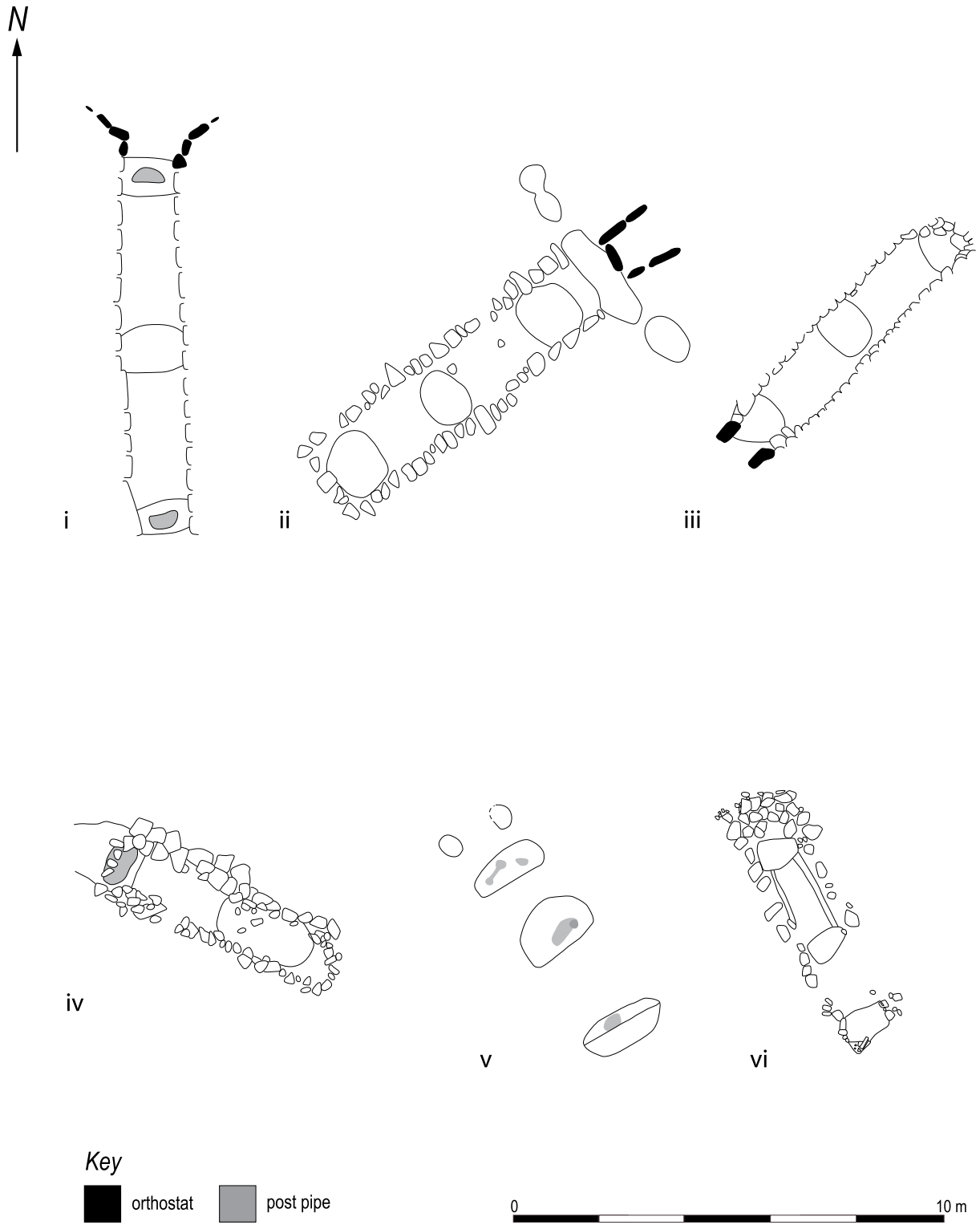
From the evidence, we might suppose that fire was an important part of most of these events (see Figure 8.6); it may well have been, but burnt material is also what survives best in the ground, so we probably have a biased picture of what truly happened. Each event would also have involved things that left no traces: food, drinks or hallucinogenic drugs, for example, and containers, costumes and other accessories made of cloth, feathers, wood, straw or bone. Likewise, they were motivated by ideas and made up of actions that are lost to us. They might have involved processions, dancing, recitals, theatre, songs, feasts or the exchange of gifts. They might have been undertaken to bless marriages or mark puberty, to mourn the dead or banish their spirits from the sphere of the living, or to worship or plead with ancestors or gods.

In recent years, archaeologists have dwelt upon the political uses of such festivals or parties. Scholars have argued that some members of prehistoric British society gave feasts, bestowed exotic gifts or sacrificed valuable objects in order to gain prestige and boost their own social rank. These ritual acts allowed the development of social elites who could control greater wealth and appeared to have more influence with the ancestors. They were, in effect, a form of showing off in order to hoodwink less powerful members of society and keep them in their place.

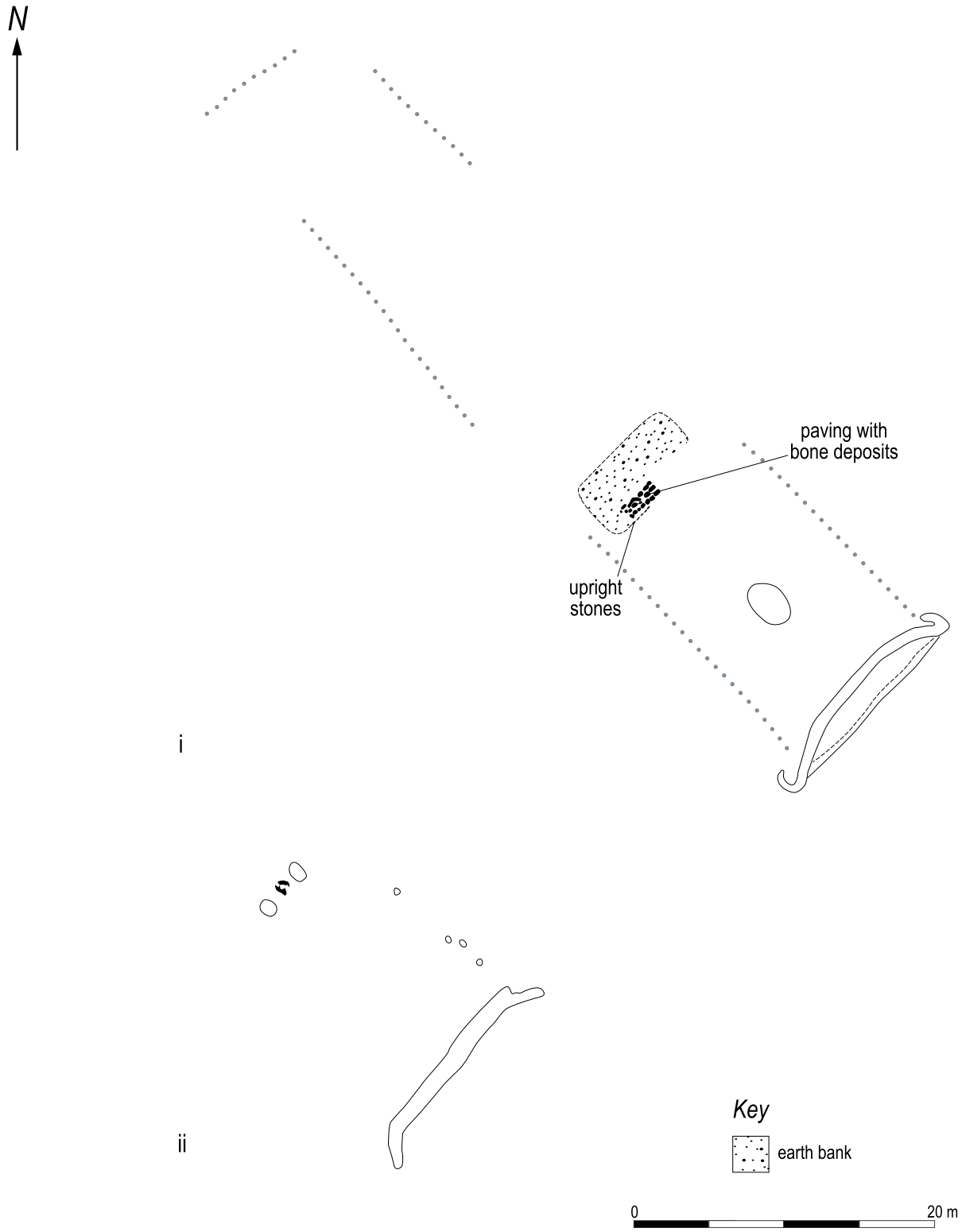
Power always enters relationships between people, and what took place at ceremonies and festivals in prehistoric Lothian would not have been exempt. It is important to remember, however, that these events mattered wholly to the people who initiated them, participated in them, watched them or heard about them. To their minds, they were probably vital to society's survival, and perhaps even to their individual physical survival.

These events would have also helped to form and maintain communities, in the broadest sense of the word. They brought together people who shared beliefs and customs, and whatever else their rituals seemed to accomplish – ensuring a good harvest, for example, or warding off disease – they would also have cemented a sense of shared identity, at least for a time.

OLIVIA LELONG



8.3 Plan of two-point and three-point mortuary structures at Slewcairn (i), Lochhill (ii), Dooey's Cairn (iii), Pitnacree (iv), Dalladies phase 1 (v) and Eweford West (i-iv) (after Scott 1992, 106; v after Piggott 1972, Fig. 8).



8.4 Plan of Giants Hill 1 and 2 (i) (after Kinnes 1992).

pottery. As most domesticates were not native, there must have been some degree of movement, either of objects or people; it has long been debated whether these new materials, and knowledge of how to produce, transform or tend them, arrived in Britain through the migration of people. Earlier views about this process characterised it as an agricultural revolution brought by boats full of immigrants (for example, Case 1969), but in recent years the model of a slow, piecemeal adoption of these practices has been favoured (for example, Thomas 1999).

Increasing evidence for similar traditions that emerged around the same time across a wide area suggests that there may in fact have been a phase of significant migration (for example, Richards 2003; Richards 2004, 88–9; Sheridan 2000; Sheridan 2004a; Sheridan in press b). This does not preclude the possibility that some indigenous groups later slowly adopted these new traditions, or that some groups rapidly emulated new practices while others remained hostile to them. This may have been a time fraught with tension between those who were abandoning the old ways of living and those who adhered to them. Others may have developed variations in their agricultural practice to accommodate local conditions. In Lothian during the fourth millennium BC, different social groups may have adopted agriculture to different degrees, or not at all, and possessed various associated belief systems. Some groups may have traced their lineage to Continental ancestors, while others may have claimed deep indigenous roots.

Structuring structures: An architectural vocabulary

During the first half of the fourth millennium BC, people began building a range of structures, including mortuary enclosures, timber halls, mortuary structures and cursus monuments. While these varied considerably in form, they did share an architectural vocabulary with a preference for rectangular or trapezoidal shaped structures of large and consistent scale and for certain formal elements. These preferences are apparent between different structures over wide geographical areas, from southern England to eastern Scotland (for example, Kinnes 1992; Bradley 1998; Barclay *et al* 2002). With such wide-ranging traditions, this section cannot be an exhaustive review. Rather, it discusses several representative examples of this shared architecture in order to explore its implications for social practice.

Ordering space and time

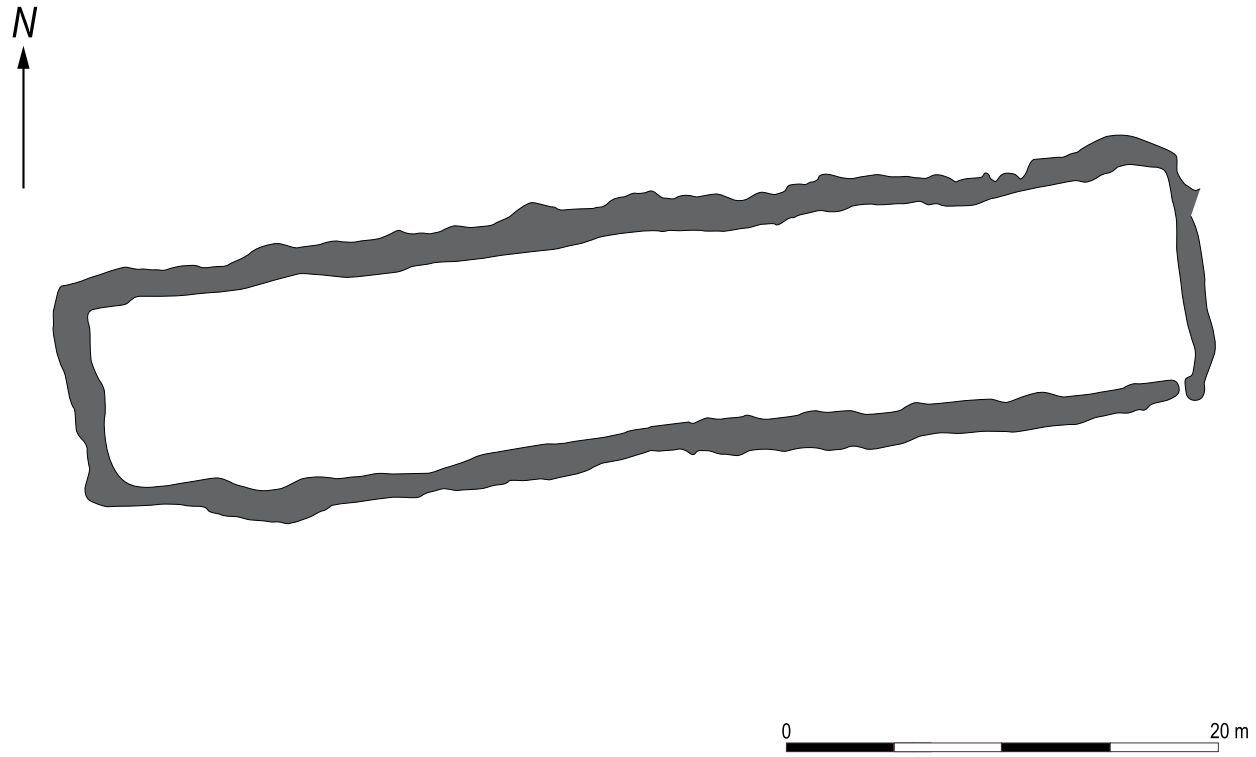
At Pencraig Hill and Eweford West, communities who probably lived in the immediate environs undertook a novel suite of practices between 3900 and 3500 BC (see Chapter 2). These practices are generally thought to have been social, ceremonial or ritual in nature, in some way distinct from the routines of daily life. At each site, there were clear episodes of archaeologically visible activity that may have been separated by months or, more probably, years, together extending beyond a single human lifetime; these sites seem to have had additional significance as inter-generational projects. They may have been communal projects, involving people from different settlements across the region.

In some respects, these projects transcended time and place. While only periodic activity was archaeologically visible, people may have visited the sites much more regularly – perhaps sometimes daily, or on a monthly (lunar) cycle. While years may have passed before it was necessary or appropriate to commence another episode of building or burning, the monuments were probably incorporated into other rhythms of life and regularly referred to in other arenas of social practice.

Their creation and use involved building mounds, erecting timber structures, bringing human remains to them and also bringing particular objects to the monuments. These practices, particularly in terms of how the structures were created and the sequence and nature of their use, are part of a tradition of monument building that extended across many parts of Britain during the fourth millennium BC (Kinnes 1992) and with marked parallels in continental Europe, particularly Denmark (Madsden 1978; Liversage 1992). Although there were variations in the sequence and manner of construction (Figure 8.3), they all achieved the same effect of framing particular practices, using certain architectural devices in broadly the same sequence. The early phases of mound building at Eweford West and Pencraig Hill initially marked out these significant places; the construction of mortuary enclosures defined or framed particular spaces; the creation of mortuary structures more clearly defined what activities took place, and finally the wooden elements were burned or sealed beneath stone or earthen mounds.

The definition of space at Eweford West was achieved initially by digging a linear trench to hold a screen; this stood for some time in front of successive mortuary structures, an arrangement with wide parallels (for example, Giants' Hills 1 (Phillips 1936) and Giants Hill 2 (Evans and Simpson 1991)). (See Figure 8.4). In contrast, the builders of Pencraig Hill followed a different sequence in defining space, erecting side screens that stood independently, forming a cursus-like arrangement. This suggests that the front and side screens were not simply ways of defining what would become a trapezoidal space, but that they performed different architectural roles.

Similar relationships between architectural elements defining sides and front can be found in other contemporary structures. For example, the form and scale of the long mortuary enclosure at Inchtuthil (Figure 8.5) could be compared to the trapezoidal enclosures pre-



8.5 Plan of the long mortuary enclosure at Incthuthill (after Barclay and Maxwell 1991).

dating the long barrows at Kilham and Skendleby (Barclay and Maxwell 1991, 39). Closer examination of the eastern end of Inchtuthil reveals an even more marked similarity. The south terminal of the east end did not join the south side trench and it expanded, perhaps to hold a major post, as did the north end; it could be argued that the east end had been dug earlier to hold a free-standing screen. There are direct parallels for these expansions to façades (for example, at Willerby Wold and Raisthorpe), and the large posts set at either end of the front screen at Pencraig Hill seem analogous to them. Similarly, parallels in the form and scale of the ends of timber structures are evident between timber halls and mortuary enclosures, which in turn find parallels with the stone façades of chambered cairns (Barclay *et al* 2002).

The detailed arrangement of structures also indicates an architectural vocabulary underpinned by shared knowledge. For example, despite differences in constructional techniques, the form and arrangement of space in timber halls at Claish, Stirlingshire and Balbridie, Aberdeenshire was exactly the same (*ibid*; Ralston 1982). Timber mortuary structures also exhibit close similarities in location and form. They were generally either set centrally to a screen, along the main axis of the defined space and forming part of a linear zone (Kinnes 1992), or were set perpendicular to that axis. Mortuary structures were generally built of either two or three posts, set in the ground to support platforms (Scott 1992). At Pencraig Hill, the two-post mortuary structure recalls the earliest structure at Pitnacree (Coles and Simpson 1965) and also perhaps the burnt structure sealed beneath the round mound at Boghead (Burl 1984). The three-post mortuary structure at Eweford West (Figure 8.11) finds striking parallels at Dalladies (Piggott 1972), Lochill (Masters 1973), Slewcairn (Masters 1981) and Dooey's Cairn (Evans 1938) (see Figure 8.3).

The details of this tradition have been well documented (see Kinnes 1992; Scott 1992), but the nature of underlying practices is worth examining further. The evidence suggests that many of these structures had two phases of use: an earlier phase relating to the storage, display or transformation of human remains, and a later phase relating to their destruction, sealing or abandonment. While the same forms of structure for treatment of the dead were constructed widely across Britain, evidence suggests that they were used differently in different regions. Those in Scotland and Northern Ireland are more frequently associated with cremated human bone, in contrast to

the south of Britain where unburnt, disarticulated or inhumed remains are more commonly found (Kinnes 1992). Mortuary structures in northern Britain and Scotland were more often burnt down, as opposed to their having rotted and collapsed. It thus appears that fire, and its transformative powers, were important elements in the belief systems operating at these sites (Figure 8.6) (also see Chapter 11).

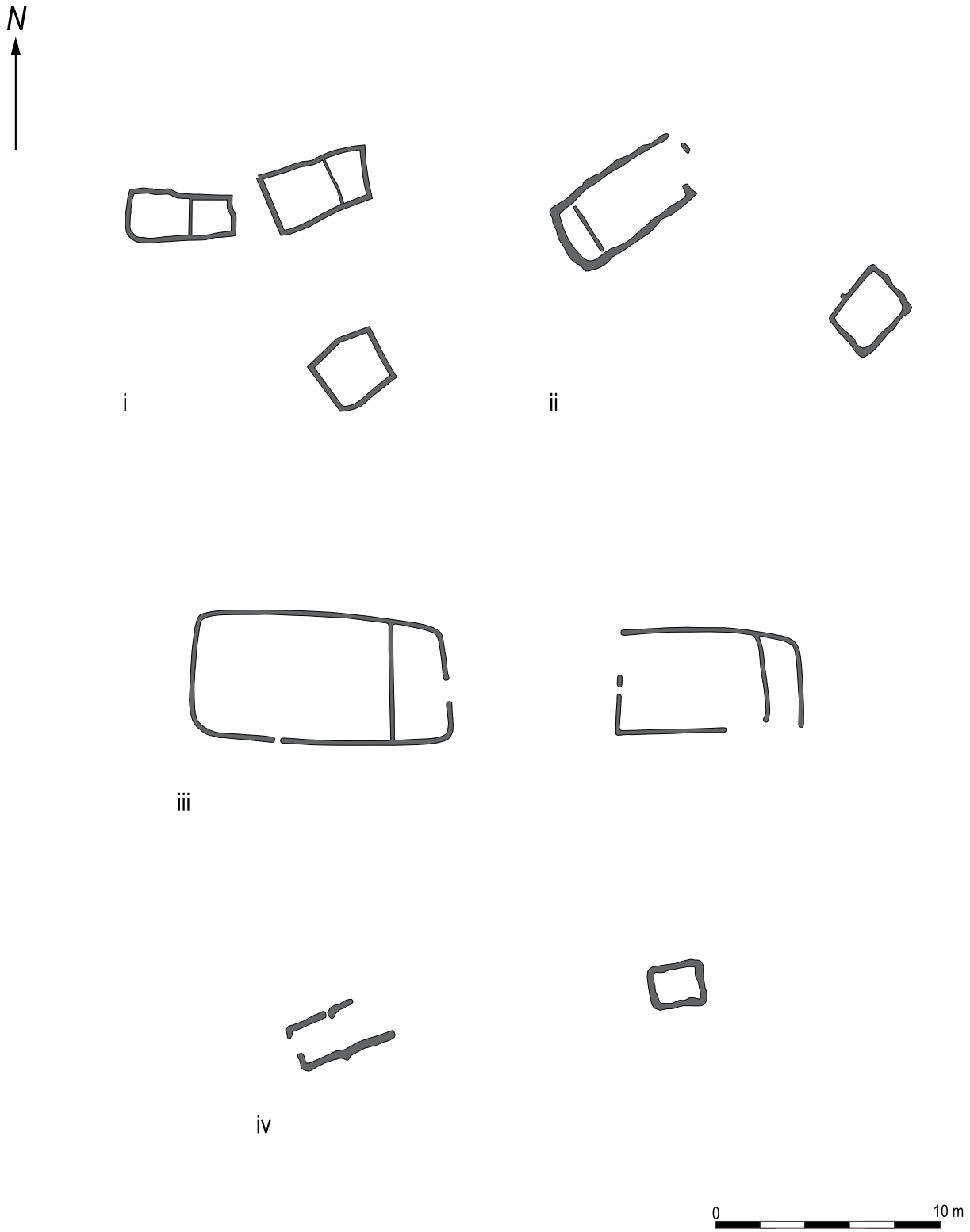
An ordered house

The monuments discussed above, with their shared architectural vocabulary, were places for acts that lay beyond the realm of daily or other regular life – the realm of food preparation, eating, sleeping and craft production. Socially, the focus of the daily cycle would have been the family or household dwelling, from which members left to hunt, tend fields or obtain raw materials and to which they returned for shelter and to gather socially. The clearest evidence for such foci for social groups are rectangular timber structures dating to the fourth millennium BC. There is evidence at three sites in the Lothians – at Whitekirk, Ratho and Doon Hill – of such structures being built at this time. These buildings were similar in form, but variations in size and complexity suggest that they may have served different purposes.

At Ratho, near Edinburgh, a community built two sub-rectangular structures in a hollow on the side of a hill, with extensive views across the Firth of Forth (Smith 1995, 69). One measured 10m by 4.5m and the other measured 5m by 4 m. Although the buildings themselves are undated, several nearby pits may have been contemporary with them; one contained earlier Neolithic Carinated Bowl pottery and a pitchstone blade and another a small assemblage of cereal, including barley (*Hordeum vulgare L.*), wheat (*Triticum cf aestivo-compactum*) and oats (*Avena* Sp) (*ibid*, 75). The cereals suggest that crops were grown and perhaps processed in the vicinity. The shape of the structures and their close proximity (20m) to the pits suggest that they were built in the fourth millennium BC.

At Whitekirk, two sub-rectangular structures, visible on aerial photographs (Brown 1983), may also have stood during the fourth millennium BC. One structure was orientated east-to-west, measuring *c.* 26m by 12m, while the second structure, a few metres to the south-east, was oriented north/south and measured *c.* 18m by 10m (Figure 8.7). Both had an internal division at their eastern and northern ends. They stood on flat ground that fell away steeply to the south and east. In the absence of

8.6 Reconstruction of Pencraig Hill mortuary enclosure being fired at night.



8.7 Plans of timber buildings at Corbhally (i), Tankardtone South (ii), Whitekirk (iii) and Ratho (iv) (i-ii after Grogan 2004; iii after Brown 1983; iv after Smith 1995).

extensive tree cover, views to the north and west were largely obscured beyond about a kilometre by local topography, but there were extensive views to Tyne Sands and Belhaven Bay, about 3km distant, and to Doon Hill to the south-west. The buildings have not been excavated so their dates are not known, but they appear similar to early Neolithic timber halls known elsewhere (see below).

Another, even larger rectangular structure was built on the eastern side of Doon Hill, 3km to the south-east of Eweford West. It was set in a basin ringed by the slopes of Doon Hill to the west and south and by the Lammermuir Hills to the north, but with extensive views to the eastern Lothian coast sweeping south-eastward to St Abb's Head. Two timber halls were built at Doon Hill; the later Doon Hill B was interpreted as Anglian in date, and it overlay an earlier structure, Doon Hill A (Hope-Taylor 1978). While there are no absolute dates for the earlier building, the discovery of sherds of earlier Neolithic Carinated Bowl pottery suggests that it could date to the early fourth millennium BC (Smith 1991, 267). Doon Hill A measured 24m by 10m and comprised several post-defined compartments. It was very similar in form to several other excavated early Neolithic timber halls, and a similarly juxtaposed Anglian hall overlying a much earlier one has recently been excavated at Lockerbie (Kirby 2006).

The structures at Ratho, Whitekirk and Doon Hill (if it did indeed have a Neolithic component) may all be part of an architectural tradition dating to the fourth millennium BC. This tradition of building sub-rectangular structures had two strands; one comprised smaller rectangular structures, most common in Ireland (Grogan 2004), and the second comprised larger rectangular structures, most common in eastern Scotland. The structures at Whitekirk and Doon Hill are similar to large timber halls like those at Balbride (Ralston 1982), Claish (Barclay *et al* 2002), Warren Fields (Murray 2005), the recent discovery at Lockerbie (Kirby 2006) and another possible example at Sprouston (Smith 1991) (Figure 8.8).

The structures at Whitekirk and Doon Hill are most similar in form and scale to the excavated hall at Claish, Stirling (Barclay *et al* 2002) (Figures 8.7 and 8.8). The Whitekirk structures do not appear to have had the same complex internal divisions as at Claish; their simple bipartite arrangement finds closer parallels in the Irish earlier Neolithic timber structures. The apparent entrance in the eastern gable end of one of the Whitekirk buildings is also similar to Irish and other Scottish examples (Grogan 2004, 107; Barclay *et al* 2002). For example, of two rectangular structures (Houses 1 and 2) at Corbally, two hearths were found in each, both in the larger chamber at the north-east end (Purcell 1999). These must have been central to what went on in the houses, with certain socially sanctioned activities such as cooking, parching grain or craftwork taking place around each one. In this respect, the Whitekirk structures probably represent dwellings of larger scale than those at Ratho (Figure 8.7).

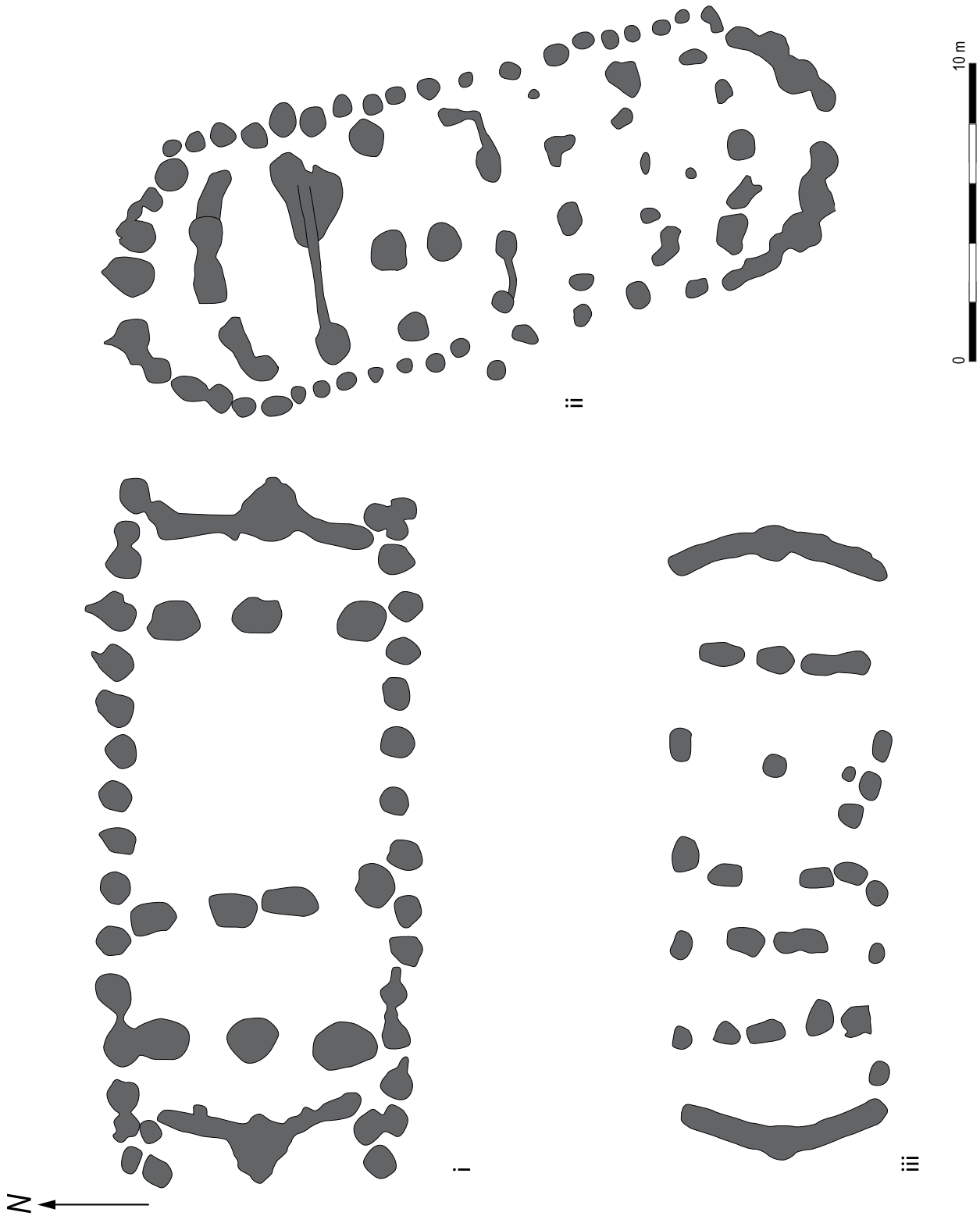
In terms of form, scale and constructional technique, parallels to the Ratho buildings can be found in earlier Neolithic Irish timber structures. The majority of these are now interpreted as houses, of which there are 46 excavated examples (Grogan 2004). Grogan notes that these tended to occur in broadly contemporary clusters rather than as isolated structures (*ibid*, 109). The paired structures at Ratho, one smaller and less rectangular, are similar to those at several Irish sites, including Tankardstone South (Gowen and Tarbett 1988) and Corbhally (Purcell 1999) (see Figure 8.7).

While the evidence for fourth millennium BC sub-rectangular structures in the Lothians is slight and circumstantial, we can suggest what they represented. Smaller, less complex buildings may have been semi-permanent dwellings, like those at Ratho, perhaps for small extended families. Larger structures with two compartments like that at Whitekirk may have been intended to accommodate larger social groups, perhaps on a more permanent basis. Even larger, more complex forms, like the possible example at Doon Hill and those at Claish and Balbridie, were timber halls used by the wider community for ceremonial or social purposes. All of these structures were sub-rectangular and consequently in keeping with the architectural vocabulary of the time. The beliefs underpinning this vocabulary were expressed in a wide range of different social arenas, including dwellings.

We must also bear in mind that less substantial, more ephemeral structures (for example, Atkinson 2002; Waddington and Davies 2002) may have formed part of an emerging settlement hierarchy during this period. We have evidence for different types of dwellings during this period, ranging from small, ephemeral structures that were occupied for relatively short periods to variously sized rectangular structures that may have been occupied for longer. This suggests that people inhabited the landscape in different ways, although it is not clear whether these related to different social groups or were complementary aspects of a unified social system.

Broken bits in pits: Deposition of Carinated Bowl pottery and pitchstone

At the same time that new kinds of social arena were being built in the fourth millennium BC, ranging from dwellings to ceremonial structures, communities were also adopting and using new kinds of material culture. The ways in which these were deposited suggests that they were not simply utilitarian objects, to be produced, used and cast away as rubbish. Instead, they were often deposited in intentional ways that suggest they were perceived as



8.8 Plans of timber halls at Doon Hill (i) (after Hope-Taylor 1980), Claish (ii) (after Barclay *et al* 2002) and Sprouston (iii) (after Smith 1991).

having potency, upon which it was possible to draw during these acts. There is also considerable evidence that many of these objects circulated over wide distances, so pieces of material culture may not have been made, used and put into the ground at the same locations.

In particular, a marked tradition emerged of burying pieces of Carinated Bowl pottery, polished stone axes and pieces of pitchstone (for example, Maynard 1995; MacGregor forthcoming; Sheridan in press b). The section of these particular objects suggests that people had preferences for particular aesthetic qualities (in terms of texture, hardness and colour). Consider the glossy black or dark green of pitchstone, often with star-like white inclusions; the speckled, polished surfaces of stone axes; the burnished, mica-flecked, black and dark brown pottery bowls. These all have similar textural and visual properties, with cool, smooth, dark surfaces and small, contrasting inclusions. They may have been associated with certain images or conditions, such as the star-speckled night sky. The shared aesthetic qualities of these objects may have underpinned how they were perceived. People may have seen the production of these artefacts as involving the controlling of vital forces; if such forces were not controlled by appropriate rites, they could become dangerous to communities.

The perceived potency of these objects may have stemmed in part from their distinctive origins: Carinated Bowls were the first form of pottery to be produced (see text box 8.2) and as such represented a new technology associated with the transformative properties of fire; in contrast, pitchstone

8.2

Early Neolithic Carinated Bowl pottery

The Early Neolithic pottery found at Eweford West and Pencraig Hill belongs to a widespread tradition known as 'Carinated Bowl' pottery, which is found over much of Britain and Ireland and which seems to have appeared around 3900 BC. The pots consist of bowls – often over 200mm in diameter, and often thin-walled and of fine fabric – where the junction between the upper, neck part and the lower, round-based belly part is marked by a low ridge, or carination. Sometimes this carination is missing and the pot profile curves in an 'S' shape; sometimes the neck is upright, sometimes splaying, and the belly can range from shallow to deep. Along with carinated and S-profiled bowls, this tradition includes (less commonly) plain, roughly hemispherical bowls and cups, and occasionally also jars with upright collars. Decoration is restricted to the very occasional use of fingertip fluting – where shallow lines were made by running a finger up a pot's neck in parallel lines (or across the rim) while the clay was still wet.

This kind of pottery has been found in and around houses, in pits and in burial monuments, and it was probably used mainly for cooking and serving food and drink.

In many areas, this was the very first pottery to have been used, and it is one of many innovations associated with the first farming communities in Britain and Ireland. The people who made this pottery were skilled: they knew how to make large but thin-walled pots. Careful attention was often given to making the surfaces smooth; some pots have been polished to a low sheen, and a few have burnished surfaces. A clear link exists with the so-called 'Chasseo-Michelsberg' pottery of north-eastern France, even though its precise area of origin has yet to be pinpointed. Debate surrounds the question as to whether the people who made this pottery (and practised early farming) in Britain were originally Continental immigrants or were descendants of the indigenous hunting-gathering-fishing population. The striking similarity in this pottery over such a large area suggests that the immigration hypothesis is more likely to be correct.

Regional variants of Carinated Bowl pottery had emerged within a century for two of its introduction; these included more extensive use of fingertip fluting and ripple burnishing, and the use of lugs and simple decoration.

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was not widely available and probably derived from a limited source on the island of Arran (Thorpe and Thorpe 1984). With appropriate skills, Carinated Bowl pottery could have been made in large quantities, but pitchstone must have had more limited availability. However, despite its usually having been deposited in small quantities, pitchstone was occasionally worked and deposited in large quantities, with sizeable assemblages from Ballygalley, County Antrim, Northern Ireland (Preston *et al* 2002) and from Weston in the Southern Uplands of Scotland (Ward 2006). It seems, therefore, that people were sometimes able to obtain large amounts of pitchstone and so its presence in smaller quantities at some sites could be for reasons other than limited supply.

Pitchstone and Carinated Bowl pottery have been found at a wide range of sites in southern and central Scotland: at Eweford West and Pencraig Hill mortuary enclosures (Chapter 2), Claish timber hall (Barclay *et al* 2002), Cowie settlement (Atkinson 2002), Bannockburn enclosures (Rideout 1997) and Ratho settlement (Smith 1995). All these sites lie on or in view of the Forth basin, apart from Claish which lies 16km up the River Teith, a tributary of the River Forth; the practices evident at all belonged to a regional tradition. Collectively, the evidence shows that these materials were taken to and utilised in a variety of social contexts. Two of these examples, Claish and Cowie, will be considered in further detail to illuminate how Carinated Bowl pottery and pitchstone were being used and what meanings may have been generated through their use. The evidence from Claish suggests that the timber hall served a specialised role, as a communal structure associated with pottery production and the exchange of pitchstone. In contrast, at Cowie there was a group of pits which, despite having the character of refuse disposal from a dwelling, contained Carinated Bowl pottery and pitchstone; they were deposited in ways that suggest these acts were socially potent.

At Claish, a community built a post-defined roofed building, measuring 24m by 8.5m, some time between 3940 and 3640 BC (Barclay *et al* 2002). Rather than being used as a simple dwelling, it probably had wider social or religious purposes (*ibid*). Fragments of up to 68 pots were recovered from two non-structural pits in the building's core and from the post-holes that supported the structure. Someone had partially filled one pit, used broken sherds of pottery to line it and then lit a fire that scorched the sherds below. The second pit had also been partially backfilled before a fire was lit in it, leaving fragments of unidentifiable burnt bone and large pieces of carbonised birch bark, perhaps the remnants of a container. Sherds from these same pots were also found in post-holes, having become incorporated in the post-pipes after the building's destruction (Sheridan 2002, 79). This suggests that when the structure was burnt down, the floor was littered with pottery that had been used or at least broken inside it, and some of the sherds had previously been put into the pits. Hence, pots were not simply used in the building, but were deliberately broken and then portions selected for deposition in a structured, non-utilitarian manner. A fragment of unfired potter's clay also suggests that pottery was made in or near the building (Barclay *et al* 2002, 78–9).

In contrast to the pottery, there was an exceptionally small struck stone assemblage that included two pitchstone blade fragments (Saville 2002b). The pitchstone fragments were in post-holes framing the core interior space and, unlike the pottery, more evocative of casual loss. In light of the evidence from Ballygalley and Weston, it could be that pitchstone had once been present in greater quantities in the core space but was taken away and circulated elsewhere, and that only a few pieces were lost or scattered inside the building.

The evidence from Claish contrasts with that from Chapelfield, Cowie, *c.* 30km to the south-east (Atkinson 2002). The contents of three pits at Cowie demonstrate that depositing broken artefacts was not simply an act of rubbish disposal; rather, the artefacts were part of meaningful practices. These acts were also extended over several episodes, and fragments of some objects were kept for later use and deposition.

In the fifth millennium BC, a pit was dug and lined with clay and stone, including pieces of pitchstone (Atkinson 2002, 152–4). Someone dumped burnt material in it, along with broken saddle and trough quern stones. Others later re-cut the pit and filled it with an organic deposit, possibly human waste, and more burnt material, as well as a pitchstone core that fitted a flake from the pit's primary fill.

Another pit, initially lined with a stony deposit, was later re-cut twice (*ibid*, 159–62). Someone then put large parts of three Carinated Bowls in it and smashed them further with a stone. They also put coarse stone tools in the pit, including a broken saucer quern, a broken saddle quern, quern rubbers, stone knives, hammerstones, pounders and an anvil. A quern fragment, associated with the pottery in the third fill, conjoined with a fragment from the first fill. The matching pitchstone pieces and the conjoining quern fragments from the two pits show that objects were being broken and their parts kept, to be used later at a more appropriate time.

The differences between these acts of intentional deposition at Cowie and Claish illuminate how they were understood. The coarse stone tools – including broken querns, pounders and hammerstones – at Cowie were entirely absent from Claish, so there may have been conventions as to what was appropriate to deposit in different social contexts. In this respect, the comparatively

large amounts of pottery at sites associated with ceremonial activities, such as Claish and Eweford West, contrasts with the relatively small quantities of pottery deposited at dwelling sites, such as Cowie and Ratho.

The evidence suggests that material culture was being made, used and disposed of in different social arenas; behind this deployment were other, largely invisible activities. For example, the pottery sherds deposited often bear the residues of previous use, such as sooting. We can picture these vessels resting on hearths, with someone tending their contents. Similarly, the presence of cereal grains at some of these places demonstrates the cultivation of grain in fields. The querns at Cowie also show that cereals were being ground for flour, and bread might have been baked on griddles at hearths like the one at Ratho.

Hearths at Claish were the focus for depositional practices that were more formal than rubbish disposal; they might also have been associated with pottery production. Pots made at this communal structure may have been taken to smaller dwellings, to other hearths, where they were used to prepare daily sustenance. Use and re-use of these vessels led them to crack; an accidental slip created large sherds of pottery. The sherds were then drawn together, sometimes to be disposed of in isolated pits, but at other times they had to be taken to ceremonial places for burial. In this way, aspects of daily life were entangled with the routines at ceremonial or communal sites.

People did not simply use objects functionally, but also in other roles relating to how they were produced, circulated, drawn together and disposed. Evidence for a marked aesthetic and the perceived importance of objects' origins suggests that certain kinds of material culture seemed to be imbued or empowered with vital forces. These may have been generated through the transformative powers of fire, and become metaphors for birth, growth, death and decay. Appropriate rites may have been required to control such forces, such as the further smashing of pot sherds at Cowie or the smashing and burning of pots at Claish, to prevent their becoming dangerous or malevolent. The breakage and dispersal of different artefacts was perhaps one way in which such forces could be controlled or channelled. Distinctive places may have been associated with different forces and their control, and these were linked in a network which related to the transformative cycles upon which communities increasingly relied to sustain life.

Monuments to movements

Rectangular routeways: cursus monuments at Drylawhill and Westfield

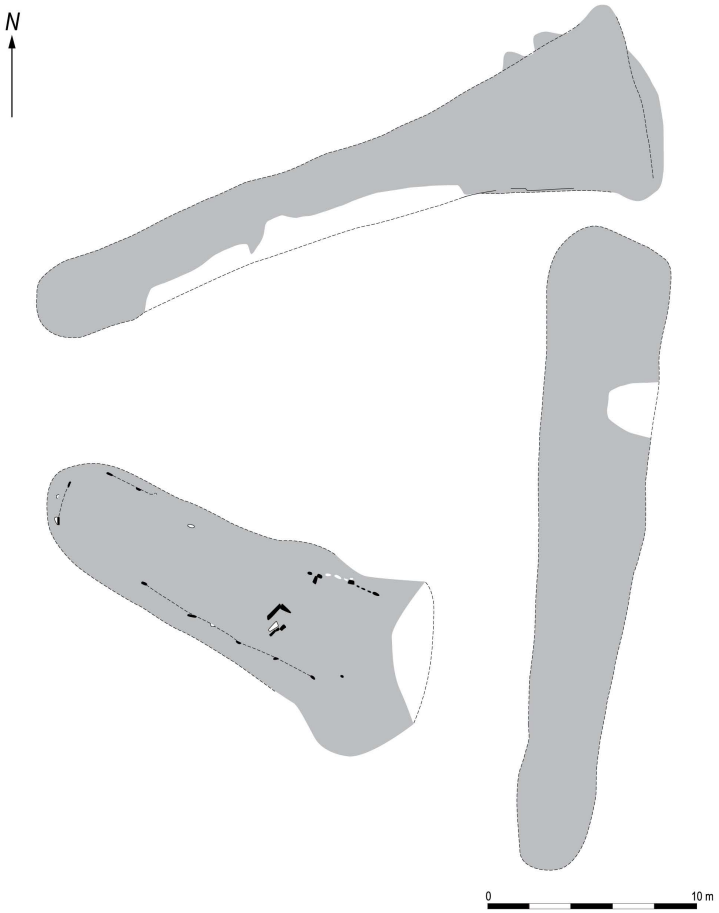
We have considered the role of sites such as Pencraig Hill and Eweford West and suggested that their continued potency in part stemmed from their incorporation into other rhythms of life (see Chapter 2). They were not ignored or forgotten between the episodes of building; instead, they were probably visited or spoken about throughout their spans of use. One way in which communities may have drawn out the meanings associated with these monuments and linked the different areas in which they lay was by formalising movement between them or marking symbolic route ways between areas associated with different communities.

Several cursus monuments in the region may have performed this role. The builders created these monuments by digging ditches or lines of pits/post-holes to form long, thin, rectangular enclosures, extending up to several kilometres long. Their creation implies that extensive tracts of woodland were cleared to accommodate them.

There are three possible cursus monuments in the Lothians, two to the east of Edinburgh, at Westfield and Westlodge, with another at Drylawhill near East Linton (see Figure 8.1). All three have been identified through aerial photographic evidence as ditch-defined cursus monuments. Of these sites, there is sufficient information to consider two, Drylawhill and Westfield, in further detail.

The cursus at Drylawhill, East Linton, is located only 6km to the east of Eweford West. Here the builders dug two broadly parallel ditches, varying between two and three metres wide, running 100 metres apart for *c.* 1100 metres (Armit 1993). They built the cursus orientated WSW/ENE between the River Tyne to the south and higher ground to the north. The cursus is orientated to run towards the north side of Pencraig Hill and the dominant view along it extends to that massif. The western end of the cursus is unknown. At its eastern end, views are obscured by local slopes to the south and east and extend to the north for a kilometre at most In the absence of extensive tree cover, the most prominent view at the eastern end would have extended across the River Tyne as it enters the sea through Tyne Sands. If people moved along the cursus to the west, Traprain Law would have been visible to the south but largely in peripheral vision.

The cursus at Westfield extends for *c.* 900m from Inveresk to Whitecraig at the south. Here the builders dug five parallel ditches in two sets of two and three respectively, up to 180 metres apart (Hanson 2002; Cook 2004, 133). They set the monument on low-lying ground at the western foot of Falside Hill, which is part of a more extensive upland ridge running eastward and separating the coastal plain to the north from the Tyne valley to the south. It was positioned so that the southern terminal was orientated on a bend in the River Esk and the northern terminal on the embayment where the River Esk enters the Firth of Forth. Movement down this monument to the



8.9 Plans of long cairns at Mutiny Stones (top), Harelawmuir (left) and Greensmuir (right) (after Henshall 1972).

south would have given a view of the Esk valley running off in the distance between the Pentland and Moorfoot Hills, while movement back to the northern end would have provided open views to the Firth of Forth. There is evidence for earlier activity in its vicinity: at the northern terminal, a pit contained charcoal dating to the end of the fifth millennium BC (Cook 2004, 137). Although the sample is oak (*Quercus*), and the taphonomy in some doubt (*ibid*, 141), this may indicate contemporary woodland clearance in the locale.

The cursus monuments in the study area are part of a wider tradition of monument building that took place during the fourth millennium BC, of ditch-, pit- and post-defined linear monuments (Brophy 1998). The closest excavated parallels can be found at Cleaven Dyke (Barclay and Maxwell 1998) and Bannockburn (Rideout 1997) (Figure 8.9). The builders of Cleaven Dyke created a bank between two ditches, over several episodes of construction, extending for 2km. Radiocarbon dates from features beneath the bank suggest it was constructed after the late fifth to mid/late fourth millennium BC (Barclay and Maxwell 1998, 47). At Bannockburn, on the raised beach above the River Forth, people dug pits that held posts to form two sub-rectangular enclosures during the first half of the fourth millennium BC (Rideout 1997). The irregular lines of the enclosures indicate that they were constructed as short lengths of pits (*ibid*, 1997, 34 and 40), perhaps over several phases.

Cursus monuments are generally interpreted as social projects that were created to define or frame ceremonial activities. The linear nature of the monuments originally prompted interpretations that their uses included procession through the landscape. However, it has increasingly been recognised, in part due to their often segmented or phased nature, that the building of these monuments was as important to how they were understood as their final forms (Barclay and Maxwell 1998, 113–15; Barclay *et al* 2002, 240–1). The cursus monuments at both Cleaven Dyke and Bannockburn may have been constructed over several phases, and the variation in ditch width at Drylawhill indicates segmented construction (Armit 1993). Such construction may have been intermittent and piecemeal, over a long period of time. Similarly, the multiple ditches at Westfield suggest a temporally extended project, perhaps the re-inscribing of the monument five times through the landscape. Cursus

monuments therefore had meanings created during their construction and other meanings generated through their use; these must have been intertwined, however, as clearly the initial builders of each monument had a vision of its final form.

All three cursus monuments in the Lothians were set on or at the edge of the coastal plain. People intermittently came to these places, creating linear monuments that marked transitions between one part of the landscape and another, between locations for the daily routines of the communities that inhabited them. Members of these communities probably came to the cursus monuments at times for other purposes that are less archaeologically visible. Perhaps, as has been suggested for causewayed enclosures (for example, Evans 1988), the monuments were used temporarily to corral cattle before exchange or feasting involving different communities. At other times, groups or individuals may have crossed these transitional zones on their way to other places such as Pencraig Hill and Eweford West.

Moving to the uplands: The long cairns of south-east Scotland

Another way in which communities marked significant places and perhaps routeways in the fourth millennium BC was by building long cairns. Possible long cairns are known in three places in the region: two on the Lothian coastal plain, an apparently isolated site to the south of the Lammermuir Hills and a small cluster to the south-west of the Lothians, in the northern part of the Southern Uplands. Whether these cairns seal earlier phases of timber and earthen construction, as at for example Lochill (Masters 1973) and Slewcairn (Masters 1981), is not clear, but it must be considered a possibility until it is disproven. Closer examination of the distribution of these sites suggests that they, like the cursus monuments, were built at transitional points in the landscape.

The apparently isolated long cairn of Mutiny Stones (Henshall 1972, 404–6; see Figure 8.10) was built in a spot that refers to a wider area beyond to the south-west, with views to a prominent peak and a river which ultimately flows to join the River Tweed. It lies on the southern fringes of the Lammermuir Hills and has limited views of the wider area, with local topography preventing wider views to the west, north and east. There are more extensive views to the south; the Dye Water is obscured in that direction, but the long cairn is orientated on a small burn that runs south to join it just over a kilometre away. The most dominant feature around is the peak of Dirrington Great Law, about 9km distant.

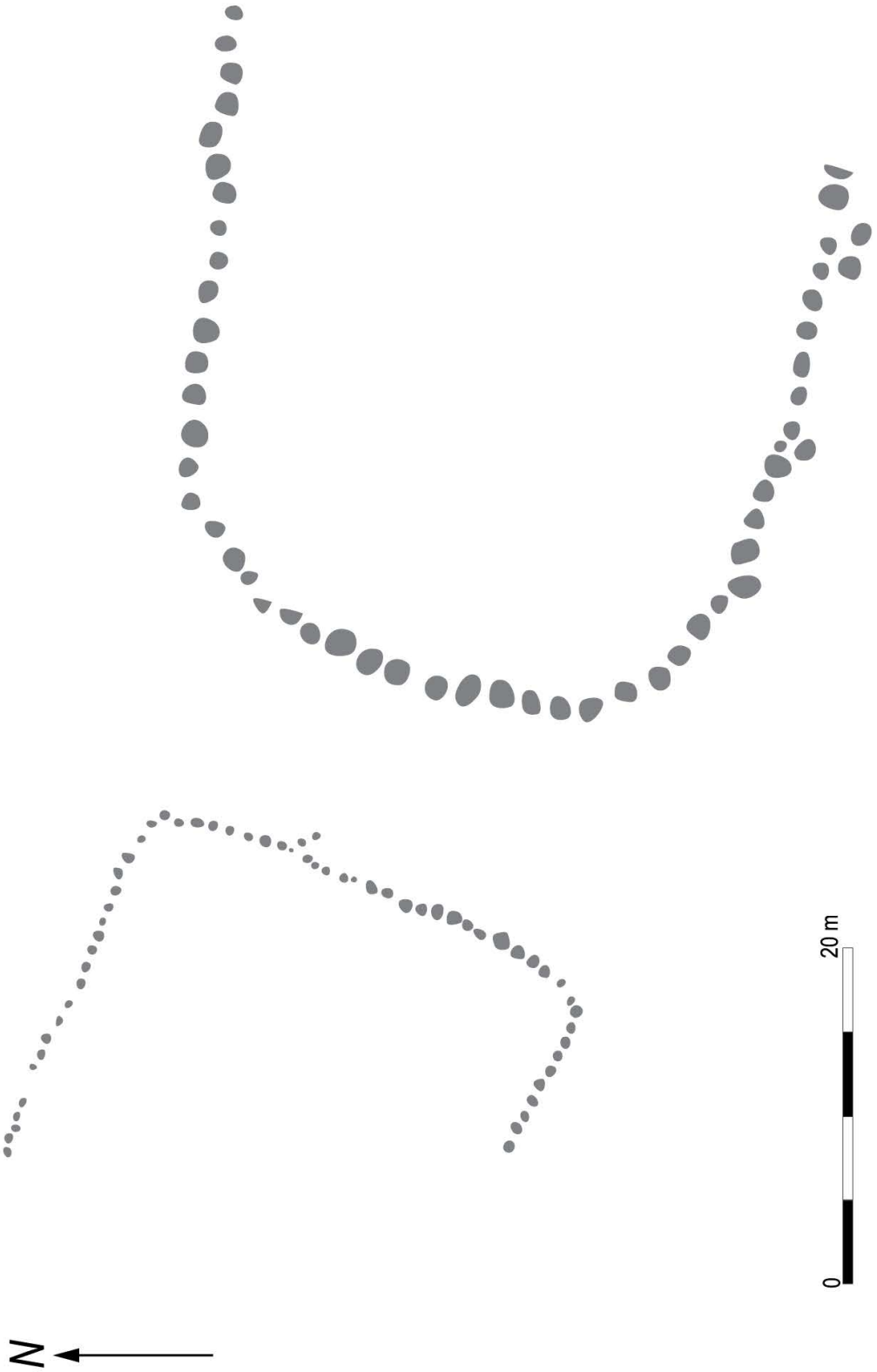
Three long cairns, at Harlaw Muir (Henshall 1972, 468), Dunsyre (NMRS no: NT04NE 19) and Greensmoor (Henshall 1972, 458–60), lie to the south-west of the region (Kinnes 1992, 17), in a place where different kinds of natural environment intersect and change (Figure 8.10). The relationships between these sites and their landscape contexts illuminate how they were understood in the past. From the Lothians, the Esk Valley leads up to the Harlawmuir Burn, headwater for the River North Esk, which runs to the north of the long cairn on Harlaw Muir. To the south, Cairn Burn runs west for 5km to join the Lyne Water, which in turn joins the River Esk about 15km to the south. The long cairn is orientated broadly south-west to north-east, reflecting the orientation of the two burns which flow about a kilometre apart in opposite directions. Forestry precludes certainty, but the slopes of Auchencorth Moss probably obscured views to the east. To the west, there were probably extensive views to Mendick Hill and Brown Hill; the route between them leads to Dunsyre.

Dunsyre long cairn lies at the southern end of the Pentland Hills, with extensive views to the Southern Uplands. It is positioned so that Dunsyre Hill forms its backdrop to the south-west, while views to the north-east extend to a network of burns meandering through the hills. The burns flow to the south-west, feeding the South Medwin, which in turn flows into the River Clyde.

The third long cairn lies about 6km to the west of Dunsyre at Greensmoor, on the south-eastern edge of the Pentland Hills. A chambered cairn lies less than a kilometre to the east. The monument at Greensmoor has a north/south orientation, unusual for long cairns, but perhaps explicable through its landscape context and proximity to the chambered cairn. Like Harlaw Muir cairn it was set between two burns, the Westruther Burn and North Medwin, which flow north to south. These converge a kilometre and a half to the south of the monument, then flow for another 4km to become the Medwin Water where it converges with the South Medwin.

These three long cairns seem to have been positioned in relation to waterways, and with an awareness of the places from which they derive and to which they flow. Inhabited places are bounded entities, discernible and limited in human terms. In contrast, rivers transcend places; they originate as obscure headwaters in upland contexts, meander as burns and flow as rivers through different places to reach the sea, where their identities are immersed.

The building of long cairns probably came late in a long sequence of activities at these sites, based on evidence from other, similar sites (Kinnes 1992). In contrast to the upland examples, the two possible long cairns in the Lothians lie close to the coastline, at the margin between land and sea, another transition point. The capping of cairns as visible statements of place may have formally marked claims to these marginal places. Here perhaps we



8.10 Plan of the excavated portions of the cursus monuments at Bannockburn (after Rideout 1997).

see how particular places not only represented distinct locales, but also boundaries, parts of larger entities or nodes on journeys.

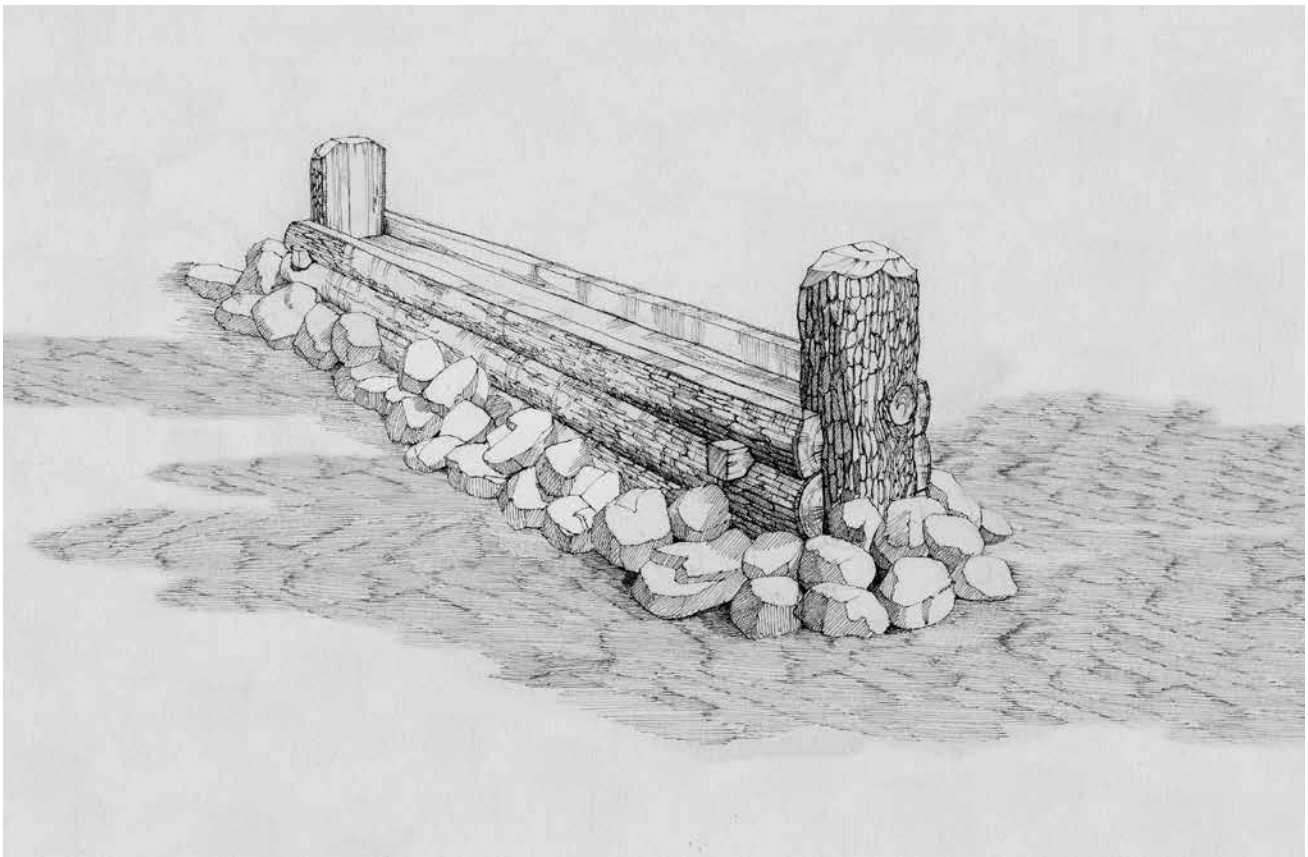
Moving from sea to hill

We have explored different arenas of social practice, dating from the ninth to the fourth millennia BC, with evidence from the Lothians and beyond. Even though the evidence is partial and sparse, it is still possible to discern the general character of life during this long period.

Before the fourth millennium BC, communities seem to have moved around the region in complex cycles and patterns, probably using different structural forms that were suited to different lengths and types of dwelling. The evidence suggests that these cycles were varied, with some groups exploiting the coast and others focusing more on inland and upland resources. Certain places probably became fixed in communal memory as spots where buildings had previously stood or where raw materials could be obtained.

There is sufficient evidence from the region to suggest that immigrants arrived from the Continent early in the fourth millennium BC and introduced new ways of engaging with the land, ways which had a greater impact upon the environment. Trees were felled to create clearings for fields and to obtain timber to construct ceremonial monuments and dwellings. Ground was broken and stones cleared to plant crops. While these effects may have been limited and piecemeal, the changes would have been tangible, and ultimately over several generations they began to transform the character of the landscape.

These changes were mirrored by changes in the social landscape. Clearings may have formed the focus for new social arenas: dwelling structures or communal halls like the possible examples at Ratho, Whitekirk or Doon Hill; mortuary structures and enclosures at Pencraig Hill and Eweford West (Figure 8.11); long cairns at Eweford and the Mutiny Stones, and cursus monuments at Drylawhill and Westfield. It is clear that these arenas did not develop in isolation, but were built by communities who possessed shared, wider knowledge of how things should be done.



8.11 Reconstruction of the mortuary structure at Eweford West.

The arenas emerged in a context of geographically wider traditions, expressed through a common architectural vocabulary, which probably spread through the travel of people or ideas across regions.

The locations of these sites are significant; they are unlikely to have been selected at random, but for the meanings already associated with them. They were chosen not only for their associations with earlier activity, but also for their relationships to other places. For example, it is striking that the three possible fourth millennium BC sites in the vicinity of Dunbar (the timber halls at Whitekirk, the cursus at Drylawhill and the mortuary structures and subsequent mound at Eweford West) were all positioned with views to the Tyne Sands and Belhaven Bay – the largest bay in the area, and perhaps the spot where people first arrived with cattle, cereals for cultivation and knowledge of pottery production.

Those living in the Lothians during the fourth millennium BC belonged to wider communities that developed around the Forth estuary and beyond. They made or renewed contacts with other settlers, who established groups elsewhere along the eastern coast. Their exploration and contacts with indigenous groups led to new understandings of the landscape. They learned to follow pathways into the Southern Uplands, to the networks of exchange by which they could obtain raw materials like pitchstone and chert. Subsequent generations made more permanent marks on the land. They marked transitional points by building long cairns in the Southern Uplands, at points where they could see different environments to the south. At times, members of individual communities may have used these places, while at others various communities from different areas may have used them jointly. These different uses may have been ordered or socially regulated, and may have created longer rhythms of practice extending over years and generations.

We have also explored how people began using artefacts in ways that did not involve mere disposal of rubbish, but disposal according to certain conventions about what was appropriate to deposit, in what manner, in different arenas. These conventions may have emerged as a means of controlling vital forces that were perceived as stemming from the processes of transformation that created the artefacts. These traditions clearly developed from a blend of old and new technologies – for example, in combinations of pottery and pitchstone. The evidence for Mesolithic activity followed by fourth millennium BC ceremonial activity at sites such as Pencraig Hill and Eweford West could be construed as indicating the deliberate imposition of a new order on an aboriginal landscape; alternatively, it suggests a sharing of knowledge of older pathways and places.

The conventional ways in which artefacts were deposited, the strong prevailing aesthetic sense and the use of an architectural vocabulary suggest that there were formalised ways of behaving which extended into all spheres of life. Why did this suite of conventional behaviours emerge at this time? Perhaps it was because people were acquiring and developing new sets of skills relating to the tending of livestock and the growing of crops. These skills required different kinds of intervention with the land and its rhythms to bring about successful results. Yet success was not guaranteed in the face of factors beyond communities' control, such as drought or disease, and in those scenarios people may have fallen back on old ways to acquire food, skins for clothing and bones for tools; if these old resources were not plentiful, communities would go hungry and the weak would die. They may have resorted to other forms of intervention, hailing the help of spirits or appeasing the anger of ancestors, by observing particular rites that involved drawing together, manipulating and depositing potent materials.

Chapter 9

Changes in dwelling, people and place, *c.* 3500–1000 BC

GAVIN MacGREGOR

Introduction

Different strands of evidence show that during the later fourth millennium BC to the end of the second millennium BC, there were some fundamental shifts in how people engaged with each other and with the landscapes they inhabited. These strands include the development of pit alignments as a means of landscape division; the use of rock art to mark places; the development and use of different pottery forms; the increasing range and use of prestige artefacts; changes in the treatment of human remains; and changing forms of settlement. This chapter considers the evidence from Knowes (Chapter 3), Overhailes (Chapter 4), Eweford West (Chapters 4 and 5) and Pencraig Wood (Chapters 4 and 5), as well as other sites in the wider region (Figure 9.1). Several of the strands are treated together under the theme of dwelling and division, as they relate to how people defined, modified and used space, while others are considered in terms of how people created and maintained social identities. While these changes were taking place, certain long-held concerns continued to affect social life – among them, the uses of different parts of the landscape and beliefs about relationships between the living and the dead.

Dwelling and division

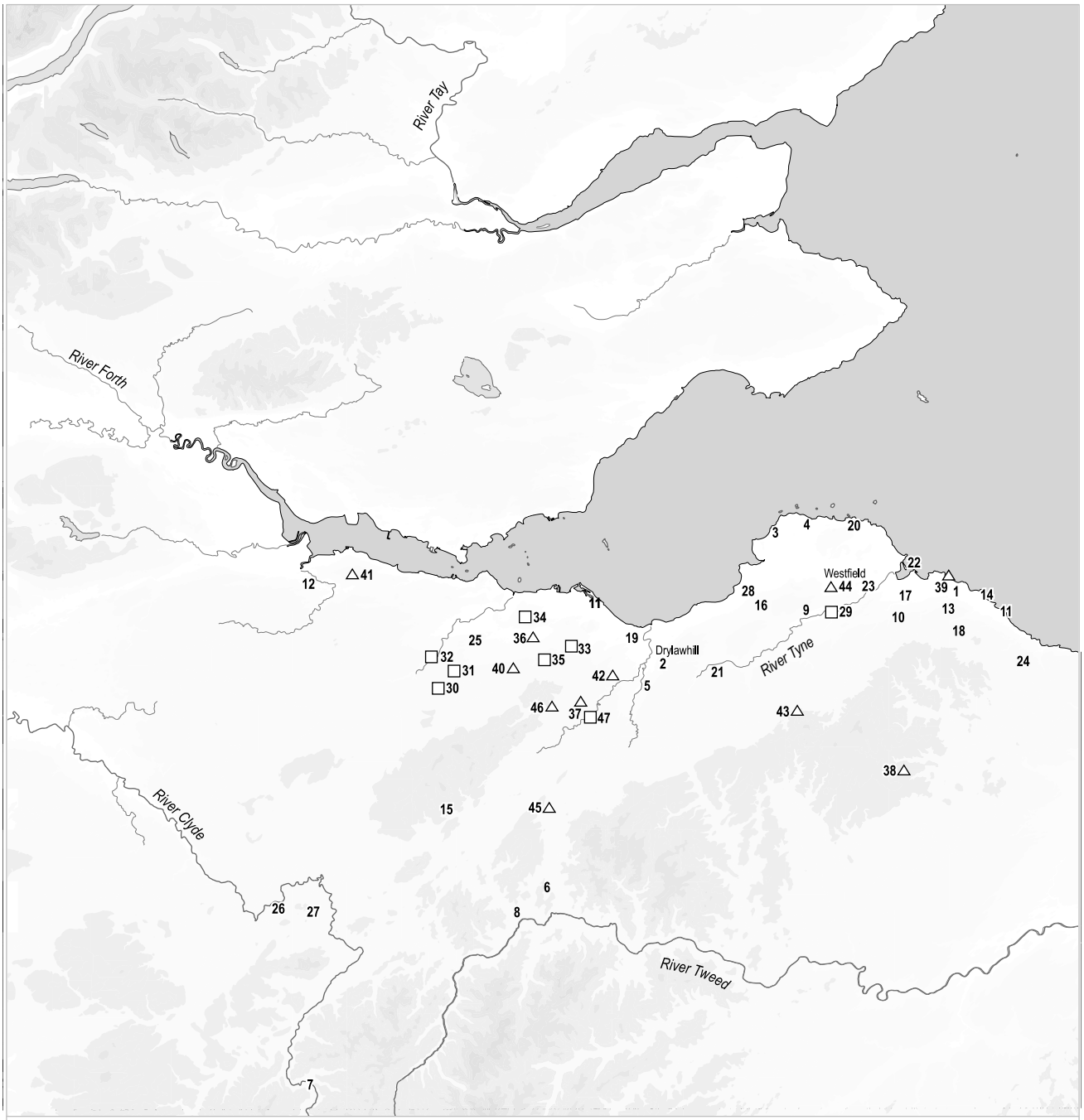
Different types of evidence suggest that, from the late fourth to the late second millennia BC, communities were engaging in new ways with their surroundings. The evidence for land divisions and the production and circulation of rock art during the late fourth and third millennia indicate an increasing concern with defining and moving between upland and lowland places. When this is considered along with the decreasing size and robustness of dwellings, it seems to indicate increasing reliance on a pastoral economy. By contrast, in the second millennium BC the character of settlement evidence changes, suggesting a shift to permanent settlement in upland and lowland areas, based on a mixed agricultural system.

Shrinking houses – growing landscape

We have argued in Chapter 8 that, during the early and mid fourth millennium BC, people were building different types and sizes of structure for dwelling on different scales. The hierarchy of dwelling structures ranged from substantial timber halls to smaller rectangular structures to even smaller, ephemeral buildings, for various social groups from households to wider communities. By the late fourth millennium BC, it appears that large, rectangular halls were no longer being built. Evidence from the Lothians and central Scotland suggests that from this period onward, smaller, lighter structures were being built as dwellings, such as Structure 1 at Overhailes (Chapter 4) and the oval structures at Cowie (Atkinson 2002) (Figure 9.2).

At Overhailes, there was evidence for a flimsy, stake-built, sub-circular structure, up to 6m across, that stood towards the end of the fourth millennium BC (Chapter 4). It may have been associated with a yard, which was perhaps where a group sometimes gathered for social purposes, or which held livestock. Inside the putative yard were two pits filled with stone tools, hearth waste and pot sherds, including portions of Fengate Ware vessels. Other pits containing sherds of Impressed Ware pottery at Broxmouth (Hill 1982b) and Thornybank (Rees 2002, 317) may belong to the same tradition of social practice.

The limited evidence for other structures from the Lothians suggests that households continued to live in relatively small and insubstantial structures during the third millennium BC. A scatter of pits, post- and stake-holes, dating to 2880–2500 BC, at Lamb's Nursery (Figure 9.2) may have represented a small structure; its occupation involved the use and deposition of Grooved Ware pottery (Cook 2000a). Another small structure, represented by seven post-holes at East Barns, also involved the use of Grooved Ware (Gooder 2001). In light of this evidence, the group of features associated



Key

1 Broxmouth	8 Meldon Bridge	15 West Water Reservoir	22 Hedderwick	29 Traprain Law	36 Saughtonhall	43 Leaston House
2 Thorny Bank	9 Abbey Millfarm	16 Grainfoot	23 Preston Mains Farm	30 Kaimes Hill	37 Glencorse	44 East Linton
3 Archerfield	10 Ruchlaw Mains	17 Bowerhouse	24 Hoprig	31 Dalmahoy Hill	38 Crosswood	45 Lamancha
4 Tusculum	11 Skateraw	18 Thurston Mains	25 Ratho	32 Tormain Hill	39 Easter Broom House	46 Castle Law
5 Lambs Nursery	12 Linlithgow	19 Belfield	26 Cloburn Quarry	33 Blackford Hill	40 Gowanhill	47 Hawthornden
6 Greenknowe	13 West Pinkerton Farm	20 West Golf Course	27 Blackshouse Burn	34 Corstorphine Hill	41 Bonnytoun	□ rock art in-situ
7 Lintshie Gutter	14 Dryburn Bridge	21 Duncra Hill Farm	28 Longniddry	35 Braid Hills	42 Parkburn Quarry	△ portable rock art

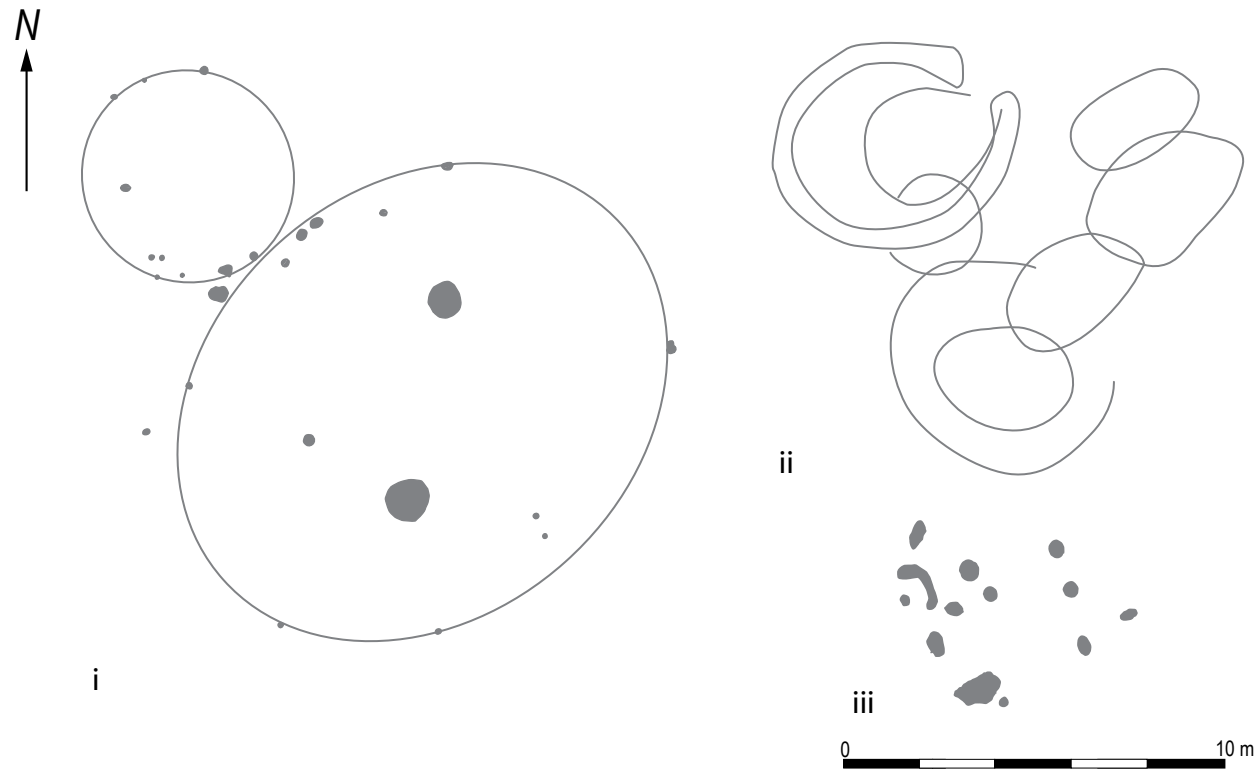
9.1 Map showing the locations of sites referred to in the chapter.

with Grooved Ware at Eweford East may also be best interpreted as a small dwelling (see Chapter 3) dating to the third millennium BC. Such light dwellings could have been rapidly erected and may not have been occupied for as long as more substantial structures. This may in turn indicate that communities at the time required a greater degree of mobility, perhaps because they relied largely on the grazing of stock for subsistence.

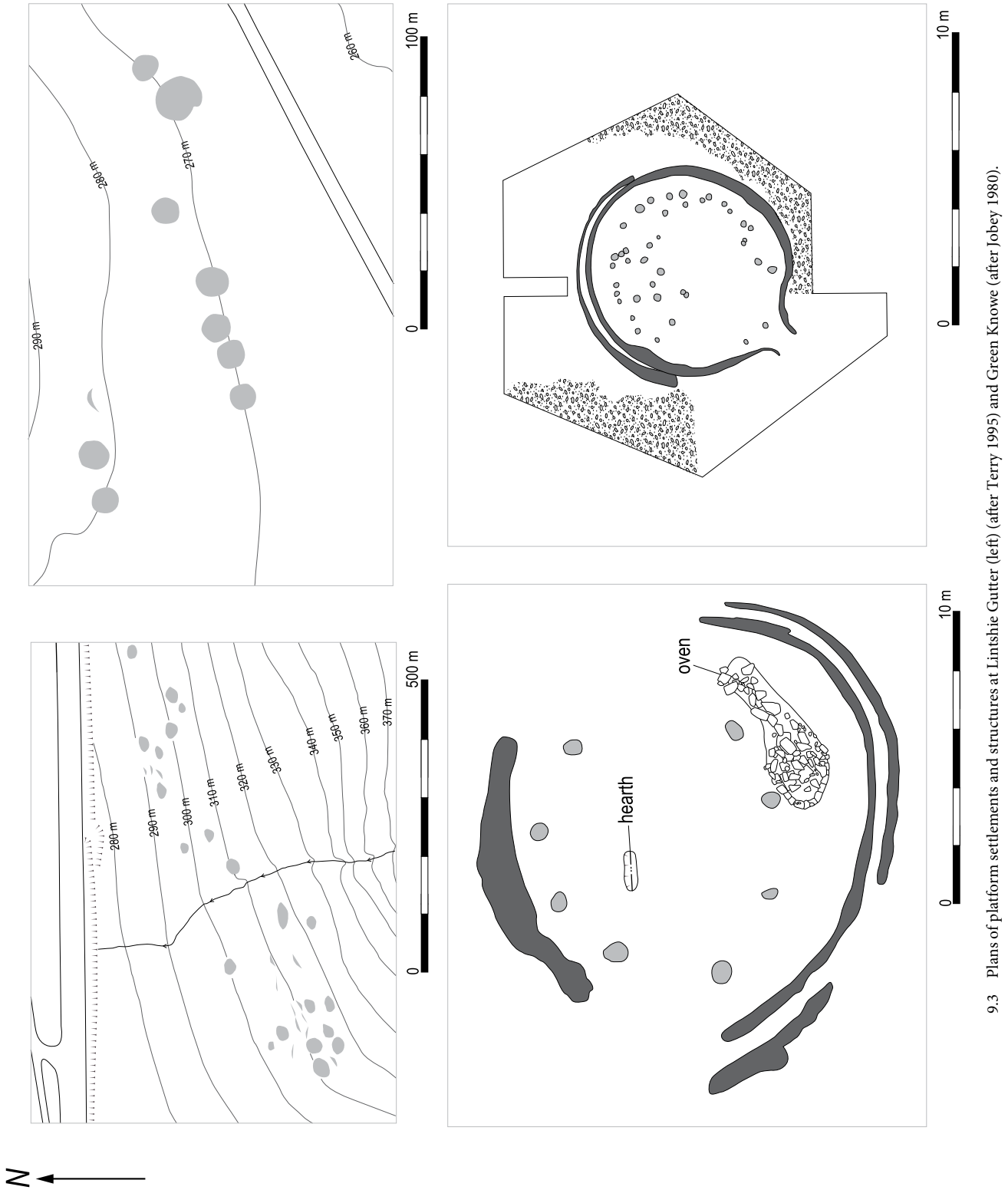
The impression that contemporary dwellings were light is also supported by evidence from coastal sand dune sites, where Grooved Ware (Cowie and MacSween 1999; MacSween 2001, 77) and Beaker pottery (Gibson 1982) form a component of middens. At Archerfield one midden mound, probably dating to the third millennium BC, comprised layers of shells, loam and sand which indicated distinct activity areas (Curle 1908). People had scattered marine shells (including whelks, limpets, oysters and mussels), crab claws and animal bones in two parts of the mound as they processed food, and left behind sherds of pottery that may have been used to store or cook it. Flint tools, pieces of red deer antler, a bone pin and chisels and an axe-polishing stone show that they were also working raw materials there. Most of the pottery consisted of rusticated Beaker or Grooved Ware (with up to 14 vessels of the latter, most of it from this mound), with some sherds of fine Beaker (Curle 1908, 319; Gibson 1982, 98). Another mound close by contained similar remains but fewer shells, associated with fine Beaker pottery (Curle 1908, 312–17).

Similar evidence for dwelling, dating to the second half of the third millennium BC, was found in two middens associated with Beaker pottery at Tusculum (Cree 1908). Those who fished, gathered and hunted food around the site left a thick deposit of sea shells, crab claws and fish bones, along with split and burnt domesticated and wild animal bones, extending approximately 45m by 13m, with the remains of a hearth on top. Numerous sherds of pottery, struck stone tools, coarse stone tools and worked deer antler again indicate craft activity and food storage or cooking.

These midden sites illuminate the character of dwelling in this coastal context. Despite the investigation of extensive areas, there was no evidence for associated structures, so if any existed they may have been tents or light structures that left no archaeologically visible traces. The evidence of Structure 2 at Overhailes, which dated to



9.2 Plans of Overhailes structure A (i), structures at Cowie (ii) (after Atkinson 2002) and Lamb's Nursery (iii) (after Cook 2000).



9.3 Plans of platform settlements and structures at Lintshie Gutter (left) (after Terry 1995) and Green Knowe (after Jobey 1980).

the late third millennium BC (see Chapter 4,) also points to a continued tradition of understated structures through the third millennium BC.

This contrasts with more substantial architectural forms that were emerging by the early second millennium BC, accompanied by changes in the character of settlement. For example, a ring-slot timber round house, measuring 12m in diameter, stood at Lambs' Nursery during the middle of the second millennium BC (Cook 2000a). Further evidence for dwellings in the Lothians during this period is scarce, but examples from further afield suggest its probable character. The best understood contemporary settlement is in the Southern Uplands, in the unenclosed platform settlements that date from the early second millennium BC onward.

For example, the settlement at Green Knowe comprised a group of nine platforms, set among field banks (Jobey 1980a) (Figure 9.3). On one platform, a small, circular ring-slot house up to 7.7m diameter stood in the mid second millennium BC. A path led from the south-facing entrance into the house. A stone-lined hearth pit sat off centre to the east of the entrance, and its location suggests internal spatial divisions, with one area dedicated to preparing food. Numerous stone artefacts, including rubbers, pounders and broken saddle querns, had been tossed along the platform's southern edge. Another platform held three successive, circular, ring-slot houses, up to 10m in diameter, built during the late second millennium BC. A bank of stone, probably cleared from fields, fringed the down slope edge of each platform, with a paved gap leading into each building. To the left (as one exited the house) of one doorway, midden material lay inter-leaved with the clearance bank, suggesting that rubbish, including pottery, charcoal and burnt bone, was thrown out of the doorway to that side. Many of the houses had been burnt down, perhaps deliberately destroyed at the end of their useful lives. Other artefacts from the settlement, including cup-marked stones, chert tools, fragments of a lignite pendant and ring and an amber bead, show the kinds of implements, ornaments and portable art that the inhabitants used.

Excavation at Lintshie Gutter (at *c.* 300m above OD) showed that the tradition of unenclosed platform settlements may have commenced in the early third millennium BC but was certainly established by the first half of the second millennium BC (Terry 1995). Excavation of four of the 31 platforms revealed traces of ring-groove round houses associated with flat-rimmed pottery, but also established that at least one of the platforms was used as a stock enclosure (Figure 9.3). One structure may have served as a barn, mill and bakery: it had two opposed entrances, contained an oven and produced the only two quern stones from the site, one of which lay in the rake-out from the oven, and a cup-marked stone. The opposed entrances may have allowed a breeze through to winnow cereal, with the querns used for grinding the grain and the oven for baking bread.

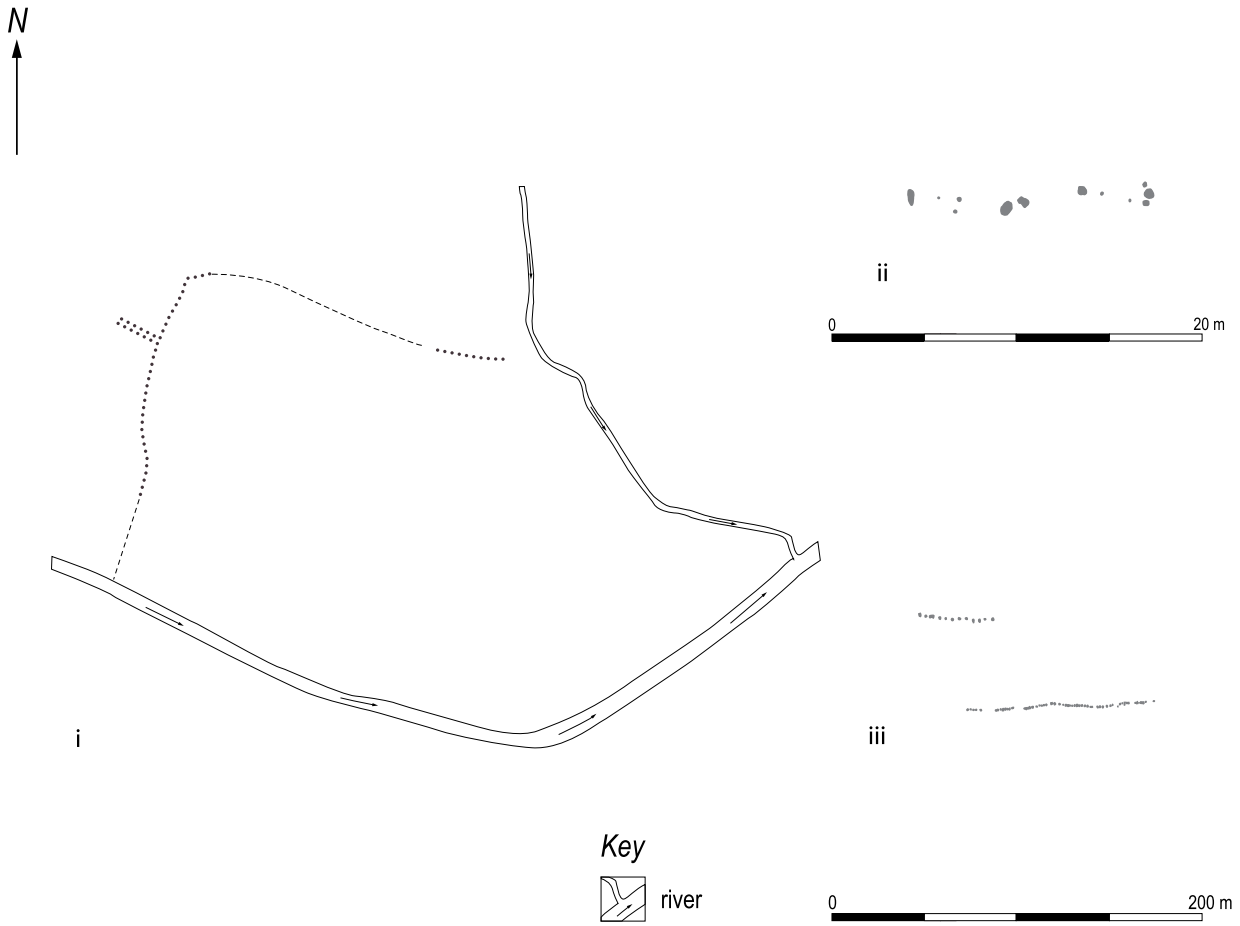
We can suggest several reasons for the apparent shift to building smaller, lighter dwellings from the late fourth millennium BC onward. The abandonment of larger, rectangular structures may indicate the collapse of the highly conventionalised social systems that prevailed during most of that millennium. These spacious buildings, with their ability to accommodate large numbers, were no longer socially necessary. Instead, smaller social groups were the norm, and these called for smaller buildings. The construction of smaller, less substantial structures during the third millennium BC may also point to lower investment in establishing homes, as they were not designed to be occupied for long. The light structure and putative yard at Overhailes, for example, may have been occupied for a few months at most. The coastal middens indicate the long-term use of particular places for hunting, fishing, gathering and eating (as evidenced by Grooved Ware, Impressed Ware and Beaker pottery), yet the absence of evidence for associated structures indicates that the middens built up over several intermittent episodes of activity.

Lower investment of time and effort in building dwellings may correlate to a greater degree of mobility in Lothian society. Clearly people were spending time in the coastal zone, but pig bone at Overhailes and roe and red deer bone from the coastal middens show that they were also exploiting animals further inland, in woodland or upland contexts. These movements may have related to the tending of cattle and other livestock, which were brought to the uplands for summer grazing. If communities were relying increasingly on livestock, and therefore moving around the landscape on a seasonal basis, they may have lived in smaller social groups and occupied more ephemeral houses.

By the second millennium BC, however, larger ring-slot houses were being built in both the lowlands and uplands, with those in the uplands forming small hamlets that may have been occupied year-round. The quern stones at both Lintshie Gutter and Green Knowe indicate an arable component to the economy, perhaps with field systems nearby. Platform settlements may have been positioned on slopes in order to maximise the arable ground on the valley floors and to keep dwellings close to grazing livestock. Within hamlets like Lintshie Gutter, certain buildings were given over to processing the arable crop and others to containing stock.

Dividing the land

Around the same time that communities in Lothian were becoming more mobile, they also began establishing



9.4 Plans of the pit alignments at Meldon Bridge (i) (after Speak and Burgess 1999), Knowes (ii) and Eweford East (iii).

distinct boundaries across the landscape, evident archaeologically as pit alignments. The evidence from Knowes, of a short length of aligned pits, may relate to the beginnings of this tradition in the late fourth millennium BC (Chapter 3). The pits appear to have been left open for a time, except for three that held sherds of Impressed Ware and waste from fires.

There is increasing evidence that pit alignments had a long currency of use, but two broad forms can be distinguished. The first are those that formed part of ceremonial sites dating to the third and second millennia BC, frequently comprising upright timbers in circular pits; the second are those dating to the late first millennium BC, with sub-rectangular pits associated with banks (Waddington 1997). Both forms are known in the Lothians, with an example of the first at Eweford East (Chapter 3) and of the second at Eskbank (Barber 1985). However, the presence of a cup-marked stone in a pit alignment at Thornybank (Rees 2002) suggests that this form, too, may have originated much earlier than the later first millennium BC date usually accepted; in fact, it could date to the third millennium BC.

Numerous pit alignments are known as crop marks in the Lothians, but most of these are not dated and it is difficult to know how they relate to each other or to contemporary settlement. Some appear to form regular systems of landscape division, and these may relate to landscape organisation in the first millennium BC (see Chapter 10).

The tradition of using lines of pits to create boundaries clearly emerged earlier, however. At Eweford East, two parallel pit alignments were created during the mid third millennium BC; these may have supported linear boundaries comprising timber uprights linked by wicker panels (Chapter 3). As at Knowes, people put objects (pot sherds, stone tools and a cup-marked stone) into the pits, and eventually the boundaries were burnt down. Radiocarbon dates indicate that at least parts of both

alignments stood at the same time, forming a pit-defined linear enclosure and inscribing a double line across the landscape. The segmented nature of the southern pit alignment, in particular, suggests that groups gathered intermittently to create it over an extended period of time, perhaps several seasons or years. Subsequent generations built a circular timber enclosure and the parallel northern pit alignment.

The creation of boundaries was a potent act that defined different categories of space: it differentiated inside from outside or this side from that side. These spatial divisions must have been both physical and conceptual, associated with other meanings or values. The pit alignments at both Eweford East and Knowes (Figure 9.4) ran broadly east to west and along lower-lying ground, below slopes that ran up to the foothills of the Lammermuir Hills. These boundaries may have distinguished different areas of the landscape and also prevented stock from moving between different farmsteads or territories. The enclosure at Eweford East may have been used as a stock pen, perhaps to wean young animals or to gather herds from several local farmsteads before moving them to the uplands for summer grazing.

A similar pit-defined monument was discovered at Meldon Bridge, about 25km to the south-west (Figure 9.4). Here, following earlier phases of activity at the site, a community constructed a large enclosure during the first half of the third millennium BC, and it remained a focus of some kind until the mid second millennium BC (Speak and Burgess 1999). The enclosure was defined by posts that were faced with planks and extended between the Lyne Water and Meldon Burn, enclosing an area of up to eight hectares (*ibid*, 105–6). The enclosure is similar to several other sites, found across Britain, that the authors consider were political centres for distinct territorial units (*ibid*, 111–14).

About 25km to the west of Meldon Bridge is another large enclosure dating to the third millennium BC, at Blackshouse Burn (Lelong and Pollard 1998a). A circular area, 300m in diameter, was enclosed with two concentric rows of posts, between which ran a substantial bank (Figure 9.5). The monument was established in a boggy area to enclose the headwaters of two burns. This choice of location probably reflected the importance of water in these uplands to the communities who built the enclosure; if they practiced transhumance, they may have gathered

9.5 Plan of the enclosure at Blackshouse Burn (after Lelong and Pollard 1998a).

at the place during visits to the summer grazings (*ibid*, 48–9). Meldon Bridge may have been positioned with reference to water courses for similar reasons. Such sites played important roles in the uplands during the seasonal gathering of different communities. Herds may have been temporarily penned in the enclosures for exchange, marking or blood letting. These gatherings would have also provided opportunities for the exchange of objects, kin and news.

Moving mountains

While communities in Lothian were beginning to create boundaries to mark distinct areas in the landscape, they also gave meaning to certain places by creating and moving rock art. There is evidence to suggest that rock art was being produced as early as the fourth millennium BC, in the form of a cup-marked stone incorporated in a mortuary structure at Dalladies (Piggott 1972). It is likely that by this time people had also begun to adorn outcrops or boulders with similar simple motifs. The chronology of rock art is difficult to establish, but there seem to have been two distinct developments: curvilinear or geometric motifs were mainly created at monuments such as chambered tombs, while simpler cups and cup-and-rings were more usually created on outcrops and boulders (Bradley 1997). In general, geometric and curvilinear motifs are more frequently found in the west and north of Scotland, reflecting the distribution of monuments, while simple cup marks were incorporated in monuments dating to the second millennium BC in the south and east of Scotland (Morris 1989; Bradley 2000).

In the Lothians region, cup-marked stones have been found on several hills, including Traprain Law (Edwards 1935), Kaimes Hill (Simpson *et al* 2004), Dalmahoy Hill (Naddair 1989), Tormain Hill (Morris 1981, 139–40), Blackford Hill (Morris 1981, 139), Corstorphine Hill (NMRS: NT27SW 190) and the Braid Hills (Morris 1981, 143–5), with another set of rock carvings on the cliff face beside the River Esk at Hawthornden (Morris 1981, 147–8). All of these pieces of rock art may have been produced during the fourth or third millennium BC. It is particularly striking that, apart from Traprain Law, all of these sites cluster around the Pentland Hills and present-day Edinburgh (Figure 9.1).

In contrast, several other cup-marked stones have been found in secondary contexts, including one from a dyke at Saughtonhall (*PSAS* 1896), another from old Glencorse churchyard (Morris 1981, 147) and a third from Crosswood (NMRS: NT05NE 12). It is unclear whether these were quarried from their primary contexts or whether they were produced on individual stones. Their locations do, however, mirror the broad distribution of primary sites, so they may well have been quarried from boulders or rock faces nearby. Cup-marked stones were incorporated in the cairn at Eweford West during its remodelling (Chapter 4) and in the southern pit alignment at Eweford East during the third millennium BC (Chapter 3). The cup-marked stone put into a pit forming part of an alignment at Thornybank (Rees 2002) may date to the same period. At Eweford Cottages, a cup-marked stone played a part in burial rites at the end of the third millennium BC (Chapter 5; Nisbet 1975), and the standing stone with three cup marks on its western face at Easter Broomhouse (RCAHMS 1924), about a kilometre to the east, may date to the same time.

The tradition of moving and reworking rock art in secondary contexts continued into the second millennium BC, with decorated slabs used to build stone cists. In many cases in the Lothians, these slabs appear to have been quarried from outcrops that were decorated generations before – for example, at Gowanhill (NMRS: NT16NE 47), Bonnytoun (Morris 1981, 143), Caerlowrie (Morris 1981, 145), Craigie Hill (*ibid*) and Parkburn Quarry (*ibid*, 156). A sandstone slab with cup-and-ring markings at East Linton (NMS 1996) was aligned with the eastern end of the Drylawhill cursus monument (see Chapter 8). Other decorated slabs have been discovered at Leaston House, close to the foot of the Lammermuirs (Morris 1981, 152), and at Lamancha, close to the foot of the Moorfoot Hills (*ibid*, 40). Smaller, portable cup-marked stones were also used during the second millennium BC, for example at the settlements of Lintshie Gutter (in a building associated with grain processing and the arable cycle) (Terry 1995) and Green Knowe (Jobey 1980a).

The production of rock art on living rock marked certain places in the landscape, visibly and audibly. It also transformed them into places that were distinctly cultural. The distribution of *in situ* rock art in the region indicates a distinct focus around the area of Edinburgh and the Pentland Hills. Rock art, the social context of its production and its subsequent meanings were intimately associated with the uplands. In contrast, the distribution of portable rock art in the late third and second millennia BC focused on the lower-lying ground, and much of it seems to have been quarried from more upland outcrops, while other pieces adorned smaller boulders or stones that were easy to transport. In some cases, then, people seem to have deliberately moved fragments of places, as slabs, from uplands to lowlands. In other cases, simple cup-marked stones may have been created in the lowlands, but with reference to a tradition that originated in the uplands. These decorated stones were used at places that continued to have significance as ceremonial monuments, including pit alignments and burial sites. By the second millennium BC, we also see evidence for more substantial structures in upland contexts, at which portable cup-marked stones

were deposited.

The movement of rock art was both physical and metaphorical. It involved the physical movement of a place that had already been marked as significant, and it also necessarily involved the movement of people, often between the uplands and lowlands. As we argue above, the changing nature of dwellings and land division suggests that households were increasingly practicing a more pastoral economy. The movement of rock art may have expressed physical connections between areas of upland grazings and low-lying arable areas of the landscape during the third millennium BC. These rock fragments were also imbued with the original meanings of the markings, with claims to place, with the significance of the motifs and with those who had changed the landscape.

While the act of creating rock art may have been most meaningful for marking places in the fourth and third millennia BC, cup marks clearly continued to have potency through their re-use in secondary contexts during the late third and second millennia BC. By the mid second millennium BC, rock art was less commonly put in burials, but it was clearly being incorporated into dwellings in the uplands (for example, Jobey 1980a; Terry 1995). Even in this upland context, there may have been a marked spatial division between the higher ground of settlements and grazing and the arable ground on the valley floors. Here, stones may have been used to evoke ancestral activities or link upland pastoral and lowland arable land on a smaller scale. These roots continued to run through subsequent traditions into the first millennium BC or later, as evident from the cup-marked stone built into the wall of a souterrain at Castle Law, Glencorse, in the Pentland Hills (Childe 1933).

Society, identity and social structure

From the late fourth to the late second millennia BC, there were important changes in the ways that people treated and deposited human remains and also certain artefacts. Among the latter, there were particular developments in the forms and uses of pottery, in the adoption of metalworking technology and the circulation and deposition of metal objects.

Making, using and breaking pots

Clay can be worked and fired to produce pots in a wide variety of shapes and sizes, and they be easily decorated in numerous ways. In spite of this potential for variation, pottery styles during the fourth, third and second millennia BC in Britain were generally conservative. That is, while the form and size of vessels varied during particular phases, there were also a series of clear traditions of potting, each lasting for several hundred years. Thus, while pottery can be a highly innovative medium, during this period social factors militated against freedom of expression by potters. Potting was not simply an exercise of production, but a socially determined form of practice (for example, Hill 2002).

The potential for producing pots of various shapes means that deliberate choices lay behind the prevailing forms. Bowls may have been considered better for serving and eating food and larger, barrel-shaped vessels better for storage (Parker Pearson 2003, 12). The choice of a pot's fabric may also have related to function; for example, a coarse, highly tempered fabric would have had better thermal properties for cooking, while a finer fabric would have been better for storing liquids (*cf* Morris 2002). Analysis of the composition of pottery assemblages can illuminate how pottery was used and establish correlations between form, fabric and function of vessels (for example, Petersen 2003; Jones 2005), which can then be considered in relation to decoration or surface treatment. Few large assemblages of pottery in the Lothians have been studied in these terms, but there still appear to have been significant changes in the ways that pots were produced and used, changes that were related to shifts in social practices and the formation of identities.

Pottery production emerged at the beginning of the fourth millennium BC with a range of carinated and plain bowl forms (Herne 1988; Cowie 1993) (see text box 8.2). By the mid to late fourth millennium BC, a different tradition of potting had emerged. Potters began making flat-based bowls and vase-shaped vessels in many parts of Britain, probably beginning with the Impressed Ware tradition (MacSween 1999b). By the late fourth millennium BC, another pottery tradition had emerged, possibly in Orkney, with Grooved Ware that comprised flat-based bowls and bucket- and barrel-shaped pots (MacSween 1999a), often decorated in complex and varied ways. These potting traditions continued into the late third millennium BC, with the continued currency of Impressed and Grooved Ware traditions.

Parker Pearson (2003, 12) argues that the earliest bowl-shaped vessels were designed for sharing boiled food, in contrast to the Grooved Ware pots, which were designed for storing food. Liquids could easily have been drunk from the simple open bowls of the early fourth millennium BC; it would have been more difficult to share liquids from the Impressed Ware bowls with their T-shaped rims (for example, Speak and Burgess 1999), but their open forms would still have facilitated sharing the pots' contents.

The shift to flat bases with less open rims may have corresponded to changes in how food or drink was shared. A round-based Carinated Bowl could have been set into the ground or into a hole through a plank, but in general

the bowl would have been passed like a quaich from one person to another to prevent the contents from spilling, evoking a communal approach to eating and drinking. In contrast, the flat bases of Grooved Ware and Impressed Ware pots could be more easily set down, without the imperative to pass them on, and this implies a more individual approach to mealtimes. Perhaps certain people possessed certain pots, and individual identity was linked to particular vessels through the decoration of pots in the late fourth millennium BC. Other views about what pots it was appropriate or necessary to make would also have constrained production and decoration. For example, the Grooved Ware tradition, with its larger storage vessels, suggests that there was a perceived need to accumulate and store food for later consumption. In contrast, the earlier tradition suggests a perceived need to contain food for immediate use.

Another tradition of potting developed in the mid third millennium BC with the adoption of Beakers, both fine wares and rusticated wares. The fine wares appeared in a distinct series of forms and with similarities in fabric, firing and decoration that distinguished them from earlier traditions (Clarke 1970; Boast 1995, 71). The rusticated wares were more similar to some of the earlier traditions (Gibson 1982), such as Impressed Wares, but were also part of a single tradition (Case 1995, 56). In the Lothians, fine wares are more commonly found associated with inhumation burials in cists, a context in which rusticated wares are never found. Rusticated wares are usually found in occupation contexts, such as the coastal sand dune sites discussed above. Both rusticated and fine wares are found in pits, such as the pit at Eweford (see Chapter 4), and sometimes together, as at Elginhaugh (MacGregor forthcoming). The fine Beaker pottery may have had a special role related to the consumption of alcohol (Burgess and Shennan 1976; Dickson 1978; Case 1995). This role not only influenced how the vessels were used and broken in contexts relating to dwelling; it also led to their being deposited, complete or broken, into other symbolically charged contexts. The rusticated vessels were often much larger and, like Grooved Ware, suggest the continued need to store food and drink during the later third millennium BC.

The different traditions of pottery discussed above have been identified through similarities of form, fabric, firing and decoration. Such similarities were of course clearly apparent to people in the past, and they were produced intentionally, to signify something meaningful to others. These different pottery traditions may have related to communities who identified themselves as distinct from other groups. Perhaps those who adopted one tradition traced genealogical roots to indigenous ancestors, while another claimed lineage from those who had arrived on boats hundreds of years before. The point is that pottery played a role in social practices that was not simply functional, serving as containers, cooking pots or drinking cups; it may have also helped to create the identities of those who used the vessels (*cf* Hill 2002).

These distinctions in identity would have related to various spheres, from places where pots were made to areas where food was prepared and eaten to the spots where the sherds from broken pots were deposited. The meanings associated with different forms of pottery would have been carried from one sphere to another and perhaps transformed in transit. They became linked to those who were variously involved in making the pottery, preparing the food and collecting the rubbish to take to the midden. While some of the broken pots undoubtedly ended life on the midden, others were taken elsewhere and deposited in particular places, such as in the pits at Knowes, or as packing for posts at Meldon Bridge, or in pits with human remains at Pencraig Wood. Pots also frequently accompanied human remains, as we discuss below, and there seems to have been considerable overlap between what could be used in a house and what could be used with the dead. For example, during the second millennium BC, barrel- and bucket-shaped vessels were used to hold human remains (see Speak and Burgess 1999, 75, illus 42 and 43) and were also being used in houses (for example, Terry 1995; Jobey 1980a).

Changes in the treatment of human remains

This section reviews the changing and complex ways in which human remains were treated in the Lothians during the third and second millennia BC. The ways that people treated their dead can point to the belief systems that also influenced how they conducted themselves in life (see text box 9.1). The practice of burying individuals along with what are considered prestigious artefacts during the late third and second millennia BC has been interpreted as evidence for the development of social hierarchies based on individual identities (Clarke *et al* 1985; Shennan 1982). However, this interpretation is difficult to sustain; there is no necessary correlation between how the dead are treated and their status in life, as it is the living who choose how to treat the dead and which artefacts to place with them (Barrett 1994).

Archaeologists still often interpret deliberate deposits of human remains as burials and groups of such deposits as cemeteries (see Chapter 5). Implicit in these terms is a view of burial as the social response to the death of a loved, valued or significant individual, and a means of preparing the dead for the afterlife. Yet the treatment of the dead in third and second millennia BC Britain was not so simple; certainly not all individuals were treated the

same way after death. Only a small proportion had their remains formally deposited, and even those selected for deposition were treated in different ways. Instead, there was a remarkably wide range of different treatments, involving both inhumation and cremation. Furthermore, research has shown that the remains of individuals of all ages and both sexes were deposited in different ways, in spite of attempts to find correlations between particular forms of burial practice and particular social groups (for example, Shepherd 1989; Waddell 1995). It appears, therefore, that the patterns of human remains deposition during this period did not directly reflect the structure of society. The evidence suggests there were more complex reasons for these practices.

There was a marked trend toward placing bodies in cists during the late third millennium BC. At the same time, there are also examples of single and multiple articulated inhumed individuals, cremated individuals, and mixed cremated and inhumed remains from the region during this period. The traditions of inhumation and cremation continued throughout the second millennium BC, with multiple individuals frequently combined, sometimes as token deposits. The use of such token deposits, frequently of children's remains, is evident at other ceremonial sites such as Pencraig Wood, Eweford West and Meldon Bridge during the third and second millennium BC. These may have related to the creation and recreation of ritual foci to which people referred when they gathered at

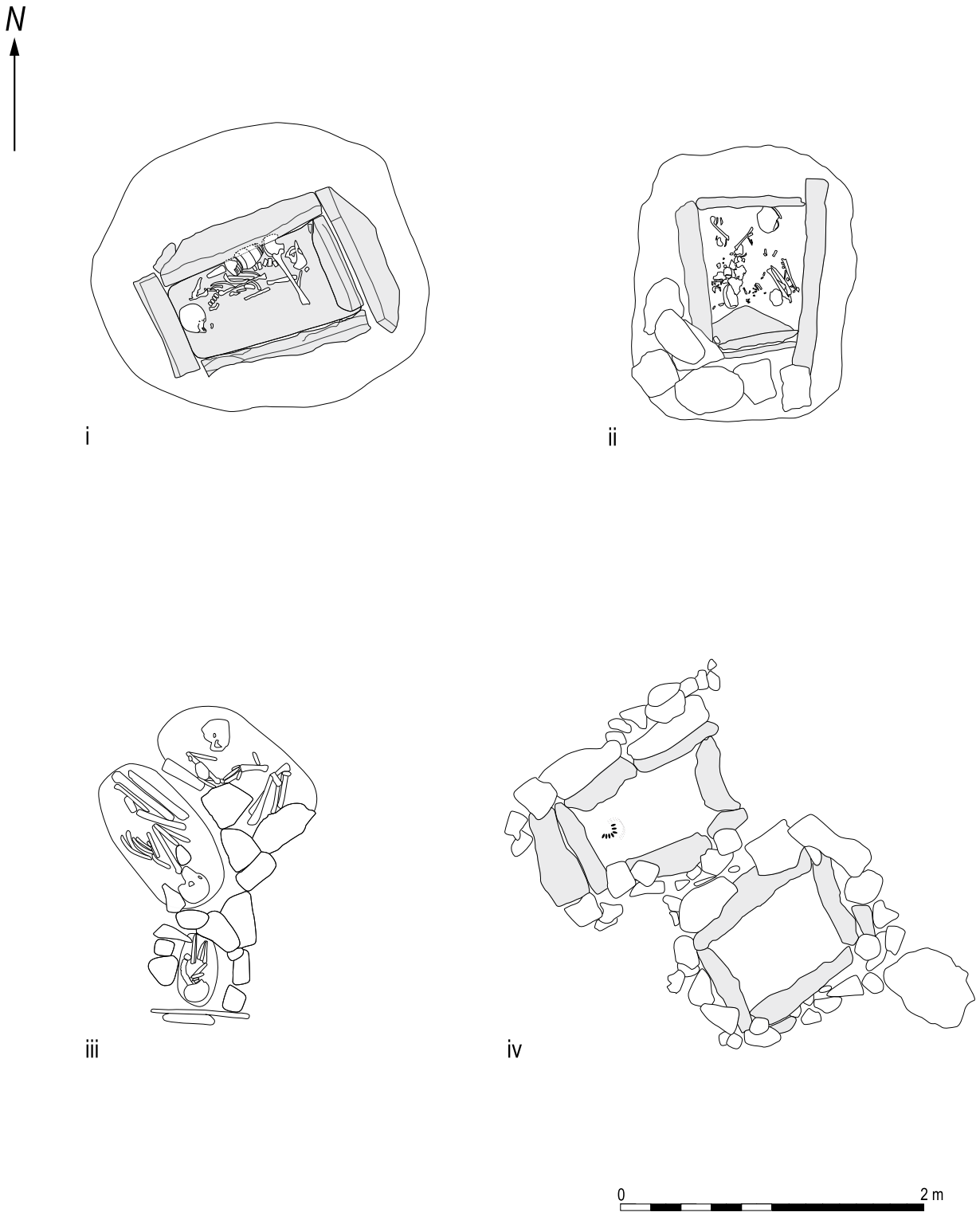
9.1

Death and mourning

For the living, the death of a person is not simply the ceasing of biological life. The living deal with the dead in ways that reflect concerns with their own health and hygiene, with emotional closure and with the well-being of the deceased. Most cultures or religions view the moment of death as a point of transition from one state of being to another. Death can be seen as marking the soul's migration to an afterlife or to another plane of existence. These times of transition can draw into focus the relationship between the living and the dead, and so people may refer especially at such times to their ancestors. The events and rites surrounding such transitions are usually highly social, involving immediate kin and often members of a wider community.

In this sense, death is social, and social death can extend over a considerable period of time. It may involve the dead person's separation from the wider community. In some cases, those close to him or her may be considered impure or contaminated and are avoided; in others, the time approaching death may require people to draw together. While the social response to death varies greatly from culture to culture, it is most evident archaeologically in how the body is treated after death. Mortuary rites can transform the state of the body; they can range from the exposure of bodies for defleshing (excarnation) to dismemberment to the cremation of bodies (or body parts) on pyres, as with the remains excavated at Eweford West, Pencraig Wood and Pencraig Hill. Rites like these are usually followed by funerary rites that involve formally depositing the body, or its fragmented parts. In some cases, a person's remains may be put in places that are not usually archaeologically visible (such as in the sea or rivers), while in others bodies may be deposited in archaeologically visible ways (such as in stone cists). We can catch glimpses of such rites in archaeological traces, like the carefully assembled combinations of cremated bone, urns, battle axhead and knife-dagger in the Bronze Age pits at Eweford West.

Responses to death may involve other rites to mark or aid the deceased's transition from one world to another, such as acts of celebration, feasting or mourning, which often involve public display. The emotions, beliefs and rites that surround a person's death can vary greatly from culture to culture, but in all cases there is a socially sanctioned response which often relates the living community to the dead.



9.6 Plan of burials at Abbey Mill Farm (i) (after Lawson *et al* 2002), Linlithgow (ii) (after Cook 2000), Longniddry (iii) (after Baker 2003) and West Water Reservoir (iv) (after Hunter 2000).

these sites. These examples highlight that the deposition of human remains in contexts other than discrete burials was a socially sanctioned practice, the meaning of which would have been understood with reference to other contexts of social expression.

During the later third millennium BC, communities in the Lothians and elsewhere in Britain began to place individual bodies in a crouched position inside stone cists or graves. Many of these were accompanied by certain artefacts, with intact Beaker pots among the earliest. For example, a female body dating to 2570–2300 BC was placed, crouched on her side, in a cist, accompanied by a domesticated pig scapula and a Beaker at Abbey Mill Farm (Lawson *et al* 2002) (Figure 9.6), while an adult male was put crouched in a cist at about the same time at Ruchlaw Mains (Ashmore *et al* 1982). Two other burials in cists at Skateraw indicate more complex mortuary rites. In one, a young male may have had his arms placed on the wrong side of his body, so he had partly decomposed or his arms had been severed before burial (Ritchie 1958). In another cist, a body's femur was replaced with one from another individual (Close-Brooks 1979). In both these cases, the bodies were transformed from their natural states, with particular emphasis on the limbs; this suggests that inhumed bodies were not simply understood as representing individuals.

While there was a clear trend in the region toward the inhumation of single individuals, the treatment of the dead was often more complex. In some cases people's remains were deposited collectively; in others, it was socially acceptable to revisit cists and disturb or move earlier deposits to add fresh human remains. For example, at the end of the third millennium BC, the partial, disarticulated and mixed, unburnt and burnt bones of at least one adult, four children aged about nine years and one child aged about five years were put into a cist at Linlithgow (Cook 2000b) (Figure 9.6). The excavator suggested that the cist had been constructed in a manner that allowed re-opening and, indeed, there are other examples of the possible re-use of cists to add more human remains, for example at West Pinkerton Farm (Stevenson 1939), Dryburn Bridge (Dunwell 2003) and West Water Reservoir (Hunter 2000, 127–9). The tradition of placing crouched and multiple inhumations into cists continued into the mid second millennium BC. This is evident from three inhumations in separate cists at Longniddry (Baker 2003), dated to 1690–1440 BC (OxA–10034) and 1520–1310 BC (OxA–10088) (Figure 9.6). Multiple inhumations are evident from the two adults deposited with pig bones at Grainfoot, Longniddry demonstrate; bone from the cist dated to 1310–970 BC (GU-2762) (Dalland 1991a).

There were also variations in what was considered appropriate to place with the body. Pots varied in style from Beaker-Food Vessel hybrids (for example, at Skateraw; Stevenson 1940) to Beakers (for example, at Bowerhouse; Seton 1831) to Food Vessels (for example, at Belfield (Turner 1918), West Golf Course, North Berwick (Cree and Richardson 1907), West Water Reservoir (Figure 9.6; Hunter 2000) and Duncra Hill Farm, (Anderson 1900). Placing intact Beakers with inhumed bodies seems to have been reserved for certain parts of the landscape, with a notable concentration in the vicinity of Skateraw (for example, Stevenson 1940; Ritchie 1958; Henshall 1968; Close-Brooks 1979; Triscott 1996). Around the same time, people were leaving sherds of Beaker in other ceremonial contexts (see Chapter 4) and using them in settlements (see above). At times, objects like flint knives were also added (for example, at Thurston Mains; Stevenson 1940). In other cases, bodies were put into cists with no accompanying artefacts (at least, none that did not decay away); this was the case at Eweford Cottages in the late third millennium BC (Chapter 4), and also at Dryburn Bridge (Triscott 1982; Dunwell 2003, 158), Hedderwick (Callander 1929), Preston Mains Farm (NMRS no: NT57NE 85) and Hoprig (Taylor 1929).

While the remains of a few were chosen to be put more or less whole into cists during this period, the remains of others were treated in ways that recalled the earlier mortuary practices of the fourth millennium BC. At two places in particular in the third millennium BC – Pencraig Hill and Eweford West (see Chapters 2 and 8) – human remains were fragmented, cremated, circulated and deposited in various ways that harked back to earlier traditions. This concern with cremated bone continued though the late third millennium BC, and arguably increased during the first half of the second millennium BC. For example, at Harehope cairn, pieces of Beaker were deposited with cremated remains in a pit (Jobey 1980a, 100–1), and a little cremated human bone placed with a crouched inhumation, dating to 2200–1800 BC (AA-29066), along with a Beaker, flint tool and bronze awl at Doonside, Berwickshire (Clarke and Hamilton 1999).

Cremated remains were distributed and used in certain ways at other ceremonial sites in the wider region. For example, at Meldon Bridge (Speak and Burgess 1999, 26), a large pit dated to 2900–2100 BC and surrounded by six stakes had held successive posts, a stake and an upright stone; the partial cremated remains of an eight-year-old child had been scattered in it. In another case, cremated human bone was put into a pit that was set in a circle of 11 stakes. Perhaps the remains were part of more extensive ritual acts carried out at a monument where social groups from the wider region gathered seasonally.

Cremated human remains continued to be deposited in various ways throughout the second millennium BC, as

the numerous deposits at Eweford West demonstrate (see Chapter 5). They were usually put into pits, frequently inside or accompanied by pots of various forms, and occasionally with other artefacts; sometimes these had been burnt. In some instances, what appear to have been token deposits of cremated human bone were deposited, perhaps as foundation deposits. This was the case in several pits that formed two parallel rows of posts at Meldon Bridge, built between 1700 and 1050 BC (GU-1050; GU-1051) (Speak and Burgess 1999, 33–5). The excavator noted that the two lines of pits appeared to form pairs of similar size, paralleling the phase of activity at Pencraig Wood where paired pits were a focus for deposition of human remains (see Chapter 5). In still other cases, cremated human bone was brought into the dwellings of the living – for example, in a mid second millennium BC roundhouse at Lamb's Nursery (Cook 2000b, 110).

If not all deposits of human remains were simply burial in the conventional, modern sense, what were they for? Two changes in perspective may help us to interpret them. The first is to accept that not all deposits of human remains were intended to achieve the same emotional, social or metaphysical outcomes so, although they all involved the dead, they cannot be directly compared. The second is that, as people lived by belief systems which extended into all areas of their lives, we can only interpret what these acts meant by considering them in the context of other practices. What was deemed a socially appropriate way of treating human remains caught its meaning from other contexts and beliefs. For example, a complete body may have been placed inside a stone cist to bind or seal the individual's spirit, soul or ghost and prevent it from attacking the living community. A year of famine may have required that the cremated bones of kin were offered to earlier ancestors, through deposition in pits at ancestral sites, rather than passing to other worlds through the usual forms of deposition, such as sky or water burial. The gathering together of human remains and artefacts would have meant different things at various times, and each time the ways in which they were deposited may have been with very different intent, designed to achieve different social outcomes.

Other arenas of display

The examples reviewed above include many in which human remains were combined with artefacts that have traditionally been seen as indicating the higher status of the accompanying dead, because of the perceived rarity or prestige of the objects. In some cases this may have been true, if artefacts or the raw materials from which they were made came from considerable distances away. For example, some jet objects may have derived from sources near Whitby in Yorkshire (Sheridan and Davis 2002), while the amber forming beads could have come from the Baltic (Beck and Shennan 1991). Other objects, such as those made of copper, bronze and gold, may have been prestigious not only because the sources of ore were limited but also because those who had the knowledge, skills or authority to produce them were unusual and rare (for example, Clarke *et al* 1985; Budd and Taylor 1995). Modern judgements of artefacts' relative value or prestige contain implicit assumptions about their relative availability or visibility in other social arenas. However, as Hunter (2000, 173) notes, the assumed prestige of many artefacts may often be overstated, with the possibility of unpreserved, equally elaborate 'organic finery' overlooked as well as the fact that these objects were used and worn, not necessarily specifically made or acquired as new for deposition. They may well have been readily available for use and display in other social arenas, in special ceremonies or even as part of daily life in the field or forest. The varied relationships between different forms of practices and types of artefacts can be demonstrated by considering two further examples of practices during the third and second millennia BC.

In southern Scotland, there are several examples where jet or jet-like jewellery was deposited with human remains. At West Water Reservoir, the inhumed remains of a child aged 3–5, with a string of cannel coal and another of lead beads around his neck, were placed in a cist (Hunter 2000, 124–5). Analysis has shown that, at least in the case of the cannel coal string, the necklace had been used for some time before deposition, while the string of lead beads is unique (*ibid*, 136–41). In contrast, at Cloburn Quarry people built up deposits, containing cremated bone and Beaker and Food Vessel sherds, on a pre-existing monument. Among the deposits was a group of 20 jet disc beads that had not been strung together and had been made specifically for deposition shortly beforehand (Lelong and Pollard 1998b, 118; Shepherd 1998, 130).

The biography of each object illuminates the wider availability of such materials. West Water Reservoir demonstrates that such artefacts may have been in circulation for some time, perhaps as heirlooms, with different histories associated with individual beads (Woodward 2002); in other cases, as at Cloburn, communities were able to acquire or produce beads specifically for depositing at a ceremonial site. This suggests that such artefacts may have been more readily available than is generally thought, if they were both in circulation and could be produced at short notice. The apparent prestige of such artefacts stems from a general lack of archaeological visibility rather than necessarily from limited social availability.

The practices through which these objects were

deposited are also distinctly different. The acts at West Water Reservoir clearly related to the deliberate deposition of human remains. Those at Cloburn differed, in that certain artefacts were chosen for deposition at a ceremonial site. This finds close parallels with practices at Eweford West during the late third millennium BC (Chapter 4). Here, deposition of the halberd signified the incorporation of a new form of material, metalwork, into other depositional arenas besides those involving human remains (see text box 9.2, Figure 9.7). Pieces of metalwork were also deposited along with human remains during the late third and second millennia BC, such as the dagger, with a gold pommel mount, placed with a body in a cist under a cairn at Skateraw (Henshall 1968; Gerloff 1975) and a socketed axe and three bronze razors deposited in the large cairn at nearby Bowerhouse (Anderson 1886). Metalwork was also deposited in other ritualised ways elsewhere in the landscape, often in upland contexts, most notably upon Traprain Law (Jobey 1976). Other examples of this include the bronze axeheads which Cowie (2004, 252) has suggested may relate to territorial or symbolic boundaries, or the objects which Hunter (2000, 176) argues marked out the Pentland Hills as an important ritual landscape during the second millennium BC.

Dwelling with objects in the landscape

We have considered the changing nature of Lothian life during the third and second millennia BC. By the third millennium BC, dwellings had decreased in scale to reflect changing social structure, as communities may have become smaller, more mobile and dependant upon pastoralism, moving between uplands and lowlands on a seasonal basis. At the time, people were also inscribing new meanings in the landscape that referred to this mobility, creating rock art in the uplands and later using portable pieces of rock art in a lowland context. Landscape was also being redefined through the construction of linear features, which created new categories of space. The short or segmented nature of the pit alignments suggests they were built by members of a community, perhaps deriving from different farmsteads or built over a period of time in sections. In contrast, large upland enclosures may have

9.2

The Eweford West halberd

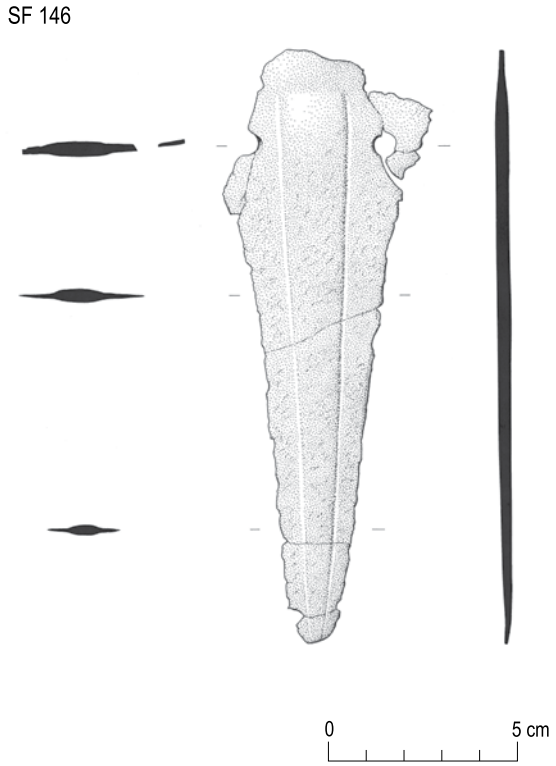
A halberd is a tool shaped something like a pick, with an asymmetrical blade hafted to a long handle and curving downwards. Halberds are among the earliest metal artefacts used and made in Britain, dating from about 2350 to 2000 BC, and to make them probably would have required more technical skill and metal than many other simple objects being made at this time (Needham 2004, 231–4). They were frequently made of arsenical copper, as opposed to bronze.

Due to their unusual form, halberds are often thought to have been mainly for display, perhaps expressing the prestige or status of those who possessed them. If this was the case, these moments of display may have been particularly important social events, such as the ceremonies performed after a person's death. The wider community would have seen halberds only occasionally, and few would ever have had the right to handle them.

Specialist analysis by Trevor Cowie of the Eweford halberd (Figure 9.7) indicates that rivet holes may have been pierced for a second time through the metal, which suggests that it was re-hafted. This observation supports the idea that halberds were treasured objects that were kept as heirlooms for long periods; the Eweford halberd seems to have been used for long enough that its handle had to be replaced. Such objects may have been exchanged or given as presents many times and circulated over considerable distances in time and space.

Recent experimental evidence suggests that, while halberds may have been used for display, they would have functioned perfectly well as weapons, perhaps in some kind of martial combat (O'Flaherty 2004).

GAVIN MacGREGOR



9.7 The halberd from Eweford West.

been foci for summer gatherings of stock and larger social groups from a wider region.

Ceremonial centres such as Eweford East may have derived their significance partly from the movements of people and animals. The building of structures and tying them into the ground through ritual deposits (as at Overhailes) may have bound smaller communities to their locales, places which had been significant to previous generations. At large enclosures, such as Meldon Bridge and Blackshouse Burn (Speak and Burgess 1999; Lelong and Pollard 1998a), such acts may have metaphorically tied the dwellings of wider communities together.

During the late fourth and early third millennia BC, human remains were being cremated, fragmented, and deposited at places like Meldon Bridge and Pencraig Wood. Challenges emerged, however, to how people viewed their relationships with the dead and with the world they inhabited. This was expressed through the practice of putting bodies into cists, at broadly the same time as communities were adopting new forms of pottery and new technologies, such as metallurgy, during the later third millennium BC (Ashmore 1996; Parker Pearson 1993). Perhaps strangers brought such traditions to the region, challenging those who lived there, or perhaps members of the communities who had already lived there for generations beforehand adopted them. Certain individuals, certain communities had access to the transformative powers of metallurgy, which depended on the fire which had long been used to transform clay into pottery or raw food into cooked.

We have pointed out flaws in the traditional model that increasing deposition of prestigious artefacts with burials indicates the emergence of elites in society. The artefacts associated with deposits of human remains were often fairly typical and widely available; it was not necessarily the status of the object or individual(s) that was being expressed through such deposits (Barrett 1994). Instead, they were intended to achieve specific

9.8 Reconstruction of the third-millennium phase of activity at Eweford West.

social, political or metaphysical effects in different social arenas.

During the same period, people may have become conscious of their ability to transform things physically in others ways – for example, through remodelling the cairn at Eweford West, and similar phases of remodelling at other ceremonial sites in the region, such as Cairnpapple (Piggott 1950; Barclay 1999), Cloburn (Lelong and Pollard 1998b) and Harehope (Jobey 1980a). People were also using Beaker pottery in a variety of contexts – in and around dwellings, in deposits at ceremonial sites and along with human remains. For example, at Eweford West, Beaker pottery was scattered around the cairn along with thousands of cereal grains, metaphorically re-sowing the site with a different crop (Chapter 4) (see Figure 9.8). The placing of intact Beakers with inhumed individuals seems to have been reserved for other areas of the landscape, with a concentration further to the east in the vicinity of Skateraw (for example, Stevenson 1940; Ritchie 1958; Henshall 1968; Close-Brooks 1979; Triscott 1996). We can speculate on the reasons. Perhaps the practice of binding individuals in stone boxes was reserved for particular places, and applied to those who had been affected by the powers which transformed stones into metal objects? Whatever its initial meaning, a tradition of crouched inhumation continued, albeit with variations, for the next millennium.

By the second millennium BC, communities had established more permanent forms of settlement in the uplands, but they retained links with communities on the lowland coastal plain. The communities living in these different parts of the landscape may have practiced different proportions of arable and pastoral farming.

Tradition ran strong, and cremation resurged as a mortuary rite during the early second millennium BC (Ashmore 2001, 2). As with previous generations, people deemed it appropriate at times to combine several individuals or their fragments together, but now the addition of complete artefacts gave new potency to these rites. Again, the close relationship between the living and the dead was re-emphasised in other rites. Token handfuls of cremated human bone were sometimes placed beneath rows of posts or in paired pits, and human remains may also have been put in pits inside houses. Increasingly, the link between pottery used in dwellings and pottery associated with the dead was restored.

The period covered in this chapter, which spans perhaps 80 generations, means that the approach we have taken has at times been broad-brush. While such an approach can oversimplify the complex changes that took place, it does highlight the different ways in which people engaged with their social and physical surroundings. Despite these marked variations, there are clues that these many generations retained a concern with the active and potent role of certain objects, including human remains. They seem to have main-tained beliefs that these objects of material culture could be used in ways that affected outcomes in the social and physical world. Such beliefs would have grown from the legacies of previous generations and been anchored to places which were remembered, revisited and reworked.

Chapter 10

Tapestries of life in late prehistoric Lothian, *c.* 1000 BC–AD 400

OLIVIA LELONG

Introduction

During the first millennium BC and the early first millennium AD, the character of life in Lothian changed considerably from that of earlier millennia, with developments in agriculture, settlement, society and ritual practice. This chapter uses the evidence from the excavations discussed in Chapters 6 and 7 and from other sites in the region to develop a contextual study of Lothian's later prehistoric communities. It is concerned mainly with how society worked: the relationships between people and households within communities, between one community and another, and between people and the past as they perceived it. It seeks to explain the patterns in the evidence for Lothian in terms of social structure and changes in society over time, and to examine how life in the Lothians differed from or was similar to society elsewhere in Britain.

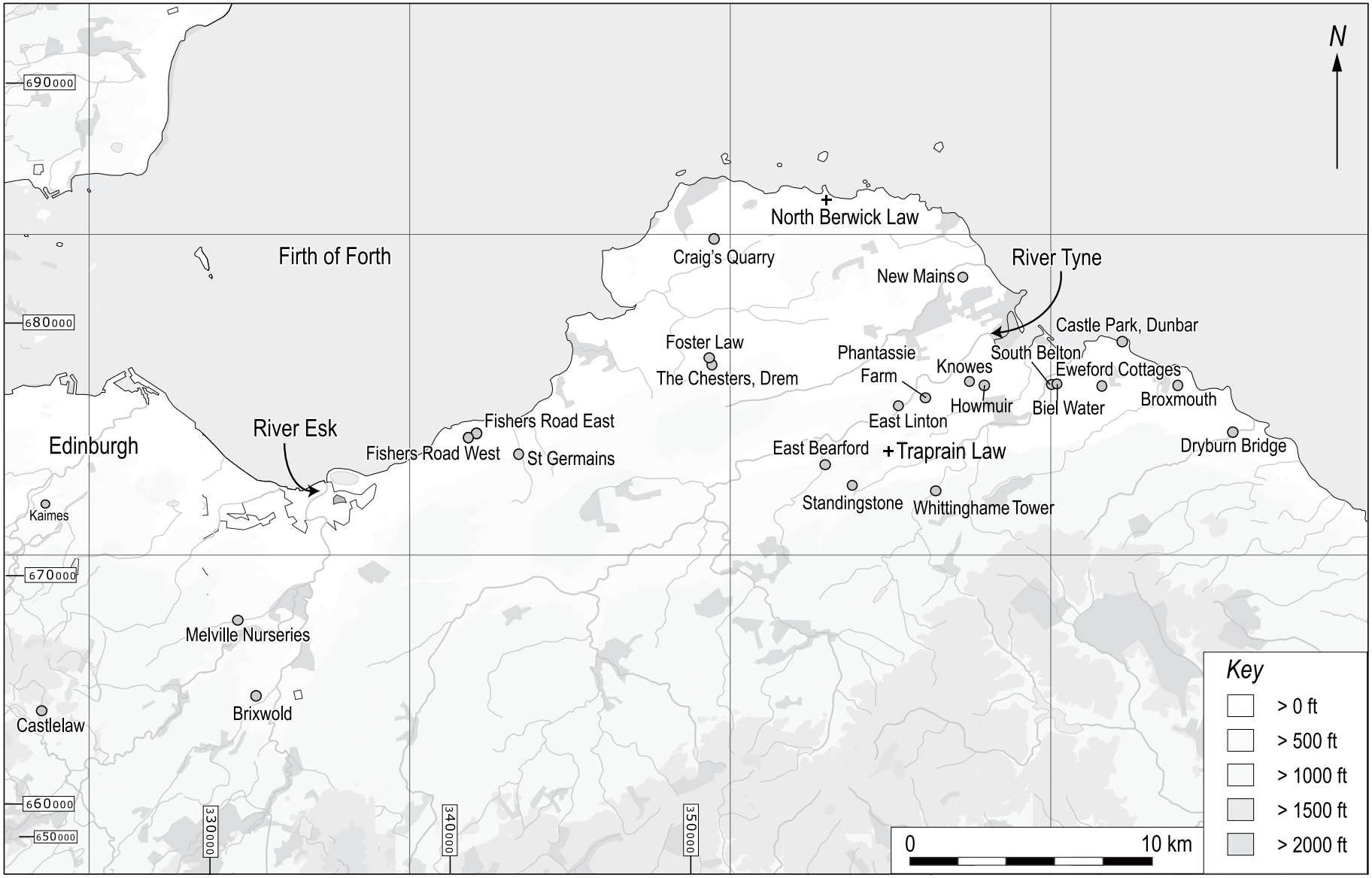
The chapter begins by summarising the evidence for settlement and other activity in the Lothians and setting it in chronological order, using the available dating evidence. From the results of excavations, it compiles a picture of farming and social life at these sites, weaving together different kinds of evidence to evoke the daily, seasonal and annual routines that made up community life. The second part of the chapter further interprets the evidence for these routines to understand the role of social memory and the nature of ritual thought in later prehistoric Lothian.

The Lothian Settlement Sequence

The dated evidence from excavated sites in the Lothians forms an overall sequence for settlement in the region; other sites, excavated but not yet dated, are woven here into the sequence where they most likely fit. Figure 10.1 shows the sites mentioned in the chapter. Where no published works are cited for radiocarbon dates, these were extracted from data compiled and provided by Patrick Ashmore, formerly of Historic Scotland.

In the early to mid second millennium BC, as Chapter 9 describes, settlement in the Lothians appears to have been relatively limited in scale. Small, mainly pastoral farming communities may have shifted their settlements on a regular basis, perhaps moving on to fresh grazing within a limited area, with some establishing more permanent settlements on the uplands. This pattern seems to have continued through the second millennium and into the first, although the upland settlements may have become less economically viable during the first millennium BC, resulting in greater competition for fertile, lower lying land (Macinnes 1982, 59). In Lothian, the evidence for settlement in this period is fairly sparse. What was probably a small farming settlement with associated field systems existed at Howmuir, with radiocarbon date ranges of 1680–1490 and 1610–1410 for the main period of occupation (see Chapter 6). A palisaded enclosure may have stood at Melville Nurseries around the same time (Raisen and Rees 1996), although its date of 1740–1300 BC is somewhat unreliable due to the mixed charcoal assemblage from which it derived.

There is also some evidence for larger scale activity. Towards the end of the second or the early part of the first millennium BC, the first monumental enclosures were built on the hill of Traprain Law: the summit enclosure was built after the early thirteenth to ninth or tenth centuries BC, and the inner rampart after the early eleventh to the late eighth centuries BC (F Hunter, pers comm; Armit *et al* 2002). The rock-art on the north-east shoulder, the quantity of Neolithic polished stone axe-heads and the bronze hoard found on the Law all suggest that the hilltop had been a significant place in earlier millennia (Jobey 1976, 192). During this period, when communities were small, dispersed and somewhat geographically transient, Traprain Law may have been a place with which many identified; it may have drawn people together from across the region for social, economic and religious or ceremonial purposes. In building banks that enclosed the hill, people were giving expression to commonly held beliefs and



10.1 Map showing the locations of sites mentioned in the chapter.

perceptions about the world they inhabited. After the early first millennium BC, on current evidence, the hilltop saw little further activity that left archaeological traces until the first century AD. However, the many different phases of rampart that encircle the hilltop, recently exposed through fire damage and recorded in survey (Armit *et al* 2002), may in fact have been created over hundreds of years during apparent hiatus, as later generations continued to express long-held beliefs, building new banks and expressing that wider sense of community.

From at least the start of the first millennium BC, groups of people began to establish more substantial, longer-lived settlements in the Lothians, sometimes on hilltops and often inside enclosures. One such group established a settlement in a palisaded enclosure at Standingstone, on the site of an earlier cremation cemetery; they erected a palisade inside a curvilinear ditch, and overlapping radiocarbon dates place the settlement between 1320 and 830 BC (Haselgrove forthcoming). Another curvilinear ditched settlement may have existed at Whittinghame Tower from about 1200 to 940 BC (*ibid*) Another community built a palisaded enclosure containing ring-ditch houses at Dryburn Bridge, also on the site of a much earlier cemetery. As the settlement expanded, the palisade fell out of use and a further 10 people were buried in and around it (Triscott 1982, 117–22). Although the span of calibrated dates from the site is large because of calibration plateaux, on balance it probably existed between *c.* 800 and 400 BC. North of the River Forth, in Angus and Fife, similar clusters of ring-ditch houses were generally not built inside enclosures (for example, Douglasmuir; Kendrick 1995) (Macinnes 1982, 60). During the same period, at South Belton in East Lothian, a community created two large scoops. They floored one with stones and eventually filled both with domestic rubbish. This midden layer accumulated between 760 and 400 BC, probably as a result of domestic occupation close by (see Chapter 6).

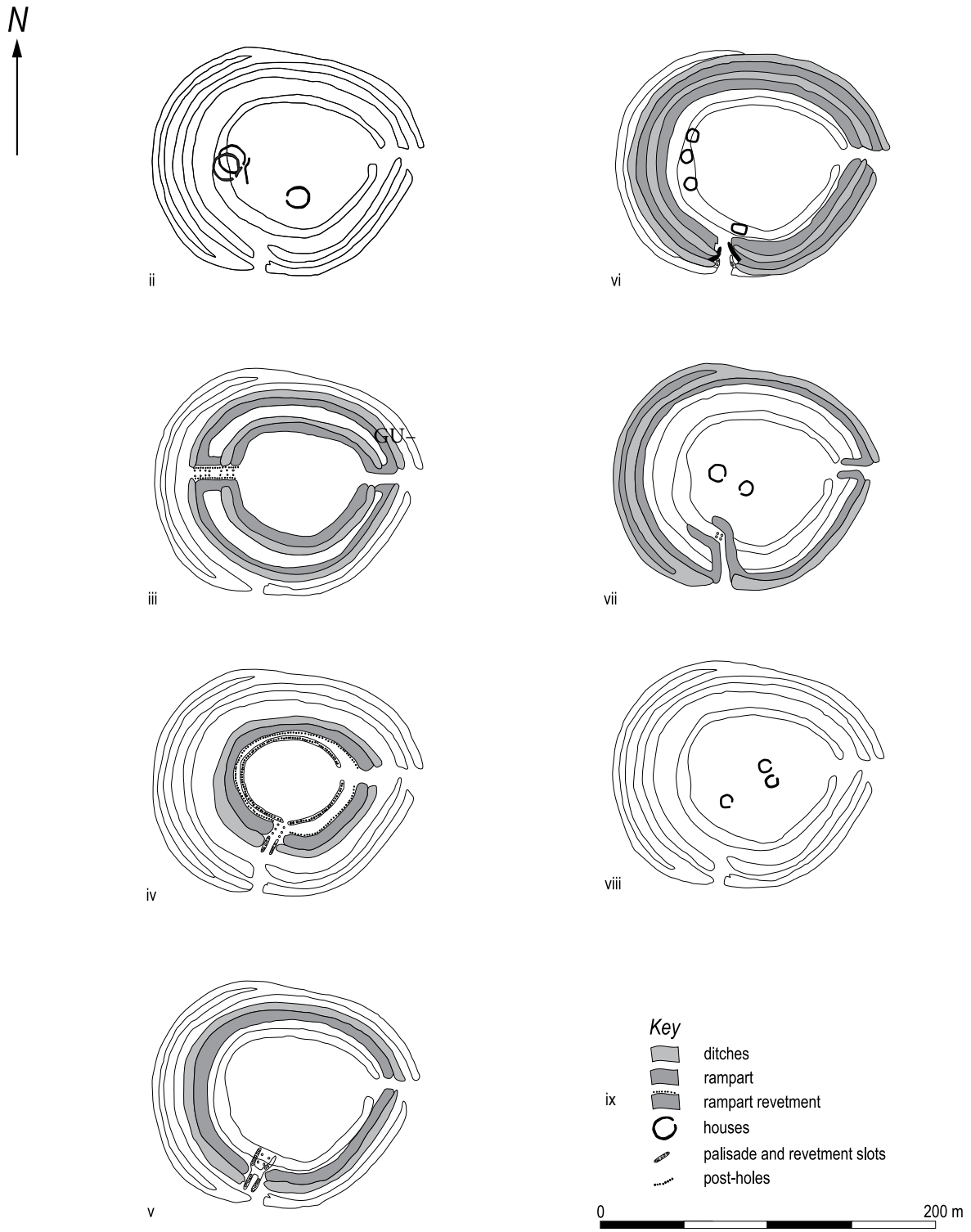
During the lifespan of Dryburn Bridge and South Belton, a much larger settlement was established on a hill at Broxmouth (Hill 1982b). It began as an open cluster of large, circular timber houses that were rebuilt several times (Figure 10.2). Over the succeeding centuries, later generations of occupants enclosed the settlement with a series of curvilinear ditches and ramparts. These went through several episodes of elaboration, expanding and contracting from one ditch to two and back again, with phases of neglect, destruction and refurbishment associated with various gates and roadways. The occupants built successive ring-groove houses inside the enclosure, and there was evidence of woodland management during Period VI (Ashmore and Hill 1983). Radiocarbon dates place this overall sequence between the eighth and the first centuries BC. From about the middle of the first millennium BC, southern Scotland saw large-scale forest clearance across huge tracts of land (Tipping 1994). This probably coincided or overlapped with the establishment of these enclosed settlements.

While Broxmouth was thriving as a large, elaborately enclosed settlement, another group of people established a settlement on a slight knoll at Eweford Cottages (see Chapter 6). They dug concentric ditches to create a large, circular enclosure around the settlement. The ditches were probably maintained for a period, but later generations allowed them to silt up, sometime between 390 and 200 BC. Around the same time, a community at Dalhousie Mains, Brixwold created a small, square, ditched and banked enclosure. Charcoal from the results of primary weathering in the ditch dated to 390–100 BC, but the ditch was kept open for another 300 years afterward (Crone and O'Sullivan 1997). Also during this period, a small enclosed homestead stood at Biel Water (see Chapter 6). As one of its smaller buildings fell out of use, the occupants dumped midden in it that contained charcoal dating to 390–170 BC.

During the same approximate period, a community established a small settlement on the site of the former palisaded enclosure at Standingstone. It consisted of several sunken-floored buildings and associated gullies, constructed over two phases between 400 and 50 BC (Haselgrove forthcoming). At Knowes, a rectilinear enclosed settlement was established from as early as the third century BC, continuing in use until the late first century BC (*ibid*).

During the last few centuries BC, some sort of activity also began on damp ground at Fishers Road West, Port Seton. Households were processing cereals in the area and perhaps creating a shallow-ditched enclosure, and at least by the second century BC a substantial, ditched, curvilinear compound stood here (Figure 10.3). People may have occupied the place several times each year for occasional markets or festivals (Haselgrove and McCullagh 2000, 83). In the late second or early first century BC, two conjoining curvilinear enclosures containing houses were built at nearby Fishers Road East (Figure 10.4), and later generations enlarged and extended these during the following 200 years (*ibid*, 183–4).

During the last two or three centuries BC, those living at Eweford Cottages filled in the ditches that defined the settlement with midden material (Chapter 6). Charcoal from the midden produced dates of 350–40 BC. Subsequently, the settlement – consisting at this stage of paved surfaces and stone-built structures – crept out over the old ditches. Charcoal from occupation deposits dated this phase of settlement to around 40 BC–AD 210, spanning the first two periods of Roman incursion into Scotland (*c.* AD 80 to 87 and AD 139 to 160 (Hanson 1997)).

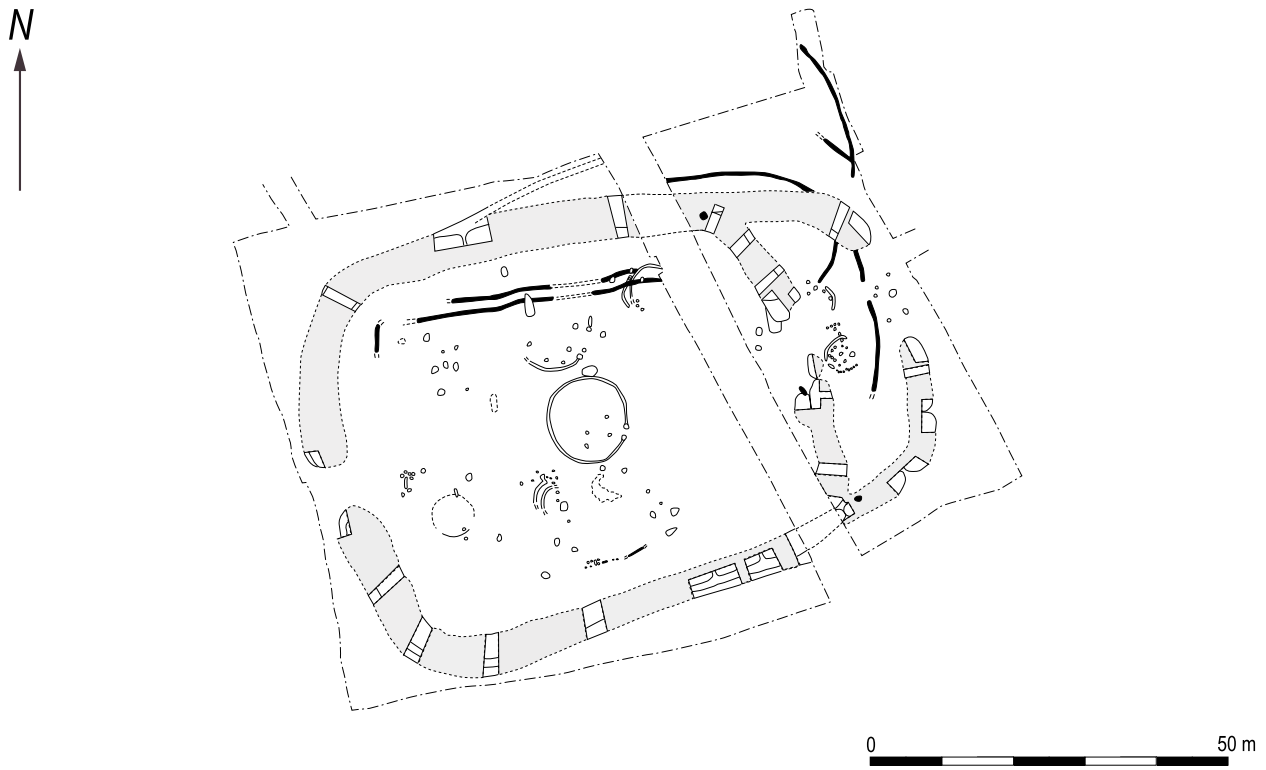


10.2 Plans of phases ii–viii at Broxmouth (after Hill 1982b).

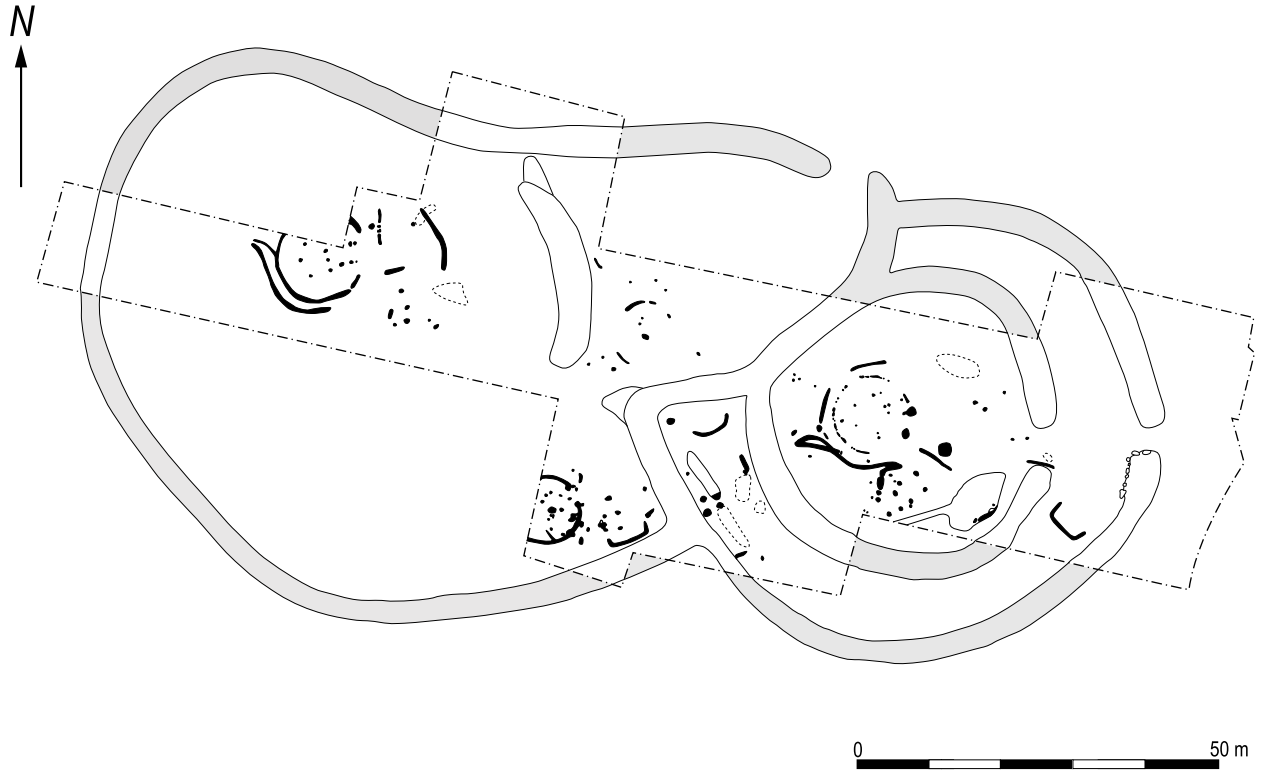
Probably about the same time as the Fishers Road West enclosure was built and after the ditches at Eweford Cottages had fallen into neglect, a group of people settled above the valley of the River Tyne at Phantassie (Chapter 7). After an early phase of settlement dating to the second or first century BC, they built a more substantial, stone-built structure inside a palisade. Later generations expanded the settlement into a crowded farming hamlet by the first century AD, abandoning old buildings and constructing new ones, with areas of paving and hard standing to accommodate cattle. Around the same period, from *c.* 40 BC to AD 140, the ditches at Knowes were filled in and replaced by a scooped complex of stone-built structures and surfaces (Haselgrove forthcoming). The second-phase ditched enclosure at Fishers Road West was also abandoned, although it may have been re-occupied periodically during later centuries (Haselgrove and McCullagh 2000, 83). Activity at Fishers Road East ceased soon afterward, perhaps in the mid second century (*ibid*, 174–5).

By the first century AD, the ditches and ramparts at Broxmouth had been completely abandoned, and a new generation of occupants built sunken, stone structures and paved surfaces on the stances of former ring-groove houses and over the old ditches (Hill 1982b, 150). These houses may have begun to be built as early as the second century BC (Hill 1982c), and they had probably fallen out of use by the second century AD. The scooped settlement at Knowes ceased to exist by the early third century AD (Haselgrove forthcoming), and the inhabitants of Eweford Cottages also abandoned their settlement by the late second or early third century AD (Chapter 6). The hamlet at Phantassie was gradually deserted, too; the last occupants had probably left by the mid third century AD. Around the time that these settlements were being abandoned, a scooped settlement with cobbled surfaces grew up at Whittinghame Tower, on the site of the earlier enclosed settlement; it continued in use until the fifth or sixth centuries AD (Haselgrove forthcoming).

At Traprain Law, both the inner and outer ramparts had fallen into disrepair before the first century AD (Armit *et al* 2002, 10). During the same century, it became a densely settled place for, it appears, the first time: recent work suggests that buildings were crammed into every available space, and the masonry and artefacts associated with them suggest that some were high-status buildings (*ibid*, 9). Occupation of the hilltop continued until the start of the fifth century AD (Jobey 1976; Close-



10.3 Plan of the Fishers Road West enclosure (after Haselgrove and McCullagh 2000).



10.4 Plan of the enclosed settlement at Fishers Road East (after Haselgrove and McCullagh 2000).

Brooks 1983), long after many smaller settlements in the surrounding area had been abandoned. The hill was re-fortified not long before it was finally abandoned (Close-Brooks 1983).

We can place other settlements approximately within this overall dated sequence. The enclosed hilltop settlement of Kaimes, near Ratho, produced evidence of a main phase of settlement in the mid to late first millennium BC (Simpson *et al* 2004). Several enclosed hilltop settlements, including those at Craig's Quarry, Braidwood (Piggott and Piggott 1952; Piggott 1958) and Castlelaw (Childe 1933), have produced artefactual evidence indicating they were occupied during the late first millennium BC and into the first or second century AD, but none have been securely dated.

At St Germains, an open settlement with a ring-groove building became enclosed with successive phases of ditch and a rampart (Alexander and Watkins 1998, 216–24). The ditch and rampart were neglected and then refurbished, but finally they fell out of use altogether and scooped, stone-built structures were built (Figure 10.5). Although the sequence at St Germains is undated, the excavators interpreted it as extending from the mid first millennium BC until the second or third century AD (*ibid*, 244). An unenclosed settlement that produced high-status metalwork and Roman pottery stood at New Mains, probably during the first or second century AD (Clarke 1969; Stevenson 1966).

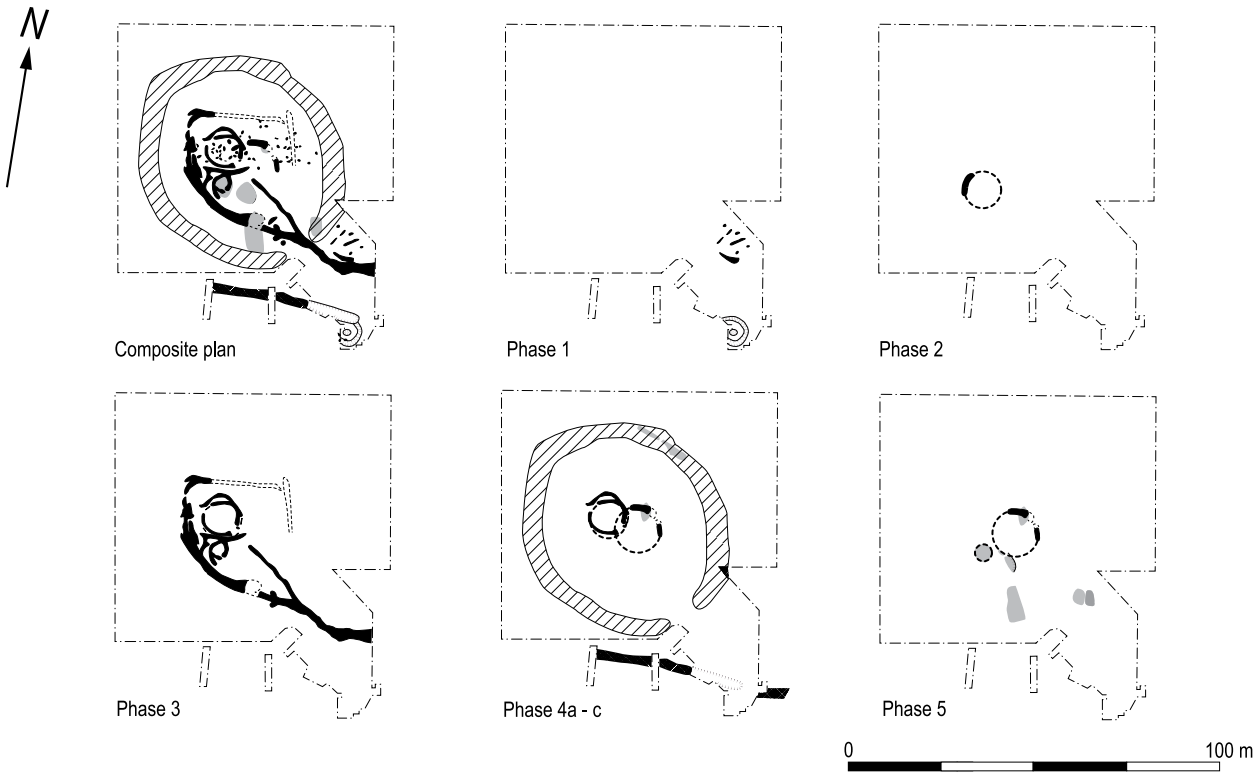
These excavated sites account for a tiny fraction of the known archaeological sites that may date to this period: hundreds of enclosures, pit alignments and other linear features which cross the land are visible as cropmarks (Lelong and MacGregor forthcoming). Projecting from the fairly consistent sequences of the dated enclosures, we could guess that many or even most of these cropmark enclosures date from the mid to late first millennium BC and were out of use by the early first millennium AD. In addition to the sites known as cropmarks, there may have been hundreds of small farmsteads or hamlets, similar to Biel Water and Phantassie, which are invisible in the cropmark record. The linear cropmarks are evidence for an extensively organised and managed farming landscape, with pit- and ditch-defined boundaries marking out fields for stock or crops (Halliday 1982, 75).

The evidence provides us with a general sketch of the

ways in which the Lothians were inhabited during this period. We can picture a more sparsely settled region in the second millennium and early first millennium BC, perhaps with many little pockets of land cleared for growing crops and herding animals. Small, open or lightly enclosed settlements may have come and gone, lasting perhaps for a few generations, as communities shifted their settlement locations. Then, from the early first millennium BC, communities began to establish new, more permanent settlements or expanded existing ones. These more substantial farmsteads and villages may have sprung up on the sites of older ones, but they were altogether different in scale and commitment and in the marks they left in the ground. Groups put considerable energy into building them, nestling settlements inside ditches and sometimes also ramparts. They practised mixed farming and built large, circular, ring-ditch or ring-groove houses using timber, usually dividing the houses internally into concentric rings. The emergence of more permanent, substantial, enclosed settlements coincided with a phase of widespread tree felling – probably to free up more land for farming and also to produce timber to use in building the settlements.

Then, at the end of the first millennium BC, the people living in the enclosures abandoned the monumental architectural ideas of their ancestors and filled in the ditches that enclosed their settlements. In some cases, such as Phantassie, new settlements of quite different form sprang up. Communities began to adopt new kinds of domestic architecture, too, building stone-paved, stone-walled houses ('Votadinian houses') that were divided internally in radial fashion, or which had no clear internal divisions at all (Hill 1982c). Hill (1982a, 9) argues that the Votadinian houses evolved from the earlier architectural traditions of timber-built houses. At this time, communities continued to practise mixed farming, although there is some evidence that certain places specialised in arable or dairy (Halliday 1982).

By the second or third century AD, many of these settlements were deserted, and the silent, disintegrating remains of farmsteads and villages must have been a common sight in the region. The hilltop of Traprain Law stands out as an exception: it became crowded while the land around it drained of settlement, based on the currently available excavated evidence. A few settlements, such as the one at Whittinghame Tower (Haselgrove forthcoming) and another at Castle Park, Dunbar (Perry 2000), continued in use until the fifth or sixth centuries



10.5 Plans of phases 1–5 at St Germains (after Alexander and Watkins 1998).

AD, the period of Anglian conquest and occupation in the Lothians.

These broad changes in the form and location of settlement must have stemmed from deep-rooted changes in society. The following section considers the nature of those social changes, while the final part of the chapter explores the implications of changes in domestic architecture, material culture and settlement pattern for Lothian society in the early centuries AD.

Social life in the Lothians

Using the evidence and landscape contexts of the sites discussed above, it is possible to evoke a more textured picture of the cycles and rhythms of work that made up Lothian farming life during this period, and how those in turn related to social life. These tasks would have been closely interwoven; each one focused on particular parts of the settlement or its environs and led from or on to another. Together these strands of activity carried society forward, ensuring that communities survived and thrived from each day, month, year and generation to the next. In maintaining and sometimes changing the daily and seasonal routines that made up their lives, people were drawing upon shared practical knowledge and the material aspects of life. These were the means by which the social system was continuously reproduced. The relationships of cooperation, affinity, obligation or authority between older and younger members of society, men and women, and between one community and another were all lived out through these routines; people's routine lives structured social relations and were in turn constantly restructured by them (Barrett 1989a, 113–14). The longer-term historical movements that swept through the Lothians during later prehistory can only be understood in terms of how these routines were maintained and transformed, day by day and through time.

This section works through the evidence, first of all, for the broad structure of society, which provided the social context for daily routines. It then considers evidence for the building projects that created architectural frameworks for daily life and the ways that households organised space and moved around in the settlements. It goes on to consider the work that communities put into feeding themselves and making the things they needed, and the different rhythms of effort and modes of interaction with the environment that these tasks demanded. It moves between different scales and periods of settlement, as the dataset permits, zooming in on sites where the evidence allows closer discussion of aspects of farming life.

The structure of society

Iron Age society in Britain and across temperate Europe is often assumed to have been hierarchial (for example, Cunliffe 1975, 305); however, there has been relatively little detailed consideration of what that society was like, the nature of those presumed hierarchies or the evidence for and against them in different regions (Hill 2006, 2–3). For southern Scotland, the settlement record (large cropmark enclosures and hillforts) and material culture ('conspicuous consumption' in hoards, and the circulation of exotic, prestige objects, particularly Roman material in the later Iron Age) have sometimes been interpreted as evidence of the ways in which elite groups maintained their authority over less powerful members of society (for example, Macinnes 1989; Hunter 1997).

The settlement record for Lothian, and for central and southern Scotland as a whole, however, points to a more complex and dynamic picture of how society organised itself politically, economically and symbolically in the first millennium BC. A more nuanced understanding of late prehistoric social structure is possible if we consider the broad changes from which it emerged, the daily routines through which it was lived, and which model might best explain the patterns in the evidence.

The trend toward enclosure in southern Scotland stretched across the Forth as far as Fife, but petered out farther north in Angus (Macinnes 1982, 67–8). The ramparts and ditches enclosing hilltops and marking out lower-lying settlements like the Lothian cropmark enclosures have traditionally been interpreted as efforts at defence (Hingley 1990a, 96). This interpretation has its roots in the Hownam model proposed by Piggott (1948), which argued that Iron Age elites moving northward from England brought new techniques of warfare and established themselves in positions of defended authority, but that harmonious conditions brought about by the *pax Romana* made such enclosures redundant. The results of more recent excavations in Lothian and elsewhere have shown that many of the enclosures went out of use before the first Roman incursions (Hill 1982a; Haselgrove forthcoming); even so, this model continues to influence interpretations of Iron Age life in southern Scotland (Armit 1999). Other authors have argued that the creation of such earthworks increased the degree of social isolation and the prestige of a settlement and its inhabitants (for example, Bowden and McOmish 1987, 77; Hingley 1990, 101–2).

Any interpretation of the social changes that prompted communities to establish more permanent and enclosed settlements must fit the contemporary context of economic change. The sequence sketched in the preceding section demonstrated how, around the early to mid first millennium BC, the pattern changed from one of small, dispersed, relatively transient settlements to one of larger, formally enclosed settlements, and how this coincided

with a significant burst in woodland clearance and land management. This increasing clearance and organisation could have coincided with the growing availability of iron tools (see Armit and Ralston 2003; Hingley 1997, 10–11), facilitating a trend toward more extensive farming and woodland management that was linked to or triggered by social and political changes (Armit 1999, 76).

More extensive farming would have required greater social organisation and cooperation within communities, and more complex negotiation and competition between communities for land and other resources (Tipping 1997b). Before this period, communities may have been relatively unstable and fluid, dissolving and re-forming in various configurations based on kinship or economic activity. Now, with greater commitment to farming particular tracts of land and with bigger labour requirements, as well as potential competition from other groups, these clusters of households needed stronger communal identities. The building of enclosures around settlements seems designed to make a vivid impact upon those both inside and outside the settlement, and not necessarily always in a military sense. A community with a strong sense of its own identity would have had no need to declare its coherence through a physical boundary.

Enclosure construction would have crystallised group identities that existed only loosely, as 'unstable entities … prone to fission' (Hill 2006, 9). It required communal effort, whether willingly provided or given under obligation or duress, bringing members together in physical labour. The resulting earthworks clearly defined the locus of their settlement, to its members and to the outside world. At many of the excavated enclosed sites, such as Fishers Road West and Broxmouth, there was evidence that the ditches were cleaned out, the ramparts were rebuilt and the gate structures were renewed on a regular basis (Haselgrove and McCullagh 2000; Hill 1982b). This could have been done in order periodically to reaffirm community bonds, to draw its members together in physical acts of communal work. Phases of neglect, such as those evident at Broxmouth, may have reflected times when community identity was stronger and could be taken for granted; these may have been followed with bursts of enclosure renewal, out of a perceived need to fortify the communal sense of self.

This discussion of enclosed settlements requires a caveat. While enclosure was undeniably a strong trend during the first millennium BC in southern Scotland, our picture of its prevalence may be skewed by archaeological survival. Enclosures survive as cropmarks in arable landscapes, while unenclosed settlements are much less visible; the known unenclosed settlements (such as Phantassie) tend to be discovered by chance. It is difficult to evaluate the importance of enclosure in society without knowing whether it was common or exceptional (Haselgrove and McCullagh 2000, 77). If it were exceptional, then enclosed settlements might have been surrounded by many more small, unenclosed farmsteads and villages.

What were the relationships between different communities? How did they establish themselves in certain places and maintain their rights to the resources within reach? One means may have been by stating affinities to ancient ceremonial sites and claiming access to the ancestral powers associated with them; there is evidence for this at both Eweford West and Pencraig Hill (see Chapters 6 and 11). The emergence of distinctive communities may have been motivated and facilitated by competition for resources, and the greater or lesser success of different groups may have given them more or less economic and political power. Certainly some settlements in Lothian, such as Broxmouth (0.65ha) and Fishers Road East (0.8ha), were larger than others, such as Standingstone (0.2ha) or Brixwold (0.16ha). By implication, the inhabitants of Broxmouth had access to more resources than those living in the smaller settlements; by further implication, certain resources were off limits to the latter. However, this does not necessarily simply equate to a highly stratified society, or to a small upper echelon of society wielding power over those with less material wealth or resources. Excavation of these settlements has produced evidence of varying degrees of material wealth that do not always correlate to hectarage. It has not usually been possible to identify, on the basis of architectural form or size, the houses of 'big men' within settlements or a hierarchy between them, as might be argued for the Atlantic region of Scotland (one exception is Fishers Road East, where the excavator speculated that Enclosure 1 was built for a group of higher social standing than those in the rest of the settlement (Haselgrove and McCullagh 2000, 175)). It is, of course, possible that differential status was expressed through other media, such as hoarding or feasting or the size of cattle herds.

Hill (2006) proposes a model for less hierarchical, more segmentary, late prehistoric societies which seems to achieve a better fit for the southern and central Scottish evidence. In his model, each community drew on the resources within a limited territory of a few kilometres across, but there were networks of cooperation between them along lines of kinship and economic relations, with both competition and mutual defence coming into play at different times. Communities probably owned or controlled certain resources in common, including arable land, grazing land and woodland. While kinship was an important social glue, it did not necessarily hold over multiple generations. Instead, it produced a complicated, untidy network of relationships between different households, in which other strands were created

through marriage, gifts, traded commodities, reciprocal obligations and mutual dependence.

The tribal group of the 'Votadini', noted by the Greek geographer Ptolemy in the second century AD (Hogg 1951; Armit 2005, 69), may have been how people in this region identified themselves in broad terms, although there is no way of knowing to what degree information about local groups was simplified or distorted in the process of eventual transmission to written form. In any case, the 'Votadini' need not have been the fixed, stable identity that a simple tag implies (see text box 10.1).

Some excavators have suggested that enclosures would have required more people to dig ditches and build ramparts than could have lived in the spaces they enclosed (for example, Haselgrove and McCullagh 2000, 186). There may have been close social links between communities in a particular area, with each contributing to the creation of the others as expressions of those links. Alternatively, members of a subservient, unfree class who lived outside the enclosures might have been forced to help build them. Pairs or small clusters of enclosures such as Fishers Road East, or the concentration centred on The Chesters, Drem, may relate to social territories in late prehistoric Lothian (*ibid*, 187). These clusters of enclosed farmsteads, along with unenclosed settlements, like Phantassie and other places used for fairs or markets, like Fishers Road

10.1

The Votadini

According to the Greek geographer Ptolemy, by the time the Romans first invaded Scotland in the second century AD, the land was occupied by various tribes. He described their territories, placing the Votadini in the south-east in what is now the Lothians. It is likely that Ptolemy presented a heavily schematic, simplified picture; he was not concerned with presenting an accurate account of indigenous society for its own sake. Even so, the impression he gives of many different groups, defined by kinship links and occupying particular areas, is probably a a fairly accurate picture of the society that the Roman army encountered.

Traprain Law was traditionally identified as the capital of the Votadini. While it does not seem to have functioned as an oppidum, in the sense of the large, fortified, hilltop proto-towns of southern England and Gaul, it seems to have been considered a significant place by groups from the surrounding area well before the first Roman invasion around AD 80.

There are no Roman forts and marching camps in East Lothian, except for Inveresk at Musselburgh on its western edge. This has led some to argue that the Roman army made alliances with the local tribe(s) before it ventured northward. This was a typical Roman tactic along its frontiers, and it would suggest there was rivalry between the different tribal groups occupying Scotland. The lack of defences or evidence for warfare at indigenous sites in the Lothians during the early centuries AD would also support the idea that the Votadini enjoyed relative freedom and prosperity because of their peaceable relations with Rome. The inhabitants of Traprain Law in the first and second century AD, in particular, had abundant fine artefacts of Roman origin or stylistic influence, suggesting that they possessed both wealth and healthy trade links.

We know little of how the Votadini defined themselves – whether they would have recognised themselves as belonging to a coherent group with that name, or whether they considered themselves members of many disparate groups that had a very loose, broad, shared identity. While the people occupying East Lothian may not have felt the need to defend themselves against the Roman army, it does appear that knowledge of and contact with the Roman Empire introduced new complexity to their social structure. Pressure from outside may have led to the rise of leaders in the tribe who could organise its members and negotiate on their behalf. A potential threat from Rome may have led loosely affiliated communities to move closer together under a more clearly defined tribal identity.

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West, would have been connected by the fluid ties of kinship, marriage, mutual dependence and obligation evoked by Hill (2006, 9). Members of these different communities may have banded together to raid other groups or defend their own territories when necessary. These linked communities may have been similar to the discrete settlement clusters identified by Wise (2000) in the middle Tweed Valley, where each focused on a river or loch and averaged 2km^2 in extent.

The daily routines considered below were lived out within many interlinking contexts: relations within and between the households that made up communities; kinship groups and their role in social life; political relations between communities; agricultural production, and the uses of land, fertility and agricultural products as cultural and political resources (Hill 2006, 11). The following sections explore the evidence for these routines and for the social conditions that shaped them and which they reproduced.

Building work

By definition, the creation and maintenance of a settlement involved building houses, outbuildings and in some cases ditches and ramparts around them. These architectural features framed and choreographed the daily lives of people who inhabited them, both producing and reproducing their social relations (see Foster 1989). Different building projects would have demanded different combinations and numbers of workers. At Fishers Road West, successive phases involved digging six enclosures, two of which held palisades, that may have been used seasonally for markets or festivals over perhaps 500 years (Haselgrove and McCullagh 2000, 83). Every 50 to 100 years, those who had inherited the tradition of gathering there renewed the enclosure, digging a new ditch that followed the ground plan of the previous one; they may have inherited the obligation to do this periodically, along with rights to the ground. If different communities came together here on a regular basis, this is likely to have been a communal effort, with members from each one contributing labour. Such acts of physical renewal may have also reaffirmed a shared sense of mutual dependence and obligation.

At much larger settlements like Broxmouth, phases of construction work involved building and remodelling ring-ditch houses; digging enclosure ditches and building ramparts and gateways; re-cutting ditches and refurbishing ramparts after periods of neglect or destruction; filling in the ditches, and building and then remodelling new stone-paved buildings (Hill 1982b). The interim results evoke the dynamic, changing character of the settlement over time. There were periods of intense, ambitious activity that must have involved thousands of hours of work, such as Period III, which saw the construction of the first ditch and rampart, the addition of a second and then the enclosure's contraction to a single ditch, with successive gateway structures. There were also phases when the intensity of activity fluctuated, such as Period V, when a new ditch, rampart and gateway structure were built, but eventually fell derelict, and squatters may have occupied the site for a time (Hill 1982b, 161).

The phases of construction would have involved marshalling and organising the community. To hack out the ditches would have first involved collecting hundreds of deer antlers to make picks like the broken ones found near a Period III ditch terminal (*ibid*, 155). Creating the ramparts involved shovelling the spoil to mound up the banks, cutting hundreds of trees for the rampart frames and gate structures, setting them in place and pinning or tying them together. The timber requirement has further implications: the evidence suggests that the occupants during Period VI were managing woodland (Ashmore and Hill 1983); they therefore had control over particular forests, and the foresight to manage them in such a way that they would meet their needs for building materials.

To build timber ring-ditch buildings like those that stood at Dryburn Bridge, Fishers Road West, St Germains and Broxmouth would have required some communal effort, perhaps from the family that would use each one or from the stronger members of several families. For Dryburn Bridge House 2 or Broxmouth Building 2, for example, they would have had to travel to a forest and cut oak trees for the building's plank walls (Reynolds 1982, 51). They may have split the trunks (radially, in this case (Triscott 1982, 120)) in the forest to make them easier to carry back to the settlement. Assembling the house involved digging the ring-groove, setting the uprights against its edge, erecting posts at the right height to form a properly pitched roof frame and covering it with thatch (Reynolds 1982).

At Phantassie, we have a fairly detailed picture of the building projects that marked the settlement's expansion from the second or first century BC to the second or third century AD (Chapter 7). When the inhabitants took on new phases of building, they would have had to collect stones from the fields or riverbeds to make the wall bases. They cut trees and branches from scrub woodland for posts and wattling, and the consistent diameters of hazel rods in the wall of Structure 1 suggest that they were coppicing woodland to produce good building material (Miller and Ramsay, see Chapter 12 and Archive). They dug holes to hold posts and hammered stones around their edges to keep them upright. They collected clay from some local quarry or riverbed to plaster some of the walls; charred wattle-and-daub were found in the midden store (Structure 4), and other fragments of daub were recovered

from across the settlement. At other times they cut heather, travelling to heathland to which they had access, to thatch the roofs; much of the charcoal assemblage from the site consisted of burnt heather, some of which may have begun as the constituents of buildings. They may have tempered turves with animal manure to make them more usable for wall-building (Simpson, see Chapter 12 and Archive). Households may have gathered materials like this every few years to make repairs or weave new hurdles in small-scale, piecemeal fashion, but the more intensive phases of building must have required large efforts to gather materials. Before they began building, they may have had to pull down an old structure on the site, throwing soot-penetrated thatch on the midden and posts on the firewood pile.

What are the implications of these building projects for social organisation inside and between settlements? Domestic architecture can be a useful indicator of social complexity (Reid 1989; Armit 1997). Certainly, in excavated settlements in Lothian and elsewhere in the Tyne–Forth province, it is difficult to identify evidence of hierarchies between households on the basis of house size or complexity. There are no obvious equivalents to Classical villas or Medieval manor houses, the homes of the social elite in other contexts. This might suggest a relatively egalitarian social structure, at least within settlements. In the larger settlements like Broxmouth, it may be that several families pitched together to build each one's house.

The shift from timber-built to stone-built houses in the early first millennium AD may reflect less abundant supplies of suitable wood for construction (Reynolds 1982, 55). The profligate woodland clearance of the mid to late first millennium BC may have been followed by a period of more careful management, like that in evidence at Broxmouth (Ashmore and Hill 1983) and Phantassie (see Chapter 7). Perhaps later, as forests dwindled and more land was enclosed for farming, communities adapted their building projects to the now-available resources, drawing on stone more than wood.

Making space

The built features of each settlement framed the lives of its inhabitants, both expressing and influencing the social relations between them (Foster 1989). At some of the excavated sites, it is possible to place ourselves in the settlement and understand the ways that people entered it, occupied its buildings and moved between them, and the effects of these movements upon social life. Studies of the alignment of doorways in houses (for example, Oswald 1997) and of the distribution of artefacts within them (for example, Fitzpatrick *et al* 1995; Hunter 1998b) have highlighted how, in later prehistoric Britain, the use of space could be highly charged with cosmological significance. The organisation of a house or placement of a doorway may have reflected labour divisions or concerns with the climate, but they also expressed people's beliefs about those aspects of life.

At Dryburn Bridge, it is possible to see how the farmstead was organised into domestic space and outbuildings or areas devoted to animals. The excavator identified two main zones in the mid first millennium BC palisaded enclosure: the community built houses in the northern part of the enclosure and reached these through the north entrance; a separate entrance led to the working areas and animal pens in the southern part (Triscott 1982, 119). At the later settlement of Fishers Road East, we can see some of the architectural components that made up each household. All of the circular timber houses except one had U-shaped gullies close by; two were paired with small, rectangular, post-built structures, and a possible midden base stood next to Structure 1 (Haselgrove and McCullagh 2000, 104–8; 174). Each house may have had a small fenced yard beside it, represented by the gullies, and some may have had sheds for storing grain or fuel. Each house probably had a mouldering heap of household rubbish outside like that represented by the midden base, one which was augmented daily and cleared away periodically. The careful curation and selection of domestic rubbish, both as a nutrient-rich resource and for symbolic purposes, is discussed further below.

At St Germains, the evolving ground plan also gives some idea of how the inhabitants lived and moved and how this changed over time. The successive ring-groove houses (RG 2 and 3) that stood on the same stance during phase 3 were tucked into the back corner of an enclosure. An entrance led into the yard from the south, with an antenna ditch funnelling people's movement toward the houses and screening off the back of the enclosure from view, creating a private space to the east of the houses (Alexander and Watkins 1998, 243). In the next phase, a ring-groove house and a stone structure stood in the middle of a much larger, deep-ditched enclosure. The space these buildings occupied was more expansive and open; perhaps the bank and ditch gave the occupants a greater sense of security within the enclosure, so they did not feel the need to screen off space inside it or tuck themselves in against the perimeter. Alternatively, in the earlier phase, more space inside the enclosure was given over to animals or craft activity, traces of which did not survive.

At less truncated sites, it is possible to infer even more subtle variations on the uses of space. At Broxmouth, for example, the excavator has been able to speculate on how House C in Area 10 was put to different uses over several seasons after people ceased to live in it. Based on the nature of the deposits and the distributions of finds,

he speculates that it was first used in winter as a cattle byre, which left a thick dome of accumulated dung; then in spring as a lambing pen; then in summer or autumn as a workshop where needlework and other crafts were carried out, and finally as a dumping ground for butchery and meat processing waste related to a pig cull (Hill 1995). This small piece of informed speculation gives a tantalising glimpse into how complex and varied the use of space may have been, even over a short period, and also into the complex understandings we might be able to reach through close study of the better preserved sites.

Circular, timber-built, ring-ditch houses, like those found at Broxmouth and Dryburn Bridge in East Lothian (Hill 1982b; Triscott 1982) and High Knowes in Northumberland (Jobey and Tait 1966), occur in many other settlements between the Tyne and Forth and also north of the Forth (Hill 1982a; Macinnes 1982). These were typically divided inside into concentric rings by progressively higher walls. House 2 at Broxmouth, for example, had an overall diameter of 17m, with an outer wall of planks or split timbers (Hill 1995). A ditch concentric to this wall was paved along its inner edge, probably to prevent wear. In some examples (as at Douglasmuir; Kendrick 1995) these inner ditches seem to have been part of the original design, whereas others (such as those at High Knowes; see Jobey and Tait 1966) seem to have been worn away through use. Another concentric plank or wattle wall was seated in the ditch in Broxmouth House 2, with a third one built of posts inside this, creating a central space 8.5m in diameter. The three would probably have supported a thatched roof (Reynolds 1982, 52).

It seems likely that the ground floors of these houses were used as byres, with cattle stalled during the winter in the different rings to protect them and to allow pastures to recover (Reynolds 1982, 53). Mucking out of stalls may have created the ditches in some (Jobey and Tait 1966, 14). Reynolds (1982, 54) has calculated that about 30 cattle could have been stalled in House 2 at Broxmouth if both rings were used. Households may have lived on the upper floors of ring-ditch houses, with clay hearths built upon timber floors and the cattle emanating additional heat upwards. This would also explain the paucity of hearths in excavated ring-ditch houses.

The general trend toward the end of the first millennium BC toward radially divided, stone-built houses may have been motivated by dwindling supplies of timber, as suggested above, but also by changes in lifestyle and animal husbandry. It may be that settlements were keeping larger herds than could be over-wintered in dwellings, and were devoting large enclosures or separate byres to their accommodation. Houses were being redesigned according to different economic principles, but the new layouts would also have had implications for social relations between the occupants.

The uses of space at Phantassie

At Phantassie, a closer look at the layout of buildings during each phase (except for Phase 1, for which evidence was limited) and the distribution of artefacts and environmental remains can illuminate how people organised and moved around the farmstead's spaces at different times. In particular, the size and condition of pot sherds – even from the relatively small assemblage of 349 sherds – can add another layer to the story of the site. This analysis draws on the degrees of abrasion recorded on the sherds by Ann MacSween, as follows:

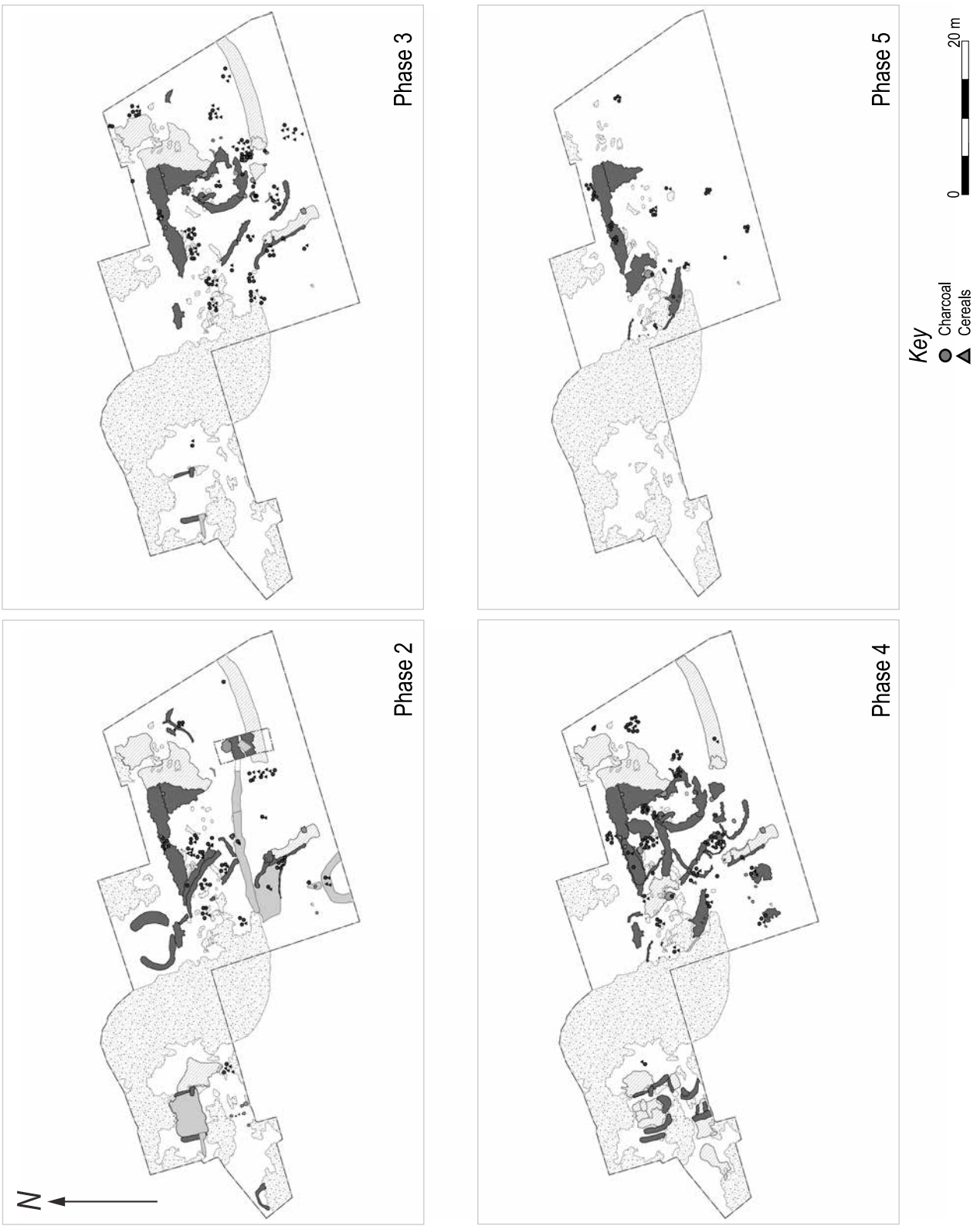
1 Fresh
2 Slight edge abrasion
3 Edge abrasion
4 Slight edge and surface abrasion
5 Edge and surface abrasion
6 Edge and surface abrasion, and rolled

Cooking pots have been identified as those sherds to which burnt residues adhered, either on the inside or outside, or which had been spalled or otherwise fire-damaged.

During the second phase, in the second or first century BC, the settlement's layout was fairly simple. Activity focused on the main dwelling, structure 1, which stood

Table 10.1 Analysis of pot sherds from Phantassie by phase, degree of abrasion and sooting, residues or fire damage.

Phase	*Total Sherds*	*% 1 Abr.*	*% 2 Abr.*	*% 3 Abr.*	*% 4 Abr.*	*% 5 Abr.*	*% 6 Abr.*	*% Cooking Pots*
2	34	0	17.6	2.94	0	38.2	41.2	32.35
3	112	0	20.5	5.36	7.14	47.3	19.6	49.10
4	70	4.29	17.1	4.29	20	28.6	25.7	61.42
5	93	0	30.1	3.23	8.6	31.2	26.9	53.76



10.6 The distribution of charcoal and cereals at Phantassie (phases 2–5).

beside a fenced yard where livestock may have been penned. The inhabitants entered the yard through a gateway on the south-east, and passed through it to a doorway that led into the house. They left the farmstead to work in their fields, collect fuel and building materials or visit other settlements via a hollow-way that led eastward, passing through what may have been a paved gate structure. A boulder-built wall base, surmounted by a fence, partly enclosed the farmstead on the north.

A more formal cobbled path, probably lined with hurdling or timber walls, led up to the dwelling [1] from the south, while a light corral [3] stood to the north of it with an entrance facing down slope. What may have been a parching frame [2] stood to the south. From the house, the inhabitants would have carried rubbish north-westward into the midden store (structure 4), dumping it inside a wattle fence that enclosed the compost heap. Small post- and stone-built sheds stood to the south of this. Charcoal, burnt cereals and animal bone were scattered around the house and yard but also to the south, in the trampled fill of a hollow and around the putative parching frame (Figure 10.6).

Of the 34 pot sherds from this phase, 32 per cent derived from cooking pots. These were concentrated in and around the house, especially to the north (Figure 10.7). Almost 80 per cent of the sherds from this phase were in the 5–6 abrasion range, with only one or two sherds from each vessel. This would suggest that when pots broke, most of the sherds were gathered up and disposed of elsewhere. A few were left, and these were kicked and trampled over time. The most abraded sherds occurred in and to the north of the house, with a few in the yard to the east. Those to the north may have worked their way downslope, catching against the wall of the corral [3]. Sherds in the yard may have been dropped from baskets of household waste and been trampled by hooves. Four highly abraded sherds from one vessel, found in the wall fill of the house, may have lain in a midden until they were gathered up with other midden material and dumped to pack or insulate the wall.

During the late first century BC or the first century AD, a later generation of Phantassie dwellers altered the form and make-up of the farmstead. The boulder-built wall base continued to define the farmstead on the north. The inhabitants metalled the hollow-way that had formerly led into the settlement from the east, and mud, pot sherds, bone and charcoal became trampled among the stones. They built new structures to the south of the earlier dwelling, and these new buildings huddled together as if leaning on each other for support. A paved porch [8] led from the track to a new house [9], centred on a fire pit with a stone hearth setting where people cooked and warmed themselves; in colder months it might have been the social heart of the farmstead. A cellular building [7] beside it, containing a possible quenching tank and a pit filled with shale fragments, may have been a workshop. Eventually, the old house [1] was dismantled or allowed to fall down. The inhabitants still used the cobbled path that led up to it from the south, and they continued to dump rubbish in the rock-cut midden store [4]. At some point, they also collected midden and dumped a thick layer of it over and around the former house stance, perhaps to mark a significant transition in how the space was used.

Charcoal and burnt cereals were scattered all over the farmstead in this phase, with heavy concentrations around the hearth and in the porch (Figure 10.6). Some fragments found their way into deposits and post-hole fills. The inhabitants were parching large quantities of grain each autumn in the hearth in structure [9], and ashes scraped up from the hearth were carried out through the porch for disposal on a midden, scattering in transit.

Of the 112 pot sherds from this phase, just under half came from cooking pots, and these were found in and around all of the buildings, with far fewer in the putative workshop [7] (Figure 10.7). Over 66 per cent of the sherds were in the 5–6 abrasion range, with low sherd to vessel ratios. The most heavily abraded ones lay in the porch and outside it, in the matrix of the metalled track, where traffic had been constricted and they had been abused by the passage of feet. Those pressed into the track were heavily abraded on one side, from having been walked on. The midden material that had been stored up in the rock-cut hollow [4] contained both small, abraded sherds and large, conjoining ones; the former may have been churned over and left behind when midden was collected for other uses, such as fertiliser, while the latter may have been more recently deposited. Other large but fairly abraded sherds from up to 21 pots were found in the midden that had been spread over and around the old house stance. Their large size evokes pots having been broken in the farmstead and dumped on the midden, where they lay undisturbed until they were gathered up for redeposition. Other large, unabraded and conjoining sherds had been left in a hollow to the south-west of the former house, which may have been a more local, temporary midden store.

Phase 4 saw the architectural elaboration of the farmstead within the existing layout. The inhabitants built more structures, cramming them into the spaces between the earlier ones, with small cellular buildings [11]/[12]/[13] leaning against existing walls and a large, paved building with a yard [10] replacing the original house. They sealed the midden store with areas of cobbling that formed floors for workshops or byres.

Of the 70 pot sherds from this phase, 61 per cent came from cooking pots and 54 per cent were heavily abraded. Many of these were found in the porch (Figure 10.7).

10.7 The distribution of sherds from cooking pots at Phantassie (phases 2–5).

Some worked their way into the stony base for a timber or straw floor in the new building [10]. Burnt residues clung to several sherds found in the rake-out from the hearth in structure [9]; broken on the fire during cooking, they may have been left behind when most of the pieces were swept up with the ashes.

By the final phase of the hamlet, most of the smaller buildings had fallen out of use. People were still using the large, paved building [10] with its yard, and they still walked up to it along what had been a cobbled path in earlier phases, but now the cobbles were covered with trampled soil. Of the 93 pot sherds from this phase, many were trampled into ground surfaces, but some notable exceptions illuminate how people were using other parts of the farmstead (Figure 10.7). They tossed large, conjoining sherds from several cooking pots to either side of the path and onto the floor of the now-abandoned house [9]. The sherds lay undisturbed until excavation, suggesting that these areas were no longer used or even walked on regularly by the last inhabitants.

Daily bread

The question of how people organised and moved around settlements nests in the larger context of their purposes and routines. These were farming communities, and raising food to sustain their members was the main focus of their existence. It required steady, consistent attention and effort, and the results would carry each community through from one day to another, and from one season, year and generation to the next.

Evidence for one of the main foods on which communities depended comes in the form of the almost ubiquitous burnt cereals, and querns for grinding grain. These two kinds of archaeological find signify a symphony of tasks and processes that led to their deposition, beginning outside the settlements in the arable fields. In a region as heavily cultivated in modern times as the Lothians it is difficult to identify these, but cultivation terraces and narrow rig elsewhere in southern Scotland and north-east England show how closely they were associated with settlements (Halliday 1982).

Like any form of arable farming, the work involved in generating grain had particular rhythms that were matched to the seasons. In late winter or early spring, fields were tilled with cattle- or horse-drawn ploughs. Direct evidence for this is sparse from the excavated sites in the Lothians, as animal bone assemblages (with the exception of Broxmouth (Barnetson 1982)) are generally small. Cattle bone from Fishers Road East showed no signs of traction pathologies so, if cattle were used to pull ploughs, it was light work on the sandy soils (Hambleton and Stallibrass 2000, 155–6). Wooden ard-shares from waterlogged sites such as Milton Loch crannog in Stewartry (Piggott 1955; Guido 1974) and Dundarg promontory fort in Moray (Rees 1984) show that these were used in contemporary agriculture.

Weed seeds from macroplant assemblages sometimes indicate the kinds of land that made up the fields. At Fishers Road East, most of the grain grew on nutrient-enriched, damp soils, with some grown on drier, sandy soils. Those tilling the fields may have fertilised them using seaweed from the coast nearby (Huntley 2000, 170). Midden that accumulated in settlements would have been rich in nutrients. At Phantassie, this material was piled up in a separate store, probably to compost before it was spread on the fields – as well as inside the settlement at certain times.

The ways that labour and agricultural produce were divided within communities, by age, gender or social status, may have been complex; they would have been interwoven with cycles of farming and consumption (see Barrett 1989b, 309) . The autumn harvest may have involved most members of a relatively small community like St Germains or Fishers Road East, all pitching in to gather the grain while the weather held. Larger communities, such as Broxmouth, presumably grew more grain and therefore would have needed more workers to harvest it. We do not know whether individual families in the larger settlements farmed together or looked after their own fields separately but, on the basis of the butchery evidence from Broxmouth (see below), it may have been a communal effort. Individual households may have cultivated plots separately but helped each other with the harvest.

If each community grew its own grain, there is evidence that households processed it in their settlement in some cases (where assemblages have been analysed), but not in others. At Fishers Road East, the abundance of chaff fragments shows that grain was sieved to separate it from the chaff inside the settlement (Huntley 2000, 169). A small amount of chaff from the ditch fills at Eweford Cottages suggests that its inhabitants also cleaned their own grain (see Chapter 6). However, chaff was noticeably absent at Phantassie (Miller and Ramsay, see Chapter 12 and Archive), and also at Whittinghame Tower (Huntley, pers comm; Haselgrove forthcoming).

Cereal also seems to have been brought ready-cleaned to the enclosure of Fishers Road West (Miller *et al* 2000, 46). The diverse species at that site, including hulled and naked barley, emmer and bread/club wheat and oats, are not likely all to have been grown by a single community (*ibid*, 49). This further supports the interpretation of the site as a place where people from different communities met to trade, among other things, grain. The evidence from Fishers Road East adds an important extra dimension to our understanding of the contemporary economic

landscape in the late first millennium BC to early first millennium AD. It shows that not all communities were necessarily self-sufficient; some may have specialised in one kind of farming above another, trading their surplus beasts or other produce for grain they did not grow themselves, or surplus grain for other essentials. It raises the possibility that settlements like Phantassie, which built such extensive hard surfaces (presumably for cattle), may have concentrated more on pastoral agriculture and did not grow their own grain.

Whether communities harvested grain they had grown themselves or traded for it, every autumn must have seen a frenzy of parching of each one's stock. People parched it in order to draw moisture out of the grains and protect them from mildew during the cold, damp months to follow, filling sacks, baskets or pots with dried cereal to see them through the winter (see text box 6.2). At least a few carbonised cereal grains have been found on almost every excavated site, showing that this practice was universal. At Phantassie, for example, the fire-pit in structure [9] would have been constantly burning during the parching season (see Chapter 7). The smell of smoke from heather twigs and burnt cereals lost to the embers would have been a familiar autumn scent, drifting through this and every other farmstead and village along the coastal plain. The burnt grains recovered from excavated deposits were surely a tiny fraction of the number that were successfully parched every autumn over the generations at each settlement.

The number of querns (or fragments of querns) found at many sites points to the vital role they played in converting grain into flour that could, in turn, be made into bread. Milling the grain into flour must have been a routine task, perhaps a daily one for which a member of each household took responsibility. About 80 querns were recovered at Broxmouth (Hill 1982b, 181) and 37 saddle querns at Dryburn Bridge (Triscott 1982, 123). Fishers Road East produced one saddle quern (Gwilt and Lowther 2000, 142) and Fishers Road West three rotary querns (Rees 2000, 35). Six rotary querns were found at Phantassie (see Chapter 7), three at Eweford Cottages (see Chapter 6) and at least four (two rotary and two saddle) at St Germains (Alexander and Watkins 1998, 223, 236, 241).

Two observations about these querns are worth noting here. The first is the context in which many have been found – often built into walls, pavings or post settings. This highlights their important role in the thought-lives of the late prehistoric inhabitants of Lothian (and elsewhere in Britain), a role considered further below. The second is the relative paucity, if not the complete absence, of whole, usable querns on these sites. At Phantassie, for example, every quern or fragment of one found had been built into a structure or surface, with the exception of a rough-out that the maker had abandoned before finishing it. This means that, when the occupants abandoned these settlements, they took their querns with them. They were portable objects, but more than that, they were absolutely vital to a community's ability to feed itself.

Animal attraction

Animal bone assemblages from the excavated sites show the importance of animals to the local subsistence cycles. Most of the assemblages are small, with poor survival of bone, but the larger ones allow a deeper interpretation of the contemporary pastoral economy. The mid first millennium BC inhabitants of both Dryburn Bridge and Broxmouth kept cattle, with fewer sheep, pigs and goats in descending quantities, as well as a few horses (Triscott 1982, 122–3; Barnetson 1982, 102). At Fishers Road East from the last century BC to the second century AD, cattle were the main source of food on the hoof, and there were enough older animals to have provided a steady source of dairy products (Hambleton and Stallibrass 2000). However, much of the sheep bone was retrieved from the sieved assemblage, leading the excavator to suspect that the apparent prevalence of cattle was due to a bias in preservation (Haselgrove and McCullagh 2000, 176). Other settlements have produced much smaller assemblages of animal bone. Cattle, pigs, sheep/goats and horses are represented at all of them, although not all these species appear at all of the settlements. The absence of some animals from the various assemblages may well be due to their small size and fragmentary nature, rather than indicating a real absence of certain species.

The herds would have made daily and seasonal demands on time. They may have been over-wintered in the settlements, in ring-ditch houses, as discussed above. At Phantassie, large spreads of cobbling close to the hamlet's core would have accommodated them (see Chapter 7), and enclosures 2 and 3 at Fishers Road East may have been used as animal pounds in the settlement's last phase (Haselgrove and McCullagh 2000, 176). During the winter, daily chores would have included feeding the beasts with hay cut the previous summer, mucking out byres and putting the manure on the midden, unless it was allowed to pile up until spring in the byres. Cattle and other animals would have provided an important source of fertiliser for the fields. Turf impregnated with animal manure found in a midden at Phantassie may have been used to bed livestock over the winter (Simpson, see Chapter 12 and Archive). During the warmer months, households may have taken the herds to graze on higher ground, if their settlements had access to high grazings. Pigs might have been kept in the settlements and fed scraps, or left out in woodland to forage; however, the latter would only have been advisable if the arable fields

were enclosed (Hambleton and Stallibrass 2000, 156).

The many linear boundaries visible as cropmarks in the Lothians may have defined large fields for grazing stock. Halliday (1982, 87) argues that the construction of these indicates that there was a shift from close, labour-intensive supervision of stock to less intensive herding. He further suggests that the first millennium BC saw a trend away from small, mixed farms, such as that at Dryburn Bridge, towards large stock farms with an arable component. That shift may have corresponded to changes in domestic architecture and seasonal routines, if communities were no longer overwintering cattle in their houses and grazing them on upland pastures in the summer but leaving them free to graze in large fields.

There is some evidence that, in the later phases at Broxmouth (Periods VI and VII, dating to the late first millennium BC and early first millennium AD), the inhabitants' economy was mainly pastoral (Hill 1995) and, as already noted, the same could be argued for Phantassie. A trend toward pastoralism might also have been expressed through changes in domestic architecture: large, ring-ditch byre dwellings, which might have housed a family's own small herd over the winter, gave way to smaller stone-built houses when herds were larger and perhaps managed communally, no longer stabled seasonally in domestic dwellings. Halliday (1993) has also suggested that increases in livestock contributed to woodland decline in the late first millennium BC, as ever larger areas of pasture were created to feed them. Classical writers noted the quantities of cattle that communities in Britain kept during the Roman Iron Age, and in some contemporary societies cattle were seen as symbols of wealth (Barnetson 1982, 104). If this were the case in Scotland, it could explain why a relatively small farming hamlet like Phantassie, which had extensive accommodation for animals, also produced evidence of unusually high-status craft activity.

If some settlements concentrated on raising animals, these stock farms may have traded cattle, sheep and pigs for grain at markets like the one perhaps held at Fishers Road West; Structure 2 at the site has been interpreted as a possible stockyard (Haselgrove and McCullagh 2000, 76). Animals are likely to have been traded in the late summer, after they had grown fat on good grazing and at the time of year when arable-dominated settlements would have needed beasts as a source of food over the impending winter. If cattle herds were valued more highly than arable capacity, then settlements specialising in pastoral agriculture may have wielded economic power over those that did not, perhaps driving hard bargains with the latter.

In general, excavated assemblages indicate that the domestic animals were healthy and well-managed (Barnetson 1982, 103; Hambleton and Stallibrass 2000, 155), although many illnesses leave no traces on the bones. About half of the cattle from Fishers Road East survived to adulthood (two to four years old) (Hambleton and Stallibrass 2000), but it is difficult to reconstruct the herd's age structure for Broxmouth (Barnetson 1982, 102–3). In a meat economy, most animals would be slaughtered at between 2 and 5 years old – old enough to fatten up but not to become tough – with some kept longer for breeding. In a dairy economy, animals would be kept alive much longer. Neither pattern is particularly obvious in the Broxmouth assemblage, and it need not have been one or the other (Barnetson 1982, 102). The cattle herds would have given families a supply of milk and the chance to make cheese at least once a year; they may or may not have bothered with the effort required to encourage cows to lactate throughout the year (*ibid*, 103). At Fishers Road East, most of the pigs were killed before they reached the age of three, but as pigs breed from the age of one and produce large litters, the herd would still have been sustainable (Hambleton and Stallibrass 2000, 155). The sheep assemblage shows a similar pattern, with enough older animals to have served as breeding stock (*ibid*).

Those living in the settlements probably butchered beasts as and when they needed to, but there was some evidence in House C at Broxmouth for episodes of more extensive slaughter, specifically a pig cull (Hill 1995). Butchery marks on bones from Broxmouth show that cattle were probably tethered and speared through their shoulder blades, which would have penetrated the vital organs and facilitated a clean kill (Barnetson 1982, 104). Most of the sheep bone at Fishers Road East was burnt and more highly fragmented than the cattle or pig, suggesting that it was processed and cooked in different ways (Haselgrove and McCullagh 2000, 176). Certain members of larger communities like Broxmouth may have had particular skills in butchery. During Period VI, the waste from relatively small joints was found in different parts of the settlement. This suggests that the carcasses were divided up in one location and the joints distributed to the inhabitants (Hill 1995). It also points to communal sharing of food and considerable organisation of labour within the settlement.

Because of the large size of bovine carcasses, which would have been too big for one family to consume while the meat was fresh, the questions of how and to whom butchered meat was distributed have implications for social organisation. The life cycles of livestock may even have determined the timing of certain social events that involved cooking and sharing fresh meat (McCormick 2002, 25–6). (While it is possible that meat was preserved using salt, very large amounts would have been required for each carcass and the cost was probably prohibitive for

most communities in late Iron Age Lothian.) In Medieval Ireland, for example, different cuts of meat from bovine carcasses were distributed according to the quality of the cut and the recipients' social rank (*ibid*, 27). More detailed analysis of the distribution of different joints to different parts of Broxmouth might illuminate the social structure of the inhabitants during that phase of the settlement.

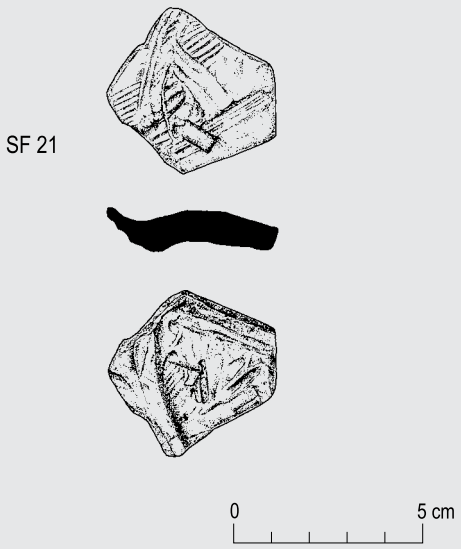
Some of the assemblages show that communities kept dogs, perhaps as watch or war dogs or to help with herding. Those from Fishers Road East showed no signs of having been treated badly (Hambleton and Stallibrass 2000, 156), but one dog found at Broxmouth had died after being hit on the muzzle with a blunt instrument (Barnetson 1982, 104).

10.2

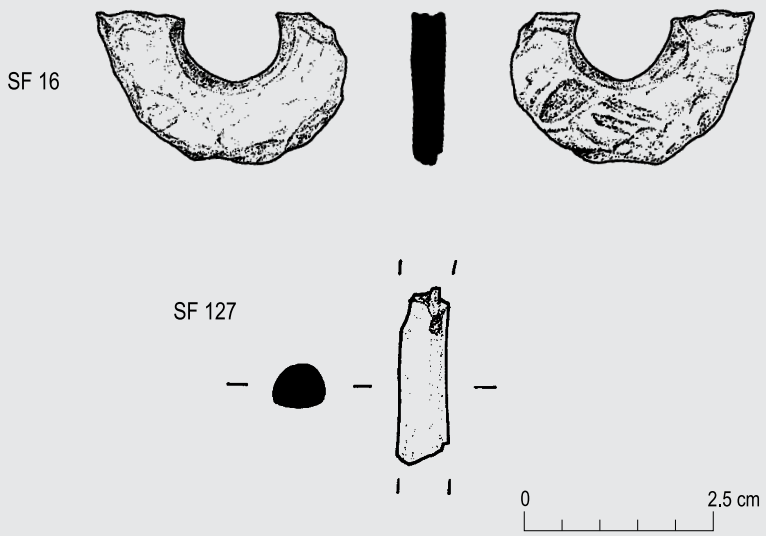
Craft and production at Phantassie

As with most Scottish later prehistoric sites, the vast majority of finds from Phantassie were domestic in character. Yet these show that people were practising a range of crafts in the settlement, notably metal- and stone-working, the latter to produce shale jewellery and rotary querns. It is likely that the community was largely self-sufficient for other things such as pottery, textiles and leather, but the evidence for these is less clear or does not survive.

The inhabitants of Phantassie were working both iron and copper alloys. Iron-working is not surprising, although the evidence is rarely considered. By the late Iron Age, iron was a vital part of the everyday tool kit, and even if smelting iron from ore remained a specialist task, most communities would have needed access to a craftsman who could produce or (perhaps most commonly) repair their agricultural tools and weapons. Phantassie produced only a small quantity of iron-working debris, much of it from poorly sealed contexts, but there was a background scatter in many phases. This shows that iron-smithing was going on in the vicinity over a period of time, although no workshop was identified. More spectacular was the evidence of copper alloy working, in the form of an iron draw plate, used to produce copper and brass wire for jewellery or complex metal objects (see text box 7.4). This unusual tool indicates that specialist craftsmen (or women) were at work in the settlement, at least occasionally.



10.8a Shale objects from Phantassie and Pencraig Hill.



10.8b Shale objects from Phantassie and Pencraig Hill.

Evidence of more everyday crafts emerges in the debris from making jewellery out of oil shale or a similar material (Figure 10.8). These dark, organic-rich rocks were often used to make bangles, beads and pendants, because they were easily carved and could be highly polished. Oil shale and cannel coal were available in outcrops of the Carboniferous deposits common in the Lothians (Cameron and Stephenson 1985, fig 17, 21). While no sources close to Phantassie have been found, oil shale and cannel coal outcrop on local beaches and in the valley of the Tyne near Haddington. Both debris and products are plentiful on nearby Traprain Law, and in much smaller quantities on a range of other sites. However, in contrast to west and central Scotland, they are relatively uncommon. In the west, the raw materials are abundant, with almost every excavated site producing evidence of manufacture (for example, Hunter 1998d). In the Lothians, things were different. There is manufacturing evidence from a range of sites, including Pencraig Hill (see Chapter 6) but on a small scale; only Traprain Law has extensive evidence of production, suggesting that this was a local production centre.

Another everyday craft, but one rarely recognised, was the manufacture of quern stones. This must have been vital to every community, as the rotary quern was an essential, everyday tool. Yet it is very rare to find evidence of their production. Among the quern assemblage from Phantassie (see text box 7.2) was an unfinished example. All the querns had been pecked to shape; the incomplete perforation on the unfinished one was probably made with an iron chisel. The implication of local, on-site manufacture is not unexpected, as most querns in Scotland are made of local stone, but surprisingly few sites have yielded evidence of production. A provisional listing of unfinished rotary quern stones is given in table 10.2 below. Quern production sites are known in western Scotland, where rough-outs were carved from outcrops, but they are not closely dated; there are examples from Minard at Loch Fyne; Heisgeir on the island of North Uist, and Achamore on the island of Gigha (Fane Gladwin 1971, 3–5; Carmichael 1870, 283; RCAHMS 1971, 209).

Table 10.2 Scottish sites with unfinished rotary quernstones.

Site Name	*Region*	*Reference*
West Mains of Ethie	Angus	Unpublished, NMS HH 924
Dunadd	Argyll	Lane and Campbell 2000, 185-6
Dun Mor Vaul, Tiree	Argyll	MacKie 1972b, 140
Druim an Duin	Argyll	Christison and Anderson 1905, 292
Harpercroft	Ayrshire	Unpublished, NMS BB 125
Dunion	Borders	MacSween and Rideout 1982, 100
West Water Reservoir	Borders	Hunter 2000, 167
Crosskirk	Caithness	Fairhurst 1984, 270-1
North Berwick Gas Works	East Lothian	Unpublished, NMS BB 104
Beirgh	Lewis	Harding and Gilmour 2000, 40
Aldclune	Perth and Kinross	Cool 1997, 440
Castlehill Wood	Stirling	Feachem 1957, 36

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The inhabitants of later prehistoric Lothian seem to have hunted and fished relatively little. Broxmouth produced much antler but only a few roe deer bones, a little whale or seal and several species of salt water fish, probably caught inshore (Barnetson 1982, 104), as well as abundant marine molluscs (Hill 1982b). At Fishers Road East, also close to the coast, there was little fish, only a few marine shells and some whale bones that probably came from a beached carcass (Hambleton and Stallibrass 2000, 154–5). Someone threw the bones of a butchered crow or rook into the midden-filled scoop at South Belton (Smith, see Chapter 12 and Archive), and an undated pit at Eweford Cottages was full of limpet shells (Chapter 6). In general, however, it seems that communities were raising their food rather than hunting it in the wild. If so, this has certain implications for both the environment and for everyday practice. We might picture a wholly tamed landscape along the Lothian plain, with few pockets of woodland left where game of any size survived. By this time, people may also have lost the hunting skills that earlier generations possessed. Cultural values may have determined what animals were eaten (J D Hill 1995a, 103–5); communities may have possessed taboos against wild game, taboos which developed as hunting skills disappeared, to be replaced by distrust of the wild. It is also possible that hunting had become an increasingly rare skill, perhaps reserved to a few members of the populace – political or religious leaders, for example – and that the detritus from kills was disposed of in equally distinct ways, apart from normal domestic waste.

Craftwork

Domestic animals would have provided not only meat and milk, but the materials for the clothes, shoes and tools that figured in people's everyday lives. The animal bone assemblages are clues that point to these other, more perishable materials, the uses to which they were put and the work involved in transforming them into usable form.

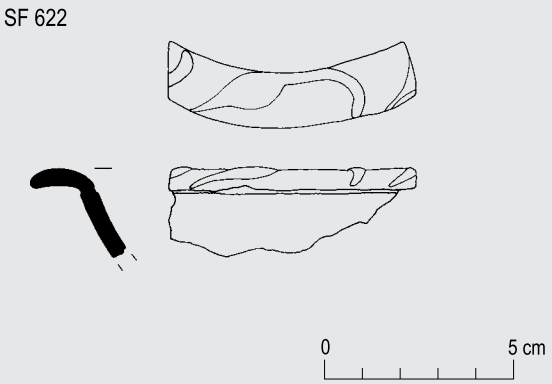
The hides of slaughtered animals would have been tanned and worked to make shoes, bags and clothing; although none survive from sites in the Lothians, examples from waterlogged sites such as Buiston crannog in Ayrshire and Oakbank crannog in Loch Tay show that hides were put to use in these ways (Crone 1993). Wool collected from sheep was spun into yarn, using spindle whorls like those found at Phantassie (Hunter and McLaren, see Chapter 12 and Archive) and St Germains (Hunter 1998a, 236), and then presumably woven into cloth (see text box 10.2). Bone and antler were carved into combs at Fishers Road West (O'Sullivan 2000, 55), rubbing tools at Fishers Road East (Lowther 2000, 145) and other objects at St Germains (Hunter 1998a, 239) and Broxmouth (P H Hill 1995). Craftsmen and women shaped shale into rings, bangles and other objects at Phantassie (see text box 10.2 and Chapter 7), Broxmouth (P Hill 1995) and Traprain Law (Jobey 1976). At Phantassie, they also made querns,

10.3

Phantassie and the Roman world

Although the nearest Roman site to Phantassie is about 30km to the west at Inveresk, it is clear its inhabitants tapped into the Roman world. We can see this in two areas: the presence of Roman artefacts in the settlement, and the more indirect influence of Roman raw materials.

Some objects from the excavations at Phantassie are easily identifiable as Roman. There is a single piece of Roman pottery, a fragment from a decorated Samian bowl that was made in central Gaul (Dragendorff form 36; see Wallace, Chapter 12 and Archive; Figure 10.9). Such fine tablewares were highly desirable in local society, a way of showing off to the neighbours. Clear Roman contact is also evident in the trumpet brooch, a typically Romano-British form which found favour with groups in and around the frontier because its style echoed local traditions. This preference for Roman objects concerned with jewellery and feasting, both ways of showing off in local society, is quite typical of the late Iron Age in southern Scotland.



10.9 A sherd from a Samian bowl from Phantassie.

More problematic are some of the other pieces, like the penannular brooch and the glass bangles. Penannular brooches were originally an Iron Age habit, but a re-analysis of the Scottish evidence (see Hunter, Chapter 12 and Archive) suggests that the style found at Phantassie is not a local type; like the trumpet brooch, it too is a Romano-British form, developed out of local traditions. Even more complex are the glass bangles; these are discussed in more detail elsewhere (Hunter, Chapter 12 and Archive), but it seems that some types are most common on Iron Age sites and others on Roman ones. While the habit of wearing glass bangles was shared in both indigenous and Roman contexts, the style of bangle would have marked the wearer's identity out. The Phantassie ones (a type 2 and two type 3A) are some of the commonest, found in abundance on both Roman and Iron Age sites. Even if they were made locally, they are in a style shared with the Roman world and most probably were made with recycled Roman glass.

This question of raw materials leads to one of the main indirect influences of the Roman world on late Iron Age society. It is most clearly evident in the iron draw plate, which was used to make wire (see text box 7.4). Analysis by Dr Jim Tate showed that the holes in the draw plate contained shavings of brass mixed with copper. Brass is a Roman metal (Dungworth 1996, 407–10), and its presence here shows that it was being recycled.

While Roman objects may have been desirable status objects, once broken they were rapidly turned to other uses.

The Roman objects also raise the question of status. The range from Phantassie is fairly typical of East Lothian settlements, but it is dwarfed by the range of artefacts from Traprain Law. This would suggest that Traprain Law was the economic and cultural centre of the region, in close contact with the Roman world, passing some of the powerful Roman objects on to descendants and dependents to grease the lines of local social networks.

But is this the full story? Other finds from Phantassie could suggest that this was not simply a dependent settlement. The draw-plate points to high-calibre metalworking, while the decorated linch pin, a most unusual find, suggests the presence of prestige vehicles on the site. Perhaps we should think of more complex relations to the central site of Traprain Law – with a number of smaller power centres around the focal site, and local elites going to the Law at certain times of the year to bargain, argue and foster the relationships which bound local societies together. This is certainly speculative, but the Phantassie evidence does offer hints that a simple model of hierarchies may not be entirely appropriate for the East Lothian plain.

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indicated by the rough-out abandoned in a small cell [12] (see text box 7.2).

Whetstones like those found at Phantassie (Hunter and McLaren, see Chapter 12 and Archive) and St Germains (Hunter 1998a, 236) signify the metal tools that communities possessed: knives for butchering animals, chisels for making querns, axes for cutting trees, scythes for harvesting grain. At several settlements, evidence has been found for small-scale smithing. These smiths may have been members of the community with the skills to produce the tools that were sharpened on the whetstones, along with the scythes and ploughshares of which farming settlements needed a reliable supply. Fishers Road East produced evidence for iron smithing and copper alloy working; the absence of zinc as a component in the copper alloy indicates either that the work took place before the Roman army arrived in the neighbourhood, or that the smiths did not have access to Roman metals (Haselgrove and McCullagh 2000, 176) St Germains also produced evidence of both ferrous and non-ferrous metalworking (Alexander and Watkins 1998, 240), as did Broxmouth during Period II, in the form of bowl furnaces and casting pits (Hill 1982b). Smiths operated on a small scale at the putative occasional market or fair held at Fishers Road West (Haselgrove and McCullagh 2000, 55).

Phantassie also produced evidence for small-scale smithing, and it yielded evidence for surprisingly fine-quality copper alloy working, in the form of an iron draw bar found in a midden deposit deliberately spread over an abandoned structure [1]. The process of drawing wire for jewellery or chain mail had left shavings of pure copper and brass in its holes. Their purity points to a Roman origin for the metals (Hunter, see Chapter 12 and Archive; see text box 10.3). In the early centuries AD, Traprain Law was a centre for fine metal smithing on a scale unmatched anywhere else in the region (Armit *et al* 2002). If metal-working was a fairly common craft, practised in most settlements on a small scale to produce everyday objects, there is also evidence that it was perceived as special, perhaps magical. We consider the evidence for this further in Chapter 11.

We can infer other crafts from the artefacts found at settlement sites, even where there are no traces of production. Artisans would have also used knives and chisels to shape wood into vessels, furniture, handles for querns, scythes and other tools, and wheels for carts and chariots – like the one excavated with a burial at Newbridge (Carter and Hunter 2003), or the chariot from which the linch pin at Phantassie came (see text box 7.3).

Somewhere along the coastal plain, there were potters living from the mid first millennium BC onward, going by the evidence from Dryburn Bridge (Triscott 1982), Broxmouth (Hill 1982b) and the later sites. Although some sites have produced relatively little pottery (the Fishers Road enclosures and Dryburn Bridge, for

example), others such as St Germains, Phantassie and Broxmouth have produced larger quantities. The inhabitants of these settlements used pots to store and cook food, and they would have needed a regular supply of vessels. The fabrics indicate local production (Gwilt 2000, 133; McSween, see Chapter 12 and Archive). If individual settlements made their own pots, no concrete evidence for kilns has yet been found, although clays for possible pottery manufacture were identified at Fishers Road West (Haselgrove and McCullagh 2000, 77). The pounders, grinders and mortars found at many sites might have been used to crush minerals or old pots to use as temper in new ones.

These crafts might have been part of the regular work of certain people in the settlements. Each community might have had its own skilled smith, weaver, stone- and bone-carver and potter who made tools, clothing, querns or pots as they were needed. Alternatively, perhaps individuals based at one settlement or another worked a neighbourhood, trading his or her wares to the other farms and villages in the surrounding area.

The Communal Self? Metaphors for life, regeneration and change

The aspects of the later prehistoric settlement archaeology of Lothian discussed so far are threads that, woven together, made up the fabric of everyday life (Figure 10.10). These threads were stitched across the landscape by people's regular passage to and from the fields, forests and moors that framed their settlements and from which they drew their sustenance. The land around settlements was not simply a physical environment; it formed the taskscape that was part of human existence (Ingold 1993). The threads of everyday life were also interwoven with social life. People's everyday lives continuously reproduced and sometimes transformed the relations between them, and in their routines we find subtle expressions of social structure and of how they viewed the world and their place within it (see Barrett 1989a).

The second part of this chapter begins by addressing certain aspects of the archaeological record that contribute to our understanding of social and ritual practices, through metaphors of fertility, transformation, regeneration and memory. Many writers have commented on how instances of structured deposition and other ritual behaviour in late prehistoric Britain seem to have expressed metaphors relating to agriculture and fertility (for example, Barrett 1991; Hingley 1992; Parker Pearson 1996). At the same time, much of the literature on the period has tended towards a normalised view of its archaeology, interpreting it in mundane and functionalist terms, skirting around the examples of less pragmatic behaviour with the barest mention. This is understandable; in general, the archaeological record could be read as indicating that communities in later prehistoric Britain were much more concerned with the business of everyday living than with the spiritual world. Their archaeological remains are largely domestic, in contrast to the dramatic ceremonial monuments and elaborate burial sites of their fourth to second millennium BC forebears.

There are, however, other ways of reading the record. Later prehistoric communities' domestic architecture and agricultural endeavours were more demanding and perhaps more ambitious than during earlier millennia, so people did expend large amounts of time and energy in those areas, and their efforts left substantial archaeological traces. At the same time, we argue that they were as caught up in belief, cosmology and the realm of the spirit as their ancestors were – in fact, so much so that these aspects of life were entirely interwoven with the threads of everyday existence. Their practical acts could carry considerable symbolic meaning (Hingley 1990; Bowden and McOmish 1987). Therefore, the material ways in which they expressed belief and ritual thought were often small, mundane acts carried out in their settlements, rather than dramatic ones in separate locations, and some of these expressions may have left no traces at all. The evidence we do have gives clues to the nature of that thought, to what people considered important and to how they understood their lives and the world around them. This view of the archaeological record also means that we should not look for evidence of the purely pragmatic or the purely symbolic, but for ways of understanding how the two were thoroughly interwoven (see Bradley 2005). The next section examines three kinds of deposition which expressed symbolic or ritual thought in the context of late prehistoric settlements: the re-use of quern stones, the uses of midden, and the treatment of the dead.

Querns

Querns, perhaps more than any other objects found in excavated settlements, were wholly embedded in the daily practices of people in late prehistoric Lothian, and elsewhere in Britain. Complete, functioning querns left lying where they were last used are a rare find. Instead, on excavated sites in Lothian, we often find parts of them deliberately built into boundaries, floors and post-settings. Elsewhere in contemporary Britain, querns are commonly found built into similar contexts (see Hingley 1992). They include both saddle and (from the third or second century BC onward) rotary querns.

At Phantassie, parts of four querns and one mortar were built, right side up, into the fabric of the settlement: a post-setting in structure [7], the massive boundary that defined the settlement platform, paving in what may have

been a gate and cobbling in structure [10]; three of these were decorated (McLaren and Hunter, see Chapter 12 and Archive). Querns were used as post-pads and incorporated in paving in Whittinghame and Knowes enclosures (Haselgrove forthcoming). One was built into the wall of a stone-paved building at St Germains (Alexander and Watkins 1998, 223), and another was used to pack a post of the unenclosed ring-ditch at Melville Nurseries (Raisen and Rees 1996). A quern formed part of a hearth kerb sealed beneath the Cruden Wall on Traprain Law (Close-Brooks 1983), and another one was built into the ramparts of Castlelaw fort (Piggott and Piggott 1952). Several were found built into pavings and walls at Broxmouth (Hill 1982b). Querns were also built into ramparts or entrances in numerous other sites in southern Scotland, including Hownam Rings, Bonchester Hill and Hayhope Knowe (Roxburgh), Castlehill Wood dun (Stirling), and Boonies (Annandale and Eskdale) (cited in Hingley 1992, 32).

Querns transformed the cereal crop – that nearly ubiquitous find, so precious that it was parched in large quantities to make it last the winter – into something edible. They were the essential tool that transformed grain into flour, which could be further transformed by water and fire into bread or porridge, common food and vital for health. Querns were, therefore, key to each community's continual regeneration and the sustaining of social and physical life. The careful ways in which they were used architecturally express how deeply they symbolised that regeneration. In particular, their incorporation into boundaries may show how querns as symbols of community regeneration were bound up with that community's identity, as these boundaries defined the locus of dwelling.

Querns like the decorated and heavily used examples from Phantassie may have been personal possessions, identified with a particular woman or family, and the decorations may have marked them out as such. They may have come to stand for a family's vitality and well-being, or become souvenirs of the care given by a mother or grandmother to the generations she had bred.

Querns are usually found re-used in parts, either as fragments or missing their upper or lower partners. If a quern was a personal possession, perhaps when its owner died it was broken or deliberately separated from its other half in a symbolic, parallel death. Fragmented in this way, it was effectively silenced; it ceased to produce the rhythmi, grinding noise that must have been an everyday sound in each settlement. It remained, however, a potent symbol of the life of the community, the family's history and its memory about itself. In putting querns into the buildings that framed their lives, people were finding new, pragmatic uses for stones that no longer worked as mills, but they were also expressing those powerful symbolic links.

Middens

Midden material was used in specific ways at many later prehistoric sites in Britain, among them Phantassie. The term 'midden', as it is used here, applies to deposits resulting from occupation and everyday activities, which contain a high proportion of refuse (including both organic and inorganic material), and which were deliberately allowed to accumulate or were collected and piled up over time (see Needham and Spence 1997).

The phase of midden-spreading at Phantassie marked a significant transition in the life of the settlement. After the farmstead began to expand, probably in the first century BC or early first century AD, midden was dumped over and around the stance of the earlier principal building [1]. The midden partially sealed its walls, built up against the wall defining the cobbled passageway to the structure and covered an area of open ground that formed a central yard (see Chapter 7). Afterwards, a larger building [10] defined partly by massive slabs was built on top of the midden spread, over the site of the old one. The inhabitants also stored midden in a large, rock-cut hollow in a separate part of the farmstead. Charcoal from fires and burnt buildings, broken pottery, charred cereals, animal bone and other food waste, and turves used for livestock bedding or walls were dumped there to compost (Simpson, see Chapter 12 and Archive). This composting process effected its transformation from unwanted rubbish to material that could enhance the fertility of agricultural fields and bolster crop yields.

Midden was also piled up and used in specific ways at other settlements in the region. The fills of the palisade trench and the House 2 ring-ditch at Dryburn Bridge were rich in animal bone (Triscott 1982, 122). Midden was used to fill in the enclosure ditches at Eweford Cottages (see Chapter 6) and the phase 4 ditch at St Germains (Alexander and Watkins 1998, 248). Successive midden deposits were dumped into the ditches defining Broxmouth during Period VIII (Hill 1982b, 150). At Fishers Road East, midden was tipped into the main internal ditches and cereal waste, in particular, was dumped into the inner enclosure ditch in the first century BC (Haselgrove and McCullagh 2000, 173). At Fishers Road West, midden was mixed with upcast to build a rampart (*ibid*, 25); micromorphological analysis also showed that there were eroding midden dumps near the open ditches, and midden was dumped into the ditches at the end of phase 3 (*ibid*, 78–9).

The hoarding, movement and deliberate deposition of midden, often in pits, is a phenomenon observed at settlements dating from the mid second millennium BC onward, as far afield as southern England (for example,

Potterne (Lawson 2000), Runnymede (Needham and Sorensen 1988) and Danebury (Cunliffe and Poole 1991)). The often peculiar juxtapositions of refuse with special animal deposits show that these were not the result of casual discard (J D Hill 1995a), at least not in many cases. Nor, given the importance of midden heaps as 'stores of fertility' (Parker Pearson 1996, 124), should we expect that they were incidental deposits.

Heaps of domestic waste were rich sources of nutrients for the soil, and therefore important resources to farming communities. They were stored up for use as fertiliser, but their occurrence inside settlements as deliberate deposits shows that they held deeper meanings as well. At Phantassie, midden may have been spread over the former dwelling in a necessary act of preparing the ground for construction of a new house. Perhaps the inhabitants of the old one had died of disease, or the family that occupied it had come to the end of its line. In covering it with midden, the community may have been marking the death of the house and also trying to ensure the prosperity and fertility of a new house and those who would inhabit it. They may have been using dead materials from the past – generated through acts of living – to bring about regeneration, a metaphysical use that echoed how they used midden on the fields. These deliberate deposits, which included placing an iron draw bar vertically into the midden that covered the old house, contrast sharply with how people behaved during the farmstead's final abandonment. Toward the end, broken objects were left scattered about in disused areas, but with no indications of deliberate dumping or placing, as if by this time people had little sense of engagement with the place and felt no need to mark its passing.

Parker Pearson (1996) has noted the proximity of middens to front doors of houses at several later prehistoric sites; he suggests that this relationship expressed associations between the east and the rising sun (the predominant position of doorways) and the life-giving qualities of the midden. Similarly, the rubbish used to fill up abandoned storage pits at Danebury (J D Hill 1995a) and Cadbury Castle (Lelong 1993), sometimes in combination with animals or even human burials, might have been seen as an offering or sacrifice designed to regenerate life and fertility (also see Parker Pearson 1996).

When midden was dumped into the enclosure ditches at Eweford Cottages, St Germains, Broxmouth and elsewhere, these acts may have carried similar meanings. They marked a fundamental transition in the physical character of the settlements – from enclosed, with perimeters definitely marked out, to unenclosed, with those boundaries erased. It also frequently marked a change in the character of domestic architecture – from annular ring-ditch houses to stone-built structures. Dumping symbolically potent midden into the ditches may have symbolised a desire for a new phase of growth to coincide with this architectural transition.

Death

Death, as well as birth and growth, forms part of the agricultural cycle, and the evidence from Phantassie suggests that people saw death – including their own –

10.10 Reconstruction of Eweford Cottages enclosed settlement in its landscape.

as inextricable from it. The scatter of burnt human bone recovered from numerous deposits across the site has been interpreted as the result of deliberate deposition (see Chapter 7). After death and cremation, the remains of each inhabitant may have been spread on middens and agricultural fields, providing nutrients for the crops that would feed the community through the next year. In death as in life, concern for the prosperity and continuity of the community prevailed over concern for individual preservation.

A sample of each person's remains was also brought back into the farmstead as a scattered handful, to remain a part of the physical and social fabric. That act may have ensured his or her continued integration in the collective social memory. The re-assimilation of the dead into the settlement and the agricultural system might, like the building of boundaries, have also been a way of working against communities' tendencies to fracture and fragment.

Human remains also appear in much more fragmented, disarticulated form in numerous other settlements. In the Lothians, a few examples of similar practices are known. At Fishers Road East, human bone was found along with animal bone in one of the ditch fills, while a probable juvenile burial was found with animal bone in a pit (Haselgrove and McCullagh 2000, 145–6). At Broxmouth, as well as several inhumation burials in pits and cists, a lower human jaw bone was found along with bone artefacts, a broken antler comb, gaming pieces and whale bone below a wall of House IV (Hill 1982b, 175). Instances of partial or whole human bodies being put into pits, rubbish deposits, foundations and boundaries in later prehistoric settlements are known as far as the south of England and the Continent, and in Orkney, Caithness and the Western Isles, a trend that began early in the first millennium BC (see J D Hill 1995a, 118). Philpott, commenting on this practice, suggests that the dead were not considered a source of 'ritual pollution', as for example they were under Roman law (1991, 236). The spirits of the dead may not have been feared; instead, perhaps the boundaries between living and dead were somewhat fluid. This incorporation of unburnt body parts in domestic contexts might have had a similar purpose to that in evidence at Phantassie.

It may be that, in late prehistoric Britain, most people were not treated after death as discrete individuals. Instead, their bodies were broken up through fire, excarnation or dismemberment, and the parts were re-used in particular and powerful ways, for symbolic purposes that went beyond individual interests. If this breaking up and re-use of the individual body was the fate of most members of communities, who were the relatively few people whose remains we find in cists, graves and under mounds? They may have been communities' leaders, or those seen as special because of their personal histories, genealogies or physical characteristics, or their powers of healing or spiritual communion.

The number of known discrete burials from first millennium BC and early first millennium AD Scotland is gradually increasing all the time, but they must still represent only a tiny fraction of the population that lived during this period. Many of the known burials in eastern and southern Scotland were single inhumations in graves and cists, multiple inhumations in cists or inhumations sealed below mounds, with one example of cremation in the Lothians (see Lelong and MacGregor forthcoming for a review of the evidence; also Ashmore 1980). In the north and west, a few more cremations are known, along with single and multiple inhumations and burials below cairns or mounds (Ashmore 1980).

The increasing use of inhumed cist burials for a few in the early centuries AD, and eventually the formal burial of many more in cist cemeteries, suggests that the ways people viewed themselves as individuals and as members of a community were changing in important ways.

Fluid boundaries and broader identities

The end of the first millennium BC and the first few centuries AD saw fundamental changes in Lothian society, changes that are evident in several aspects of the archaeological record.

Communities neglected and then actively filled in the ditches that defined their settlements, erasing the enclosures that had expressed communal identity for hundreds of years. If acts of building and renewing enclosures had crystallised those identities where they were weak, then simple neglect of enclosures might have meant that communities by then possessed strong, shared notions of who they were and where they belonged, so that maintaining the enclosures no longer seemed so important. Actively erasing the enclosures, however, implies a rejection of earlier notions of what they bounded and defined. Economic and architectural changes occurred around the same time. Domestic architecture changed from ring-ditch to stone-built houses, and this may have corresponded to a shift toward larger herds coupled with less intensive stock supervision and decreasing woodland resources.

Within a few generations, at most 300 years, life in Lothian changed even more fundamentally with the abandonment of many settlements. This took place soon after the burgeoning of Traprain Law as a 'boom town' – an intensely crowded hill top settlement – from about the first century AD (Armit *et al* 2002). There is traditionally considered to be a 'hiatus' in activity on Traprain Law

from about the eighth or seventh century BC until this time. It seems likely that, in fact, the Law had continued to be an extremely important place during that time. It had symbolic importance, as a place where these disparate communities came together – perhaps to trade, to worship their gods, to find mates or settle disputes. The various ramparts that run around the hilltop's perimeter – which had fallen out of use by the first century AD – may have been created by these various communities, for the same reason they enclosed their own settlements – in order to physically express and re-affirm their larger communal identity.

Then, from about the first century AD, perhaps various smaller communities chose to subsume their individual identities under that larger identity, and they began coalescing, choosing to live together in centres like Traprain Law and Dunbar. During the period in which Traprain Law was becoming crowded, its relationship with nearby settlements like Phantassie and later Whittinghame Tower – which lay almost in its shadow – may have changed; perhaps the much larger settlement on the hill came to dominate or demand tribute from the smaller farms, or it absorbed their lands and people among its own. The disposal of a few of the dead in single or multiple inhumation burials – in which human bodies were treated more or less as discrete entities – also began to be more common practice during this period, with a significant swing toward inhumations in cists in the early centuries AD.

What might have motivated these trends? It is tempting to attribute it to the Roman army's presence, but in fact the erasing of enclosure began before the Army's incursions to Lothian beyond in the AD 70s. By then, perhaps Lothian society was already seeing the rise of 'big men' – leaders who emerged from the general, messy jostle of inter-community relations to exert greater influence over the region and its inhabitants, eventually changing the ways communities constituted themselves. It is also quite possible that changes in political and social structure on the Continent, rolling ahead of Rome's advancing waves, caused early ripples in mainland Britain decades before the first Roman soldier set foot on the island. Lothian communities lived in a well-connected world, where technologies like the rotary quern, styles of metalwork and burial practices travelled across large distances (Carter and Hunter 2003). Those living in the first century BC and first century AD would have heard of the Roman imperial advance across Gaul and eventually into southern Britain. They would also have heard of the large, sophisticated hilltop towns or *oppida* in which their contemporaries on the Continent lived; on rare occasions they might have entertained visitors with first-hand experience of such towns, or made visits themselves while pursuing trading or kinship links.

It has been argued that the Roman army's presence in southern Scotland is given far too much weight in explaining social change, serving too often as 'a chronological magnet for change' (Armit 1999, 72) to explain changes in architecture, burial traditions, settlement and art. Recent interpretations have challenged the traditional view of the Votadini as a client state of the Empire that benefited from the *pax Romana* (for example, Erdrich *et al* 2000, 454). The Army's presence in the Lothians lasted only 15 or 20 years during the Flavian incursion (before AD 79 to AD 87), less than 30 years during the Antonine occupation (AD 139 to after AD 160) and only four or five years during the final, Severan incursion (AD 208–12) (Hanson 1997, 195–8).

While these arguments have merit, the Roman army's presence must still have had a significant, permanent impact upon society. An enormous, well-organised force that was culturally and linguistically alien marched into the Lothians and imposed a new order on parts of the landscape by constructing roads, forts and (to the west) the Antonine Wall (see Hanson 1989). This would have over-ridden, at least for a while, the existing spatial order, cutting across communities' lands and territorial boundaries. It commandeered land and resources (Breeze 1989), imposing demands for grain that may have had long-ranging effects upon how communities farmed and distributed agricultural products.

The fact that each spell of occupation was relatively short does not matter; at the end of each, the generation that had lived through it inherited and passed on a different world than the one that had existed before. Each incursion would have somehow changed the ways that communities saw the landscape they inhabited, the world beyond the coastal plain, their own social relations and perhaps even themselves. The military force also brought new forms of material culture – fine pottery, new kinds of metalwork, glass bangles and so on. The odd collections of such objects found in pits at settlements like Broxmouth (Hill 1987, 89) and in the souterrain at Castlelaw fort (Childe 1933) show that people saw them as special, perhaps as powerful. They would have evoked other-ness – new technologies, distant places and alien views of the world.

Even before the Roman army entered Scotland, news of its tide advancing across the Continent and then into southern Britain must have reached the Lothians – and so might have news of the hilltop towns of the Continent that had resisted Rome (see Collis 1984, 22–30). By the time that Lothian communities chose to abandon their individual settlements, perhaps to gather in larger ones, they would have been familiar with the notion of a vast, highly organised state. They did not group together for defence; certainly Traprain Law was not defended by

ramparts by this time (Armit *et al* 2002, 8–9; Close-Brooks 1983, 215). Instead, they may have been motivated by the novel concept of a much larger social entity. Their knowledge of both Continental *oppida* and the Empire provided new models for organising society on a scale unprecedented in the Lothians. A much broader regional identity gelled out of an incipient spiritual one, which had been expressed for centuries in ritual acts carried out on the Law.

Chapter 11

Lothian lives in the long term

OLIVIA LELONG

The preceding three chapters have explored how the character of the archaeological evidence for life in prehistoric Lothian varies dramatically over the roughly 8,000 years it spans, from the late ninth millennium BC to the early first millennium AD. Variations in the character of the evidence correspond to broad and significant changes in the social groups that people formed, their subsistence strategies, the kinds of objects they made and structures they built, the ways they treated the dead and the beliefs they held about the social and spiritual worlds they inhabited. In spite of these changes, the long view through time that we glimpse through the A1 and other sites shows that there were also common concerns or themes through the millennia, shared by disparate generations and woven like threads into varying patterns in the tapestries of their lives. This chapter explores both the broad changes and some of these common themes.

The changing character of Lothian life

From the evidence reviewed in the preceding chapters, the texture of life at different periods in the Lothians emerges. The early post-Holocene landscape was probably home to small, fairly mobile communities, who knew how to find foods in its varied environment – from fish, shellfish and seabirds on the coastal flats along the Firth of Forth to hoofed game, nuts and fruits on the forested uplands, where early birch woodlands gradually filled out with hazel, oak and elm (Tipping 1994; 1997a). The stone tools they made and used and the places in which we find them point both to varied gathering practices and to this mobility (see Chapter 8). Overall, the evidence for this long period suggests there were small communities that existed within a loose social structure; they were skilled in finding food in its natural state and probably exploited a wide range of locales and environments in their efforts to thrive.

Over time, different groups may have established rights to certain territories, resources or routes across the land. They may have respected or fought over social territories, which were marked by natural boundaries, oral traditions or associations, or perhaps their movements were utterly fluid. The discovery of buildings like the one at East Barns (Gooder 2003) suggests that some formed commitments to certain places that lasted for generations, while light structures like those that left traces at Cramond (Lawson and Saville forthcoming) would have housed people at seasonal camps (see Chapter 8). As groups moved about, certain places – favourite hunting grounds, for example, or hilltops where people met for social or religious purposes – accrued more importance. The early meanings attached to some of these places, such as Blackshouse Burn in Lanarkshire (Lelong and Pollard 1998a), may have germinated the seeds of ceremonial monuments in following millennia.

With the advent of the fourth millennium BC, the character of life changed considerably. There was a significant burst in innovation, with the introduction of animal and plant husbandry, knowledge of pottery production and new kinds of stone tools. The advent of agriculture meant that communities were intervening with their physical surroundings in unprecedented ways: digging into the earth to coax food out of it, and managing animals for food and raw materials rather than hunting them in their natural environment. While these changes are likely to have occurred piecemeal over a long period of time, they still marked a dramatic shift in how communities lived. Around the same time, strong evidence emerges for changes in social structure and the expression of belief.

A standardised architectural vocabulary, evident at many sites through the remains of massive timber halls, mortuary structures and mortuary enclosures like those at Pencraig Hill and Eweford West (see Chapter 2), hints at a new degree of social conformity and cohesion. There is also evidence for high respect for convention in other contemporary practices, such as the deposition of pottery, pitchstone and stone tools in pits and the construction of large ceremonial structures such as cursus monuments

and long cairns (see Chapter 8). The adoption of more explicit (or at least more archaeologically visible) methods of disposing of the dead suggest a rising concern with ancestors or the spirit world. This, along with the new ways in which people were expressing the significance of certain places by building monuments, may have arisen through greater involvement with particular places through farming and greater concern over the long-term success of farming projects. In a period of such radical, albeit probably piecemeal change in lifestyle and subsistence strategies, people may have felt the need to cling to conventional beliefs and communal efforts that would ensure survival.

The late fourth millennium BC onward seems to have seen the dissolution of this trend toward conformity. Large communal buildings gave way to much smaller, lighter, more temporary ones, suggesting that people were congregating in smaller groups and spending shorter periods in particular places. This could be partly related to changes in subsistence, as communities shifted more of their dependence onto herds, which regularly required fresh pasture. The occurrence of rock art on the uplands, and as portable pieces on the lowlands, further hints at increasing mobility. The continued construction of large ceremonial monuments like the pit alignments at Eweford East (Chapter 3) or enclosures centred on water, like those at Meldon Bridge (Speak and Burgess 1998) and Blackshouse Burn (Lelong and Pollard 1998a), may have been closely linked to the seasonal gathering and movement of animals; such events would have been important social occasions as well as economic ones. The diverse ways in which the dead were treated, ranging from crouched inhumation in cists to cremation deposits, show a wide range of attitudes toward the individual body and hint at the variety of social purposes these treatments served (see Chapter 9). By the second millennium BC, there is evidence for more permanent settlement, certainly on the uplands (this apparent bias could be due to better survival there), combining arable and pastoral agriculture.

By the late second millennium BC, it is clear that certain places in southern Scotland, such as Traprain Law, were considered especially important places, although not necessarily for settlement. They may have loomed large in the symbolic landscape to numerous small communities living around them, who came together under some sense of shared identity or common beliefs on these hilltops (see Chapter 10).

The mid first millennium BC saw another dramatic shift in how communities lived in the Lothians, as they began building enclosures around their settlements. These ranged in scale from the small homestead at Biel Water to the substantial ditched enclosure at Eweford Cottages (see Chapter 6) to the massive, multi-ditched village at Broxmouth (Hill 1982b). This coincided broadly with other phenomena that carried implications for social change: large-scale woodland clearance from 300–400 BC (Tipping 1994; see text box 1.1), possibly coupled with more intensive and large-scale farming, evident through pit alignments, and the appearance of new forms of material culture such as rotary querns and highly ornamental metalwork (Armit and Ralston 1997, 169). The evidence points to a new surge in social cohesion, perhaps as groups came together for security, to shore up shared identities and to stake claim to larger tracts of agricultural land.

In the closing years of the first millennium BC, Lothian society began to change again. In many cases its members neglected or actively erased the boundaries around their settlements, and during subsequent centuries they abandoned many settlements altogether. The erasing of enclosure may have prefigured the dissolution of notions of community that had been sustained over hundreds of years (see Chapter 10). The most concentrated evidence for local settlement during the early centuries AD is on Traprain Law. It may be that, as individual communities abandoned their villages and farmsteads, they coalesced in much larger settlements, choosing to subsume their various identities under larger ones like the Law. Pressure to coallesce socially in this fashion may have come from an increasing awareness of an even larger social group, the Roman imperial army. Increasingly complex social organisation may have grown in tandem with awareness of this other, much more powerful group. This may have permitted the rise of leaders who would draw together many smaller communities under a larger sense of identity, the group recorded by the Romans as the 'Votadini'. With the arrival, more than five centuries later, of Anglian settlers in Lothian and its absorption into the Northumbrian kingdom in the seventh century AD, society's make-up and organisation may have changed again (Maddicott 2000), although that lies beyond the chronological scope of this volume (but see text box 11.3).

Threads through time

While the character of everyday practice, social organisation and settlement pattern in Lothian's communities changed considerably over 9,000 years of prehistory, there are also certain themes that appear again and again in the evidence for those millennia. These themes were worked like threads into the varying patterns of different periods, carrying society forward, linking distant generations through common concerns. From the A1 sites, in particular, there is evidence that certain practices and kinds of material worked as vehicles for

social memory.

Social or collective memory is literally the way that societies remember and pass on cultural knowledge from one generation to another (Connerton 1989). The texture of that memory informs a society's views of itself and the world it inhabits. It stems from and sustains practical knowledge about the appropriate way of doing things (for example, how and where to grind grain or make pottery; the right way to butcher meat, and who is allowed to consume what joints). These aspects of practical knowledge may be wrapped up in certain cultural values and beliefs (for example, grain is ground in a particular hut that faces south towards the summer sun that ripens the crop; the shoulder joints of pigs are given to the elders as a mark of respect). The explanations for this practical knowledge can appear self-evident and remain unquestioned as they are passed from one generation to another, as can the values and beliefs underpinning them. At other times, they might be challenged due to altered circumstances, catastrophic conditions or new ideas.

Social memory and cultural knowledge can be passed on through 'incorporating practices' (Connerton 1989), such as bodily actions, particular rules of etiquette, ceremonies and rituals in which people physically perform the information they are transmitting. In non-literate societies, this is the main means of sustaining social memory. It can take place through the developmental cycles of individuals and households, and through the rites of passage that mark their turning. It can also take place as societies continue certain practices that reproduce and sustain the beliefs and values that define them; acts repeated over a long period of time can leave archaeological residues of social memory (Lucas 2005, 77–83).

For successive generations in the Lothians, social memory functioned as the stitches in history's tapestry, connecting people to the past and shaping the world that they inherited, and their own vehicles for social memory performed the same role for the generations that came after. Social memory was vital for the continuity and ongoing regeneration of society, because it carried with it communities' histories and identities. It also was key to how people managed transitions, bringing elements of the past into the changing present and future.

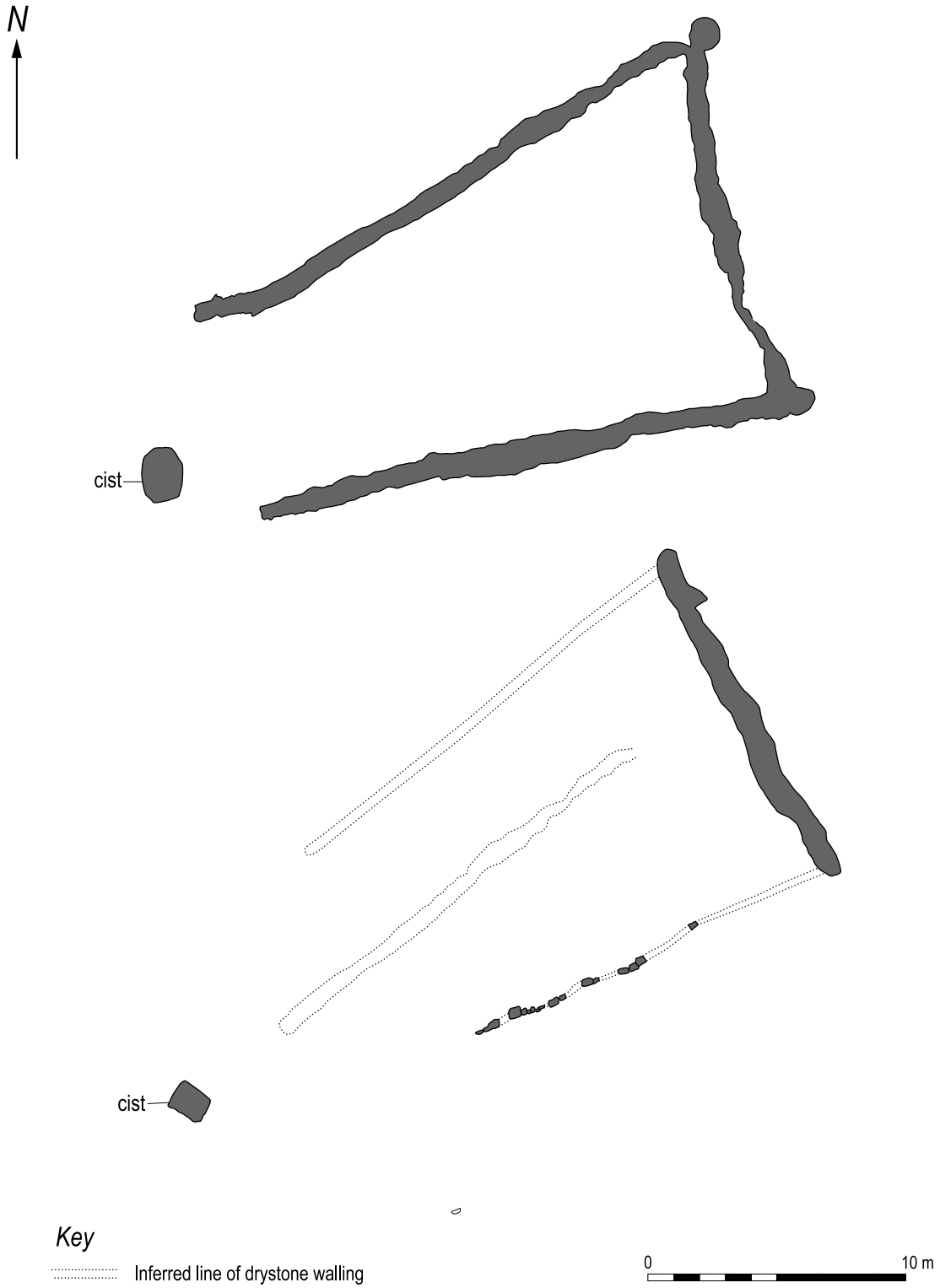
Sites of remembrance

Certain acts and places strongly evoke the role of social memory over hundreds of Lothian generations. Excavated sites along the A1 and elsewhere in the region show how long the memory of certain places endured, even if their specific meanings changed. Communities built settlements on top of earlier burial sites at Dryburn Bridge (Triscott 1982), Broxmouth (Hill 1982b), St Germains (Alexander and Watkins 1998) and Standingstone (Haselgrove *et al* in prep). Traprain Law drew some to leave significant objects on it over millennia, to modify its fabric through rampart construction and finally to live there (Jobey 1976; Armit *et al* 2002). This distinctive landform also acted as a focal point for ceremonial activity on the slopes overlooking it, from the fourth millennium BC mortuary enclosure at Pencraig Hill, to two episodes of activity in the late fourth to third millennia at Overhailes, to the cremation deposits in the third and second millennia at Pencraig Wood (see Chapters 2 and 5).

The Eweford area possessed enduring significance over almost 4,000 years. Generations returned to the site of the early fourth-millennium BC mound and mortuary enclosures, to remodel the cairn and leave Beaker pottery, stone tools and huge amounts of burnt cereal in the early third millennium BC. Even later generations continued to treat the site as important, leaving the remains of the cremated dead in the ground there throughout most of the second millennium BC. The building and burning of a complex, post-defined monument at Eweford East in the later third millennium BC and the construction of a large enclosed settlement at Eweford Cottages in the mid first millennium BC further demonstrate the area's persistent magnetism.

Two of the excavated A1 sites produced particularly remarkable evidence for the maintenance and uses of social memory (see Chapters 2 and 6). During the middle of the first millennium BC, a person or group of people came to the eroded cairn at Eweford West that sealed the fourth-millennium BC mortuary enclosure and numerous second-millennium BC cremations. They dug a hole on its flank and set a cist into its surface. They positioned it with reference to the long-vanished mortuary enclosure, placing it in what would have been its open end, and put the burnt remains of two people in it, one of whom had died between 760 and 390 BC (Figure 11.1). At Pencraig Hill several centuries later, a very similar act took place. Here, someone also dug a hole and built a cist, in a very similar position in relation to the earlier monument as at Eweford West, in the open south-western end. It was filled with hearth material and human bone. One of the dead had died between 170 BC–AD 30, up to 800 years after the death of the person whose bone was put in the cist at Eweford West.

The acts at these two places show that contemporary Lothian communities had specific knowledge of the form of these ancient mortuary enclosures. We can try to picture what the mortuary sites looked like in the first millennium BC. Eweford West would have been visible as a distinctive, turf-covered mound, with mossy stone cairns to its south-east and north-west sides, possibly with distinctive stones marking pits that held cremated human remains buried



11.1 Plans of the cists relative to the mortuary enclosures at Pencraig Hill (top) and Eweford West.

between 1500 and 500 years earlier. However, nothing of the burnt mortuary structure would have remained visible. At Pencraig Hill, there may never have been a mound sealing the destroyed mortuary structure, but the tumbled and slumped remains of the destroyed enclosure could still have slightly marked its outline. The obscurity of the ancient remains means that some knowledge of the sites must have been handed down, from generation to generation, over a period of three thousand years. People must also have known broadly what the enclosures had been for – the treatment of human remains – because their acts at both sites were concerned with the same thing.

This speaks volumes about the strength and potency of oral tradition in the Lothians across thousands of years of prehistory. Before this, we might have been able to assume and speculate that communities would have passed on ritual knowledge from the ancient past, that they might have had myths and stories to explain the presence of much older ceremonial monuments. The evidence from these two sites allows us to go further, and state quite confidently that oral traditions had passed on not just myths but specific knowledge. It shows that people knew something of the enclosures' original uses and forms, and they had quite particular ideas about what kinds of acts were proper to carry out at them – and those notions about proper ritual behaviour lasted for the hundreds of years that separated the two cists' construction. It seems likely that, down the generations, communities had been gathering at these ancient sites for their own ceremonial purposes, but rarely (in the case of Pencraig Hill) doing anything that left archaeological traces. They may have traced, through dance or procession, the outlines of the earlier monuments, re-affirming social memories of them and repeatedly re-working their meanings.

The creation of these two cists has provided important insights into how people framed their worlds in late prehistoric Lothian. Given the contrast between the rich ceremonial record of earlier prehistory and the rich settlement record of later prehistory, it is easy to conclude that first millennium BC communities were more practical and functionally minded than their predecessors, who invested such effort and time in building large ceremonial structures. The cists show otherwise; clearly people did continue to hold strong beliefs, and they occasionally acted upon them in ways that left traces in the ground. As the scope of communities' agricultural work – woodland clearance, stock raising and crop growing – increased in tandem with the scale of their domestic building projects, the focus of their efforts shifted from creating grand ceremonial monuments. They expressed their beliefs through smaller acts: building cists and burying the dead at ancient mortuary sites on occasion and, at an even smaller scale, placing certain objects (such as querns or human and animal remains) in their settlements, or re-using midden material in particular ways.

If communities had been gathering at ancient sites like these over hundreds of generations without leaving archaeological traces, then it seems probable that unusual conditions prompted two different groups to physically intervene in such dramatic ways, breaking ground and adding their own insertions. These interventions were probably not undertaken lightly, but were expressions of spiritual concern at times of considerable change. The date of the death of the adult at Eweford West (790–390 BC) coincides broadly with when the enclosed settlement was created at Eweford Cottages, a few hundred metres away (see Chapter 6). The community that dug the enclosure ditches was taking on an ambitious task and significantly altering the land at the site. In physically intervening in the earlier monument, perhaps they were making certain statements to themselves, to other communities, or to their ancestors. They might have been reaffirming their ancestral links and rights to the place and its resources (*cf* Hingley 1996) or celebrating their affinities with the mound's perceived spiritual qualities. The act carried out at Pencraig Hill, hundreds of years later, also happened during a period of significant social change, when communities based in the old enclosures were filling in the ditches, fundamentally altering their settlements – and society. Again, an act that drew upon social memory was being used to negotiate an important transition.

Another place in the Lothians may demonstrate use of long-term social memory to manage change. Doon Hill may be the location of a Neolithic timber hall, judging by the close parallels between its ground plan and that of excavated structures such as Balbridie and Claish (see Chapter 8; Ralston 1982); alternatively, it could be the site of a British (pre-Anglian) timber hall (Ralston and Armit 1997, 227). Another timber hall was built there during the Anglian period that very closely followed the footprint of the earlier structure and which stood outside an Iron Age hilltop enclosure (Hope-Taylor 1978). The sockets for the Anglian timber hall had been dug into the soft fills of the large post-pits that had supported the earlier one.

In this case, a social group that was in the process of establishing itself in the Lothians was literally delving into the ground to form a bond, through architecture, with the land's ancient past. This may have been attempt to bolster the newcomers' own rights to a place in the landscape (*cf* Bradley 1987), or it may have expressed the affinities they felt with the landscape and its historical texture. They were taking on ancient mythologies, making them their own, and expressing certain views on their own relationship to the past, views that were acted out elsewhere in the same fashion (for example, at Yeavering (Hope Taylor 1977) and at a recently excavated site near Lockerbie (Tim

Neighbour, pers comm), where juxtaposed Neolithic and Anglian halls were found). Whether they followed the footprint of a British timber hall or a Neolithic one, such close correlation could not have been possible without information from and the cooperation of indigenous communities who held social memories of the earlier timber hall and the society for which it stood – people who were able to impart knowledge of the location, form and above all social significance of the earlier sites, because their forebears had maintained it over several generations, or perhaps even millennia.

In all of these instances, those who dug into the ground were encountering the archaeological remains of long-lost generations. They were recognising those remains and their significance, and adding their own physical interventions to the sites to re-work meaning in their present times.

Marking time

When we think of the people that came to Eweford West's old cairn to leave their cremated dead or to Pencraig Hill to dig a cist at an ancient sacred site, we have to ask whether they perceived the remains of the past that they encountered in the same way that we do. The passage of time, and our and others' places in it, are issues that we – as participants in twenty-first century Western culture and even more so archaeologists in that culture – deal with intuitively and effortlessly. The linear progression of time can seem so obvious and natural that we take its universality for granted. We excavate sites with evidence for different phases of use; we date those phases through radiocarbon and artefacts, and we conclude that people remembered them and returned to them over long spans of absolute time. And this was indeed what happened at the sites discussed above.

It does not necessarily follow that the people who came to the monuments of earlier generations, hundreds or thousands of years after they were first used, perceived the time gap as we do. Anthropological studies have shown that there are many different ways of understanding time, all of them linked to how time is used in social life (Lucas 2005, 65). Our own, Western perception of time, which we take so for granted, arises through the use of clocks as scientific instruments to mark time's passing (Tiles 1986). However, science is not culturally neutral. It makes up part of our contemporary social life (Lucas 2005, 66); it is as cultural as religious belief.

Considering other ways in which prehistoric Lothian societies *might* have perceived time, by drawing on anthropological studies, can open up possibilities for interpretation. Its members, like us, experienced the passage of time, but their metaphors for it and how they saw their place within its span might have varied considerably from the inexorable, linear progression that our clocks record (see Gell 1992).

To say that the inhabitants of prehistoric Lothian did not mark the passage of time using clocks is not to say that they did not mark it or observe it at all. Lucas, in his book *The Archaeology of Time* (2005, 68), follows Nilsson (1920) in differentiating two types of time perception. 'Time indication' is fairly ubiquitous, and involves the perception of time based on astronomical phenomena, such as the earth's movement in relation to the sun, moon and stars, and on seasonal phenomena. 'Time reckoning' involves developing observations on these natural phenomena into mathematical systems, such as the calendar.

People living in prehistoric Lothian would have been thoroughly familiar with the cyclical turns of climate, year after year, from winter's dead, difficult months to the fecundity of spring and summer to the life-sustaining rewards of autumn. They would have known when to sow and harvest different crops, and when stock came into season, bred, gave birth and produced milk; they would have known when wild fruits, nuts and certain fish were available. Their existence depended upon such familiarity. They would have been aware of time's passing, but they might have imagined it as cyclical rather than linear.

If they did not reckon time through mathematical observations – and we have no evidence that they did – then people living in the first millennium BC had no means of measuring the hundreds and thousands of years that had piled up between their own present moments and the previous uses of monuments. It follows that they may not have perceived the fourth-millennium remains at Eweford West and Pencraig Hill, for example, as belonging to a past that was separated from them by a great gulf, filled with long-dead generations or an unimaginable number of seasons. There is widespread ethnographic evidence for non-literate societies perceiving time as closely linked to seasonal work, agricultural routines and generational cycles (Lucas 2005, 62).

The inhabitants of prehistoric Lothian may have believed in a direct relationship between the living and their ancestors, no matter how many generations had elapsed between them. They may have considered it important to re-affirm those links through ceremonies at ancient sites or ones involving human remains. They may have seen certain natural or built monuments, such as Traprain Law or Eweford East, as places where they could mediate their relationships with ancestors and collapse time through particular rituals. Their view of the world, past and present, and of their place within it may have arisen through the intimate linking and dependence of their own lives upon the agricultural cycle. Observing the stages of birth, growth, maturity and death in crops and

11.1

Changes in arable farming through time

The earliest cereal grains from the A1 came from several pits at Eweford West (see Chapter 5). Radiocarbon dating of the grains produced a series of dates that clustered around 2000 BC, showing that during this period the main cereal crop being grown in the area was naked six-row barley, although hulled barley was also relatively common. Only small quantities of wheat were recorded, mainly emmer and very scarce grains of possible bread wheat. Naked barley is often found in abundance at Neolithic sites, as are small quantities of emmer wheat (Dickson and Dickson 2000). However, the quantities of wheat recorded are so low that they probably came from plants growing as contaminants among the main crop of six-row barley, rather than as separate crops.

However, from the Bronze Age into the Iron Age naked barley was cultivated less commonly, with the hulled variety gaining prominence, as evident at Phantassie and Eweford Cottages. This increasing preference for hulled barley was not confined to East Lothian; it occurred all over lowland Scotland, as well as further afield in the rest of Britain, the Netherlands and Denmark. This revolution in agricultural practice would seem surprising at first glance, since hulled barley is much more difficult to process than naked barley. In naked barley the grain is loose in the spikelets, and threshing produces grain that can be used immediately, whereas in hulled barley the palea and lemma (the hulls that form part of the chaff) are fused to the grain and cannot be removed by threshing alone. Extra processing is required to make it suitable for human consumption. It seems likely that the move towards hulled barley was the result of a climatic downturn involving a trend towards cooler, wetter summer weather (van der Veen 1992). In these damper conditions, the open spikelets of naked barley would have been more prone to waterlogging, which would have encouraged fungal attack and sprouting of the grain while still on the ear. With hulled barley, the grain would have been better protected from wet summer weather than the free-threshing naked variety, and so a crop would have been guaranteed regardless of weather conditions.

Very few wheat grains were found at the A1 later prehistoric sites, so it is difficult to determine their place in the overall agricultural system at that time. Nevertheless, of the few wheat grains that were identifiable, emmer, emmer/spelt and (possibly) bread wheat were identified, indicating that the wheats must have had a place in the arable agricultural plan. It is impossible to determine whether the wheats were grown as locally tended crops, were traded or imported items, grew within maslin (mixed) crops or were merely accidental cultivates (weeds) among the main barley crop, as suggested for the Neolithic wheat at Eweford. Nevertheless, the presence of glume wheats (emmer and emmer/spelt) in the cereal assemblage is consistent with evidence from other later prehistoric sites in Scotland.

Oats never occurred as more than stray elements at any of the A1 sites, and these were likely to have been wild oats growing as weeds among the main cereal crop. Oats did not become the dominant cereal crop in much of Scotland until the Medieval period.

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stock, and in their own lives and communities, they may have seen farming as an inherent part of existence. In this view, their connections with dead ancestors, maintained through the exercise of social memory, may have seemed essential and intrinsic to life.

Farming roots

We find expressions of metaphors for the cycle of life, death and regeneration, inherent in agriculture, in the structured uses of querns, middens and human remains at many settlements in later prehistoric Lothian and further afield (see Chapter 10). Querns, built into walls, buildings

and floor surfaces, may have been potent symbols of the ongoing life and identity of each community. Midden, an important source of nutrients for the arable fields, was stored up in heaps for use as fertiliser, but it was also used in particular ways inside settlements, to mark important transitions and perhaps to ensure success in a subsequent phase. Human remains were also used in deliberate ways; these involved breaking up bodies through fire or disarticulation and redistributing them, sometimes in middens, to mark individuals' contributions to communal life and to return them to the agricultural cycle or settlement in a final contribution. These seem to have been expressions of a highly integrated, agrarian view of the world, both shaped by and feeding back into the agricultural endeavours that were integral to the life of the community, and which carried society forward from

11.2

On the edge of another landscape: The Anglo-Saxons in East Lothian

By the middle of the first millennium AD, the Lothians were occupied by a British tribe known as the Gododdin, successors to the Votadini (see text box 10.4). It is not clear whether they were the descendants of the earlier tribe, or a rival group that achieved dominance over them. Their stronghold on Castle Rock in Edinburgh began to thrive as a fortified capital after Traprain Law was abandoned, so the regional political centre certainly shifted location around that time.

During the seventh century AD, Germanic-speaking Anglo-Saxons began to settle in south-eastern Scotland. Their ancestors had first arrived in north-eastern Britain as mercenaries, invited to provide military support for warring petty kings in the political vacuum left by the Roman army's withdrawal, and they had gone on to establish kingdoms of their own. This included a powerful one in Northumbria, which spanned the north of England and eventually pushed into southern Scotland. East Lothian, with its fertile lands and relative wealth, was considered an especially fine prize (Maddicott 2000). The Anglians' control of the Lothians and other lands in southern Scotland may have progressed from remote political control, with the northern tribes paying tribute to the Northumbrian kings, to physical expansion that culminated in the siege and fall of Castle Rock in AD 638.

Archaeology and place-name evidence provide a few clues to the nature of that expansion into the Lothians. Settlement evidence from the Anglo-Saxon period, in the form of what are called *grubenhäus* structures, has been found on the promontory fort at Dunbar in East Lothian and at Ratho Quarry in Midlothian. Both the fort at Dunbar and the large timber hall at Doon Hill may have been high-status centres for local rulers, and there may have been another at Whitekirk (although this has also been interpreted as a Neolithic timber hall; see Chapter 8). The nearby village of Tyninghame, which has an Anglian place-name, was probably the site of a monastery founded by St Baldred in the eighth century. Aethelstaneford in East Lothian is traditionally thought to have been named for an Anglian commander who was killed in battle there in the ninth century. A scatter of Anglian artefacts found in East Lothian also hints at their influence there (Blackwell 2004).

In spite of these clues, however, we cannot be sure how many Anglians emigrated to and colonised the Lothians and, if they did, to what extent they mingled with or overran existing communities. Types of artefacts and buildings do not necessarily equate to certain ethnic groups, and even place-names can be introduced or imposed by political rulers from a distance. The way that the Anglian hall at Doon Hill so closely mimics an earlier building would suggest that the people who built it were drawing upon long-standing traditions about the place and its architecture, perhaps in order to integrate themselves into an alien social landscape.

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one generation to another.

What were the roots of this complex, metaphor-rich, agrarian world view? There are clues from the A1 sites and others in southern Scotland that they may have reached back as far as the origins of farming in the region (see text box 11.2). The tradition of putting particular objects into pits began in the early fourth millennium BC, when Lothian communities were in the early stages of farming practice. Each year they put other small, potent objects (seeds) into the ground and reaped food. As Hill (1995a) points out, ritual behaviour is essentially a technology, designed to bring out transformation. Putting certain objects into the ground may have been a metaphor for sowing; burying pieces of pottery or stone may have seemed a way of bringing about certain social transformations, or preserving power or prosperity or health. Powerful objects may have been buried to guarantee agricultural success and ensure fertility, or as a means of appealing to the spirit world for insurance against crop failure (*cf* Bradley 1984, 159 for a similar argument regarding deposits in Iron Age storage pits).

At Chapelfield, Cowie, for example, people were gathering particular collections of objects and putting them into pits in the early fourth millennium BC. The objects included Neolithic pottery, pitchstone blades, coarse stone tools, hammerstones, pounders and anvils, as well as broken saucer, saddle and trough querns, hearth waste and possibly human waste (Atkinson 2002; see Chapter 8). All of these things would have signified something else in the minds of those who assembled and deposited them. The querns may have been references to the agricultural efforts that sustained the community, as might the hearth waste and human waste (midden constituents). At Eweford West, huge quantities of burnt cereals were strewn across the site in the third millennium BC, perhaps a gesture of thanks for successful harvests, or the desperate sacrifice of a much-needed crop in the hope it would yield more grain (see Chapters 4 and 9).

Middens accumulated through daily life, feasts or wakes; their accumulation was governed by structuring principles probably very different from our own (Hill 1995, 17). They may have been seen as repositories of social memory – piles of detritus to which associations clung like smells – and they were valuable sources of nutrients for the arable fields. Midden material and hearth waste were used in various deliberate ways throughout prehistory, in the Lothians and elsewhere, and they could play important roles during social transitions (McOmish 1996). Pits making up the alignment at Knowes were filled with hearth waste in the late fourth millennium BC (see Chapter 3). Burnt animal bone and charcoal went into the slightly later pits at Overhailes along with the flint tools and pottery (see Chapter 4), perhaps the remains of cooking fires and meals at the gathering that culminated in filling the pits. Hearth waste (or pyre material?) was put into both of the first millennium BC cists at Pencraig Hill and Eweford West, along with human remains (see Chapter 6). Midden material was used to fill in the ditches of enclosed settlements like Eweford Cottages in the late first millennium BC (see Chapter 6), expressing important changes in communal identity, and at Phantassie, to mark the beginning of a new phase in the settlement's history (see Chapter 7). The collective life histories of the objects and organic materials making up middens may have imbued them with certain powers, both practical and symbolic, in the minds of generations of Lothian communities. They made vital contributions to agricultural success, and their perceived powers could also transfer to the social and spiritual realms.

The ways that people viewed farming and its relationship to social life undoubtedly changed considerably over the four millennia of prehistory during which they practised it in the Lothians, and this is not to suggest that it was uniform throughout. In the fourth and third millennia, communities may have raised only small quantities of crops and a few animals, combining this with gathering, fishing and hunting to meet their needs. Agriculture contributed part of what made society function, but not all; ritual acts referred to it but also to other aspects of life. As farming intensified in the first millennium BC, requiring greater investment in time and labour, it would have become more fully integrated into social life and thought, and found more modes of expression in symbolic behaviour, like those outlined above. The relative paucity of evidence for wild foods at excavated later prehistoric settlements suggests that, by this time, the skills that had made Mesolithic Lothian dwellers proficient hunters, gatherers and fishers had faded from social memory.

The power of fire

The durable, fire-hardened kinds of artefacts that do survive in structured deposits are testimony to the transformative power of fire, and there is evidence from the Lothians of how fire was perceived and used in different contexts over time. At both Pencraig Hill and Eweford West, the large timber mortuary enclosures that stood there in the fourth millennium BC were burnt down – as were the pyres holding bodies inside them, possibly at the same time (Chapter 2). At Eweford East in the mid-to-late third millennium BC, two parallel timber post alignments and a circular timber enclosure were also burnt down, probably in sections over several phases (Chapter 3). At Pencraig Wood, a wooden post may have marked out a place where cremated human bone and pottery were put in pits in the mid second millennium BC; this post was eventually burnt.

These events would have made brilliant spectacles, with dramatic effects upon sight, sound, smell and hearing to those who watched the flames catch and burn. They may have been the culmination of rites or ceremonies that marked important stages in the use of the monuments. The deliberate destruction of the structures does not appear to have expressed rejection of an old order that created them, because the Eweford West structures were rebuilt and the Eweford East alignments continued to develop; the ceremonial traditions associated with them carried on in some form. Rather, the firing events may have been seen as essential stages in the lives of the monuments, important rituals that transformed them and also those who witnessed their destruction.

Fire's symbolic potency is also evident in the kinds of objects which people were putting into pits and other structured deposits from the fourth millennium BC onwards – pottery, metalwork and cremated human bone. In a sense, this is a circular argument: these things survive in the archaeological record because they were subjected to fire; therefore, we see them as significant, not knowing what else was also deposited and considered important, but which does not survive. However, there are indications that the processes that transformed and created these remains were perceived as symbolically powerful.

The use of fire to transform clay into pottery vessels has received relatively little attention compared to metalworking (Barnett and Hoopes 1995; Hill 2002), but it may have been perceived as equally spiritually charged, particularly during the fourth and third millennia BC after the technology was first adopted in Britain. This could account for the emergence of certain widely occurring forms of pottery (such as Grooved Ware and Beakers) and their uses in highly structured deposits in pits and cists; their significance derived partly from the powerful processes that created them. We may see a lingering sense of this significance in the uses of pot sherds in later prehistory – for instance, their frequent use as packing for posts, in essence as foundation deposits, perhaps to ensure luck or success in a new house.

Budd and Taylor (1995, 141) have highlighted the evidence from social-anthropological studies that metalworking often has associations with religion or magic; it is a process that turns stones (ore) into objects that can be used to kill or maim, or into things of great beauty and value. They argue that bronze smiths in third to second millennium BC Britain were also political leaders who were perceived as magicians or shamans. Knowledge of and skill in bronze working were two of their chiefly qualities which elevated them above competitors, and the depositing of bronze objects was a form of extravagant sacrifice (akin to potlatch) that helped maintain their authority. In addition, copper alloy working may have carried with it a sense of ritual pollution, given the noxious fumes it emitted, and so was best carried out apart from settlement areas. The special qualities of copper alloy working and its products, and their powerful roles in society, may be reflected in the careful ways that bronze objects were deposited in third millennium BC Scotland. At Eweford West, a bronze halberd was placed in the stone cairn during the second millennium BC, when people were also intermittently visiting the place to put decorated pots and cremated human remains into the ground (see Chapter 5) – all objects transformed by fire, and hence, we would argue, powerful points of mediation between the living and the spirit world.

In the context of the social implications of metalworking, the widespread adoption of iron involved not only a forging technology replacing an alloying and casting one, but a fundamental reorientation of society and a falling apart of old orders. Iron workers may have been less tied to particular tribes or lineages, as they were not dependent on controlled supplies of tin; they may have operated as itinerant smiths who provided certain liminal services to communities who could keep them – and the risk of ritual contagion – at a safe distance (Budd and Taylor 1995, 140). Alternatively, members of each community may have taken on the role of blacksmith as part of their everyday routines, although the process may have continued to be imbued with a sense of transformative magic. Iron smithing involved transforming raw materials into objects vital to the agricultural cycle, objects which in turn would transform plants into sustenance, animals into food – or which could bring about death. It produced knives or swords that could kill people or butcher animals; ploughshares and scythes that were needed to sow and harvest crops; chisels to make querns to further transform grain; axes to cut fuel, and so on (Hingley 1997, 9). The smithing process, and iron objects themselves, may have been seen as metaphors for life and death, embedded in the agricultural cycle. Like querns (and, in several cases, wooden ard-shares (Hingley 1992, 38)), they were sometimes set into the boundaries that defined communities' homes in later prehistory. Hingley (1990b) has reviewed the evidence for iron currency bars set into the boundaries of settlements in central and western England, arguing that such deposits represented both the agricultural cycle and relations of power.

Phantassie produced a hint of the perceived potency of metalworking in the late first millennium BC. An iron draw bar was discovered, which had been used make copper and brass wire for ornaments or chain mail; shavings of pure copper and brass still clung to its holes, and the purity of the metals indicates a Roman origin (see text box 7.4). It was found in a thick layer of midden-rich sediment that was dumped over the principle structure of the phase 2

11.2 The Bass Rock, seen from Eweford West.

farmstead after it was abandoned, marking a significant transition in the settlement's evolution – perhaps a kind of closure deposit for the house itself (*cf* Bradley 2005, 52; see Chapter 10). The draw bar was found sticking upright in the midden, where it had been pushed into the soft, rotting matrix. Its presence in a symbolic deposit points to the powerful processes of creation and transformation for which both the draw bar and the midden stood.

Evidence for these themes resonates across the nine millennia of prehistory during which people inhabited the Lothians. Various generations shared concerns that are fundamental to the experience of being human: needs for food, shelter and clothing; for physical, emotional and spiritual well being, and for the survival of family and community. People addressed these concerns in how they produced or found food, built houses and other buildings and treated their dead, weaving them into their daily lives in ways that varied over time. What all the generations over at least five of those millennia had in common was a a reliance on the agricultural cycle, played out over and over in the same landscapes. The societies in which they lived would have had certain social, conceptual and physical constraints that helped to shape how different generations acted – constraints such as beliefs in supernatural powers, unequal power relations between members of society and the need to ensure survival.

Conclusion

As we drive through East Lothian on the upgraded A1, our wheels traverse a landscape through which people have been journeying for at least 10,000 years. Those past journeys related to the different rhythms that governed peoples' lives. In the early millennia, they included annual movements to the uplands to hunt deer, or travels to the coast to gather sea birds and fish. Struck stone tools from Pencraig Hill, South Belton, Phantassie and the Eweford sites evoke the movements of people hunting singly or in groups along the coastal plain, from around 9,000 to 4,000 BC. With the adoption of farming in the early fourth millennium BC and for thousands of years afterward, people were regularly driving their herds to pasture on

the uplands. They were moving around their settlements regularly and rhythmically: to sow crops and cart midden to the fields, to collect firewood from forests and water from burns. The charcoal assemblages from Eweford Cottages and Phantassie evoke journeys to forests and moorland to gather timber and heather, and to fields to harvest grain.

People also ventured from their dwellings for other reasons, to satisfy spiritual and emotional needs at monuments to their ancestors. The similarities in form between the mortuary enclosures at Eweford West and Pencraig Hill (and their similarities to others across Britain and northern Europe) hint at people's travel from one place to another in the fourth millennium BC, carrying images of monuments in their minds. The pits at Overhailes, filled with pottery and stone tools during the later third millennium BC, recall a long journey to this spot from eastern England. Other imperatives would have decided the time and place for social gatherings – the birth of a child, the death of an elder, the acquisition of a long travelled artefact or the exchange of marriage partners. These different rhythms of life may have been intimately bound together; trips could have been both practical and meaningful. Accounts of journeys, places, events, objects or people would have been told and retold, spun and rewoven by generations around hearths at home, while putting dead into the ground or revisiting places of ancient significance. Those rhythms changed in scale and composition over the millennia: some chimed long and clear, while others became faint echoes from a hazier past.

As our journeys, now safer and faster, take us daily to Edinburgh for work, monthly to visit relatives in Dunbar or annually to the south on holiday, we share the legacy of the landscape bequeathed to us by so many previous generations. Traprain Law and Berwick Law still catch our eye; the sweeping coast and rolling hills still frame our sense of the region, and the rivers Esk and Tyne still tie the lowlands to the uplands. The texture and appearance of the land have changed again and again over the 10,000 years since people first returned to it, following the vegetation and wildlife into the emptiness left when the ice sheets melted. We still share many concerns with our distant ancestors, concerns inherent in the rhythms of life and the very nature of human existence: our sense of place in a landscape, in our society, in our local community and in our own family. The discoveries we have made along the new A1 have brought us into contact with ancient but familiar themes, revealing stories that had long been lost to time – stories about people more like ourselves than we might imagine, yet who lived lives that were almost unimaginably different.

What will the archaeologists of the remote future make of the A1 expressway itself? Will they recognise it as an ancient transport route, or attribute some more esoteric function to it? If they correctly divine the road's purpose, will they debate the motivations behind our early third millennium AD journeying, arguing over whether it was a ritual, social or economic phenomenon?

As they make sense of the traces of our own journeys through the East Lothian landscape, as well as those of its earlier inhabitants, perhaps they will recall the words of Henry Miller, who wrote: 'One's destination is never a place, but a new way of seeing things.'

Chapter 12

Bridge to the A1 Archive

This volume was designed to present the findings from the A1 excavations and post-excavation analyses in as holistic a way as possible, in order to give a well-rounded account of what people did at each place in the past. For this reason, the results of specialist analysis of artefacts, palaeoenvironmental remains, animal bone and human bone have been integrated into the account of the excavated archaeology as much as possible in Chapters 2 to 7, while text boxes in all of the chapters focus on certain aspects of the findings in more detail.

Given the length of the reports on specialist analysis – inclusion of which would have doubled this volume – it was not possible to include them in printed form here. They have been included in full with the Site Archive, which has been deposited with the National Monuments Record of Scotland, held and maintained by the Royal Commission on the Ancient and Historical Monuments of Scotland.

We hope that the results of the A1 excavations will be as useful as possible to a variety of readers, including other specialists who might want to draw on the A1 material for comparisons or subject it to further analysis in the future. To that end, this chapter provides a guide to the archived specialist reports on the artefactual, palaeoenvironmental and bone assemblages from the excavations.

Table 12.2 presents the radiocarbon dates obtained from all of the excavated sites along the A1.

Table 12.1 Specialist reports deposited with the Archive, including catalogues and tables.

Site	*Report: Catalogues, tables and discussion*	*Author*
Pencraig Hill	Pottery	Alison Sheridan
Pencraig Hill	Coarse stone tools	Alison Sheridan
Pencraig Hill	Possible stone bead: natural geological freak, possibly used as amulet	Alison Sheridan
Pencraig Hill	Pieces presented as possible examples of worked shale: almost all natural	Alison Sheridan
Pencraig Hill	Vitrified material, probably resulting from Early Neolithic burning of monument	Alison Sheridan
Pencraig Hill	Burnt daub	Alison Sheridan
Pencraig Hill	Human remains	Nicholas Marquez-Grant
Pencraig Hill	Archaeobotanical summary report	Jennifer Miller and Susan Ramsay
Pencraig Hill	Archaeobotanical full archive report	Jennifer Miller and Susan Ramsay
Pencraig Hill	Micromorphology of a Neolithic long mortuary enclosure	Ian A. Simpson
Eweford West and East	Pottery: Grooved Ware from Eweford West, lower hollows area and beyond	Alison Sheridan
Eweford West and East	Beaker Pottery from Eweford	Alison Sheridan
Eweford West and East	Traditional Carinated Bowl pottery from the Area 5 Early Neolithic funerary monument	Alison Sheridan
Eweford West and East	Early Neolithic pottery from pit 2 [025] to the south-east of Eweford West	Alison Sheridan
Eweford West and East	Eweford West: Bronze Age urns from cemetery of cremated remains on periphery of cairn	Alison Sheridan

Site	*Report: Catalogues, tables and discussion*	*Author*
Eweford West and East	Early Neolithic pottery from pit 1 [019] to the south of Eweford West	Alison Sheridan
Eweford West and East	Eweford West: pottery from context 109 (fill of lower hollow)	Alison Sheridan
Eweford West and East	The pottery from Eweford East	Alison Sheridan
Eweford West and East	Struck lithic artefacts	Alan Saville
Eweford West and East	Battle axehead from Pit 025, context 042 (SF 145) (Eweford West)	Alison Sheridan
Eweford West and East	Stone axehead fragments from Eweford	Alison Sheridan
Eweford West and East	Cup-marked stones from the western side of the cairn	Alison Sheridan
Eweford West and East	Coarse stone from Eweford East post and pit alignments	Dawn McLaren
Eweford West and East	Coarse stone from Eweford West	Dawn McLaren
Eweford West and East	Eweford miscellaneous metal finds	Alison Sheridan
Eweford West and East	Worked bone/antler from Eweford	Dawn McLaren
Eweford West and East	Eweford West bone bead	Alison Sheridan
Eweford West and East	Animal bone from Eweford West	Catherine Smith
Eweford West and East	Eweford human remains	Paul Duffy
Eweford West and East	Archaeobotanical summary report	Jennifer Miller and Susan Ramsay
Eweford West and East	Archaeobotanical full archive report	Jennifer Miller and Susan Ramsay
Eweford West and East	The interpretation of archaeological sediments and soils from Eweford West and Eweford East using thin section micromorphology	Jo Thomas and Ian A. Simpson
Knowes	Pottery	Alison Sheridan
Knowes	Struck lithic artefacts	Alan Saville
Knowes	Archaeobotanical summary report	Susan Ramsay and Jennifer Miller
Knowes	Archaeobotanical full archive report	Susan Ramsay and Jennifer Miller
Overhailes	Pottery	Alison Sheridan
Overhailes	Struck lithic artefacts	Alan Saville
Overhailes	Animal bone	Catherine Smith
Overhailes	Archaeobotanical summary report	Jennifer Miller and Susan Ramsay
Overhailes	Archaeobotanical full archive report	Jennifer Miller and Susan Ramsay
Howmuir	Pottery	Alison Sheridan
Howmuir	Struck lithic artefacts	Alan Saville
Howmuir	Archaeobotanical summary report	Jennifer Miller and Susan Ramsay
Howmuir	Archaeobotanical full archive report	Jennifer Miller and Susan Ramsay
Howmuir	Micromorphology of a ditch-fill section	Ian A. Simpson
South Belton	Struck lithic artefacts	Amelia Pannett
South Belton	Animal bone	Catherine Smith
South Belton	Archaeobotanical summary report	Jennifer Miller and Susan Ramsay
South Belton	Archaeobotanical full archive report	Jennifer Miller and Susan Ramsay
Biel Water	Struck lithic artefacts	Amelia Pannett
Biel Water	Animal bone	Catherine Smith
Biel Water	Archaeobotanical summary report	Jennifer Miller and Susan Ramsay
Biel Water	Archaeobotanical full archive report	Jennifer Miller and Susan Ramsay
Eweford Cottages	Coarse pottery	Ann MacSween
Eweford Cottages	Struck lithic artefacts	Amelia Pannett
Eweford Cottages	Coarse stone	Dawn McLaren and Fraser Hunter (with geological identifications by Fiona McGibbon)
Eweford Cottages	Animal bone	Catherine Smith
Eweford Cottages	Soils analysis	Ian A. Simpson
Eweford Cottages	Archaeobotanical summary report	Jennifer Miller and Susan Ramsay
Eweford Cottages	Archaeobotanical full archive report	Jennifer Miller and Susan Ramsay
Eweford Cottages	Micromorphology of a ditch-fill section	Ian A. Simpson
Phantassie	Coarse pottery	Ann MacSween

Site	*Report: Catalogues, tables and discussion*	*Author*
Phantassie	The Samian sherd	Colin Wallace
Phantassie	Struck lithic artefacts	Amelia Pannett
Phantassie	Non-ferrous metalwork	Fraser Hunter
Phantassie	Iron Fraser	Hunter
Phantassie	Glass, ceramic and bone small finds	Fraser Hunter
Phantassie	Vitrified material	Dawn McLaren and Andrew Heald
Phantassie	Animal bone	Catherine Smith
Phantassie	Human remains	Paul R J Duffy and Nick Márquez-Grant Analysis by Nick Márquez-Grant
Phantassie	Archaeobotanical summary report	Jennifer Miller and Susan Ramsay
Phantassie	Archaeobotanical full archive report	Jennifer Miller and Susan Ramsay
Phantassie	Interpreting anthropic-type deposits using thin section micromorphology	Ian A. Simpson
Thistly Cross	Pottery	Ann MacSween
Thistly Cross	Coarse stone	Dawn McLaren and Fraser Hunter
Thistly Cross	Archaeobotanical report	Jennifer Miller and Susan Ramsay

Table 12.2 Radiocarbon dates from the A1 sites.

Site	*Lab-code*	*Material*	*Context*	*Description*	*Years BP*	*C13*	*1 Sigma*	*2 sigma*
Biel Water	SUERC-8196	*Betula* charcoal	001	Fill of scoop [012], sealing (010).	2210 ± 35	–26.40	360–200 BC	390–190 BC
Biel Water	SUREC-8192	*Betula* charcoal	001	Fill of scoop [012], sealing (010).	2215 ± 35	–26.00	370–200 BC	390–190 BC
Biel Water	SUREC-8197	*Corylus* charcoal	010	Occupation layer in base of scoop [012].	2295 ± 35	–24.50	410–250 BC	410–200 BC
Eweford Cott	SUERC-8186	*Hordeum vulgare var vulgare*	101	Occupation deposit.	1925 ± 35	–23.40	AD 30–125	40 BC–AD 210
Eweford Cott	SUERC-8181	*Corlyus* charcoal	103	Occupation deposit.	1925 ±35	–26.00	AD 20–125	40 BC–AD 140
Eweford Cott	SUERC-8182	*Hordeum vulgarel*	103	Occupation deposit.	985 ± 35	–20.70	40 BC–AD 55	60 BC–AD 90
Eweford Cott	SUERC-8180	*Hordeum vulgare sl*	011	Fill of pit 070.	2025 ± 35	–24.00	90 BC–AD 30	160 BC–AD 60
Eweford Cott	SUERC-8176	*Triticum* sp	061	Fill of enclosure ditch B, a midden dump.	2110 ± 35	–22.40	190–50 BC	350–40 BC
Eweford Cott	SUERC-8177	*Prunus spinosa* charcoal	008	Fill of enclosure ditch A, a midden dump.	2115 ± 35	–25.40	200–50 BC	350–40 BC
Eweford Cott	SUERC-8187	*Betula* charcoal	061	Fill of enclosure ditch B, a midden dump.	2120 ± 35	–25.90	200–90 BC	350–40 BC
Eweford Cott	SUERC-8172	*Betula* charcoal	096	Fill of enclosure ditch B, a natural silting.	2225 ± 35	–26.90	370–200 BC	390–200 BC
Eweford Cott	SUERC-8178	*Betula* charcoal	037	Fill of enclosure ditch A, a natural silting.	2235 ± 35	–25.00	380–210 BC	390–200 BC
Eweford Cott	SUERC-8179	*Maloideae* charcoal	018	Primary fill of pit 024.	4180 ± 35	–24.90	2880–2670 BC	2890–2630 BC
Eweford East	SUERC-5344	*Corylus* charcoal	1166	Fill of post-hole 1167 in southern pit alignment.	3880 ± 35	–25.00	2460–2300 BC	2470–2200 BC
Eweford East	SUERC-5345	Salix charcoal	1166	Fill of post-hole 1167 in southern pit alignment.	3890 ± 40	–23.60	2460–2310 BC	2470–2230 BC
Eweford East	SUERC-5346	*Corylus* charcoal	1549	Fill of post-hole 1519 in northern pit alignment.	3910 ± 35	–27.50	2470–2340 BC	2490–2280 BC
Eweford East	SUERC-5337	*Corylus* charcoal	1478	Fill of post-hole 1479 of enclosure.	3950 ± 35	–25.50	2560–2350 BC	2570–2300 BC
Eweford East	SUERC-5336	*Salix* charcoal	1478	Fill of post-hole 1479 of enclosure.	4010 ± 35	–26.20	2570–2470 BC	2620–2460 BC
Eweford East	SUERC-5340	*Salix* charcoal	1114	Fill of post-hole 1115 in southern pit alignment.	4140 ± 35	–25.80	2870–2620 BC	2880–2580 BC
Eweford East	SUERC-5347	*Salix* charcoal	1549	Fill of post-hole 1519 in northern pit alignment.	4685 ± 40	–26.30	3520–3370 BC	3630–3360 BC
Eweford East	SUERC-5338	*Corylus* nut shell	1291	Fill of pit 1292.	4740 ± 40	–22.70	3640–3380 BC	3640–3370 BC
Eweford East	SUERC-5339	*Corylus* charcoal	1114	Fill of post-hole 1115 in southern pit alignment.	7050 ± 40	–25.90	5990–5840 BC	6000–5800 BC
Eweford West	SUERC-5287	Cremated adult femur	058	Upper fill of cist 055, overlying slabs 074.	2395 ± 40	–26.30	760–390 BC	760–390 BC
Eweford West	SUERC-5320	Cremated adult humerus	031	Cremated bone fill from Urn 1 in pit 028.	2960 ± 40	–24.70	1260–1050BC	1320–1020BC
Eweford West	SUERC-5334	Cremated longbone	156	Cremated bone in pit 157.	3000 ± 35	–21.80	1370–1130 BC	1380–1120 BC
Eweford West	SUERC-5329	Cremated adult tibia	147	Cremated bone in pit 146.	3070 ± 40	–23.80	1400–1260 BC	1430–1210 BC
Eweford West	SUERC-5350	Cremated adult femur	131	Cremated bone in pit 129.	3335 ± 35	–24.40	1690–1520 BC	1690–1520 BC
Eweford West	SUERC-5327	Cremated adult humerus	119	Cremated bone in pit 118.	3345 ± 40	–17.80	1690–1530 BC	1740–1520 BC

Table 12.2 Radiocarbon dates from the A1 sites (*cont*).

Site	*Lab-code*	*Material*	*Context*	*Description*	*Years BP*	*C13*	*1 Sigma*	*2 sigma*
Eweford West	SUERC-5319	Cremated adult cranium	039	Cremated bone in pit 027.	3370 ± 35	–23.80	1740–1610 BC	1750–1520 BC
Eweford West	SUERC-5354	Cremated adult femur	082	Cremated bone in pit 081.	3385 ± 35	–24.40	1740–1620 BC	1750–1520 BC
Eweford West	SUERC-5328	Cremated adult vertebra	144	Cremated bone in pit 145.	3395 ± 35	–23.40	1750–1630 BC	1860–1530 BC
Eweford West	SUERC-5349	Cremated adult tibia	061	Cremated bone in pit 060.	3405 ± 40	–24.60	1750–1620 BC	1880–1530 BC
Eweford West	SUERC-5300	Cremated adult femur	071	Cremated bone in pit 073.	3420 ± 40	–22.00	1860–1630 BC	1880–1610 BC
Eweford West	SUERC-5324	Cremated adult femur	043	Cremated bone in pit 025.	3430 ± 40	–23.20	1860–1680 BC	1880–1620 BC
Eweford West	SUERC-5325	Cremated adult cranium	026	Cremated bone in pit 040.	3430 ± 40	–24.90	1860–1680 BC	1880–1620 BC
Eweford West	SUERC-5356	Cremated adult femur	168	Cremated bone in Urn 2 in pit 169.	3435 ± 40	–25.60	1860–1680 BC	1880–1620 BC
Eweford West	SUERC-5532	Cremated adult parietal	153	Cremated bone in pit 152.	3440 + 35	–25.20	1860–1680 BC	1880–1630 BC
Eweford West	SUERC-5355	Cremated adult cranium	034	Cremated bone in Urn 4 in pit 032.	3440 ± 40	–23.60	1870–1680 BC	1880–1630 BC
Eweford West	SUERC-5304	*Corylus* charcoal	031	Cremated bone Urn 1 in pit 028.	3455 ± 35	–24.50	1880–1690 BC	1880–1680 BC
Eweford West	SUERC-5330	Cremated adult femur	154	Cremated bone in pit 150.	3460 ± 40	–21.00	1880–1690 BC	1890–1680 BC
Eweford West	SUERC-5326	Cremated adult femur	122	Cremated bone in pit 121.	3470 ± 35	–21.70	1880–1730 BC	1890–1680 BC
Eweford West	SUERC-8206	Cremated adult humerus	031	Cremated bone in Urn 1 in pit 028.	3465 ± 3	–23.60	1880–1730 BC	1890–1690 BC
Eweford West	SUREC-8202	Cremated adult tibia	031	Cremated bone in Urn 1 in pit 028.	3485 ± 35	–24.80	1880–1750 BC	1900–1690 BC
Eweford West	SUERC-5348	Cremated adult tibia	117	Cremated bone in pit 118.	3490 ± 40	–25.10	1880–1740 BC	1890–1690 BC
Eweford West	SUERC-5288	Cremated adult humerus	090	Deposit sealing a gravel layer 187.	3515 ± 35	–26.20	1890–1760 BC	1940–1730 BC
Eweford West	SUERC-5307	*Corylus* charcoal	119	Cremated bone in pit 121.	3520 ± 40	–26.30	1890–1750 BC	1950–1730 BC
Eweford West	SUERC-5305	*Betula* charcoal	081	Cremated bone in hollow 081.	3535 ± 35	–25.90	1920–1770 BC	1950–1740 BC
Eweford West	SUERC-5316	*Hordeum vulgare var vulgare*	165	Fill of pit 164.	3650 ± 35	–23.60	2130–1940 BC	2140–1910 BC
Eweford West	SUERC-5284	*Hordeum vulgare var nudum*	107	Fill of secondary mortuary structure.	3650 ± 40	–23.50	2130–1940 BC	2140–1890 BC
Eweford West	SUERC-5318	Human bone proximal half left ulna	N/A	In a cist which had been sealed by a capstone.	3650 ± 40	–21.30	2130–1940 BC	2140–1890 BC
Eweford West	SUERC-5295	*Hordeum vulgare var vulgare*	141	Fill of pit 140, sealed by cairn 024.	3675 ± 35	–22.40	2140–1970 BC	2200–1940 BC
Eweford West	SUERC-5317	*Hordeum vulgare var vulgare*	176	Fill of pit 175.	3680 ± 40	–24.50	2140–1970 BC	2200–1940 BC
Eweford West	SUERC-5308	*Hordeum vulgare var nudum*	147	Cremated bone in pit 146.	3690 ± 35	–24.90	2140–1980 BC	2200–1950 BC
Eweford West	SUERC-5314	*Hordeum vulgare*	156	Cremated bone in pit 157.	3695 ± 35	–24.40	2140–2030 BC	2200–1960 BC
Eweford West	SUERC-5315	*Hordeum vulgare var nudum*	170	Cremated bone in pit 169.	3700 ± 35	–25.50	2140–2030 BC	2200–1970 BC
Eweford West	SUERC-5309	*Hordeum vulgare sl*	148	Cremated bone in pit 148.	3725 ± 40	–23.60	2200–2030 BC	2280–1970 BC
Eweford West	SUERC-5310	*Hordeum vulgare var nudum*	151	Cremated bone in pit 150.	3730 ± 35	–23.40	2200–2030 BC	2280–1980 BC
Eweford West	SUERC-5296	*Triticum dicoccum*	143	Fill of pit 142, sealed by cairn 024.	3735 ± 35	–23.80	2200–2030 BC	2280–2030 BC
Eweford West	SUERC-5306	*Hordeum vulgare var nudum*	119	Fill of pit 118.	3740 ± 40	–24.70	2210–2030 BC	2290–1980 BC

Table 12.2 Radiocarbon dates from the A1 sites (*cont*).

Site	*Lab-code*	*Material*	*Context*	*Description*	*Years BP*	*C13*	*1 Sigma*	*2 sigma*
Eweford West	SUERC-5299	*Hordeum vulgare*	028	Fill of pit 028.	3775±35	–23.30	2280–2130 BC	2310–2030 BC
Eweford West	SUERC-5294	*Corylus* nut shell	103	Fill of pit 101.	4275±40	–25.00	2920–2876 BC	3020–2700 BC
Eweford West	SUERC-5297	*Corylus* charcoal	020	Fill of pit 019.	4800±35	–24.10	3650–3530 BC	3660–3510 BC
Eweford West	SUERC-5286	*Alnus* charcoal	182	Burnt *in situ* timber in façade trench.	4950±35	–26.60	3770–3660 BC	3800–3650 BC
Eweford West	SUERC-5289	*Corylus* charcoal	209	Fill of stakehole 209.	4960±35	–26.70	3780–3695 BC	3890–3650 BC
Eweford West	SUERC-5298	*Corylus* charcoal	023	Fill of pit 025.	5045±35	–26.70	3940–3780 BC	3960–3710 BC
Eweford West	SUERC-5290	*Corylus* charcoal	216	Fill of stakehole 216.	5055±35	–25.20	3950–3790 BC	3960–3770 BC
Eweford West	SUERC-5280	Cattle radius	051	Fill of large primary pit 094.	5065±35	–22.00	3950–3790 BC	3960–3780 BC
Howmuir	SUERC-7530	*Salix* charcoal	017	Fill of post-hole 016.	2650±35	–26.30	835–795 BC	900–780 BC
Howmuir	SUERC-7533	*Corylus* charcoal	009	Primary fill of ditch 005.	3210±35	–26.40	1505–1435 BC	1610–1410 BC
Howmuir	SUERC-7529	*Corylus* charcoal	008	Upper fill of ditch 005.	3295±35	–25.10	1615–1525 BC	1680–1490 BC
Howmuir	SUERC-7534	*Prunoideae* charcoal	009	Primary fill of ditch 005.	3300±35	–25.80	1620–1525 BC	1680–1490 BC
Howmuir	SUERC-7531	*Salix* charcoal	008	Upper fill of ditch 005.	3325±35	–25.60	1670–1530 BC	1690–1510 BC
Howmuir	SUERC-7532	*Corylus* charcoal	012	Fill of post-hole 013.	3490±35	–25.20	1880–1760 BC	1910–1690 BC
Knowes	SUERC-7522	*Betula* charcoal	004	Fill of pit 005.	4505±35	–27.20	3340–3100 BC	3360–3090 BC
Knowes	SUERC-7524	*Salix* charcoal	025	Fill of pit 026.	4550±35	–24.00	3370–3120 BC	3370–3100 BC
Knowes	SUERC-7523	*Salix* charcoal	004	Fill of pit 005.	4615±35	–24.10	3500–3350 BC	3520–3190 BC
Knowes	SUERC-7525	*Alnus* charcoal	025	Fill of pit 026.	4660±35	–26.30	3510–3360 BC	3620–3360 BC
Overhailes	SUERC-7515	*Corylus* charcoal	292	Fill of a slot 293.	2115±35	–27.20	200–90 BC	350–40 BC
Overhailes	SUERC-7521	*Prunus spinosa* type charcoal	287	Fill of post-pit 287.	3505±35	–25.70	1890–1770 BC	1930–1740 BC
Overhailes	SUERC-7520	*Corylus* charcoal	287	Fill of post-pit 287.	3785±35	–27.00	2290–2140 BC	2340–2040 BC
Overhailes	SUERC-7513	*Corylus* charcoal	240	Fill of pit 241.	3785±40	–25.70	2290–2140 BC	2350–2040 BC
Overhailes	SUERC-7510	*Maloideae* charcoal	017	Fill of pit 024.	4395±35	–25.70	3090–2920 BC	3270–2900 BC
Overhailes	SUERC-7505	*Corylus* nut shell	246	Fill of pit 247.	4405±35	–23.70	3090–2930 BC	3320–2910 BC
Overhailes	SUERC-7511	*Prunus spinosa* type charcoal	008	Fill of pit 007.	4425±35	–26.50	3270–2930 BC	3330–2920 BC
Overhailes	SUERC-7504	*Corylus* charcoal	246	Fill of pit 247.	4440±40	–25.70	3330–3010 BC	3340–2920 BC
Overhailes	SUERC-7512	*Corylus* charcoal	008	Fill of pit 007.	4450±35	–27.50	3330–3020 BC	3340–2930 BC
Overhailes	SUERC-7509	*Corylus* charcoal	017	Fill of pit 024.	4455±35	–25.20	3330–3020 BC	3340–3010 BC
Overhailes	SUERC-7519	*Salix* charcoal	292	Fill of slot 293.	8535±40	–25.10	7590–7545 BC	7600–7525 BC
Pencraig Hill	SUERC-7665	Cremated human bone	220	Fill of enclosure trench.	2050±35	–20.90	110 BC–AD 10	170 BC–AD 30
Pencraig Hill	SUERC-7655	*Alnus* charcoal	105	Fill of enclosure trench.	3835±35	–25.70	2350–2200 BC	2460–2150 BC
Pencraig Hill	SUERC-7911	Cremated human bone	124	Cremation pyre.	4800±50	–27.70	3650–3520 BC	3700–3380 BC

Table 12.2 Radiocarbon dates from the A1 sites (*cont*).

Site	*Lab-code*	*Material*	*Context*	*Description*	*Years BP*	*C13*	*1 Sigma*	*2 sigma*
Pencraig Hill	SUERC-8001	*Corylus* charcoal	140	Fill of large corner post-hole.	4870 ± 50	–25.10	3710–3630 BC	3780–3520 BC
Pencraig Hill	SUERC-7658	*Alnus* charcoal	118	Fill of enclosure trench.	4945 ± 35	–24.50	3770–3660 BC	3800–3650 BC
Pencraig Hill	SUERC-7656	*Corylus* charcoal	200	Fill of slot.	4955 ± 35	–24.40	3775–3690 BC	3800–3650 BC
Pencraig Hill	SUERC-7654	*Corylus* charcoal	105	Fill of enclosure.	4965 ± 35	–27.80	3785–3700 BC	3910–3650 BC
Pencraig Hill	SUERC-7910	Cremated human bone	124	Cremation pyre.	4940 ± 50	–27.90	3770–3650 BC	3920–3630 BC
Pencraig Hill	SUERC-7662	*Alnus* charcoal	113	Fill of enclosure trench.	4975 ± 35	–25.10	3790–3705 BC	3930–3650 BC
Pencraig Hill	SUERC-7657	*Alnus* charcoal	178	Fill of corner post-hole.	5015 ± 35	–25.60	3930–3710 BC	3950–3700 BC
Pencraig Hill	SUERC-9039	*Quercus* bark	239	Fill of pit 238.	5025 ± 35	–27.60	3795–3705 BC	3940–3660 BC
Pencraig Hill	SUERC-9035	*Quercus* bark	170	Fill of pit 238.	5025 ± 35	–28.00	3950–3790 BC	3970–3760 BC
Pencraig Hill	SUERC-9034	*Quercus* bark	166	Layer in the pyre.	5025 ± 35	–29.20	3790–3695 BC	3930–3650 BC
Pencraig Hill	SUERC-9033	*Quercus* bark	124	Cremation pyre	4985 ± 35	–28.00	3795–3705 BC	3940–3660 BC
Pencraig Hill	SUERC-7663	*Alnus* charcoal	122	Fill of scoop defined by stones 217.	5025 ± 35	–24.30	3940–3710 BC	3950–3710 BC
Pencraig Wood	SUERC-6892	*Corylus* charcoal	019	Fill of pit.	3110 ± 35	–25.10	1430–1310 BC	1460–1290 BC
Pencraig Wood	SUERC-6889	*Corylus* charcoal	011	Fill of pit.	3150 ± 35	–25.90	1490–1395 BC	1500–1310 BC
Pencraig Wood	SUERC-6891	*Corylus* charcoal	023	Fill of pit.	3840 ± 35	–25.10	2400–2200 BC	2460–2200 BC
Pencraig Wood	SUERC-6890	*Corylus* charcoal	023	Fill of pit.	3890 ± 35	–26.80	2470–2340 BC	2480–2230 BC
Pencraig Wood	SUERC-7160	Cremated adult long bone	011	Cremated bone fill of pit.	3095 ± 35	–23.00	1420–1310 BC	1440–1260 BC
Phantassie	SUERC-5625	*Salix* charcoal	361	Occupation deposit in structure 1.	1715 ± 40	–25.20	AD 250–390	AD 240–420
Phantassie	SUREC-5614	*Hordeum vulgare var vulgare*	033	Occupation deposit in structure 10.	1805 ± 40	–24.40	AD 130–320	AD 80–340
Phantassie	SUERC-5519	*Hordeum vulgare sl*	173	Fill of wall cut 366 for structure 1.	1860 ± 35	–26.10	AD 80–220	AD 70–250
Phantassie	SUERC-5640	*Hordeum vulgare sl*	408	Old ground surface beneath structure 9.	1860 ± 40	–23.30	AD 80–220	AD 60–320
Phantassie	SUERC-5617	*Corylus* charcoal	016	Midden deposit under structure 10.	1865 ± 35	–25.90	AD 80–220	AD 70–240
Phantassie	SUERC-5511	*Triticum*	049	Overlay upper fill of hearth pit in structure 9.	1865 ± 35	–23.30	AD 80–220	AD 70–240
Phantassie	SUERC-5499	*Hordeum vulgare sl*	224	Upper fill of subrectangular hollow in bedrock.	1895 ± 35	–23.20	AD 60–210	AD 20–230
Phantassie	SUERC-5520	*Betula* charcoal	197	Lower fill of hearth pit 331 in structure 9.	1895 ± 35	–25.00	AD 60–210	AD 20–230
Phantassie	SUERC-5521	*Corylus* charcoal	020	Midden deposit to the south of structure 1.	1895 ± 35	–26.40	AD 60–210	AD 20–230
Phantassie	SUERC-5644	*Hordeum vulgare var vulgare*	466	Occupation deposit under structure 1.	1895 ± 40	–22.30	AD 60–210	AD 20–240
Phantassie	SUERC-5517	*Prunus spinosa* type charcoal	242	Upper fill of subrectangular hollow in bedrock.	1900 ± 40	–26.50	AD 30–210	AD 20–240
Phantassie	SUERC-5507	*Corylus* charcoal	235	Matrix for arc of stones 246.	1905 ± 35	–29.50	AD 30–135	AD 20–220
Phantassie	SUERC-5700	*Hordeum vulgare sl*	245	Lower fill of subrectangular hollow in bedrock.	1910 ± 35	–23.30	AD 30–130	AD 20–220

Table 12.2 Radiocarbon dates from the A1 sites (*cont*).

Site	*Lab-code*	*Material*	*Context*	*Description*	*Years BP*	*C13*	*1 Sigma*	*2 sigma*
Phantassie	SUERC-5635	*Corylus* charcoal	435	Occupation deposit associated with structure 1.	1910 ± 40	–25.50	AD 20–140	AD 0–230
Phantassie	SUERC-5496	*Hordeum vulgare var vulgare*	055	Occupation material in structure 7.	1915 ± 35	–22.30	AD 30–130	AD 0–220
Phantassie	SUERC-5628	*Corylus* charcoal	409	Fill of ditch 439.	1915 ± 35	–26.90	AD 30–130	AD 0–220
Phantassie	SUERC-5526	*Hordeum vulgare sl*	171	Ground surface sealed by structure 11 floor deposit 093.	1920 ± 35	–23.40	AD 30–130	AD 0–220
Phantassie	SUERC-5527	*Hordeum vulgare sl*	333	Fill of post-hole 349.	1920 ± 35	–23.10	AD 30–130	AD 0–220
Phantassie	SUERC-5627	*Betula* charcoal	326	Occupation deposit.	1920 ± 35	–26.10	AD 30–130	AD 0–220
Phantassie	SUERC-5626	*Hordeum vulgare sl*	411	Fill of post-hole 413.	1920 ± 40	–25.40	AD 25–130	AD 0–220
Phantassie	SUERC-5516	*Corylus* charcoal	006	Occupation deposit in structure 10.	1930 ± 35	–26.30	AD 25–130	20 BC–AD 210
Phantassie	SUERC-5637	*Corylus* charcoal	150	Fill of ditch 399.	1930 ± 35	–28.40	AD 25–130	20 BC–AD 210
Phantassie	SUERC-5639	*Prunoideae* charcoal	189	Old ground surface beneath structure 9.	1930 ± 35	–25.40	AD 25–130	20 BC–AD 210
Phantassie	SUERC-5492	*Hordeum vulgare var vulgare*	066	Occupation deposit in structure 8.	1935 ± 35	–23.40	AD 25–125	40 BC–AD 140
Phantassie	SUERC-5509	Corylus charcoal	179	Fill of post-hole 177, sealed by later floor deposit 092 in structure 11.	1935 ± 35	–28.80	AD 25–125	40 BC-AD 140
Phantassie	SUERC-5645	*Hordeum vulgare var vulgare*	069	Deposit between stones 068 making up rubble track.	1935 ± 35	–21.90	AD 25–125	40 BC–AD 140
Phantassie	SUERC-5497	*Hordeum vulgare var vulgare*	128	Midden deposit under west end of structure 10.	1940 ± 35	–22.40	AD 20–125	40 BC–AD 140
Phantassie	SUERC-5529	*Prunoideae* charcoal	335	Upper fill of large scoop 368.	1950 ± 35	–26.40	AD 0–120	40 BC–AD 130
Phantassie	SUERC-5486	*Hordeum vulgare var vulgare*	070	Occupation deposit in structure 8 paving slabs 067.	1960 ± 35	–23.60	AD 0–80	50 BC–AD 130
Phantassie	SUERC-5618	*Corylus* charcoal	020	Midden material dumped south of structure 1.	1960 ± 40	–26.80	20 BC–AD 90	50 BC–AD 130
Phantassie	SUERC-5487	*Hordeum vulgare sl*	109	Lower fill of post-hole 108.	1965 ± 35	–23.10	AD 0–80	50 BC–AD 130
Phantassie	SUERC-5522	*Corylus* charcoal	170	Midden deposit below floor 093 in structure 11.	1965 ± 35	–28.40	AD 0–80	50 BC–130 AD
Phantassie	SUERC-5616	*Alnus* charcoal	120	Midden deposit over structure 1.	1965 ± 40	–27.10	40 BC–AD 80	50 BC–AD 130
Phantassie	SUERC-5638	*Betula* charcoal	362	Occupation deposit in structure 1.	1965 ± 40	–26.10	40 BC–AD 80	50 BC–AD 130
Phantassie	SUERC-5488	*Corylus avellana* charcoal	057	Fill of post-hole 158.	1980 ± 35	–24.30	40 BC–AD 70	50 BC–AD 120
Phantassie	SUERC-5512	*Corylus* charcoal	239	Deposit sealed by wall 205 of structure 16.	1980 ± 35	–25.50	40 BC–AD 70	50 BC–AD 120
Phantassie	SUERC-5500	*Hordeum vulgare sl*	024	Occupation deposit under structure 14.	1985 ± 35	–22.60	40 BC–AD 60	60 BC–AD 120
Phantassie	SUERC-8196	*Corylus* charcoal	061	Deposit beneath wall of structure 3.	1995 ± 40	–26.80	45 BC–AD 60	100 BC–AD 130
Phantassie	SUERC-5531	*Hordeum vulgare sl*	267	Fill of pit 268 forming part of structure 5.	2000 ± 35	–22.00	45 BC–AD 55	100 BC–AD 90
Phantassie	SUERC-5508	*Betula* charcoal	120	Midden deposit over structure 1.	2005 ± 35	–26.00	45 BC–AD 55	100 BC–AD 80

Table 12.2 Radiocarbon dates from the A1 sites (*cont*)

Site	*Lab-code*	*Material*	*Context*	*Description*	*Years BP*	*C13*	*1 Sigma*	*2 sigma*
Phantassie	SUERC-5502	*Hordeum vulgare sl*	110	Scorched deposit in structure 2.	2010 ± 35	–23.00	45 BC–AD 50	110 BC–AD 80
Phantassie	SUERC-5629	*Betula* charcoal	423	Fill of post-hole 426, below structure 14.	2010 ± 40	–26.40	50 BC–AD 55	150 BC–AD 80
Phantassie	SUERC-5490	*Corylus* charcoal	126	Wall fill in structure 1.	2015 ± 35	–26.40	50 BC–50 AD	110 BC–AD 80
Phantassie	SUERC-5634	*Hordeum vulgare sl*	431	Old ground surface.	2015 ± 40	–21.20	60 BC–AD 60	160 BC–AD 80
Phantassie	SUERC-5501	*Betula* charcoal	163	Post-pipe in post-pit [111].	2025 ± 35	–26.20	90 BC–AD 50	160 BC–AD 70
Phantassie	SUERC-5528	*Maloideae* charcoal	245	Lower fill of subrectangular hollow in bedrock.	2025 ± 35	–25.00	90 BC–AD 50	160 BC–AD 70
Phantassie	SUERC-5506	*Corylus* charcoal	234	Constructional deposit of structure 6.	2050 ± 35	–25.30	110 BC–AD 10	170 BC–AD 30
Phantassie	SUERC-5530	*Corylus* charcoal	256	Fill of pit 257.	2050 ± 40	–27.30	120 BC–AD 10	170 BC–AD 50
Phantassie	SUERC-5510	*Salix* charcoal	049	Latest rake-out in fire-pit in structure 9.	2060 ± 40	–26.90	160 BC–AD 0	180 BC–AD 30
Phantassie	SUERC-5518	*Betula* charcoal	308	Lower fill of hollow 132.	2070 ± 35	–25.70	160 BC–AD 0	180 BC–AD 20
Phantassie	SUERC-5630	*Betula* charcoal	116	Upper fill of hollow 132.	2070 ± 40	–24.30	160 BC–AD 0	200 BC–AD 30
Phantassie	SUERC-5636	*Hordeum vulgare var vulgare*	438	Fill of ditch 436.	2075 ± 40	–23.30	170–40 BC	200 BC–AD 30
Phantassie	SUERC-5620	*Hordeum vulgare var vulgare*	388	Occupation deposit under structure 8 paving 067.	2100 ± 40	–26.40	170–50 BC	350 BC–AD 10
Phantassie	SUERC-5498	*Corylus* charcoal	224	Upper fill of subrectangular hollow in bedrock.	2110 ± 35	–26.00	180–50 BC	350–40 BC
Phantassie	SUREC-9040	Cremated human bone	013	Scorched deposit beside boundary wall 100.	2150+40	–20.70	350–110 BC	360–50 BC
Phantassie	SUERC-7345	*Corylus* charcoal	367	Fill of post-hole 366 in structure 13.	2480 ± 40	–26.80	20 BC–AD 70	50 BC–AD 120
Phantassie	SUERC-5491	*Corylus* charcoal	223	Post-abandonment deposit over structure 6.	3610 ± 40	–27.10	2030–1890 BC	2140–1820 BC
Phantassie	SUERC-5624	*Corylus avellana* charcoal	305	Fill of pit 368.	4790 ± 40	–24.20	3650–3520 BC	3660–3380 BC
Phantassie	SUERC-5489	*Betula* charcoal	042	Fill of post-hole 121 in structure 14.	5230 ± 40	–25.50	4220–3970 BC	4230–3960 BC
South Belton	SUERC-8199	*Prunus spinosa* type charcoal	005	Secondary fill of pit 009, overlain by 004.	6085 ± 40	–25.10	750–410 BC	760–400 BC
South Belton	SUERC-8198	*Corylus avellana* charcoal	004	Upper fill of pit 009.	6085 ± 40	–25.70	5060–4930 BC	5210–4840 BC

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