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FRONT COVER: St Chad as depicted in stained glass in the north choir aisle of York Minster (window n8). Photograph © York Glaziers Trust, reproduced Courtesy of the Chapter of York.
(Also given as fig. 6 in Lepine, ‘Cult of St Chad at Lichfield cathedral’ article.)

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CEREMONIAL CIRCLES: AN EARLY BRONZE AGE FUNERARY LANDSCAPE AT UTTOXETER QUARRY, NORTH-WEST OF THE TEAN–DOVE CONFLUENCE

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ABSTRACT

In 2009 and 2010 archaeological investigations were undertaken across an extension to Uttoxeter Quarry, Staffordshire, by Phoenix Consulting Archaeology Ltd, on behalf of Aggregate Industries (UK) Ltd.

Soil stripping across approximately 7.7ha of the site revealed multi-period archaeological remains dating between the Middle Neolithic and Medieval periods. Of particular significance was an Early Bronze Age funerary landscape including ring-ditch enclosures and cremation burials – the commencement of a monumental landscape at the confluence of the Rivers Tean and Dove. If typical of the immediate area, the excavated evidence could constitute part of a broader landscape of conspicuous Bronze Age burial monuments at the convergence of the two rivers: a pattern of prehistoric land use seen elsewhere. Pre-Roman remains also included pits containing Middle Neolithic pottery, a Late Bronze Age burnt mound, and a contemporary field system.

The results of this work bring to light a significant prehistoric landscape, geographically separate from other known concentrations of Bronze Age and earlier monuments in the West Midlands. In so doing, it helps to redress a bias in the known distribution of such sites and makes an important contribution to a developing regional corpus of Bronze Age research.

UTTOXETER QUARRY AND ITS LANDSCAPE SETTING

Uttoxeter Quarry occupies a low gravel terrace, bounded to the south by the River Tean (Fig. 1). Enclosed farmland surrounds the quarry on all other sides, while the village of Crakemarsh is located c. 1km to the north-north-west. The Tean flows into the River Dove near Dove Bridge, around 1.5km to the south-east.

The area of excavation, hereafter referred to as ‘the site’, is located to the north-west of the existing quarry (centred on NGR SK 094 355), at an elevation of between 78m and 81m above Ordnance Datum. The site’s soils are the alluvial gley soils of the CONWAY Association, characterised by deep, fine silty and clayey soils variably affected by groundwater and at risk of flooding on flat land (Soil Survey of England and Wales 1983, 18). To the west, these give way to the permeable, fine and coarse loamy soils of the WIGTON MOOR Association (ibid. 19) which support pasture and are suitable for arable cultivation, while the seasonally waterlogged soils of the CONWAY Association are characterised by permanent grassland suitable for dairying (ibid. 18–19). The region’s solid geology constitutes Mudstones of the Permian and Triassic Period, overlain by riverine gravels.

Archaeological context

Across Europe, the Bronze Age (dated in Britain between c. 2500–800BC) is characterised by sedentary agricultural settlements (Champion 2009, 129; Harding 2000, 22; Parker Pearson 2009, 103). The British pollen record portrays a landscape of deciduous woodland and cleared, cultivated land, occupying a generally favourable climatic era (Harding 2000, 19). In the West Midlands, Bronze Age settlement sites are uncommon (Watt (ed.) 2011, 64, 104). By contrast, monumental landscapes typified by barrows and burials, often grouped to form ‘ceremonial centres’ or ‘sacred landscapes’, are better represented (ibid.). The gravels of the Trent–Tame confluence contain one such landscape, including concentrations of round barrows, particularly numerous within the Tame Valley (Buteux and Chapman 2009; Vine 1982). Significant sites in this area include the ‘Catholme Ceremonial Complex’, located c. 20km (12.4 miles) to the south-east of Uttoxeter, the constituent

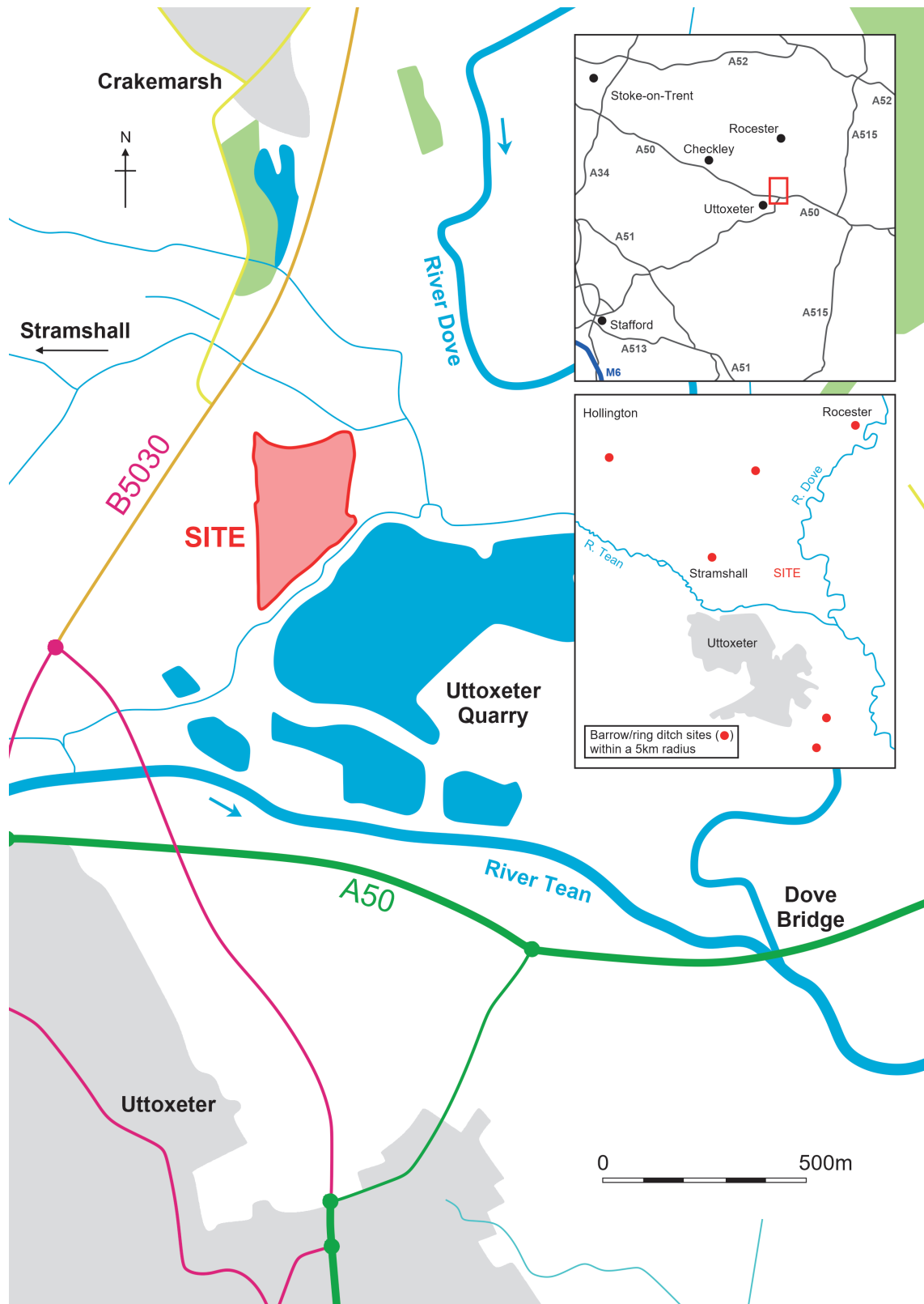


Fig. 1 Site location plan

Ordnance Survey base map reproduced under licence AL 100030371 © Her Majesty's Stationery Office

monuments of which include a multi-phase ‘sunburst’ circle with central Beaker burial (Bain *et al.* 2006). The Staffordshire Historic Environment Record (HER) includes six barrows/ring ditches or possible examples thereof, within a 5km (3.1 mile) radius of the current site (Fig. 1). The 18th-century findspot of two prehistoric urns, one of which contained cremated bone, is also documented at Checkley, 9km (5.6 miles) to the north-west (HER 01954) (Fig. 1). The West Midlands region also contains many burnt mounds, generally of Middle Bronze Age date, including an excavated example at Cox Bank Farm (HER 54376), some 3.2km to the south-south-west of the current site.

The site’s immediate landscape contains few archaeological remains of any period. However, a group of possible Bronze Age funerary monuments is recorded at Stramshall, approximately 1.5km to the west (Fig. 1). These include the ploughed-out remains of a ring ditch surrounded by a double-ditched rectangular enclosure (HER 03643), and the cropmark of a D-shaped enclosure containing a further ring ditch (HER 03648). A burial mound is also recorded as having once stood on the site of the 19th-century parish church (Redfern 1886).

The archaeological evidence

The earliest encountered archaeology constitutes three Middle Neolithic pits ([4195], [4197], and [4206]), located in the north-west corner of the site (Fig. 2). These shallow features (up to 0.20m deep) were circular or sub-circular in plan with a diameter of between 0.70m and 0.85m. The pits contained 44 sherds (525g) of Peterborough Ware pottery, including decorated sherds in the Mortlake and Meldon Bridge styles (Cooper 2012, 49). A comparable Middle Neolithic assemblage is reported from Willington in Derbyshire (Marsden *et al.* 2009), where cross-joining sherds from two vessels were identified. With the exception of a single sand-tempered sherd, all of the material was in a quartz or quartzite-tempered fabric, characteristic of Neolithic pottery from the Trent Valley area (Cooper 2012, 49). A review of the dating of Peterborough Ware in relation to the Willington assemblage, assisted by an improved absolute chronology, suggests a currency of some 600 years for the use of this ware, spanning c. 3500 cal BC to 2900 cal BC (Marshall *et al.* 2009).

The Uttoxeter pits contained mixed deposits of pottery which could be construed as ‘domestic’ in character, and perhaps representing waste in this context. However, whilst it may be easy to consider these deposits as refuse arising from domestic activities, their placement in isolated features could represent a more deliberate, symbolic act. It is notable that cross-joining sherds were identified from the fills in two different pits, not only suggesting that they were deposited at the same time, but perhaps that some specific process of selection and deposition was taking place. As suggested for other Peterborough Ware pits, the current pits may, in fact, represent the deposition of domestic waste as a ‘ritual’ action. Until quite recently, the identification of pits containing cultural material has been held to represent the surviving structural components of insubstantial Neolithic settlement sites (e.g. Dixon 1988; Field *et al.* 1964). However, it is now generally accepted that the identification of such features can represent something removed from the rudimentary activities associated with sedentary occupation (Richmond 2005).

The Early Bronze Age was the principal episode of archaeological activity at the site, and forms the focus of this report. This period was characterised by a funerary landscape including four large circular enclosures, two with associated cremation burials (Fig. 2). Two of the enclosures were only partially exposed. Overall, 12 cremation burials were encountered, including at least two urned examples. A small number of pottery sherds from a single Bronze Age vessel were distributed among five un-urned cremation burials, thought to constitute token inclusions. The burials form part of what is almost certainly a larger area of prehistoric ritual activity. Early Bronze Age features were confined to a slightly raised gravel terrace overlooking the confluence of the Rivers Tean and Dove.

Subsequent activity included the poorly preserved remains of a Late Bronze Age burnt mound, surviving as a rectangular trough and associated spread of burnt flint, and a possible contemporary field system; an excavated ditch segment [3098] in the southern part of this system contained a broken flint end scraper with lateral retouch (Fig. 2). A radiocarbon dated sample of charcoal from the trough returned a calibrated date range of 1260–1010 cal BC (Possnert and Sundström 2012, 72). Post-dating this was a single sherd of Roman pottery – Central Gaulish samian from a Drag 37 decorated bowl – present within the fill of a rectangular pond-like feature ([7010]; Fig. 2), while pieces of Roman tegulae were found within the fill of a post-Medieval ditch. A single curvilinear gully of Saxon date [4095] was also recorded (Fig. 2). The gully contained three cross-joining pot sherds (20g) in a handmade, quartz sand-tempered fabric with smoothed surfaces (Cooper 2012,

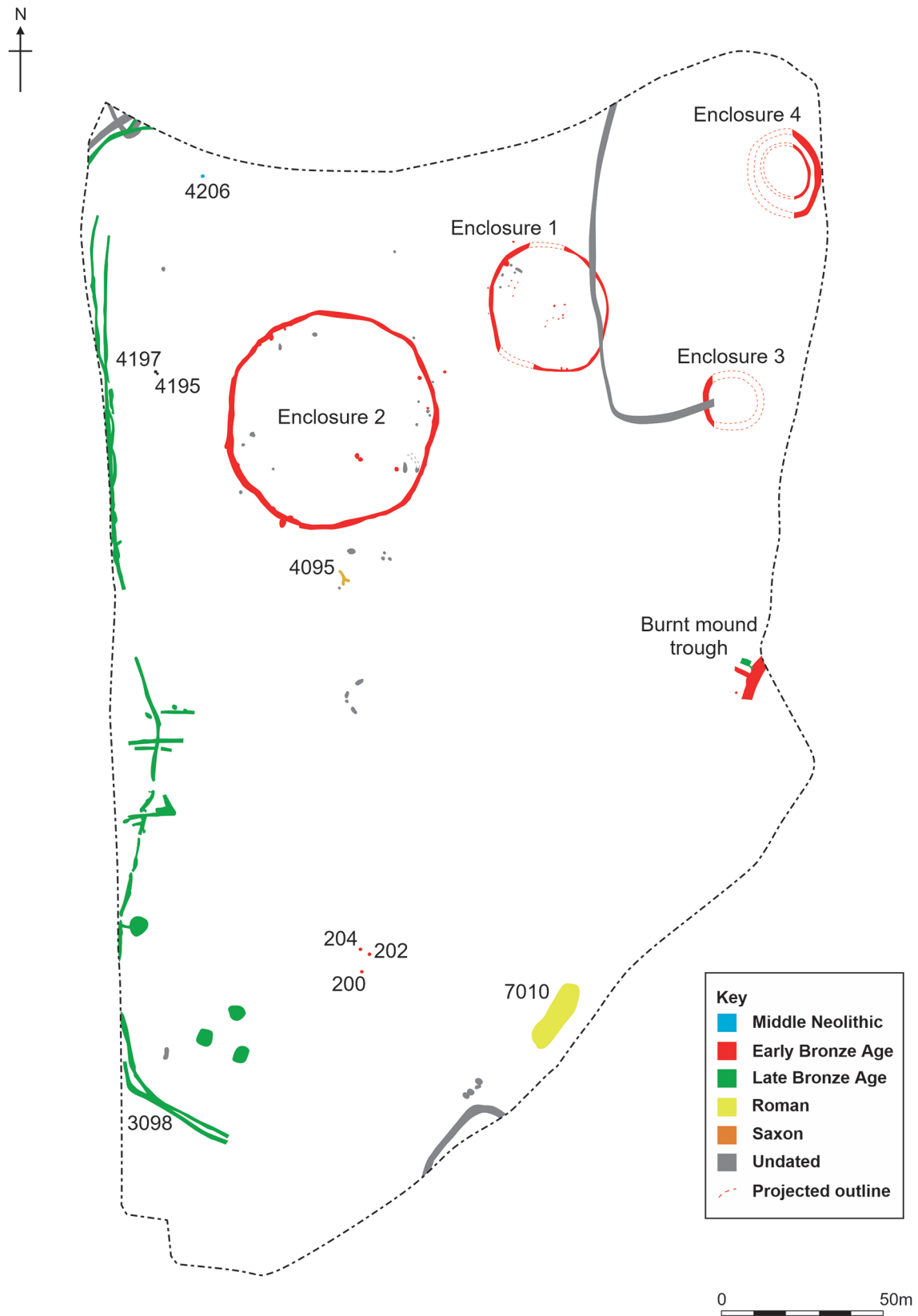


Fig. 2 Distribution of archaeological features within the site

60). Full reporting of the encountered archaeology, including specialist analyses and raw data, are presented in the excavation report (Richmond 2012).

THE EARLY BRONZE AGE ENCLOSURES

Enclosure 1

A 40m-wide circular enclosure was identified within the central northern part of the site. The enclosure's ditch encircled a number of urned and un-urned cremation burials (Cremation Burials 1–8, see below *The Cremation Burials*), as well as several undated pits and four post-holes, possibly representing some form of timber structure. An undated field ditch ([100=175=400]) and a 4m-wide sewage main traversed the enclosure, no doubt causing the loss of archaeological remains, including any central burial(s) (Fig. 3).

Fourteen excavated sections through the enclosure ditch revealed a *c.* 1m deep, U-shaped profile some 1.5m wide, which contained up to three sterile light-brown silty sand fills, with occasional gravel inclusions. It was evident that the western side of the enclosure had suffered significant post-depositional truncation. Several sections displayed slumping of material from the outside edge (e.g. segment [136]; Fig. 3), perhaps indicating the original presence of a bank on the external perimeter.

The only find from the enclosure ditch was a fragment of flint bladelet from fill (4005), assigned a broad Bronze Age date. Environmental bulk sampling of ditch fills recovered only individual grains of barley and wheat (from fill (4025)), in addition to occasional fragments of indeterminate charcoal.

POSSIBLE POST-HOLE STRUCTURE

A sub-square arrangement of four post-holes ([4072], [4074], [4076], and [4078]) was present within the north-west quadrant of Enclosure 1 (Fig. 3). The post-holes were between 0.25m and 0.3m deep and contained sterile, mid-brown sandy fills; there was no evidence of post-pipes. The regular placement of the post-settings suggests that they may represent some form of four-post timber structure, possibly relating to the funerary landscape. However, a lack of dating and stratigraphic evidence makes this impossible to determine.

UNDATED PITS

Eight undated pits were present within the area of Enclosure 1, including two ([130] and [4015]) which were stratigraphically earlier than the enclosure ditch (Fig. 3). The remaining pits ([4029], [4031], [4033], [4070], [4081], and [4083]) were mostly similar in appearance, having bowl-shaped profiles of between 0.15m and 0.4m in depth. All but one contained individual, sterile yellow sandy gravel fills. Elongated pit [4070] contained two fills, the earlier of which represented weathering or slumping from the northern edge. There was no evidence to suggest the function of these features.

Enclosure 2

Enclosure 2 was located within the central northern part of the site, immediately south-west of Enclosure 1 (Fig. 2). The enclosure's perimeter ditch formed a near-perfect circle, some 65m in diameter, occupying a slightly elevated position at approximately 80m above Ordnance Datum (Fig. 4). Nine excavated segments through the ditch ([4039], [4042], [4047], [4051], [4053], [4058], [4067], [4163], and [4181]) revealed a fairly shallow concave cut, averaging about 1.5m wide by 0.5m deep (Fig. 5). Fills numbered between 1 and 5, and mostly constituted sterile yellow-grey silty sands; there was no evidence of slumping to suggest the original presence of internal or external earthworks. The ditch appeared to have suffered severe truncation, particularly along its northern and eastern edges where the remains of ridge-and-furrow cultivation were recorded (e.g. segment [4051]; Fig. 5). Segment [4053] yielded the only finds, comprising four sherds (5g) of grog-tempered pottery, from the body of a Bronze Age Collared Urn. Fill (4062) of [4053] was radiocarbon dated to 1780–1610 cal BC.

The circuit of Enclosure 2 encompassed a number of discrete features. These constituted a single cremation burial (Cremation Burial 9, see below *The Cremation Burials*), four Early Bronze Age pits, and 16 undated features. The latter included a single ditch ([4044]), the fill of which was cut by the enclosure ditch, and three pits which post-dated the infilling of the latter. An additional 12 undated pits and a single gully were present within the interior of Enclosure 2 (Fig. 5), none of

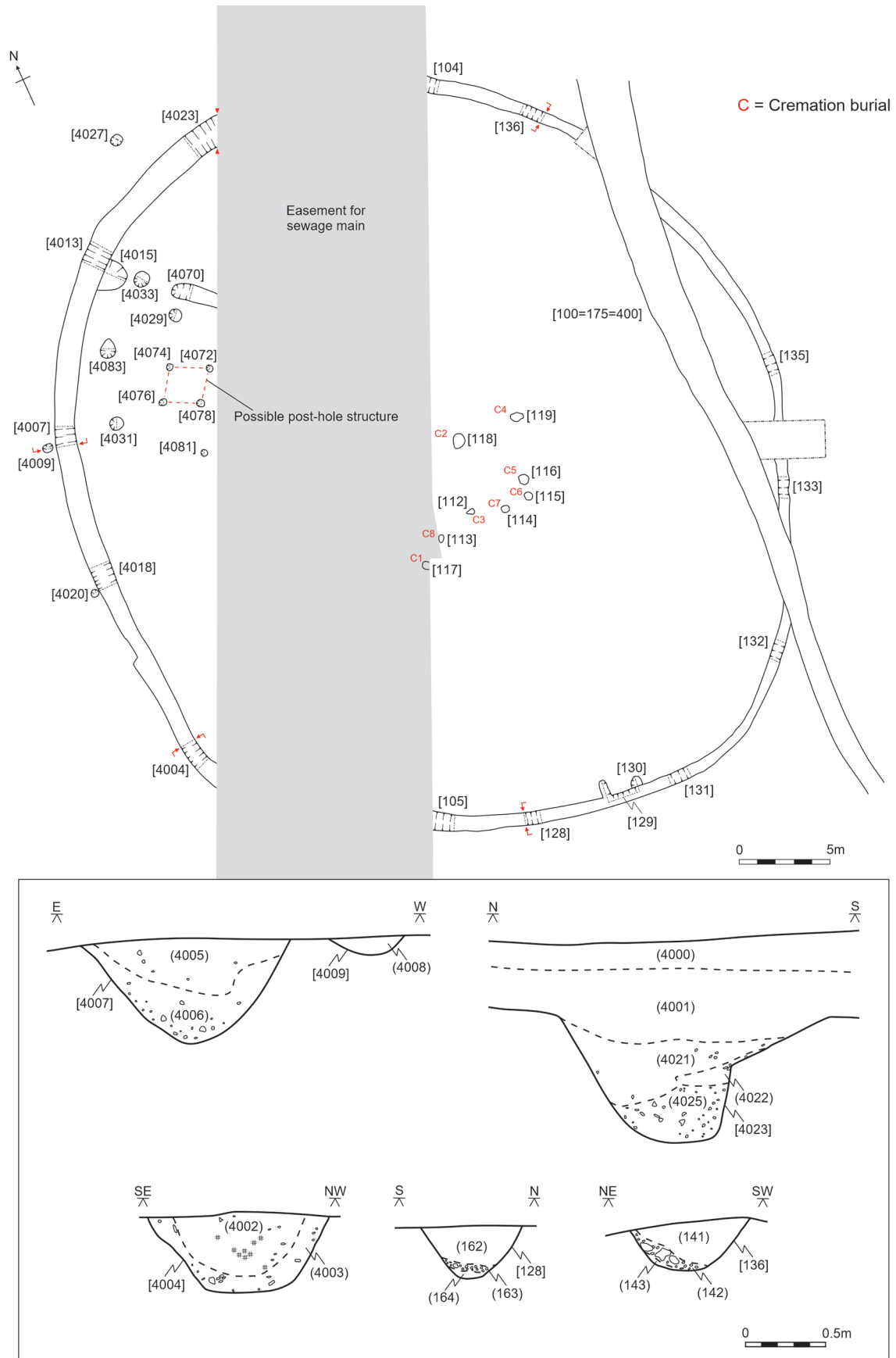


Fig. 3 Enclosure 1: plan and selected ditch sections

which contained finds of any description. Several pits were also identified around the exterior of the enclosure, including one dating to the Early Bronze Age ([4085]).

BRONZE AGE PITS

Four Early Bronze Age pits ([4097], [4114], [4134], and [4154]) were present within the eastern circuit of Enclosure 2 (Fig. 5). Pits [4097] and [4114] formed a pairing of features occupying the enclosure's south-east quadrant. Pit [4097] was sub-square in plan, measuring approximately 1m across by 0.5m deep. Its single sandy silt fill yielded 62 sherds (379g) of grog-tempered Early Bronze Age pottery representing at least two vessels, together with a single worked tertiary flint flake. The pottery assemblage included a decorated rim sherd, displaying a single horizontal incised line and vertical slashes. Also present was a plain upright rim with a faint applied cordon and a body sherd with 'maggot' impressions, similar to a Collared Urn from Cremation Burial 6 (see below).

Pit [4114], adjacent to the north-western edge of [4097] (Fig. 5), was sub-circular in plan measuring 1.3m in diameter by 0.2m deep. Its single silty sand fill contained ten sherds of Early Bronze Age pottery, including a tapering rim, bevelled on the interior and displaying two horizontal whipped cord lines. The form and decoration of this sherd is paralleled by a vessel at Cossington (Leicestershire), radiocarbon dated to 1740–1530 cal BC (Allen 2008, 31, table 2, fig. 33.12).

Pits [4134] and [4154] were located close to the eastern edge of Enclosure 2 (Fig. 5). Both constituted shallow, scoop-like features, possibly representing the truncated remains of deeper pits. This area of the enclosure had been heavily reworked by ploughing. The sandy fill of [4154] contained a single sherd (6g) of Bronze Age pottery, while the earlier of two fills within [4134] yielded a single, secondary flint blade of probable Bronze Age date. While the significance of these shallow features is difficult to ascertain, their position within Enclosure 2 is unlikely to be coincidental. Unstratified fragments of cremated bone and grog-tempered pottery encountered during soil stripping suggest that [4134] and [4154] may represent heavily truncated burials, denuded by ploughing over the course of many centuries.

Pit [4085] was located close to the exterior north-eastern edge of Enclosure 2 (Fig. 5). Like pits [4134] and [4154], this feature was notably shallow and contained a single silty sand fill. The latter yielded two body sherds (22g) of grog-tempered Early Bronze Age pottery accompanied by a secondary flint flake.

Enclosures 3 and 4

Enclosure 3 was partially exposed towards the eastern edge of excavation (Fig. 2). The enclosure was defined by a single ditch, approximately 1.8m wide by 1m deep, with a V-shaped profile and an extrapolated diameter of some 25m (Fig. 6). Only c. 20 per cent of this feature was exposed within the excavated site. Like Enclosure 1, part of the enclosure ditch was truncated by undated field boundary [100=175=400].

Two excavated segments through the enclosure ditch revealed five fills, including evidence of slumping from the outside edge (silty sand fill (172)), possibly indicating the original presence of an earthwork bank (Fig. 6). No finds were recovered from the enclosure ditch, although its close spatial association with Enclosures 1 and 2 strongly suggests an Early Bronze Age date. No internal features were present within the exposed part of Enclosure 3.

Enclosure 4, located towards the north-east corner of the site, was alone in being defined by a double-ditched boundary, albeit only partially exposed (Fig. 2). The outer ditch was the more substantial of the two, with an extrapolated diameter of some 27m (Fig. 7). Four excavated sections revealed a broad, U-shaped feature approximately 2.4m wide by 0.8m deep, containing three brown, sandy gravel fills; no finds were present. An environmental bulk sample from the ditch's basal fill identified only small indeterminate charcoal fragments and modern rootlets.

The inner ditch was smaller, being just 0.5m wide by 0.5m deep, with an extrapolated diameter of some 14m (Fig. 7). Four excavated sections revealed a shallow, U-shaped profile containing a single sandy fill devoid of cultural material. Once again, environmental sampling of this material yielded only sparse indeterminate charcoal fragments and modern rootlets.

Despite lacking finds and internal features, the boundaries forming Enclosure 4 are thought to have been contemporary with other circular enclosures within the site. Comparable Bronze Age ring ditches have been excavated at a number of sites, including Tucklesholme Farm, Staffordshire (Ferris and Buteux 1992) and Biddenham Loop, Bedfordshire (Luke 2008, 96 and 99, fig. 6.2 and table 6.3).

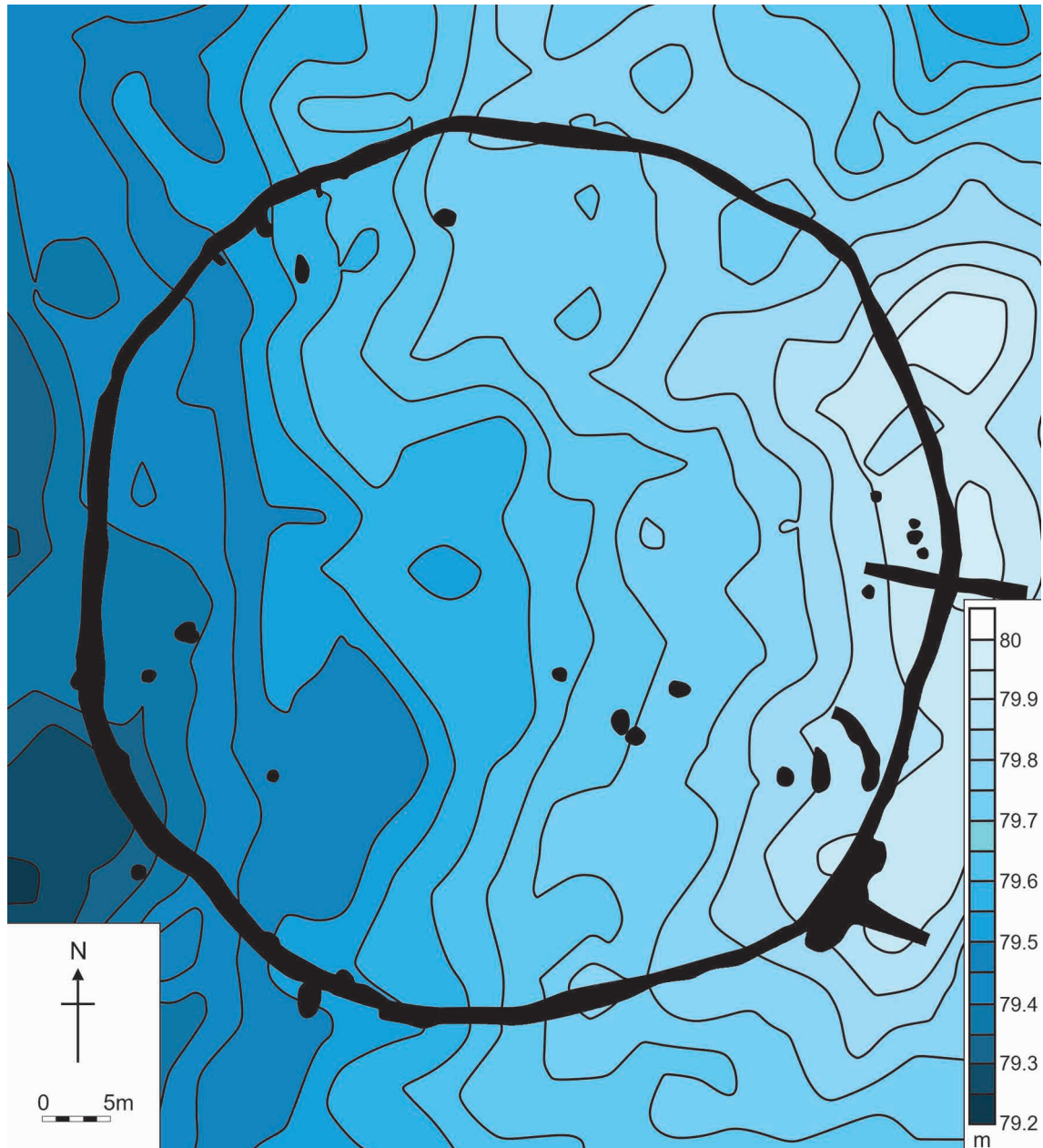


Fig. 4 Enclosure 2: topographical plan

It is clear that funerary and associated activities of this period were conducted across a fairly wide area at the confluence of the Rivers Tean and Dove. It is notable that no pyre site associated with the cremation ritual was identified and it may, therefore, be located elsewhere within the immediate landscape; perhaps upslope to the north-west.

THE CREMATION BURIALS *Harriet Jacklin with Antony Mustchin*

Twelve cremation burials were identified within the site. Eight of these (Cremation Burials 1–8) – including two urned examples – were present within the circuit of Enclosure 1, while a single un-urned cremation burial (no. 9) was encircled by Enclosure 2, all within the northern half of the site (Figs 2–3 and 5). In addition to these, three unenclosed cremation burials (nos 10–12), not associated with any form of monument, formed a tight cluster within the central southern half of the site (contained by [200], [202], and [204]) (Fig. 2).

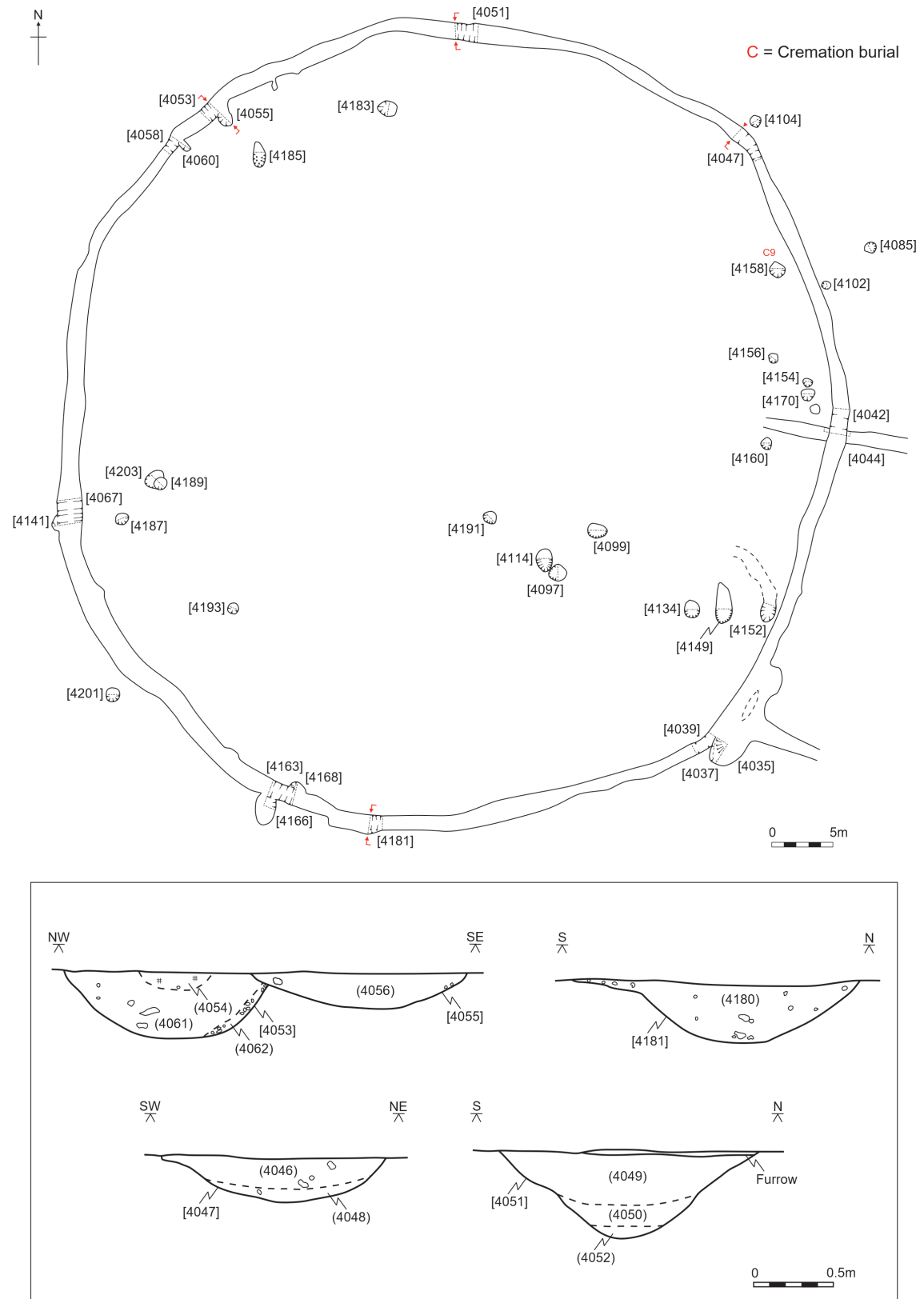


Fig. 5 Enclosure 2: plan and selected ditch sections

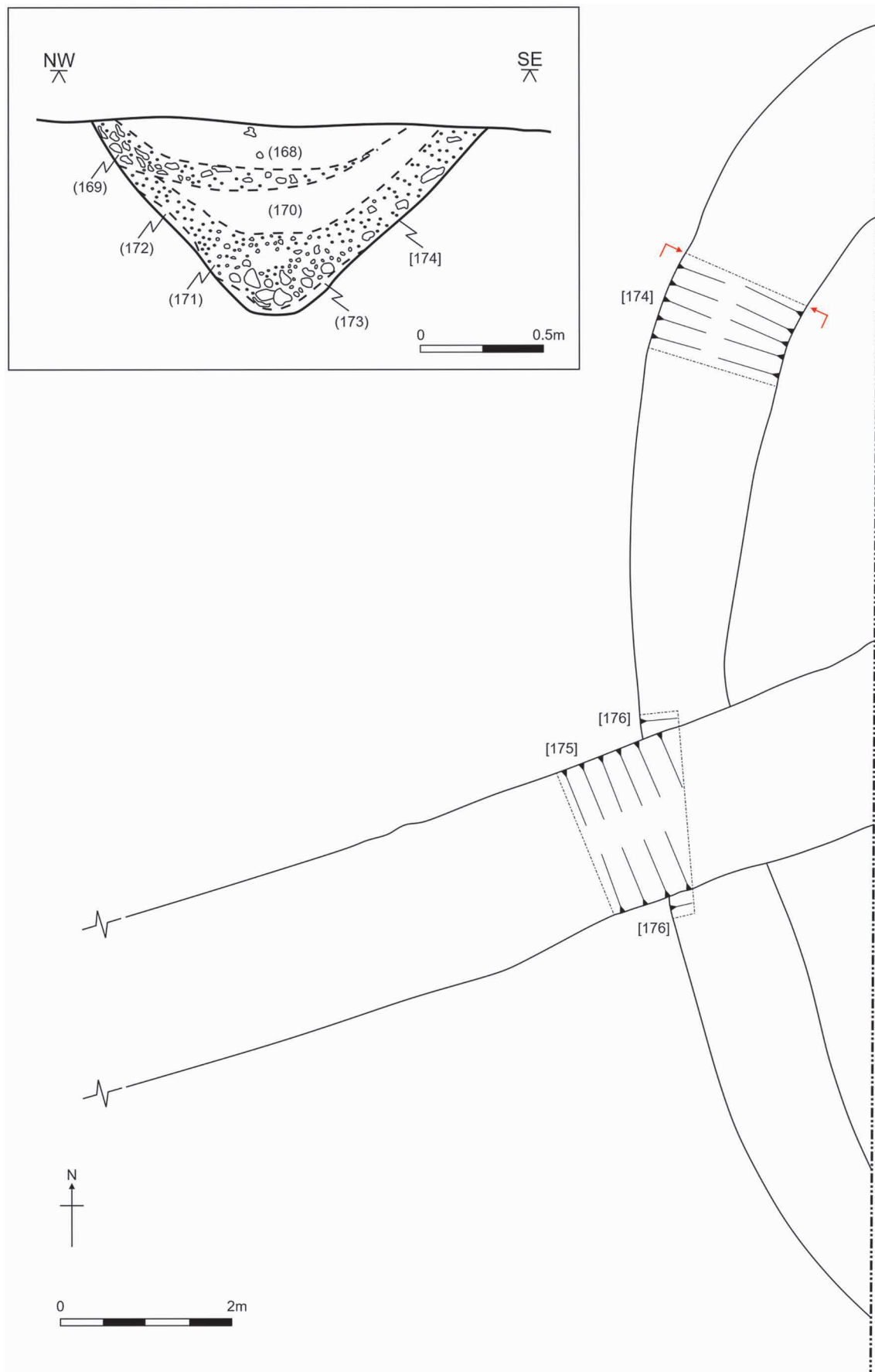


Fig. 6 Enclosure 3: plan and ditch section

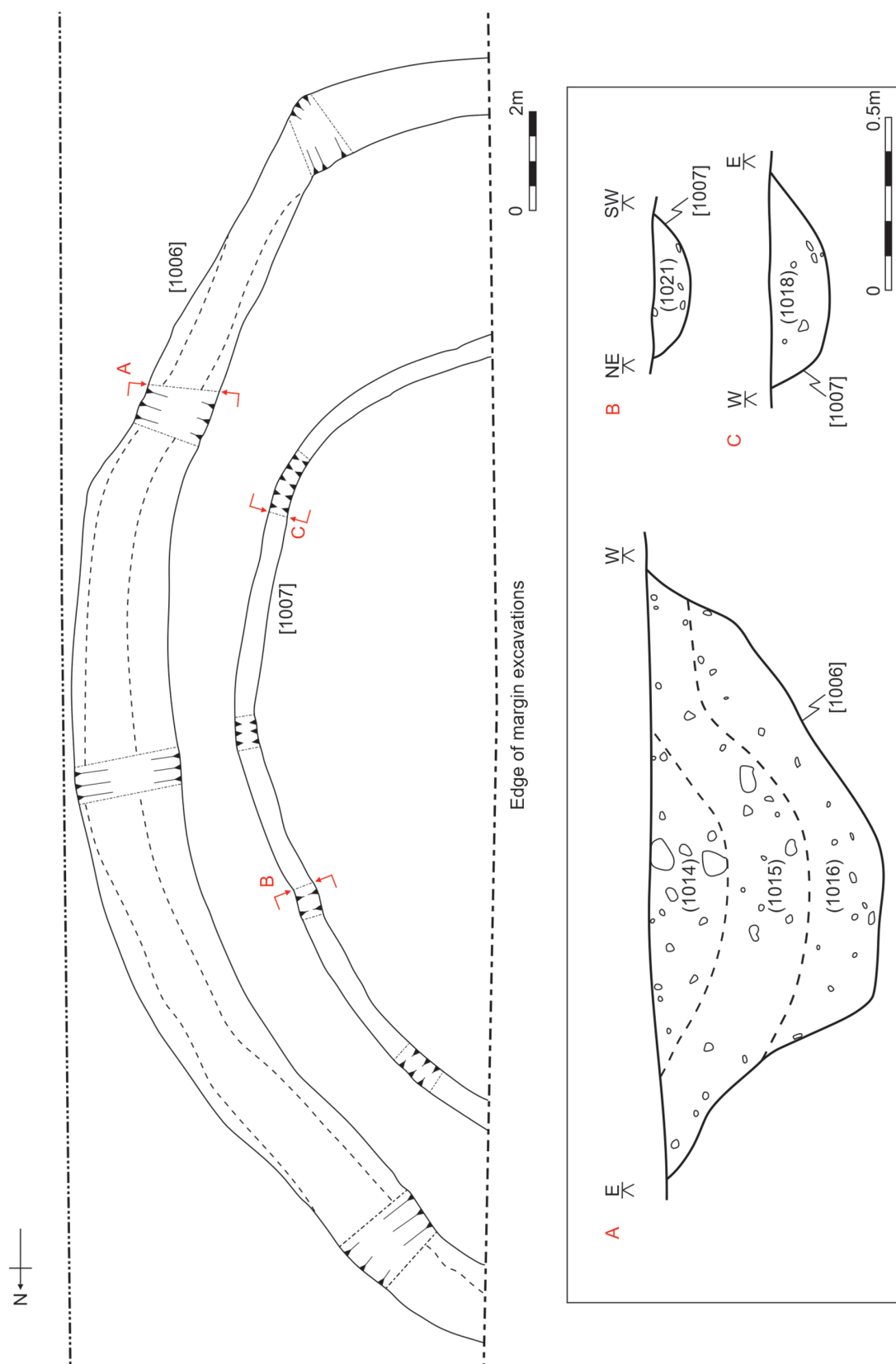


Fig. 7 Enclosure 4: plan and selected ditch sections

Analytical method

Analysis of the cremated bone included assessment of age, sex, and pathologies. Cranial and post-cranial metrics, non-metric traits, and stature were not recorded due to the high level of bone fragmentation. All cremated material was processed and divided into fragment sizes of 0<2mm, 2<5mm, 5<10mm, and 10+mm to aid analysis, after McKinley and Roberts (1993). Other measurements and observations were undertaken with reference to Bass (1995), Brickley and McKinley (2004), Brothwell (1981), Buikstra and Ubelaker (1994), McKinley (1994; 2000 a and b), and McKinley and Bond (2001). All fusion data within this report are based on Scheuer and Black (2000).

Cremation Burials 1–8

Cremation Burial 1 was that of an adolescent/adult (18–50 years) of indeterminate sex. Age at death was based on epiphysial fusion and cranial suture closure. The cremation deposit was excavated in spits, revealing a random distribution of body parts (totalling 1679g), with no duplication of skeletal elements. No pathologies were seen. Most of the material forming Cremation Burial 1 was fully oxidised, having been exposed to temperatures in excess of 600 degrees Celsius. The presence of most of the cranium, upper and lower limbs, including hand and foot bones, indicates a degree of care taken during the collection of remains for interment.

The cremation was contained by a badly damaged Collared Urn (206 sherds; 1,007g) which collapsed during excavation (see below *The Pottery*). The urn (Vessel 1) had been placed in an upright position, upon a large flat stone at the base of a shallow U-shaped cut ([117]), some 0.3m in diameter and 0.4m deep (Fig. 3). The burial was accompanied by a calcined plano-convex flint knife on a triangular-sectioned blade, while the presence of charred grass stems and charcoal flecks indicates the incorporation of spent fuel debris from the pyre.

Cremation Burial 2 was that of a young adult male (21–25 years). The sex of the individual was based on cranial and pelvic morphology. Age at death was based on epiphysial fusion, cranial suture closure and dental morphology. Once again, the majority of cranial bones, upper and lower long bones and elements of the hands and feet were represented. However, the remains (1338g) included a disproportionate number of elements from the right side of the body, perhaps indicating that the left-hand side had been exposed to higher temperatures during the cremation process. Most of the surviving bone fragments were fully oxidised.

The cremation was contained by a near-complete Collared Urn, the rim of which had been damaged by ploughing (Vessel 2; see *The Pottery*). Excavation in spits found no deliberate placement of body parts within the vessel. The latter had been set in an upright position within a 0.6m-deep cut ([118]), some 0.75m in diameter (Fig. 3). Accompanying the cremated remains were a small calcined flint flake and a fragment of copper alloy pin shaft, in addition to indeterminate charcoal fragments.

Cremation Burial 3 was contained by a shallow, heavily truncated cut ([112]) (Fig. 3). The surviving bone (144g) belonged to a middle-aged individual (36–50 years) of indeterminate sex, who suffered from osteoarthritis affecting the lower spine. Age at death was based on epiphysial fusion and cranial suture closure, assessment of the auricular surface, and age-related changes. The bone was fully oxidised and there was no duplication of elements. The deposit included rim sherds from a Collared Urn, in addition to pyre debris, although whether the cremation was originally contained by a vessel remains uncertain; sherds from the same vessel (Vessel 3) were present within Cremation Burials 5–8 (see below). Those from Cremation Burial 3 included four sherds decorated with whipped cord maggot motifs.

Cremation Burial 4 was contained by a heavily truncated cut ([119]), just 0.1m deep (Fig. 3). The cremated remains (42g) were those of an adolescent or adult (13–50 years) of indeterminate sex. Estimation of age at death was based on the size and width of recovered bone fragments. Most of the bone was fully oxidised. No pottery or other finds were present, although indeterminate charcoal lumps probably represent fuel debris from the pyre.

Cremation Burial 5 was also contained by a heavily truncated cut ([116]) (Fig. 3). The surviving bone (160g) was that of an adolescent/adult (15–50 years), accompanied by a small quantity of pottery – part of Vessel 3 – and pyre debris, including charred grass stems. Age at death was based

on epiphysal fusion. The majority of the bone was fully oxidised. The pottery (20 sherds; 115g) included the whipped-cord decorated rim of a Collared Urn and two other decorated sherds. The rim sherd indicated a vessel diameter of 220mm. A fragment from a sandstone object, possibly a whetstone, was also recovered.

Cremation Burial 6 (cut [115]; Fig. 3) was that of a middle-aged adult (36–50 years) of indeterminate sex. Age at death was based on cranial suture closure, size and width of bone fragments, and age-related changes. The remains (21g), most of which were fully oxidised, displayed evidence of pathological modification linked to osteoarthritis of the lower spine. The cremation was accompanied by six sherds (53g) of pottery (part of Vessel 3), in addition to a broken fragment of a plano-convex whetstone. Pyre debris was present in the form of charred grass stems and oak charcoal, while a fragment of hazelnut shell was also recovered.

The pottery included three decorated sherds from a rim collar displaying whipped cord maggot motifs. One had a thinner whipped cord motif on the internal surface. Once again, a vessel diameter of 220mm was indicated.

Cremation Burial 7 (cut [114]; Fig. 3) was another very poorly preserved deposit. The remains (just 14g) belonged to an adolescent or adult (13–50 years), once again accompanied by a small amount of pottery (part of Vessel 3). Bone was fully oxidised and there was no duplication of skeletal elements. Age at death was based on size and width of bone fragments. Pyre material was represented by small quantities of indeterminate charcoal.

The pottery from [114] comprised seven sherds (50g), including six sherds decorated with whipped cord maggot motifs. Two sherds displayed thinner whipped cord motifs on the internal surface, as identified in Cremation Burial 6.

Cremation Burial 8 was contained by a truncated cut ([113]), surviving to a depth of 0.3m (Fig. 3). The deposit was very poorly preserved. Environmental sampling recovered flakes of cremated human bone together with oak charcoal fragments, although there was insufficient bone to enable any analysis. Rim sherds from Vessel 3 were again present. Cross-joining rim sherds indicate that a continuous thin whipped-cord motif ran around the inside of the vessel about 15mm below the top.

Cremation Burial 9, close to the eastern internal edge of Enclosure 2 (Fig. 5), was a single un-urned burial, contained within shallow pit [4158], measuring 1m in diameter by just 0.15m deep. The cremated material (weighing 270g) was that of a young child aged approximately four years. Age at death was based on dental eruption and morphology, bone morphology and size. There was no duplication of skeletal elements. A fragment of left orbit displayed signs of cribra orbitalia, denoting pathological change linked to iron deficiency anaemia, but also indicative of general ill-health, blood-loss through traumatic injury, chronic disease, and biological stress. Most of the bone was fully oxidised. The human remains were accompanied by calcined sheep/goat bones, additional examples of which were recovered from fill (4157), overlying the cremation. It is possible that the animal bone represents a token deposit cremated alongside the deceased and gathered together with the human bone for interment (McKinley 1997, 132).

Cremation Burials 10–12, a closely spaced cluster of three un-enclosed cremation burials, were identified approximately 70m south of Enclosure 2 (Fig. 2). Each was contained by a shallow bowl-like cut ([200], [202], and [204]), some 0.7m in diameter and between 0.25m and 0.5m deep. Severe truncation meant that only the basal profiles of these features survived. Despite their poor state of preservation, all three burials produced pottery sherds derived from Early Bronze Age grog-tempered vessels: Cremation Burial 10 within pit [200] contained a single rim sherd (65g); Cremation Burial 11 (pit [202]) contained 16 sherds (126g) from the base of a vessel; and Cremation Burial 12 (pit [204]) contained four decorated rim sherds (22g). All three burials produced cremated bone, although only small quantities were present within [202] and [204], while sparse indeterminate charcoal was recovered through environmental bulk sampling. While very little can be said regarding these burials, it is clear that Early Bronze Age funerary activity extended well beyond the area defined by the ring ditch enclosures.

Cremation Burial 10 [200] was that of an adolescent/adult (18–50 years) of indeterminate sex. Age at death was based on bone morphology and size. Most of the bone was fully oxidised. The cremated bone (42g) included no duplicated elements and displayed no signs of pathological modification. Accompanying pottery comprised a single upright rim sherd (65g) in a grog-tempered Bronze Age fabric. The rim sherd indicated a vessel diameter of 260mm.

Cremation Burial 11 [202] yielded just 4g of mostly fully oxidised bone, again belonging to an adolescent/adult (18–50 years) of indeterminate sex. Age at death was based on bone morphology and size. The age profile of these remains raises the possibility that they are associated with Cremation Burial 10 and do not, in fact, represent a burial in their own right. Sixteen undecorated sherds (126g) from the base of a grog-tempered vessel were present within [202].

Cremation Burial 12 [204] yielded only a trace amount of unidentifiable bone. Pottery from this context constituted four sherds (22g) from the upright rim of a grog-tempered vessel, including fingernail-impressed decoration.

THE POTTERY *Nicholas Cooper*

A total of 463 Bronze Age sherds (7,617g) were retrieved during the archaeological interventions. The majority of these (by sherd count and weight) represented three vessels derived from seven contexts.

The pottery was analysed by form and fabric with reference to the Prehistoric Ceramics Research Group guidelines (PCRG 2010) and the Leicestershire Prehistoric Pottery Fabric Series (Marsden *et al.* 2009). Fabrics were defined with the aid of a binocular microscope and quantified by sherd count and weight.

VESSEL 1

A badly damaged Collared Urn, much of which was missing, was recovered from Cremation Burial 1 ([117]; Fig. 8). Cremation Vessel 1 (206 sherds plus small fragments; 1,007g) had an estimated rim diameter of c. 200mm and was coil-built in a grog-tempered fabric (inclusion range 1–3mm). The collar was decorated around the exterior with whipped cord ‘maggot’ motifs arranged in a herringbone pattern, running left to right. Five cross-joining rim sherds, comprising about 30 per cent of the vessel, were accompanied by two concave sherds decorated in a similar manner, which may have formed a cavetto zone below the collar. This suggests a vessel of tri-partite form and is supported by the occurrence of plain lower body sherds with a carination at the top, immediately below the decorated cavetto zone. Excavation records indicate an original vessel height of 350mm. In terms of size, form and decoration this vessel was similar to one from Barrow 2 at Cossington, Leicestershire, which contained an adult cremation burial radiocarbon dated to 1880–1630 cal BC (Allen 2008, 30, fig. 33.8).

The upper part of the vessel was oxidised orange throughout the body, whilst the lower part was reduced dark grey (or retained its carbonaceous content) across the inner margin and surface of the vessel which was also coated in burnt residue.

VESSEL 2

A near complete Collared Urn was recovered from Cremation Burial 2 ([118]; Fig. 9; Plate 1)

The vessel (50 sherds; 5,046g) was tripartite in form and near complete; the top part of the collar was missing. Vessel height was at least 350mm, with a girth of 290mm and a basal diameter of 150mm. The thickness of the vessel body was 15mm. The urn was in a grog-tempered fabric decorated across the cavetto zone and collar with incised diagonal strokes arranged in two rows of herringbone, continued vertically across the two upper zones of the vessel. While close parallels are difficult to draw, the vessel was similar in form and decoration to one from Sutton in Suffolk (Gibson 2002, fig. 46.3). The incised herringbone pattern across two zones is also paralleled at Conegre Farm (Thurgarton) in the Trent Valley of Nottinghamshire (Allen *et al.* 1987, 192, fig. 10.54).

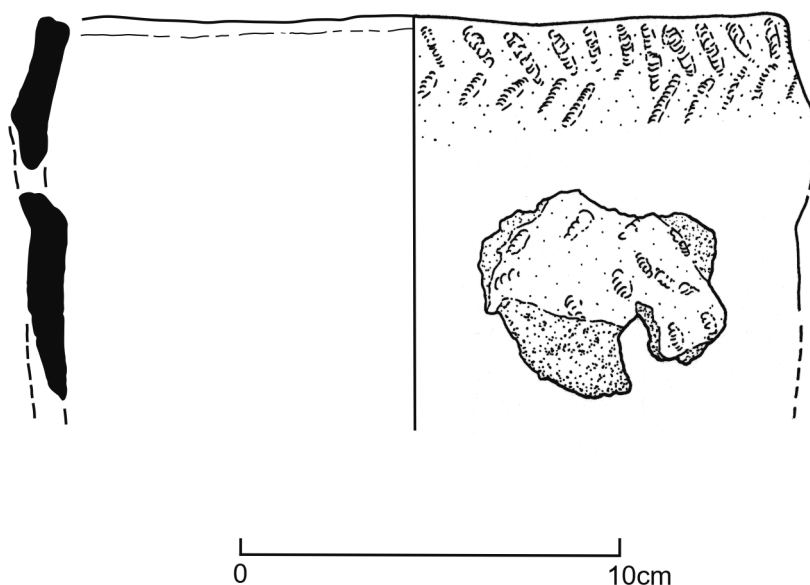


Fig. 8 Vessel 1

VESSEL 3

Fragments of a single Collared Urn were recovered from Cremation Burials 3 and 5–8, all within the circuit of Enclosure 1. The grog-tempered sherds (inclusion range 1–3mm) belonged to the upper portion of the vessel, which may have been of bi-partite form with a whipped-cord decorated collar rim (Fig. 10). The vessel's rim was flat and slightly inturned, with an estimated diameter of 220mm. The external surface, margin and core were oxidised (light brown/orange), while the internal margin was reduced and dark grey in colour. Vessel form is not easy to parallel from the collar rim alone, but the whipped-cord decoration is typical of the Collared Urn tradition. Fifty-three sherds of this vessel came from Cremation Burial 3, 20 sherds from Cremation Burial 5, six sherds from Cremation Burial 6, and seven sherds from both Cremation Burials 7 and 8.

REMAINING SHERDS

The remaining Early Bronze Age assemblage (114 sherds weighing 961g) comprised thick-bodied, mostly undecorated sherds. These were grog-tempered and may in part represent the fragmentary remains of Collared Urns from disturbed cremation burials (or cremation-related deposits), being similar to those outlined above. However, the majority came from pits within Enclosure 2, while additional sherds were present within pit [4085] to the immediate north-east of this enclosure. A few sherds were also found within segment [4053] of the enclosure's perimeter ditch. Three unenclosed cremation burials (nos 10–12) within the southern half of the site were also found to contain small pottery groups.

Vessel fragments from Cremation Burials 10, 11, and 12 were generally found in association with small deposits of cremated human bone. Sherds from Burial 12 included two fragments from upright rims and one with fingernail-impressed decoration, and may represent parts of a single, poorly made vessel. All occurred in a reduced, grey fabric. The remainder of the assemblage, all of which occurred in a grog-tempered fabric, came from features in and around Enclosure 2. The sherds were between 10mm and 15mm thick and displayed a poor finish consistent with Collared Urns. However, recovered rim sherds were similar to other forms of Bronze Age cremation vessels, including examples from Cossington in Leicestershire, found alongside Collared Urns (Allen 2008). Pit [4114] yielded two sherds from a tapering upright rim, bevelled on the inside, with a pair of horizontal whipped cord lined beneath (Vessel 6; Plate 2). The form and decoration of these sherds was paralleled by a vessel at Cossington, with an associated radiocarbon date range of 1740–1530 cal BC (Allen 2008, 31, table 2, fig. 33.12).

Adjacent pit [4097] yielded the only other decorated material (Vessel 4). This comprised a tapered rim sherd with internal bevel, the exterior surface of which was decorated with a series of vertical slashes and a single horizontal incised line below the rim (Fig. 11; Plate 3). A plain upright rim including a faint applied cordon (Vessel 5; Fig. 11) was also present within this feature. The rim

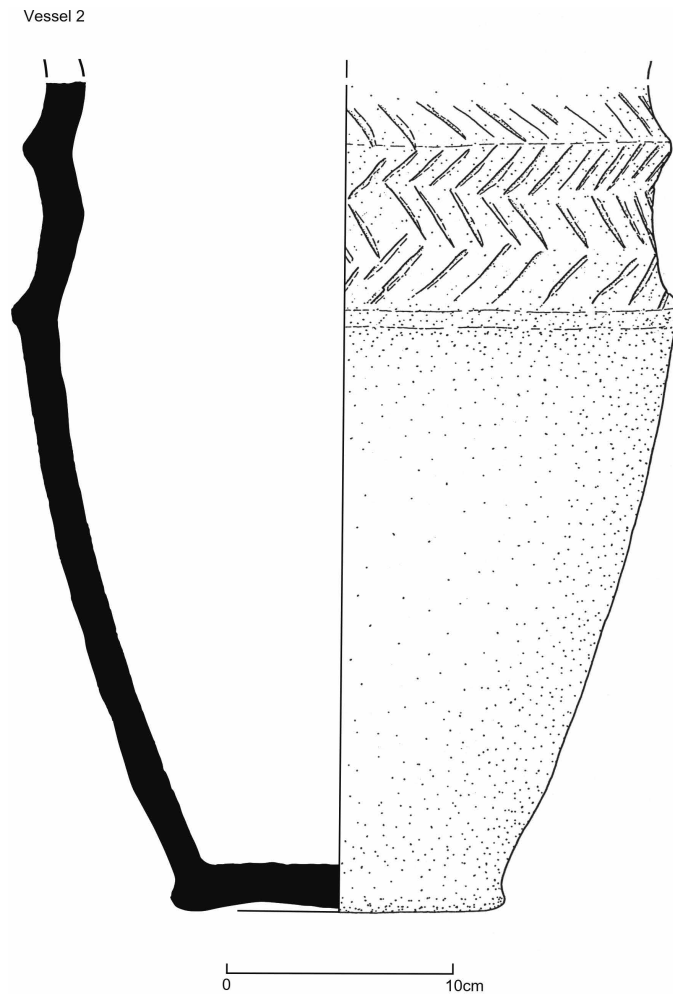


Fig. 9 Vessel 2

form and decoration of Vessel 4 is paralleled by a series of cordoned urns from a cremation cemetery at Eye Kettleby, near Melton Mowbray (Leicestershire) (Woodward and Marsden 2011, 73, fig. 62.24 – Group 8), whilst the plain rim with cordon of Vessel 5 resembles a vessel from Group 3a at the same cemetery (ibid. fig. 61.14). Associated radiocarbon dates suggested that the Eye Kettleby groups were deposited between 1610–1500 cal BC (ibid. 76), placing them at the Early/Middle Bronze Age transition.

A single body sherd decorated with a ‘maggot’ impression, identical to those found in association with Cremation Burial 6 (Enclosure 1), was also recovered.

OTHER FINDS *Lynden Cooper*

Struck Flint

A very small assemblage of struck flint was recovered (Table 1). With the exception of pieces found in association with Early Bronze Age pottery (described below), the assemblage could be assigned only a broad Neolithic/Bronze Age date.



Plate 1 Vessel 2

A plano-convex knife on a triangular-sectioned blade (length 52mm; width 19mm) was found in association with Cremation Burial 1 (fill (187)). The piece displayed continuous retouch along its margins, mostly short removals but somewhat longer at the distal end. The blade was calcined to the point of cracking, while the ventral face appeared vitrified, perhaps relating to its position within the cremation pyre.

A small calcined flake (length 10mm; width 7mm) was present within fill (120) of Vessel 2 (Cremation Burial 2). A secondary flake from pit [4085] and a tertiary flake from pit [4097] were also found in association with Early Bronze Age pottery.

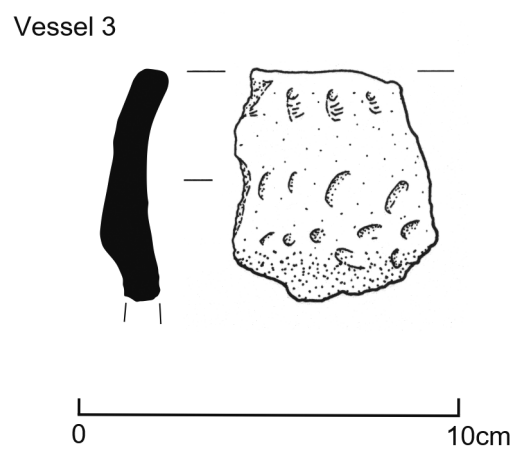


Fig. 10 Vessel 3: decorated rim sherd from Cremation Burial 5



Plate 2 Vessel 6

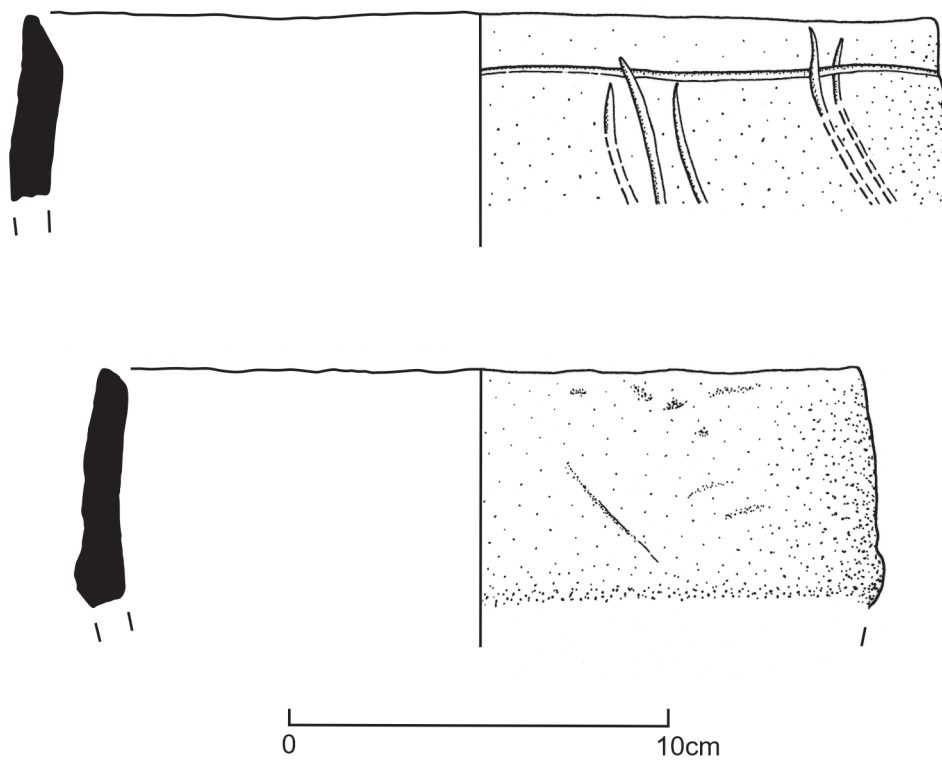


Fig. 11 Vessels 4 (above) and 5 (below)



Plate 3 Vessel 4

TABLE 1 Summary of the struck flint assemblage

Feature/Cremation Burial	Context	No. of Pieces	Description
Cremation Burial 2	120	1	Calcined flake
Cremation Burial 1	187	1	Plano-convex knife
Ditch segment [3098]	3097	1	Broken end scraper with lateral retouch
Enclosure 1 ditch segment [4007]	4005	1	Bladelet fragment
Pit [4085]	4084	1	Secondary flake
Pit [4097]	4096	1	Tertiary flake
Pit [4134]	4133	1	Secondary flake

Coarse Stone

A short length of whetstone was found in association with Cremation Burial 6 (fill (125)). The piece was manufactured from a fine-grained sandstone, was plano-convex in section, and was broken at both ends (broken length 57mm; width 40mm; thickness 10mm).

A piece of possible whetstone, again made from fine-grained sandstone, was present within fill (124) (Cremation Burial 5). The piece was plano-convex in section with a broken length of just 20mm (broken width 8mm; thickness 3mm).

An irregularly shaped fragment of shale was found within backfill (121), surrounding Vessel 2 (Cremation Burial 2). The piece was completely laminated (length 88mm; width 50mm; thickness 20mm).

Copper Alloy Object

A fragment of possible copper alloy pin was found within Cremation Burial 2, accompanying the cremated remains. The piece was a tapering shaft fragment of circular section (broken length 12mm; maximum width 3mm). It is possible that the pin formed part of a dress item or other personal object. Cremation Burial 2 was that of a young adult male (21–25 years).

THE ENVIRONMENTAL EVIDENCE

Animal Bone Jennifer Browning

The Early Bronze Age contexts produced a small assemblage of calcined animal bone. A single cattle (*Bos* sp.) tooth was also recovered from an undated pit to the south of Enclosure 2.

The Early Bronze Age assemblage was entirely associated with Cremation Burial 9 (contexts (4157) and (4207)). The material was generally in a poor state of preservation, although this is not unusual for sites with sand and gravel geology. It is significant that only calcined specimens and tooth enamel had survived, as these tend to be more durable than unburnt bones. Calcification typically occurs at temperatures exceeding 700 degrees Celsius, which destroys the organic component of the bone and consolidates the mineral element (Gilchrist and Mytum 1986, 30). Although characterised by shrinkage, warping and fragmentation, its lack of porosity can aid the survival of calcined bone.

Grave backfill (4157) and cremation deposit (4207) (Cremation Burial 9) yielded sheep/goat (*Ovis aries/Capra hircus*) bones, constituting a fused proximal calcaneum and a fused distal tibia, both parts of the hind leg. It is possible that these belong to a token deposit – perhaps a joint of meat – cremated alongside the deceased and collected with the human bone for interment.

Environmental samples Anita Radini and Angela Monckton

Bulk environmental soil samples were taken from a wide range of contexts, including enclosure boundary ditch fills and deposits associated with the twelve Early Bronze Age cremation burials. Full reporting of the environmental assemblage, including raw data, is presented in the site report (Radini and Monckton 2012).

Charred plant remains were sparse in all the samples. Four of the cremation burials (nos 1, 5, 6, and 9) contained a few charred fragments of grass stem which may suggest that grass was used as kindling during the cremation process or was growing at the pyre site(s). A single fragment of hazel (*Corylus avellana*) nutshell in Cremation Burial 6 may have been incidental or perhaps

included because it was burnt in the pyre. Oak (*Quercus* sp.) charcoal fragments were identified from Cremation Burials 6 and 8, while hazel, oak, and willow (*Salix* sp.) were represented in Cremation Burial 9, suggesting that these species were used as fuelwood for cremation. Oak, in particular, is a high quality, efficient fuel wood with an average density of 550kg per cubic metre (Mytting 2015, 58).

Small quantities of charred cereals were recovered from the basal fills of enclosure ditches. Fill (4025) of [4023] (Enclosure 1; Fig. 3) yielded individual grains of wheat (*Triticum* spp.) and barley (*Hordeum vulgare*), while fill (4062) of [4053] (Enclosure 2; Fig. 5) contained a single barley grain and a single indeterminate cereal grain. It is possible that the grains relate to food offerings, although their numbers suggest little more than a general background scatter of material.

RADIOCARBON DATING DETERMINATIONS *Göran Possnert and Ingela Sundström*

As part of a targeted programme of scientific dating, carbonised material from basal fill (4062) of ditch segment [4053] (Enclosure 2) was submitted to the University of Uppsala (Sweden) for radiocarbon dating. The sample returned a calibrated date range of 1780–1610 cal BC (Table 2).

TABLE 2 Radiocarbon date

Lab No.	Sample ID	$\delta^{13}C\text{‰ VPDB}$	14C age BP
Ua-42570	Uttoxeter PC316 # (4062)	-28.0	3399 $\pm$ 33

DISCUSSION

Archaeological investigations at Uttoxeter Quarry revealed an Early Bronze Age monumental landscape comprising at least four conspicuous funerary monuments – ring-ditch enclosures – and associated cremation burials, or cremation-related deposits. A small group of the latter was also present to the south of the ring ditches. Funerary activity was located on a low-lying gravel terrace at the confluence of the Rivers Tean and Dove, a pattern of landscape utilisation encountered elsewhere in the region and one which almost certainly held considerable significance in the minds of the contemporary Bronze Age population. The monumental site superseded Neolithic activity, albeit on a more modest scale, thus possibly representing a broad continuity of prehistoric ritual/ceremonial practice within this distinctive landscape setting.

Landscape and Cultural context

The location of the Early Bronze Age site at the confluence of two rivers is of interest. It is certainly well recorded throughout Britain that Neolithic and Bronze Age funerary and other monuments were often positioned adjacent to ‘watery’ locations (cf. Finn 2011; Wigley 2017; Hogan 2013; Daniel 2009; Malim 1993), but there seems to be something of increased landscape and perhaps ritual importance at the point that one river actually joins onto another. Some 20km to the south of Uttoxeter Quarry is the significant Catholme ceremonial complex, positioned at the confluence of the rivers Trent and Tame (Bain *et al.* 2005). Here a collection of Neolithic and Bronze Age monuments, including a henge, a so-called ‘sun-burst’ monument and several ring-ditches, cluster together on a raised terrace above the point where the rivers merge. In and around the site are further burial monuments, cairns and ring-ditches signifying funerary and ritual activities in a specific landscape setting associated with the rivers (Coates and Richmond 2013; Garwood 2007, 2011; Hewson 2006; Martin and Allen 2001; Nielson 2002). Indeed, the Catholme landscape came to be known as the area ‘where rivers meet’ (Buteux and Chapman 2009). There are certainly significant comparisons between the Catholme and Uttoxeter Quarry landscapes with regard to their utilisation during Neolithic and Bronze Age times.

Although Early Bronze Age belief systems pertaining to water are difficult to qualify, the religious or otherwise cultural significance of watery sites, including wetlands, is one which appears to have persisted into the Middle and Late Bronze Age in Britain, with the revival of ‘water cults’ and an increased deposition of metalwork hoards into lakes and rivers (Bradley 1990) (cited in Brown 2008, 15). On this basis, it is tempting to apply a wholly sacred context to the location of the Uttoxeter Quarry site and its monuments, close to the confluence of two rivers and their floodplains. However, while the site’s funerary character is indisputable, the act of burial is not always associated with any form of religious conviction and need not occur in order to show reverence to the deceased or

their deity(s) (Taylor 2001, 35–6). It could be argued, therefore, that the site and its monuments also served a more prosaic function (at least in part), perhaps emphasising a boundary or similar landscape ‘marker’.

The function of prehistoric monuments as territorial markers has received considerable academic attention (e.g. Spratt 1991). In Southern Britain, for example, Neolithic causewayed enclosures are often seen to mark boundaries between different types of environment, including floodplains and higher, drier ground (Darvill 2016, 10). A similar pattern is outlined by Malim (2000, 81), who sees a regular distribution of cursus monuments along the Great Ouse Valley as emphasising a tribal boundary, otherwise marked by the river itself (cited in Abrams 2010, 49). In the Ivel Valley, south of Biggleswade (Bedfordshire), a Neolithic cursus became the focus of Bronze Age barrow building, primarily clustered around one end of the earlier earthwork (ibid. 46), and it is possible that both monument types served as landscape markers associated with social and/or political boundaries. Indeed, the role of barrows as territorial markers has been much discussed, notably by Fleming (1971) in his assessment of Bronze Age Wessex (cited in Halsted 2011, 109). It is not unreasonable, therefore, to view the Uttoxeter Quarry site and its enclosures as serving a similar function. The Rivers Tean and Dove may well have helped to define local or regional patterns of land tenure, possibly representing the holdings of specific social or kinship groups.

An Inherited Landscape?

Continuity of landscape use, specifically between the Neolithic and Early Bronze Age, is another interesting theme. While the ritual or otherwise special nature of the Middle Neolithic pits at the site remains uncertain, it is tempting to view the Early Bronze Age funerary monuments as building upon an established pattern of prehistoric land use. Clear relationships between Bronze Age and Neolithic monuments are recorded at other southern British sites, with the best-known regional example being the Catholme Ceremonial Complex (Buteux and Chapman 2009). This impressive grouping of monuments incorporates various phases of ‘symbolic and ceremonial activity’ (Chapman *et al.* 2010, 135). Constituent features include a woodhenge, a probable cursus, a multi-phase ‘sunburst’ circle, and radiating lines of pits, as well as a very large ring ditch and several later pit-alignments (Bain *et al.* 2006; Buteux and Chapman 2009, 7). Indeed, many Bronze Age cemeteries and graves have been discovered close to earlier monuments (cf. Bradley 1998, 146). In her assessment of patterns and themes relating to the Raunds Area landscape (Northamptonshire), Harding (2007, 38) noted the construction of at least 20 Bronze Age barrows within the confines of an earlier Neolithic complex, while a Neolithic and Bronze Age mortuary complex was also recorded at the Bunyan Centre (Bedfordshire), south of the River Great Ouse (Steadman 1999, 9ff). Further afield, a sequence of monuments including a Neolithic causewayed enclosure and Bronze Age barrows was excavated at Lodge Farm, St Osyth (Essex) (Germany 2007). An Early Bronze Age pond barrow at Lodge Farm was situated within the circuit of the earlier enclosure and acted as a focus for ritual and funerary activity (ibid.). While the site under investigation here cannot boast any major Neolithic element, severe truncation may have caused the loss of evidence.

Underlying reasons behind the targeting of earlier monuments by Bronze Age builders have been widely discussed. Harding (2007, 38) suggests a ‘continuity of tradition’, albeit indirect, whereby later monuments are seen to commemorate an ‘established set of meanings’, or alternatively, the creation of tradition intended to legitimise a new social order through the adoption and reworking of ancestral landscapes. Similar themes are discussed by Bradley (1998, 146) and Jones (1986, 68), who also sees monumental landscapes and their ancestral links as a means by which to exert centralised control over the wider population. Certainly, some form of perceived ancestral connexion is commonly cited.

The Early Bronze Age Enclosures

The funerary landscape of the Early Bronze Age at Uttoxeter Quarry was characterised by four substantial ring-ditch enclosures, two of which were only partially exposed. The enclosures were circular in plan and ranged in diameter between *c.* 25m (extrapolated) and 65m. They occupied an elevated gravel terrace overlooking the confluence of the Rivers Tean and Dove, and would have constituted conspicuous monuments within the Early Bronze Age landscape. Two of the enclosures (nos 1 and 3) may have included earthwork banks on their exterior perimeter, indicated by slumped ditch fills, although the evidence is rather insubstantial; no evidence of internal mounds was seen. While the enclosures do not appear to represent the remains of barrows, it is possible that any

associated earthworks have been denuded by ploughing; much of the surviving archaeology displayed signs of considerable truncation. The presence of external banks – if genuine – is mirrored by a hengiform monument at the Bunyan Centre (Bedford), while a D-shaped enclosure with an internal bank at Eye Kettleby (Leicestershire) was part of an Early Bronze Age funerary/ceremonial site (Finn 2011, 34; Steadman 1999, 9). An internal bank was also inferred in association with Bronze Age ring ditches at Biddenham Loop, Bedfordshire (Luke 2008, 102). The hengiform monument and Biddenham Loop ring ditches had internal diameters of between 13m and approximately 26m, very much within the lower part of the range displayed by the Uttoxeter enclosures.

Three of the Uttoxeter Quarry enclosures were defined by individual perimeter ditches, all of which (where fully exposed) lacked entrance causeways, while Enclosure 4 incorporated a double-ditched boundary. Other examples of double-ditched Bronze Age monuments include Barrow 2 at Cossington (Leicestershire) and ring ditches L56, L245, and L270 at Biddenham Loop (Luke 2008, 96 and 99, fig. 6.2, tables 6.2–3; Thomas 2008). While this difference in style is interesting, there is little evidence to suggest any chronological variation; the Uttoxeter Quarry enclosures are believed to be broadly contemporary. The same is suggested for a group of three unenclosed cremation burials in the south of the excavation. The only finds from the ring ditches were a Bronze Age flint bladelet from Enclosure 1 and four sherds of Collared Urn from Enclosure 2, consistent with other pottery groups from the site.

Internal features comprised pits, including dated examples within Enclosure 2, and a possible four-post structure within the western circuit of Enclosure 1. Although the latter may represent some form of funerary structure, perhaps a small building or platform, a lack of finds makes any association with the surrounding enclosure impossible to prove. Finds from the dated pits include modest pottery groups, while unstratified fragments of cremated bone and grog-tempered pottery encountered during soil stripping in the area of pits [4134] and [4154] suggests that these may represent heavily truncated burials. Their position strongly suggests that the dated pits were associated with the funerary rite, most likely the act of burial.

The Cremation Burials

Twelve cremation burials were identified, eight of which (including two urned examples) were encircled by Enclosure 1. A single un-urned cremation burial was present within Enclosure 2. Three unenclosed cremation burials or cremation-related deposits, forming a tightly spaced cluster, were also identified in the central southern half of the site. It is highly likely that additional funerary evidence had been lost as a result of plough action.

As would be expected, none of the surviving cremation burials contained complete or near-complete individuals; it is extremely rare that all recoverable bone would have been collected for burial from the pyre site (McKinley 1997, 136). However, the very small quantities of bone recorded from Cremation Burials 4, 6–8, and 10–12 is itself notable. None of these burials yielded more than 42g of bone, while Cremation Burials 8 and 12 produced only trace quantities of unidentifiable fragments. *Prima facie*, the evidence would support the depletion or destruction of these deposits by ploughing, although it is equally possible that they represent ‘token’ deposits of bone, rather than true burials (cf. McKinley 2013, 154). While ‘token’ is used to describe various types of cremation-related deposit, it is generally assigned to remains weighing less than 100g or less than six per cent of the bone (by weight) that would be expected from a complete adult individual (ibid.). While it is difficult to differentiate between token deposits and disturbed burials at the current site, it is clear that the majority of features containing cremated bone were severely truncated.

Another possible token deposit was found accompanying Cremation Burial 9, the un-urned burial of a young child. Sheep/goat bones from this burial may represent a joint of meat from the hind leg, cremated alongside the individual, collected from the pyre site, and then buried with them. Animal bone is commonly occurring in Bronze Age cremations (McKinley 1997) and the remains from Uttoxeter Quarry could constitute a dedicatory offering, the remains of a meal associated with the act of cremation, or a symbolic offering of food meant to nourish the deceased (Grant 1989, 79).

Pottery accompanied ten of the Cremation Burials. Cremation Burials 1 and 2 were contained by substantially complete Collared Urns (Vessels 1 and 2), although that from Cremation Burial 1 was badly damaged. Collared Urns constitute a common type of cinerary urn utilised during the Early and Middle Bronze Age (Darvill 2003, 94–5; Gibson and Woods 1997, 126). They are found throughout Britain in bi- and tri-partite forms and are thought to have developed from Peterborough Ware (as found in the Middle Neolithic pits at the current site), particularly the Fengate style

(Gibson and Woods 1997, 126, 128). All but the smallest vessels are coil built with grog temper being a common occurrence in earlier or 'primary series' urns (Longworth 1984, 4). Whipped-cord 'maggot' impressions, as recorded from the site, are also an earlier trait, being rarer after 1400 BC, while chevron decoration (e.g. Vessel 2; Plate 1) is also more prevalent within the 'primary series' (Gibson and Woods 1997, 130, 134).

The process of burying cremated remains within an urn symbolises a suite of actions which had to be undertaken following the cremation rite, including the collection of bone at the pyre site and its curation prior to interment (Rebay-Salisbury 2010, 68). However, not all cremation-related deposits at Uttoxeter Quarry were accompanied by pottery and many of those including pottery cannot be termed 'urned' burials. Most striking is the occurrence of sherds from a single Collared Urn (Vessel 3) within five different burial deposits (nos 3 and 5–8), all found within Enclosure 1. These burials contained the partial remains of individuals, collectively aged between 15 and 50 years (where ageable), all of indeterminate sex. The occurrence of related sherds within different contexts might indicate that the burials occurred within a short space of time, with token offerings of pottery from a single, broken vessel being included with each. The clustering of these burials might further suggest their broad contemporaneity. However, it is also possible that the sherds were curated over an extended period, being kept specifically for use as part of the burial rite. A similar occurrence was recorded at Whitemoor Haye Quarry, where sherds from the same Beaker vessel were found within two separate burials (nos 4 and 5) (Hewson 2006, 105). Interestingly, the pottery from Burial 4 at Whitemoor Haye was 'fresh' in appearance, while that from Burial 5 was abraded (*ibid.*), strongly suggesting that the latter had been curated, possibly as a 'relic' (cf. Woodward 2002, 1047), solely for funerary purposes (Hewson 2006, 105).

Other grave goods from the site were scarce and relatively uninformative. These included a fragment of plano-convex whetstone from Cremation Burial 6, a fragment of possible whetstone from Burial 5, struck flint from Burials 1 and 2, and a broken length of copper alloy pin shaft, also from Burial 2. The latter may represent part of a dress pin or other small personal item. None of these finds can be used to infer the gender of the deceased, although Cremation Burial 2 was that of a young adult male, aged 21–25 years. No useful demographic analysis could be undertaken based on the site's burial population, although the lack of infant and juvenile remains is potentially of interest.

CONCLUSION

Archaeological work at Uttoxeter Quarry has revealed the existence of a significant Early Bronze Age funerary landscape at the confluence of the Rivers Tean and Dove. Encountered features appeared to constitute a development of earlier, Middle Neolithic activity at the same site, and so mirror a pattern of prehistoric landscape utilisation seen elsewhere within the region. Bronze Age and earlier monument complexes often occur within or adjacent to watery locations, including wetlands and rivers. This is an important point when considering the lack of archaeological sites and findspots previously recorded from the immediate area and highlights the archaeological potential of similar landscapes elsewhere. In addition to their funerary function, the circular enclosures may have helped to define or augment natural landscape boundaries, constituting conspicuous, culturally important monuments within the Early Bronze Age landscape, which served to emphasise the 'significance of place' within the mindset of the contemporary population (Halsted 2011, 22).

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‘GLORIOUS CONFESSOR’: THE CULT OF ST CHAD AT LICHFIELD CATHEDRAL DURING THE LATER MIDDLE AGES

DAVID LEPINE

Although he was bishop of Lichfield for less than three years, St Chad has had a profound and lasting impact on the cathedral. His cult flourished there for eight centuries, from his death in 672 until the destruction of his shrine in 1538. With multiple shrines and images, several altars, and two feast days, Chad permeated the cathedral and its liturgy and was at the heart of its identity. As patron saint of its mother church, Chad also permeated the diocese. There was an active fraternity named after him, which raised money for the cathedral fabric, and the small annual payments from each household in the diocese due to the cathedral were known as Chad’s farthings. In the later middle ages the cult was given new vigour by the benefactions of three bishops, Walter Langton (d. 1321), Robert Stretton (d. 1385), and William Heyworth (d. 1447), and its status was raised from an essentially local, diocesan cult to one observed across the whole province of Canterbury. This article seeks to show the scale, diversity, and importance of the late medieval cult at Lichfield using an interdisciplinary approach that draws on art history, liturgy, and literature as well as history. Before focusing on the late medieval period, however, it is helpful to outline the origins of the cult and its development up to 1300.

OVERVIEW OF THE CULT TO 1300

One of four brothers, all of whom became priests and two of whom became saints, Chad was of Northumbrian birth and a disciple of St Aidan. His early education took place at Lindisfarne and he later studied in Ireland. After returning to England, he became abbot of Lastingham (Yorks.) in 664 and soon afterwards bishop of York. In 669 he resigned York because his consecration had been irregular, but the same year was appointed bishop of Mercia and established his see at Lichfield. Soon after his death in 672, a cult developed there; Bede, in his *Ecclesiastical History of the English People*, written in the earlier 8th century, records that frequent miracles of healing were attributed to him.¹ The cult flourished and by the late 8th or early 9th century Chad had a shrine of outstanding artistic quality, part of which, the ‘Lichfield Angel’, has survived. During this period, the kingdom of Mercia flourished under Offa (757–96) and Coenwulf (796–821), and Lichfield was an important ecclesiastical centre, probably with its own scriptorium; indeed, it was briefly an archbishopric between 787 and 803.² Little is known, however, about either Lichfield or St Chad’s cult from this period until after the Conquest. Having been ravaged by the Vikings who overwintered at Repton (Derbs.) in 873–4, Mercia declined and ceased to be an independent kingdom in 918.³ Despite this fate and the development of new centres of power at Gloucester, Worcester, and Chester, the ‘Lichfield Angel’ shrine evidently remained intact until deliberately broken up towards the end of the 10th century. Nothing is known of its immediate successor, but the presence of the Lichfield Gospels in the cathedral from this time suggests that the cathedral remained a significant artistic and ecclesiastical centre and at the Conquest St Chad was recorded for the first time as its patron saint.

During the late 11th and 12th centuries the cult seems to have stagnated as the cathedral’s fortunes waned, and for 150 years between 1072 and 1228 Lichfield even lost its cathedral status,⁴ the see having been moved, first to Chester by Bishop Peter in 1072 x 1073, and then by Bishop Robert de Limesey to Coventry by 1102. At the time of Domesday Book in 1086, therefore, Lichfield was only a collegiate church with five canons, and because successive bishops favoured other churches, St John’s, Chester and St Mary’s abbey, Coventry, it was somewhat neglected. A revival, much of

1 B. Colgrave and R. A. B. Mynors (eds), *Bede’s Ecclesiastical History of the English People* (Oxford, 1992), 345.

2 For a summary see S. Keynes, ‘Mercia’, in M. Lapidge, J. Blair, S. Keynes, and D. Scragg (eds), *The Blackwell Encyclopaedia of Anglo-Saxon England* (Oxford, 1999), 306–8; M. P. Brown, ‘Writing in the Insular World’, in R. Gameson (ed.), *The Cambridge History of the Book in Britain, I, c. 400–1100* (Cambridge, 2012), 121–66 (at 162–4).

3 C. Insley, ‘Southumbria’, in P. Stafford (ed.), *A Companion to the Early Middle Ages: Britain and Ireland c. 500–c. 1100* (Oxford, 2009), 322–40.

4 For what follows see: C. N. L. Brooke, J. Denton, and D. E. Greenway (comp.), *Fasti Ecclesiae Anglicanae, 1066–1300: XI Coventry and Lichfield* (London, 2011), pp. xxvii–xxxix; and C. P. Lewis, ‘Communities, Conflict and Episcopal Policy in the Diocese of Lichfield, 1050–1150’, in P. Dalton, C. Insley, and L. Wilkinson (eds), *Cathedrals, Communities and Conflict in the Anglo-Norman World* (Woodbridge, 2012), 61–76.

it credited by the cathedral chronicle to Bishop Clinton (1129–48), began in the mid 12th century but was focused on expanding the size of the chapter, increasing its endowments, and rebuilding the fabric, rather than developing the cult of St Chad. By the mid 13th century, as well as having recovered its cathedral status, Lichfield resembled other secular cathedrals in having four dignities (a dean, treasurer, precentor, and chancellor), a greater number of canonries – twenty-two had been added – and its first statutes. Between c. 1170 and the 1230s a new square east end and choir and a three-storey chapel complex were built, and by 1249 work had started on the chapter house.⁵ Bishop Meuland (1257–95) continued to develop the cathedral, issuing a new set of statutes, creating three new prebends, rebuilding the nave, and starting work on the west front.⁶ But it was his successor, Bishop Langton, who enhanced the cult of St Chad.

THE PRINCIPAL SHRINE OF ST CHAD

No fewer than five shrines of St Chad have been identified: the first shrine described by Bede; the Mercian shrine – the 'Lichfield Angel' – in what is now the cathedral nave, which was the principal shrine and was later moved to the east end behind the high altar; and three portable reliquaries, one containing his head and another his right arm, and a rectangular one. Yet nothing remains of any of them except the 'Lichfield Angel', although it has been suggested that a fragment of Purbeck marble, a small pinnacle carved with figures, may have been part of the base of the principal shrine.⁷ The lack of physical remains is, however, partly offset by documentary evidence, in particular an unusually detailed, though incomplete, description in a mid 15th-century inventory. This late medieval evidence enables a less speculative account of the pre-1300 shrine to be presented.

The Mercian shrine Bede described the earliest shrine as 'a wooden coffin in the shape of a little house, having an aperture in its side through which those who visit it out of devotion can insert their hands to take out a little of the dust'.⁸ He is less clear about its location. Having described it, Bede goes on to relate how Chad was buried beside (*iuxta*) the church of St Mary, implying that the original burial was in the open air, but that after the church of St Peter was built, his bones were translated there. As miracles took place at both sites, it is not clear from Bede's account whether the shrine he described was at St Mary's or St Peter's. The scholarly consensus has been that it was in St Peter's but, as John Blair has pointed out, the description of visitors taking a little dust (*partem pulueris*) from the tomb better fits the original burial next to St Mary's, the dust being soil.⁹ Chad's bones had been moved to their new location in St Peter's church probably during the episcopate of Bishop Headda (691–716 x 727), as recounted in the 14th-century cathedral chronicle of Alan de Ashbourne (d. 1334).¹⁰ The chronicle credits Headda with the construction of 'the church of Lichfield', presumably Bede's church of St Peter, and dates the translation of Chad's bones to 31 December 700, though such a precise date should be treated with caution.¹¹

Our understanding of the Mercian shrine of St Chad was transformed in 2003 by the discovery of the 'Lichfield Angel' – a carved polychrome figure of outstanding quality – during excavations in the nave led by Warwick Rodwell.¹² A large rectangular pit with vertical sides was uncovered and, close to its south-western corner, an *in situ* socketed stone base, together suggesting a small crypt surmounted by a shrine with a baldacchino-like structure. The angel figure, found face-down in three fragments in the pit adjacent to the socketed base, originally probably formed the left-hand side of a gabled box shrine that enclosed the wooden one described by Bede. Its iconography, identified as the Archangel Gabriel in an Annunciation scene, shows the influence of 6th-century eastern Mediterranean models, but the carving itself can be dated to the late 8th or the early 9th

5 W. Rodwell, 'The Development of the Choir of Lichfield Cathedral: Romanesque and Early English', in J. M. Maddison (ed.), *Medieval Archaeology and Architecture at Lichfield* (London, 1993), 17–35.

6 D. A. Carpenter, 'Meuland, Roger de (c. 1215–95)', *Oxford Dictionary of National Biography* [hereafter *ODNB*], online edn ref:odnb/37908 (accessed 21 January 2020).

7 R. K. Morris, 'The Lapidary Collections of Lichfield Cathedral', in Maddison (ed.), *Medieval Archaeology and Architecture at Lichfield*, 105 (LC27).

8 Colman and Mynors (eds), *Bede's Ecclesiastical History*, 347.

9 J. Blair, 'A Saint for Every Minster? Local Cults in Anglo-Saxon England', in A. Thacker and R. Sharpe (eds), *Local Saints and Local Churches in the Early Medieval West* (Oxford, 2002), 455–94 (at 491).

10 H. Wharton, *Anglia Sacra* (London, 2 vols, 1691), I, 428.

11 A. Sargent, *Lichfield and the Lands of St Chad* (University of Hertfordshire Press, 2020), 53.

12 For what follows see W. Rodwell, J. Hawkes, E. Howe, and R. Cramp, 'The Lichfield Angel: A Spectacular Anglo-Saxon Painted Sculpture', *The Antiquaries Journal*, 88 (2008), 48–108.

century and so was roughly contemporary with Lichfield's brief elevation to archiepiscopal status under King Offa.

The question of whether the 'Lichfield Angel' shrine was on the site of Chad's initial burial beside St Mary's or was inside the church of St Peter, is difficult to resolve with any certainty, particularly as the location of St Peter's has yet to be firmly established. Andrew Sargent has suggested that it was a separate funerary chapel built near to a (later) church on the initial burial place close to St Mary's.¹³ Later medieval evidence, however, both archaeological and documentary, makes it clear that the Mercian shrine, in what is now the second bay of the nave of the extended cathedral, was thought to be St Chad's burial place. The strongest evidence of this is the will of William Berford (d. 1450), a residentiary canon, who wished to be buried near the tomb of his uncle Dean Thomas Stretton (d. 1426) in the nave 'and near the tomb of St Chad'.¹⁴ This nave shrine was almost certainly the site of the 'altar of St Chad in the nave' where William de Bosco had earlier established his chantry in 1325,¹⁵ and the altar was also the site of the chantry of Bishop Stainsby (d. 1238) and probably of the light established at the 'tomb (*sepulchro*)' of St Chad in 1160 x 1182.¹⁶ The high-status clerical burials excavated there by Warwick Rodwell confirm that, because of its association with the tomb of St Chad, it remained a prestigious burial place between the 13th and 15th centuries.¹⁷

Towards the end of the 10th century, for reasons not yet understood, the Mercian shrine was deliberately but carefully dismantled and buried. Presumably it was replaced by a new shrine on the same site, but if so nothing is known about the replacement. With the building of the nave, probably by Bishop Limesey (1085–1117), the shrine was incorporated into the present cathedral building; it is located in the second bay of the new nave built by Bishop Meuland in the second half of the 13th century.

Translation to a shrine at the east end At some point between the late 10th and the late 14th century, St Chad's shrine in the nave (the principal shrine) was moved to the east end of the cathedral. The transfer of a saint's body from one location to another in an elaborate 'translation' ceremony was standard practice in the middle ages: many saints were moved two or three times, and a few as many as four.¹⁸ As we have seen, this had happened to Chad by 731, probably during the episcopate of Bishop Headda. Such translations were the 'formal' confirmation of sainthood before the process came under papal control during the pontificate of Innocent III (1198–1216). These and subsequent papal canonisations resulted in the elevation of a saint's body in two respects: not merely from below the ground in their burial place to a shrine *above* it, but also to a new and holier part of the church further east, often a *raised* position behind the high altar. Although translation – which generally took place some years after papal canonisation – usually included the construction of a new and richly decorated shrine, shrines continued to be remodelled and enhanced, a process that sometimes resulted in them being moved for a second or third time. The period 1270–1350 was a 'golden age' of translation and remodelling,¹⁹ the many shrines being transformed included those of St Richard at Chichester in 1276, St Hugh at Lincoln in 1280, St William at York in 1284, St Alban at St Albans between 1302 and 1308, and St Erkenwald at St Paul's between 1313 and 1326.

The evidence about the date when Chad's principal shrine was moved from the nave to the east end is uncertain. There is archaeological evidence that it may have been moved in the later 12th century. Warwick Rodwell has established that there would have been little room for a shrine in either the early Norman apsidal choir of c. 1085–1100 or the later Norman one of c. 1150–60,²⁰ but the construction of the Transitional style choir (c. 1170–80) with a square east end would have created enough space for a shrine beyond the high altar and the presence of four large piers in the fifth bay may mark its location. This, however, is the only evidence of it, and although it has been suggested that a lost late 13th- or early 14th-century sculpted stone panel of the Coronation of the

13 Sargent, *Lichfield and Lands of St Chad*, 120.

14 R. N. Swanson (ed.), 'Lichfield Chapter Act Books, 1433–61', in *Collections for a History of Staffordshire* [hereafter *SHC*] (Staffordshire Record Society), 4th series, 13 (1988), 27–46 (at 42).

15 H. E. Savage (ed.), *The Great Register of Lichfield Cathedral Known as Magnum Registrum Album* [hereafter *MRA*] (being *SHC*, 3rd series, 1924), no. 694.

16 Savage (ed.), *MRA*, no. 740; M. J. Franklin (ed.), *English Episcopal Acta, 16: Coventry and Lichfield Diocese, 1160–82* (Oxford, 1998), no. 65.

17 W. Rodwell, 'Revealing the History of the Cathedral: 4 Archaeology of the Nave Sanctuary', *Friends of Lichfield Cathedral Sixty-Seventh Annual Report* (2004), 18–35 (at 31–4).

18 B. Nilson, *Cathedral Shrines of Medieval England* (Woodbridge, 1998), 210–11.

19 N. Coldstream, 'English Decorated Shrine Bases', *Journal of the British Archaeological Association*, 129 (1976), 15–34.

20 Rodwell, 'The Development of the Choir', in Maddison (ed.), *Archaeology and Architecture at Lichfield*, 17–35.

Virgin flanked by two kings may have been part of it, this attribution cannot be verified and sheds no light on its location.²¹

The surviving written sources of the 11th to 13th centuries and the account of this period in the cathedral chronicle make no mention of any translation or remodelling of Chad's shrine in this period. In particular, there is no evidence that the shrine was moved in either 1148 or 1296 as suggested in the entry for Chad in the *Oxford Dictionary of National Biography*.²² Both years were episcopal interregnums: Bishop Clinton had died in Antioch in April 1148, having left England on crusade in the summer of 1147, and his successor, Bishop Durdent, was not consecrated until October 1149; whilst Bishop Meuland died in December 1295, and his successor, Bishop Langton, although consecrated on 23 December 1296, did not visit Lichfield until January 1299.²³ Only in the 14th century is there documentary evidence of its location behind the high altar, from the account in the chapter act book of the dedication of Bishop Stretton's new shrine base in 1378 (see below). It seems likely, however, that the move had taken place by 1345, as a sacrist's roll compiled that year refers to two silver reliquaries behind the high altar.²⁴ Such subsidiary reliquaries were often placed adjacent to a major shrine, as they were at Canterbury. Whether the move to the east end came before or was part of Bishop Langton's enhancement of the shrine in the early 14th century is not clear from the surviving written sources, but the archaeological evidence suggests that it probably took place when the choir was remodelled in the late 12th century.

Bishop Langton's shrine The first certain evidence of the enhancement of the principal shrine in the later middle ages comes from the episcopate of Walter Langton (1296–1321). The wealthiest and most generous of the late medieval bishops of Lichfield, Langton had ambitious plans to transform Chad's cult with a magnificent new reliquary for his bones in an equally magnificent new architectural setting at the east end of the cathedral. His commission of a new reliquary can be dated to the first decade of the 14th century: probably after 1303 as it is not listed with Langton's other benefactions by the dean and chapter in the testimonial letter they wrote to Pope Boniface on his behalf, but before 1307/8 when his bankers, the Ballardis of Lucca, claimed for its cost.²⁵ Though the Ballardis's claim for 'the cost of the shrine of St Chad made in Paris' tells us little, the shrine's magnificence is evident from its huge cost. They held £2,120 of the bishop's money against which they claimed for the cost of the shrine, as well as the education of two of Langton's nephews and 'various expenses', most of which seem to have been spent on the shrine.²⁶ The Lichfield Chronicle of Alan Ashbourne (d. 1334) and the sacrist's roll of 1345 describe it as a 'great reliquary' (*feretrum magnum*) with a value of £2,000.²⁷

The huge cost of St Chad's reliquary – no allegations of fraud against the Ballardis were made at Langton's trial (in 1307–12 for malpractice in office as treasurer) and the two Lichfield sources independently give a similar value – makes it a truly remarkable object,²⁸ and there is little doubt that Langton could have afforded it. The fabulous wealth he accumulated while serving as Edward I's treasurer from 1295 until 1307 is set out in the trial records: the crown's income from his confiscated property in one year alone (1308) amounted to £2,400 and in 1318 Langton claimed £20,000 in compensation for his losses.²⁹ The decision to commission Parisian rather than London goldsmiths reflects the scale of Langton's ambition for Chad's shrine and his discernment as a patron. His

21 It was drawn by William Stukeley and John Carter: N. J. Tringham, 'An Early Eighteenth-Century Description of Lichfield Cathedral', *South Staffordshire Archaeological and Historical Society Transactions*, XXVIII (1988), 55–63 (at 61).

22 D. H. Farmer, 'Ceadda (d. 672)' *ODNB*, online edn ref/odnb/4970 (accessed 18 November 2019); D. H. Farmer, *Oxford Dictionary of Saints* (Oxford, 1979), 75. No source is clearly cited by Farmer but it seems to have come from R. Hyett Warner, *Life and Legends of St Chad, Bishop of Lichfield (669–72)* (London and Cambridge, n.d.), 129–30.

23 M. J. Franklin, 'Clinton, Roger of (d. 1148)', *ODNB*, online edn ref/odnb/95152 (accessed 5 December 2019); Brooke, Denton, and Greenway (comp.), *Fasti 1066–1300: XI, Coventry and Lichfield*, 8–9; J. B. Hughes (ed.), *The Register of Walter Langton, Bishop of Coventry and Lichfield, 1296–1321* (Canterbury and York Society, 2 vols: 91 and 97, 2001 and 2007), II, 208.

24 J. C. Cox, *Catalogue of the Muniments and Manuscript Books Pertaining to the Dean and Chapter of Lichfield* (being *SHC*, VI (2), 1886), 199.

25 J. M. Maddison, 'Building at Lichfield Cathedral during the Episcopate of Walter Langton (1296–1321)', in Maddison (ed.), *Archaeology and Architecture at Lichfield*, 65–84 (at 70).

26 A. Beardwood (ed.), *Records of the Trial of Walter Langton, Bishop of Coventry and Lichfield, 1307–12* (Camden Society, 4th series, VI, 1969), 185–6.

27 Wharton, *Anglia Sacra*, I, 442; Cox, *Catalogue of Muniments*, 199–221.

28 A. Beardwood, 'The Trial of Walter Langton', *Transactions of the American Philosophical Society*, new series, 54 (1964), 1–45.

29 *Ibid.* 32.

achievements as an artistic patron have generally been overshadowed by his career in government and his downfall, but as well as building the Lady Chapel at Lichfield, he was also responsible for work on the choir, the crossing tower, and the upper west front and its towers.³⁰ In addition, he remodelled the episcopal palaces at both Lichfield and Eccleshall, and the manor house on his estate at Thorpe Waterville in Northamptonshire. The new palace at Lichfield in particular reflected his awareness of current stylistic developments: its polygonal turrets were modelled on Caernarvon castle; its hall matched the size of Bishop Burnell's at Wells, completed by 1292, and its wall paintings on the life and triumphs of Edward I were a spectacular example of early 14th-century art.³¹

Indeed, Langton's presence at the royal court from the late 1280s onwards exposed him to new artistic developments including the French influences that were a feature of the 1290s.³² He spent several months in northern France and Flanders on royal business in 1296–7 and 1299–1301 and made short visits to Paris in November 1305 and March 1306.³³ This was a period – from the end of the 13th century to the first decades of the 14th – during which the art of French goldsmiths flourished, especially in Paris, where a large community of exceptionally skilled craftsmen produced outstanding work for royal and noble patrons.³⁴ Several reliquaries made by Parisian goldsmiths have survived, among them the head reliquary of St Januarius in Naples cathedral dating from 1306–7 and the reliquary of St Francis and St Claire at Assisi of around 1280–1300. The work of Parisian goldsmiths was highly prized at the English royal court and considerable quantities of it were purchased in the 1290s.³⁵

An inventory of 1445 gives some indication of the reliquary's magnificence.³⁶ It describes a large rectangular jewel-encrusted gilt reliquary in the shape of the nave of a church, a cockle (shell) on its roof, with images of saints on its sides, among them St Chad, St Mary, and probably St Michael. The image of St Chad was richly adorned with jewels: a gold clasp with precious stones, a gold brooch with two large crystal stones and a block of crystal, a gilded ring and seven collars, some of which may have been later donations. The image of the Virgin was decorated with nine pearls, three rubies, and a sapphire. The west face had a gold clasp with an enamelled falcon surrounded by eight clusters of pearls, each with a diamond. This description suggests that the design of Langton's reliquary probably resembled two fine late 13th-century French reliquaries, those of St Romain in Rouen cathedral and St Gertrude at Nivelles. The former, dating from around 1270–90, is in the shape of church nave with elaborate micro-architecture, its arches – three on each side and one at each end – inhabited by the Apostles and figures of Christ and the Virgin and Child.³⁷ Langton's reliquary also closely resembled the specifications of the contract drawn up in 1292 between the dean and chapter of Beverley Minster and a London goldsmith for the relics of St John of Beverley.³⁸ It was to be five and a half feet long, one and a half feet wide, of proportionate height, and to be adorned with 'plates [small pieces of precious metal] and micro-architecture and beautiful and finely worked figures' (*platis et columpnis de opera cementario et ymaginibus subtilis et decori*) with 'canopied niches and pinnacles' (*tabernaculis et pinnaculis*) at the front and back. As Chad's bones were dispersed in three other reliquaries, Langton's reliquary may have been smaller. It may also have had a cover over it that could be raised and lowered, as many others did, but no record of one survives.

The very high cost of Langton's reliquary suggests that it was made of gold rather than silver-gilt, and that it was adorned with the most expensive jewels, such as rubies, emeralds, sapphires, and diamonds. This is confirmed by the description in the 1445 inventory which lists rubies, sapphires, diamonds, and pearls. Comparisons are hard to make because few valuations survive. The gold head-reliquary of St Martin of Tours made by the Parisian goldsmith Simon de Lille in 1323

30 Maddison, 'Building at Lichfield Cathedral'.

31 M. Reeve, 'The Former Painted Cycle of the Life of Edward I at the Bishop's Palace, Lichfield', *Nottingham Medieval Studies*, 46 (2002), 70–83.

32 J. Hillson, 'St Stephen's Chapel Westminster: Architecture, Decoration and Politics in the Reigns of Henry III and the Three Edwards (1227–1363)' (unpublished PhD thesis, University of York, 2015), 92–107.

33 Hughes (ed.), *Register of Walter Langton*, II, 207–13.

34 D. Gaborit-Chopin, 'Orfèvrerie et Émaillerie', in D. Gaborit-Chopin and F. Avril (eds), *1300 – l'art au temps du Philippe le Bel* (Paris, 2001), 179–83.

35 M. Campbell, 'Paris – Mirror or Lamp to English Medieval Royal Goldsmiths', *The Ricardian*, 13 (2003), 100–13.

36 R. N. Swanson, 'Extracts from a Fifteenth-Century Lichfield Chapter Act Book', in *A Medieval Miscellany* (being SHC, 4th series, XX, 2004), 129–70 (at 142–3).

37 Gaborit-Chopin, 'Chasse de Saint Romain', in *1300 – l'art au temps du Philippe le Bel*, 184–5.

38 A. F. Leach (ed.), *Memorials of Beverley, the Chapter Act Book of the Collegiate Church of S. John of Beverley, A.D. 1286–1347* (Surtees Society, 98 and 108, 1898 and 1903), I, 299–301. Rosemary Horrox argues that this contract was for the cover only, not the reliquary itself: R. Horrox, 'The Later Medieval Minster', in R. Horrox (ed.), *Beverley Minster: An Illustrated History* (Beverley, 2000), 37–49 (at 39–40).



Fig. 2 Exterior of the Lady Chapel, Lichfield cathedral. (Photo © Lichfield Cathedral Photographers)



Fig. 1 Interior of the new east end of Lichfield cathedral built by Bishop Langton, showing the retrochoir and Lady Chapel. (Photo © Lichfield Cathedral Photographers)

cost 3,000 *livres parisis* (about £750) and the jewels given by Henry III to the shrine of St Edward the Confessor in Westminster Abbey were pawned in 1267 for £2,300.³⁹ Among Henry's many gifts were an image of the Virgin and Child with rubies, emeralds, sapphires, and garnets valued at £200, an image of St Edmund with two large sapphires in his crown valued at £86, and a 'most beautiful' sapphire worth 100 marks (£66 13s. 4d.). Langton's reliquary, therefore, was almost as lavish as Henry III's shrine for Edward the Confessor and would have out shone most. Many were more modestly embellished with cheaper silver and gilt plates containing images and jewels; a new gold crest made in 1314 for St Thomas's reliquary at Canterbury cost £7 10s., and 36s. 1d. was sufficient to purchase 140 gold leaves and 350 silver leaves to adorn St William's shrine at Norwich in 1325.⁴⁰ Langton's reliquary is undoubtedly a lost masterpiece of medieval religious art.

The architectural setting that Langton planned for his reliquary – a new Lady Chapel with a retrochoir to house the shrine – matched its splendour and magnificence and also shows strong French influence (Fig. 1). He chose a striking model, the Sainte-Chapelle in Paris. Completed in 1248 by Louis IX as a shrine for the Crown of Thorns (widely regarded as one of the most precious relics in Christendom), the Sainte-Chapelle created a new architectural form, the reliquary chapel. All the key features of the Lady Chapel at Lichfield, in particular its tall, narrow proportions, trefoil tracery, deep buttresses, and polygonal east end, were directly modelled on the Sainte-Chapelle's upper chapel (Fig. 2).⁴¹ As John Maddison has pointed out, no other building in Europe refers to it so literally. Langton's choice of the Sainte-Chapelle as his model, therefore, reflects the scale of his ambition for the relics of St Chad, and his desire to house them in the most splendid and prestigious setting, albeit in a somewhat dated architectural style. Work probably began on the Lady Chapel in the mid 1310s but was unfinished at Langton's death in November 1321.⁴² Although he made very generous provisions for its completion, a bequest of 904 marks (£602 13s. 4d.), its seizure by the king and his imposition of a forced loan of £257 19s. 11d. on the dean and chapter in July 1322, delayed progress significantly. After a protracted effort, the chapter had been able by Easter 1331 to recover the bulk of the funds seized by the king,⁴³ and the Lady Chapel was complete by 1336 when two keepers of its fabric were appointed. Soon afterwards work on the retrochoir was undertaken, and in May 1337 Philip Turville, a residentiary canon, bequeathed 300 marks for the 'new work between the choir and the new Lady Chapel, extending the choir to the chapel' (*novum opus inter chorum et novam capellam beate Marie elongand' ipsum chorum usque ad dictam capellam*).⁴⁴

Bishop Stretton's enhancements Construction of the retrochoir raises the question of where St Chad's principal shrine was during this period. If, as seems likely, it had already been moved to the east end of the cathedral by the 14th century, the building of the Lady Chapel would not initially have impinged on it, as the new chapel was constructed separately beyond the existing east end. Construction of the retrochoir to join the Lady Chapel to the presbytery in the late 1330s would, however, have necessitated the shrine's temporary removal, especially as there were technical difficulties – a two-foot difference in width between the presbytery and the Lady Chapel – to be overcome: the king's master mason, William Ramsey, had to be brought in as a consultant in May 1337 to carry out the 'repair of the defects' (*emendacio defectorum*) there.⁴⁵ He was also engaged in remodelling the choir, a project begun in Bishop Langton's time which continued until the 1380s.

The culmination of the enhancement of St Chad's shrine was the building of a new base for it behind the high altar by Bishop Robert Stretton in 1378. It is not clear what Langton's splendid reliquary rested on prior to this, perhaps a temporary base, as building work on the retrochoir and the remodelling of the choir might have delayed the construction of a fitting one until the 1370s. Stretton had a particular devotion to St Chad, whom he described as a 'glorious confessor',⁴⁶ and he clearly felt that the existing base was inferior to the reliquary and duly provided a new 'marble place ... next to the Lady Chapel' (*locus marmoreum ... iuxta capella beate Marie*).⁴⁷ The account

39 M. A. and R. H. Rouse, 'The Goldsmiths and the Peacocks: Jean de la Mote in the Household of Simon de Lille, 1340', *Viator*, 28 (1997), 281–303 (at 286–9); *Calendar of Patent Rolls, 1266–72*, 136–40.

40 Nilson, *Cathedral Shrines*, 36, 38.

41 Maddison, 'Building at Lichfield Cathedral', 71–2.

42 K. Blockley, 'Lady Chapel Lichfield Cathedral, Staffordshire: Standing Fabric Recording' (unpublished report, 2011), 11–12.

43 As recorded in surviving chapter acts: Oxford, Bodleian Library [hereafter Bodleian], Ashmole MS 794, f. 42r.

44 C. E. Woodruff (ed.), *Sede Vacante Wills* (Kent Archaeological Society, 1914), 117–21.

45 Bodleian, Ashmole MS 794, f. 57v.

46 R. A. Wilson (ed.), *The Registers of Bishop Robert Stretton* (being *SHC*, new series, VIII and X, 1905 and 1907), I, 99.

47 Bodleian, Ashmole MS 794, f. 173v.

of the ceremony on 17 May 1378 to place the reliquary on the new base makes it clear that this was not regarded as a translation. The chapter act book states that Chad's reliquary was 'transferred' (*transmotus fuit*) to the new base, having originally been translated by Bishop Headda as set out in the 'chronicle and martyrology of the cathedral' (*cronic[o] et Martilogio ecclesie Lich[fieldsensis]*). The use of the Latin word *transmotus* rather than *translatus* to describe Stretton's ceremony is further evidence that the shrine and reliquary were already behind the high altar, and that provision of a new base did not result in any significant relocation. Bishop Stretton also adorned the shrine with a precious jewel, a white 'Grypes hey' – a cup made of a griffin or vulture egg (probably an ostrich egg) – with a silver gilt base and cover, and constructed an altar on its west face. As we shall see, the new shrine base was part of a much greater enhancement of Chad's cult by Stretton that included the grant of an indulgence and the creation of a new liturgical feast, the Translation of St Chad.

SUBSIDIARY SHRINES OF ST CHAD

St Chad's cult in the cathedral was multi-centred. In addition to the principal shrine, there were three other *foci*: a head reliquary, an arm reliquary, and a rectangular portable reliquary containing some of his bones; as well as his empty tomb in the nave. Like the rectangular reliquary, the head and arm reliquaries were portable. It is not known when Chad's bones were divided. Until the mid 9th century it was not customary to fragment a saint's body,⁴⁸ and it is therefore unlikely that Chad's was divided when he was translated by Bishop Headda around 700. From the 10th century the division of relics became more common, and this may have happened to Chad by the early 12th century when other religious houses claimed some of them; his head, jaw, and arm appear on a list of the relics of Abingdon abbey drawn up by Abbot Faricio (d. 1117), and St Chad's church in Shrewsbury listed an arm bone among its collection.⁴⁹

Head shrine By the later middle ages, Chad's most prominent subsidiary shrine was that of his head, which had its own chapel. Separate head-shrines had become relatively common by that time, and can be found at Lincoln for St Hugh, at Chichester for St Richard, at York for St William, and at Worcester for St Oswald and St Wulfstan. However, there are few references to such shrines or to head-reliquaries in England before the 13th century, nor is there any trace of a Saxon or Norman head-shrine of St Chad.⁵⁰ The earliest record is an entry in the sacrist's roll of 1345 for 'the head in a painted wooden box'. This was probably a gilt bust reliquary, described in the 1445 inventory as 'gilded and well decorated with various precious stones', including collars and other gold jewels weighing 256 ounces, and made up of two parts which could be divided.⁵¹ Accompanying it was a 'precious' mitre which was hung above it.

The focus of the head cult was what is now known as the chapel of St Chad's Head in the south aisle of the choir. The chapel was part of a remarkable three-storey structure built around 1230 with external octagonal turrets at the south-east and south-west corners (Fig. 3).⁵² It consisted of a barrel-vaulted crypt, a ground-floor chapel dedicated to St Peter to which a treasury was later added, and an upper chamber. Access to the three storeys was complex. A stair in the south-east turret led down to the crypt but there was no internal stair to the upper chamber, which was probably reached by an external wooden stair in the south choir aisle. The limited access to the upper chamber and its initial lack of a piscina suggests that, at first, it was used as a treasury rather than as a chapel. Subsequently, the external wooden stair was replaced with an internal stone one and a gallery (Fig. 4). The elaborate decoration of the gallery – a miniature vault supporting a cornice decorated with fleurons and a tracery balustrade made up of a band of boxed quatrefoils surmounted by trefoil arches and trefoils – indicates that it was intended to adorn a particularly important place, such as the location of some of St Chad's relics. Stylistically – there is no written evidence – the gallery

48 D. Rollason, *Saints and Relics in Anglo-Saxon England* (Oxford, 1989), 23–35, 49, 159–60, 221.

49 J. Stevenson (ed.), *Chronicon Monasterii de Abingdon* (Rolls Series, 2 vols, 1858), II, 157; Bodleian, MS Rawl. D 1225, f. 11r (a later addition to an early to mid 12th-century martyrology).

50 J. Crook, *English Medieval Shrines* (Woodbridge, 2011), 218–20.

51 Swanson, 'Extracts from Lichfield Chapter Act Book', 148, 155.

52 W. Rodwell, 'Archaeology and the Standing Fabric: Recent Investigations at Lichfield Cathedral', in T. Tatton-Brown and J. Munby (eds), *The Archaeology of Cathedrals* (Oxford, 1996), 81–94 (at 86–9).



Fig. 3 Exterior of St Chad's Head Chapel, Lichfield cathedral. (Photo © Lichfield Cathedral Photographers)



Fig. 4 Gallery of St Chad's Head Chapel in the south choir aisle from which the relics of St Chad were displayed. (Photo © author)

has been dated to the last quarter of the 14th century, and so contemporary with Bishop Stretton's new shrine base and liturgical feast.⁵³

The new gallery was part of the enhancement of Chad's cult, a place where the head and arm reliquaries could be displayed to pilgrims below, and the use of a separate chapel as a shrine for his head probably dates from this period: the head was listed as being in the sacristy in 1345.⁵⁴ There is, however, no documentary evidence of the chapel until 1445, when Thomas Bramley is named as the warden of the chapel containing the head of St Chad.⁵⁵ A later reference in 1482 to 'the altar of St Chad in the chapel where his head is marvellously honoured' (*altari sancti Cedde in capella ubi caput eius mirifice honoratur*) suggests that the head was displayed on the altar rather than locked away in an aumbry.⁵⁶ Neither reference locates it, but the presence of such an ornate gallery strongly suggests that this was the chapel's location.

Arm reliquary Like the head reliquary, the arm reliquary of St Chad is first recorded in the 1345 sacrist's roll, where it was listed simply as 'an arm of St Chad'.⁵⁷ The 1445 inventory gives a fuller description: 'the right arm of St Chad enclosed in silver gilt with a hand in the upper part as though blessing, weighing 74 ounces', which stood on three lions.⁵⁸ In 1345 it was kept in the sacristy but in 1445 it was in the care of the warden of the chapel of St Chad's Head and probably kept there. Arm reliquaries – though they often contained other bones as well – were one of the most popular body-part reliquaries of the middle ages: St Paul's, London, had three and Lichfield also had an arm of St Sampson.⁵⁹ They were particularly associated with episcopal saints such as Chad and, like his, often showed the hand in a blessing gesture.⁶⁰ The worn and damaged fingers of many surviving examples suggest they were used to touch the sick and bless pilgrims, a measure of their powerful symbolism.

Rectangular portable shrine A further portable shrine of St Chad in existence by the mid 13th century was probably the one listed in the 1345 sacrist's roll and the 1445 inventory.⁶¹ Although it is the most fully described of the four reliquaries in the inventory, it is difficult to visualise, apparently being rectangular with a large cover which had a bell tower surmounted by a gilded cross. Its most striking feature is the large number of jewels and images with which it was encrusted. As well as images of St Chad, the Virgin, St Katherine, and a Crucifix, there were smaller images of the Evangelists, the Last Judgement, the Agnus Dei, and the Annunciation, together with several collars and brooches. The jewels ranged from a 'great sapphire over an inch long', two emeralds and many pearls, to more modest gems – garnet, serpentine, and coral – and several 'glass stones'. The large number of smaller items – twenty-two clasps, nineteen collars, five rings, and five brooches – and the eclectic range of images, which included a griffin collar, eight mermaids and four shoveller ducks, suggest they were gifts accumulated over many years, and their often modest value shows the strength of popular devotion to St Chad. In 1445 the portable shrine, which also contained the bones of some other saints, was kept in the sacristy.

The use of the shrines There is little direct evidence from Lichfield of the four principal forms of reverence accorded to relics in the middle ages: visits, processions, expositions, and blessings.⁶² Although the surviving sources shed no light on the pilgrims who visited the principal shrine or on how it was integrated into the cathedral liturgy, there are some indications of how the three portable reliquaries were used. As we have seen, the gallery constructed in the south choir aisle was probably intended to display two of the portable reliquaries, the head and the arm. Exposition from elevated

53 J. M. Maddison, 'Master Masons of the Diocese of Lichfield: A Study of 14th-Century Architecture at the Time of the Black Death', *Transactions of the Lancashire and Cheshire Antiquarian Society*, 85 (1988), 107–72 (at 142–8).

54 The sacrist's roll only gives a location for items not in the sacristy.

55 Swanson, 'Extracts from Lichfield Chapter Act Book', 148, 155.

56 J. C. Cox, 'Benefactions of Thomas Heywood, Dean (1457–1492) to the Cathedral Church of Lichfield', *Archaeologia*, 52 (1890), 617–46 (at 639).

57 Cox, *Catalogue of Muniments*, 199.

58 Swanson, 'Extracts from Lichfield Chapter Act Book', 148, 155.

59 W. Sparrow Simpson, 'Two Inventories of the Cathedral Church of Paul, London dated respectively 1245 and 1402', *Archaeologia*, 50 (1887), 439–524 (at 470–1); Swanson, 'Extracts from Lichfield Chapter Act Book', 155.

60 C. J. Hahn, 'The Voices of the Saints: Speaking Reliquaries', *Gesta*, 36 (1997), 20–31.

61 Cox, *Catalogue of Muniments*, 199; Swanson, 'Extracts from Lichfield Chapter Act Book', 143–5.

62 G. J. C. Snoek, *Medieval Piety from Relics to the Eucharist: A Process of Mutual Interaction* (Leiden, 1995), 227.

structures ensured greater visibility for relics and was increasingly adopted in the later middle ages.⁶³ We know that the rectangular portable reliquary was used in the liturgy in processions and that it was sometimes taken around the diocese to raise funds.⁶⁴ The liturgical customs of the cathedral, set out in the first statutes of 1240–1, include a special peal of bells to mark its departure and return.⁶⁵ This was probably in connection with the fraternity of St Chad collecting funds for the fabric and happened only on special occasions such as fund-raising campaigns. As these collections were regularly subcontracted to others in the 14th and 15th centuries, it seems unlikely that the reliquary regularly travelled far for this purpose in the later middle ages.

The dearth of Lichfield evidence can, however, be supplemented by our knowledge of the practice elsewhere. At York the head of St William was carried in procession on his feast day (8 June), and in 1498 the considerable sum of 37*s.* 3*d.* was spent on making an elaborate painted canopy for it.⁶⁶ A portable reliquary of St William is shown crossing the Ouse bridge in the St William window in the minster (c. 1414), and it was taken to St Mary's abbey on the Monday after Pentecost.⁶⁷ Relics were also taken in procession in times of crisis: the monks of Worcester cathedral processed with those of St Oswald during bad weather at the end of the 14th century; and in 1457 and 1471 the monks of Christchurch, Canterbury, processed with the relics of St Audeon 'on account of the plague'.⁶⁸ Continental liturgical practice shows how relics were regularly used to enhance worship on major feasts. At Amiens cathedral in the late 13th century, the arm of St Firmin, its first bishop, was taken in procession and used to make blessings at Epiphany, Easter, Ascensiontide, the Assumption of the Blessed Virgin Mary, and on All Saints Day.⁶⁹ It is highly likely that St Chad's relics were venerated in similar ways on his feast days, as well as on other major festivals and special occasions, though processions outside the cathedral were more likely to have taken place on his Translation (the Sunday before Ascension Day) when the weather was better, than on his principal feast day, 2 March.

Although none of Chad's relics were kept at the site of his tomb in the nave in the later middle ages, it remained a venerated site. As well as retaining its altar, it continued to be a sought-after site for elite clerical burials, and several deans were buried nearby: Thomas Stretton (d. 1426), John Yotton (d. 1512) in the chantry chapel he built adjacent to it in the second bay of the north aisle of the nave (Fig. 5), and probably Ralph Collingwood (d. 1521).⁷⁰ Burial near the shrine at the east end seems to have been reserved for bishops, notably Bishop Stretton.⁷¹ Chad's tomb was still a sufficiently familiar and prestigious site to be the location for the payment of an annual rent in a lease drawn up in 1521.⁷²

THE ALTARS OF ST CHAD

Three altars in the cathedral were dedicated to St Chad. The earliest reference to one is in the first statutes of 1240–1.⁷³ Its location is not given but it was probably in the nave at the site of the Mercian shrine and Chad's burial place. There is a further reference to this altar in 1255 and to a mass of St Chad which was celebrated there in c. 1260.⁷⁴ Confirmation that the altar was in the nave comes from the arrangements made in 1325 for the commemoration of William de Bosco (d. 1329), the chancellor:⁷⁵ the mass of St Chad, during which the second collect would be said for William's soul, was to be celebrated every day 'at the saint's altar in the nave'. The nave altar seems to have

63 Ibid. 281–2.

64 W. Dugdale, *Monasticon Anglicanum*, revised edition by J. Caley, H. Ellis, and B. Bandinel (6 vols in 8 parts, 1817–30, reprinted 1846), VI (3), 1257.

65 Ibid. 1257.

66 J. Raine (ed.), *Fabric Rolls of York Minster with and Appendix of Illustrative Documents* (Surtees Society, 35, 1859), 90.

67 S. Brown, 'Our Magnificent Fabrick': *York Minster, An Architectural History c. 1220–1500* (Swindon, 2003), 282; L. McLachlan and J. B. L. Tolhurst (eds), *The Ordinal and Customary of the Abbey of St Mary, York* (Henry Bradshaw Society, 3 vols: 73, 75, and 84, 1936–49), II, 333.

68 Nilson, *Cathedral Shrines*, 42; W. G. Searle (ed.), *Christchurch Canterbury, The Chronicle of John Stone* (Cambridge Antiquarian Society, 34, 1902), 69, 87, 117.

69 G. Durand (ed.), *Ordinaire de l'église Notre-Dame: Cathédrale d'Amiens, par Raoul de Rouvroy (1291)*, Société des Antiquaires de Picardie (Paris, 1934), 111, 232, 308, 423, 502.

70 Collingwood left instructions to be buried by a pillar close to St Chad: Stafford, Staffordshire Record Office [hereafter SRO], LD30/2/1/4, ff. 3–5.

71 M. W. Greenslade (ed.), *Victoria County History of Staffordshire, XIV: Lichfield* (Oxford, 1990), 54–5.

72 Cox, *Catalogue of Muniments*, 12.

73 Dugdale, *Monasticon Anglicanum*, rev. edn, VI (3), 1256.

74 Savage (ed.), *MRA*, nos 41 and 278–9.

75 Ibid. no. 694.



Fig. 5 The entrance to the chantry chapel of Dean John Yotton (d. 1512) located adjacent to the tomb of St Chad in the second bay of the nave. (Photo © author)

continued in use until the Reformation, as Bishop Stainsby's chantry, which as celebrated there in the early 14th century, was still being celebrated at 'the altar of St Chad' in 1535.⁷⁶

A new altar dedicated to St Chad was established by Bishop Stretton in 1378 at the west end of the shrine base he built for Langton's reliquary behind the high altar. He equipped it generously with his best silver-gilt chalice and paten, his second-best missal, and a gilt pax-board, and in 1390 Canon John Moreton (d. 1398) established his own chantry there.⁷⁷ The third altar dedicated to St Chad was in the chapel where his head was kept in the south choir aisle. Although it does not, as we have seen, appear in the records until the mid 15th century, it may well date back to the construction of the gallery in front of it in the later 14th century.

IMAGES OF ST CHAD

Despite permeating it to such a great extent, almost no medieval images of St Chad survive in the cathedral and few remain elsewhere. The only surviving one at Lichfield is a very worn carving, thought to be of St Chad baptising the Mercian king Wulfhere (d. 674), located in the lowest voussoir

⁷⁶ J. Caley and J. Hunter (eds), *Valor Ecclesiasticus Temp. Henry VIII: Auctoritate Regia Institutus [VE]* (London, 6 vols, 1810–34), III, 140.

⁷⁷ London, Lambeth Palace Library [LPL], Register Archbishop Courtenay, f. 211; SRO, LD30/2/1/1, f. 22v.

on the right of the outer order of the north porch.⁷⁸ From the written sources we know of some lost images: on the west front, he was honoured with a statue in the central niche immediately above the great west door,⁷⁹ and, as we have seen, there were prominent images of him on Bishop Langton's reliquary and the portable reliquary. A list of the cathedral's jewels drawn up in 1433 includes a silver-gilt book cover for the gospels and epistles which depicted St Chad, and Bishop Blythe (d. 1532) gave a silver image of him to the cathedral.⁸⁰ It is highly likely there were other images of Chad in the cathedral as well as depictions of him in the stained glass, but the surviving medieval sources rarely mention images, and the destruction of the Civil War left little for later antiquaries to record. Perhaps fittingly, the best surviving medieval images of St Chad are at York, where he was briefly bishop, and where a depiction of him and three scenes from his life appear in one of the windows of the Minster's north choir aisle (Fig. 6).⁸¹ Dating from about 1415, the window was given by Robert Wolveden (d. 1432), precentor of Lichfield from 1390 until 1426. He had begun his career in the service of Bishop Richard Scrope and in 1398 moved with him to York, where he was appointed treasurer (Fig. 7);⁸² whilst at York he retained strong links with Lichfield, spending periods in residence there and was elected its dean in 1426.⁸³ There is also a roughly contemporary image of St Chad dating from the mid 15th century in a copy of the *South English Legendary*, an important late 13th-century regional collection of saints' lives.⁸⁴ Both images portray Chad as a generic late medieval bishop, though as we shall see, the scenes from his life at York are of particular interest and importance.

Chad was an integral part of the corporate identity of both the cathedral and the diocese. For example, he regularly appears on the seals of bishops from the 12th century onwards.⁸⁵ The small seal of Bishop Roger Clinton (d. 1148) had an image of a bishop below the Virgin and Child with a punning inscription: *CEDDA ROGA PUERU[M] REGAT UT CU[M] MATRE ROGERU[M]* (Chad ask the Child that He and His Mother may rule Roger).⁸⁶ Chad also appears on the dean and chapter's *ad causas* seal of 1390.⁸⁷ In addition, he gave his name to a type of cross – a cross potent quadrate (one with cross bars at the four ends and a square central boss) – that became known as the St Chad's cross. It is the central device in the arms of the diocese used by Bishop Smith during his episcopate (1491–5): *Gules a cross potent quadrate per pale Argent and Or between four crosses formy the two dexter Or and the two sinister Argent*.⁸⁸ An early 15th-century version, without the quadrate element, appeared in the stained glass window commemorating Bishop Burghill (d. 1414) in the south transept, where the arms are shown below the figure of a king alongside Bishop Langton and Bishop Burghill.⁸⁹ St Chad's cross can also be found on a roof boss in the third bay of the north choir aisle at the entrance to the vestibule leading to the chapter house, a significant position for a symbol of corporate identity (Fig. 8), and on another in the same aisle close to his shrine. These arms also appeared on curtains round the high altar listed in the 1445 inventory.⁹⁰

LIVES OF ST CHAD

As with images of him, medieval lives of St Chad are relatively scarce. Compared with other pre-Conquest saints, Chad's surviving hagiographical tradition is meagre. The fullest and earliest account of his life – completed by 731, sixty years after his death – was written by Bede in Book IV, chapters 2 and 3 of his *Ecclesiastical History of the English People*.⁹¹ All subsequent surviving medieval lives ultimately derive from Bede (Fig. 9), the best known of these being the *Life of St Chad* found in a

78 M. Thurlby, 'The North Transept Doorway of Lichfield Cathedral: Problems of Style', *RACAR*, 13 (1986), 121–30 at 128.

79 Tringham, 'Early Eighteenth-Century Description of Lichfield Cathedral', 57.

80 Swanson, 'Extracts from Lichfield Chapter Act Book', 140; Wharton, *Anglia Sacra*, I, 455.

81 Brown, 'Our Magnificent Fabrick', 226–7, 282.

82 R. T. McDermid, *Beverley Minster Fasti, being Biographical Notes on the Provosts, Prebendaries, Officers and Vicars in the Church of Beverley Prior to the Dissolution* (Yorkshire Archaeological Society Record Series, CXLIX, 1993), 93.

83 In 1415, 1416–18, 1426, and 1427: SRO, LD30/2/1/1, ff. 87v–99v, 118v–19, and 122v–23.

84 Bodleian, Tanner MS 17.

85 W. de Gray Birch (comp.), *Catalogue of Seals in the Department of Manuscripts in the British Museum* (London, 6 vols, 1887–1900), I, nos 1637, 1639, 1642–4.

86 Wilson (ed.), *Registers of Bishop Stretton*, I, 131.

87 Birch (comp.), *Catalogue of Seals*, I, no. 1657.

88 D. H. B. Chesshyre, T. Woodcock, J. Grant, I. Graham, S. Flowers, and T. Chalmers (eds), *Dictionary of British Arms: Medieval Ordinary* (London, 4 vols, 1992–2015), III, 188.

89 London, British Library [hereafter BL], Add. MS 71474, f. 13v.

90 Swanson, 'Extracts from Lichfield Chapter Act Book', 154, 168.

91 Colgrave and Mynors (eds), *Bede's Ecclesiastical History*, 288, 294, 316, 334–47.



Fig. 6 Figure of St Chad, from glass in the north choir aisle, York Minster (window n8). (Photo © York Glaziers Trust, Reproduced Courtesy of the Chapter of York)

manuscript dating from the first half of the 12th century. Indeed, its editor, Rudolph Vleeskruyer, described it as largely consisting of ‘inexpertly translated passages’ of the *Ecclesiastical History* with frequent omissions.⁹² His contention that it was a copy of a Mercian text dating from the third quarter of the 9th century has been challenged by many scholars, but no new consensus has yet emerged.⁹³ Until it can be dated more securely, explanations of why it was produced must remain provisional. As a local saint, one primarily celebrated in the diocese of Lichfield, it is not surprising that Chad does not appear in some of the most popular collections of saints’ lives such as the *Legenda Aurea* – a universal compendium with very few British saints compiled around 1260 – or its later English versions, the *Gilte Legende*, and Caxton’s printed edition of 1483. Chad does, however, appear in

92 R. Vleeskruyer (ed.), *The Life of St Chad: an Old English Homily* (Amsterdam, 1953), 12.

93 Summarised in Sargent, *Lichfield and Lands of St Chad*, 88–9. For a 12th-century dating see E. Treharne, *Living Through Conquest: The Politics of Early English 1020–1220* (Oxford, 2012), 140–5.



Fig. 7 Robert Wolveden, precentor of Lichfield 1390–1426 and dean 1426–32, from the donor panel in the window he gave to York Minster in the north choir aisle (window n8). (Photo © author)



Fig. 8 Roof boss with a St Chad's Cross above the entrance to the vestibule leading to the chapter house, Lichfield cathedral. (Photo © author)

the *South English Legendary*, which was probably produced at Gloucester or Worcester, and which includes several native saints, particularly Anglo-Saxon episcopal and royal figures.⁹⁴ A condensed version of this *Life* can be found in some later manuscripts of the *Gilte Legende*, in which Chad is one of the sixteen British 'supplementary lives' added in the later 15th century.⁹⁵

The York Minster stained glass, however, suggests that, in addition to Bede's account, there were other hagiographical traditions that are now lost. Two of the scenes depicted in a window there, Chad rescuing a hart and preaching to the two princes, Wulfhad and Ruffin, sons of King Wulfhere, and Wulfhere killing his sons, are not recounted in Bede nor in the *Lives* derived from him (Figs 10 and 11).⁹⁶ Both princes are legendary figures who do not appear

in the hagiographical record until the early 12th century, but are known from three Midland sources: the history of Stone priory; the *Life of St Werburge* (daughter of King Wulfhere) by the Chester monk Henry Bradshaw (d. 1513); and the 15th-century glazing scheme of the west walk of the

94 H. Blurton and J. Wogan-Browne, '(Re-)Situating the South English Legendary', in H. Blurton and J. Wogan-Browne (eds), *Rethinking the South English Legendaries* (Manchester, 2011), 3–19.

95 R. F. S. Hamer and V. Russell (eds), *Supplementary Lives in some MS of the Gilte Legende* (Early English Text Society, old series, 315, 2000), pp. xiii–xiv, 215–16.

96 Brown, 'Our Magnificent Fabrick', 282.



Fig. 9 The death of St Chad based on the account by Bede, from glass in the north choir aisle, York Minster (window n8). (Photo © author)



Fig. 10 St Chad rescuing the hart and preaching to the sons of Wulfhere, from glass in the north choir aisle, York Minster (window n8). This scene is not in Bede's account of Chad's life. (Photo © author)



Fig. 11 King Wulfhere killing his sons, from glass in the north choir aisle, York Minster (window n8). This scene is not in Bede's account of Chad's life. (Photo © author)

cloisters of Peterborough Abbey.⁹⁷ The stories were presumably also known at Lichfield in the later 14th century and were taken to York by Dean Robert Wolveden. The Lichfield sculpture of Chad baptising King Wulfhere is another hagiographical tradition not taken from Bede.

ST CHAD IN THE LITURGY

As befitted the cathedral's patron, St Chad was given the highest liturgical honour and was celebrated as a double feast. Double feasts were the most important in the liturgical calendar, distinguished by nine lessons at matins, the singing of the antiphons twice (before and after the psalms and canticles), and the 'ruling' of the choir by cantors.⁹⁸ Lichfield cathedral's first statutes of 1240–1 list thirty-two double feasts, the majority of them either the principal feasts of the liturgical year, such as Christmas and Easter, or Marian feasts.⁹⁹ St Chad, with St Katherine and St Nicholas, was one of only three non-Biblical saints honoured with a double feast. In the statutes of Bishop Meuland (1294) Chad's feast day on 2 March is listed as one of the four principal ones of the year alongside Christmas, Easter, and the Assumption of the Blessed Virgin Mary.¹⁰⁰ Bishop Langton's statute of 1300 also gave special prominence to St Chad's day. It was one of the two days each year when the dean had to entertain the whole choir, the other being the Assumption, thus honouring the cathedral's

97 C. T. Camp, *Anglo-Saxon Saints Lives as History Writing in Late Medieval England* (Cambridge, 2015), 1–2; C. Horstmann (ed.), *The Life of Saint Werburge of Chester by Henry Bradshaw* (Early English Texts Society, old series, 88, 1887), 43–50; S. Patrick (ed.), *The History of the Church of Peterburgh by Symon Gunton* (Stamford, 1990), 103–12; R. Marks, *Stained Glass in England During the Middle Ages* (London, 1993), 88, 90. Wulfhad and Ruffin do not appear in the 11th-century life of Werburge: R. C. Love (ed.), *Goscelin of Saint-Bertin: the Hagiography of the Female Saints of Ely* (Oxford, 2004), 29–51.

98 R. W. Pfaff, *The Liturgy in Medieval England: A History* (Cambridge, 2009), 434–6.

99 Dugdale, *Monasticon Anglicanum*, rev. edn, VI (3), 1259.

100 Ibid. 1260.

two patron saints.¹⁰¹ The particular honour given to St Chad in the cathedral's liturgy was the principal characteristic of the Use of Lichfield (the liturgical practices and customs of the cathedral and diocese which are set out in the early cathedral statutes),¹⁰² as in almost all other respects the Lichfield Use followed that of Sarum.¹⁰³

Whilst there is no doubt that Chad was greatly honoured in the cathedral liturgy, it is much more difficult to establish the precise details of how he was venerated beyond the daily mass said in his honour at his altar in the nave. Only two surviving medieval liturgical books can be convincingly linked to the cathedral, a processional and a partbook (a music book containing the notation for one or several voices). Fortunately, service books from other dioceses where Chad was venerated contain the principal texts. The breviaries of the Uses of Hereford, York, and, after 1415, Sarum give the antiphons, psalms, and lessons to be used in the daily offices on his feast day, the nine lessons being taken from Bede's account of his life.¹⁰⁴ In addition, as we have seen with St Firmin at Amiens, it is likely that the portable relics of St Chad were used to enhance the liturgy on other principal feast days, especially those of the Virgin Mary, the cathedral's co-patron.

The liturgy honouring Chad was greatly enhanced in the late 14th century with the creation of a new feast, the Translation of St Chad. When he moved Bishop Langton's magnificent reliquary to a new marble shrine base on 17 May 1378, Bishop Stretton ordered that the event should be commemorated each year in perpetuity.¹⁰⁵ He undoubtedly intended the new feast to commemorate Chad's translation in 700 as well – it is mentioned in the account of the proceedings of 17 May. The new feast took root and was securely established by the 1420s: it was given special prominence in a processional given to the cathedral by William Admondeston, a residentiary canon from 1424 until his death in 1432.¹⁰⁶ The processional contains a new hymn specially written for the new feast – a reworking of the popular processional hymn *Salve festa dies* – and its initial letter is the only one picked out in gold; the rest are decorated in red and blue ink. The solemnity with which the new feast was celebrated is also reflected in a contemporary manuscript, Shrewsbury School MS VI, a Lichfield partbook containing processional chants that were probably performed polyphonically.¹⁰⁷ This manuscript gives prominence to the Translation feast and includes the new processional hymn *Salve festa dies*. The new feast was celebrated on the Sunday before Ascension, which in 1378 was the next Sunday after Bishop Stretton's ceremony on 17 May. Unlike St Chad's day on 2 March this was a simple feast, with three lessons rather than nine, and was celebrated only within the diocese.¹⁰⁸ Yet the new translation feast was part of a much wider campaign by Stretton to augment the veneration of St Chad, one that included the grant of an indulgence, the construction of a gallery from which to display the reliquaries of St Chad's head and arm, and the new shrine base.

St Chad's cult had the rare distinction of having the status of its principal feast day on 2 March raised by the archbishop of Canterbury as metropolitan: initially by Roger Walden in 1398, and again by Henry Chichele in 1415–16. Both archbishops issued mandates in convocation that it should be celebrated throughout the province of Canterbury as a feast with nine lessons with the choir being ruled.¹⁰⁹ Prior to this it was primarily a diocesan feast, albeit one also celebrated in the neighbouring dioceses of Hereford and York (where Chad had briefly been bishop), and it was not in the Sarum Use calendar, which had been widely adopted in the province of Canterbury by the second quarter of the 14th century. The reasons for Chad's elevation are difficult to establish precisely. There was increasing devotional interest in pre-Conquest bishops in the later middle ages, especially in the 15th century. As Katherine Lewis has argued, this was partly because, at a time when there was a

101 Ibid. 1260–1.

102 Ibid. 1255–60. There is a reference to the Use of Lichfield in 1311: Savage (ed.), *MRA*, no. 373.

103 Bishop Blythe's 1526 statute required the Sarum Use to be followed except on six feast days, namely those of St Chad, St Katherine, St Nicholas, and the three days after Pentecost: Dugdale, *Monasticon Anglicanum*, rev. edn, VI (3), 1265.

104 F. Proctor and C. Wordsworth (eds), *Breviarum ad Usus Insignis Ecclesie Sarum* (Cambridge, 3 vols, 1879–86), III, 193–204; S. W. Lawley (ed.), *Breviarum ad Usus Insignis Ecclesie Eboracensis* (Surtees Society, 71 and 75, 1880 and 1883), II, 212–14; W. H. Frere and L. E. G. Brown (eds), *The Hereford Breviary* (Henry Bradshaw Society, 3 vols: 26, 40, and 46, 1904–15), II, 122–4.

105 Bodleian, Ashmole MS 794, f. 173v.

106 BL, Harley MS 5249. For Admondeston see B. Jones (comp.), *Fasti Ecclesiae Angliae, 1300–1541: X Coventry and Lichfield* (London, 1964), 19, 30, 42; SRO, LD/30/2/1/1, ff. 101r–39r.

107 S. Rankin, 'Shrewsbury School Manuscript VI: A Medieval Part Book?', *Proceedings of the Royal Musical Association*, 102 (1975–6), 129–44.

108 It appears in some Sarum liturgical texts as a non-Sarum feast: Proctor and Wordsworth (eds), *Breviarum Sarum*, III, 317–19.

109 Pfaff, *Liturgy in Medieval England*, 437–42.

growing sense of Englishness, they were seen as representatives of English national identity,¹¹⁰ and a dearth of new English saints – only eleven were canonised between 1161 and 1457 – compounded this retrospective approach. In addition, cults of holy bishops, both canonised and unofficial, were, as we have seen in the discussion on shrines, a particular feature of English devotion.

Despite these wider devotional trends, it is doubtful if St Chad would have been elevated without royal intervention, first by Richard II and subsequently by Henry V. Richard II's piety was grounded in the cult of saints and his interest in pre-Conquest saints, especially Edward the Confessor and Edmund, is well-established and seems to have included St Chad.¹¹¹ The king's interest in Chad may well date from his presence at the enthronement of Richard Scrope as bishop of Lichfield in June 1387, and Richard II was also present at the enthronement of his successor, John Burghill, in September 1398, a year in which he made six visits to Lichfield.¹¹² Earlier in 1398, on Chad's feast day indeed, the new archbishop of Canterbury, Roger Walden, had issued a mandate raising Chad's status together with that of St David and St Winifred and the Translation of St Thomas Becket.¹¹³ Walden, a loyal servant of the king who briefly replaced the exiled former archbishop Thomas Arundel, is not known to have had interest in St Chad and was probably acting on Richard's instructions. But his mandate was ineffective and seems to have lapsed on Arundel's reappointment as archbishop in October 1399. Chichele's mandate, issued in January 1416, within three months of Henry V's victory at Agincourt, had an overtly nationalistic tone and was principally concerned with the promotion of St George: the 'patron and protector of the English nation', to whom Chad, David, and Winifred were appended. Chichele acted at the king's request and, like Walden, had no known personal devotion to St Chad.¹¹⁴ The nationalism evident in the elevation of these saints can also be seen in the renewed promotion of the Sarum Use as a specifically English liturgy and as a counter to Lollardy.¹¹⁵ However, it is doubtful whether the elevation of Chad had much impact outside the diocese. The adoption of his feast in the province of Canterbury was gradual and took decades as old liturgical books were supplemented and new ones written. Within the diocese it was no doubt a source of great pride and encouragement, and contributed to the vigour of the cult in the 15th century and its enhancement during the episcopate of Bishop Heyworth.

THE POPULARITY OF ST CHAD

The popularity of late medieval saints' cults is notoriously hard to measure as no records were made of the number of visitors to their shrines. Shrine income, calculated from surviving accounts recording the offerings made by pilgrims, can be used to estimate numbers and trace changing patterns of giving and attendance, but no such accounts survive for Lichfield. The patterns elsewhere show a gradual and irreversible decline of income in the later 14th and 15th centuries, but the only direct evidence from Lichfield, albeit highly problematic, contradicts such trends. In 1536 the royal commissioners, in the course of their investigation of the monasteries, reported that the pilgrimage to St Chad at Lichfield was worth £400 a year.¹¹⁶ Such a high income, which is not recorded in the *Valor Ecclesiasticus*, is far greater than that for comparable shrines and defies easy explanation.¹¹⁷ At face value, an income of £400 a year would suggest the shrine was extraordinarily popular on the eve of its destruction. Though the size of the diocese – Lichfield was one of the largest with

110 K. J. Lewis, 'Anglo-Saxon Saints Lives, History and National Identity in Late Medieval England', in H. Brocklehurst and R. Phillips (eds), *History, Nationhood and the Question of Britain* (Basingstoke, 2004), 160–70; K. J. Lewis, 'Margery Kempe and Saint Making', in J. H. Arnold and K. J. Lewis (eds), *A Companion to the Book of Margery Kempe* (Cambridge, 2004), 195–216 (at 205–9).

111 N. E. Saul, *Richard II* (New Haven and London, 1997), 319, 323–4, 471–4.

112 Ibid. 471–4; SRO, LD30/2/1/1, ff. 15r, 52v.

113 G. Bray (ed.), *Records of Convocation 4: Canterbury 1377–1414* (Woodbridge, 2005), 184–5.

114 Pfaff, *Liturgy in Medieval England*, 439–40.

115 D. N. Lepine, 'Let them Praise Him in Church': Orthodox reform at Salisbury Cathedral in the First Half of the Fifteenth Century', in V. Gillespie and K. Ghosh (eds), *After Arundel: Religious Writing in Fifteenth-Century England* (Turnhout, 2011), 167–85 (at 180–1).

116 J. Gairdner (ed.), *Letters and Papers Foreign and Domestic of the Reign of Henry VIII*, X (London, 1887), 137. The original reads 'Ecclesia Cath[edralis] Lichfeld/hic habet[u]s peregrination ad sanctu[s] Ceadda redditus annus ccccⁱⁱ/fundator d[omi]n[u]s Reg[is]' (TNA, SP 1/102 f. 85r). Even allowing for scribal error an income of £100, £200, or £300 is very high.

117 The offerings at the shrines of St Thomas at Hereford and the Holy Blood at Hailes Abbey were valued at only £10 (Caley and Hunter (eds), *VE*, III, 5; *VE*, II 456), although at £260 12s. 4d. the income of the shrine of the Virgin at Walsingham approached Lichfield's (Caley and Hunter (eds), *VE*, II, 388). It is difficult to explain why commissioners investigating monasteries visited a secular cathedral in the course of their work.

five archdeaconries spread over seven counties – and its strong sense of identity through its patron saint might partly account for such a high income, few certain conclusions about this valuation can be drawn.

An alternative measure of St Chad's popularity is the health of the cathedral fraternities, which, though principally intended to raise money for the fabric, were closely associated with him and dedicated to him. The early history of cathedral fraternities at Lichfield is hard to disentangle.¹¹⁸ There seem to have been four distinct entities: the *Martiloge*; Chad-farthings; a mass membership fraternity; and an elite fraternity.

Martiloge The *Martiloge* first emerges in the early 13th century offering spiritual benefits, such as masses, prayers and obits, for cathedral benefactors.¹¹⁹ During the course of the century it acquired sufficient endowments to justify the appointment of members of the minor clergy as keepers, to manage them. Little is heard of it after 1315, but a visitation of the vicars choral in 1491 found that they had neglected praying for its brothers and sisters, both living and dead, which suggests that responsibility for administering the *Martiloge* passed to the vicars.¹²⁰

Chad-farthings Chad-farthings – the payment of a farthing a year by every household in the diocese to support the fabric – were said in 1352 to be a longstanding custom, though there is no evidence of them before this date. They were probably what were known as Pentecostals in other dioceses, small annual payments made by parishioners to the cathedral as the mother church of the diocese, in recognition of their spiritual dependence.¹²¹ Both Chad-farthings and Pentecostals were due from households rather than individuals, but in most dioceses other than Lichfield Pentecostals were not connected to the fabric. Although the tradition of some parishioners personally taking their offerings in procession to the cathedral during Pentecost week remained strong at Lichfield up to the Reformation, the chapter encountered problems collecting them in 1352. In response, Bishop Northburgh threatened to excommunicate those laity who did not pay and those officials and parish clergy who were in arrears with the payments they had collected.¹²² It was probably for this reason that the chapter subsequently farmed their collection to others.¹²³

Mass membership fraternity The limited surviving evidence suggests that Lichfield probably had two separate but overlapping cathedral fraternities dedicated to St Chad, one with a mass membership primarily intended to raise funds for the fabric, and another more exclusive one.¹²⁴ Collections for the former were said to be an ancient custom when first recorded in 1322. That year Bishop Northburgh reminded his clergy and officials of the fraternity's privilege, namely that its questors (local collectors) had a monopoly of alms collection in parishes between Advent and the octave of Easter.¹²⁵ Even so, in 1337 the principal collector named nine false questors whom he claimed were collecting without a licence.¹²⁶ Collections for the fraternity, like Chad-farthings, were generally farmed (granted to others to collect for a fixed sum) in the 14th and 15th centuries, archdeaconry by archdeaconry, as at other cathedrals.¹²⁷ For example, in 1348 the archdeaconry of Chester was being farmed for 13 marks (£8 13s. 4d.) a year.¹²⁸ This evidence makes it clear that the Lichfield fraternity undertook large-scale fund-raising campaigns annually, encouraged by episcopal indulgences such as the one issued by Bishop Heyworth in 1439–40 (see below).

A remarkable list of about 51,000 names from the archdeaconry of Stafford, dating from 1532–3, suggests that, on the eve of the Reformation, the fraternity of St Chad operated on a very large scale.¹²⁹ As its editor, Ann Kettle, has argued, the list is most probably a record of the fraternity's

118 I am most grateful to the anonymous reader whose ideas have greatly improved the following discussion.

119 Savage (ed.), *MRA*, nos 104, 108–9, 207, 236, 352.

120 Ibid. no. 207; SRO, LD30/2/1/3, f. 4v.

121 D. N. Lepine, 'And Alle Oure Paresshens': Secular Cathedrals and Parish Churches in Late Medieval England', in C. Burgess and E. Duffy (eds), *The Parish in Late Medieval England* (Donington, 2006), 29–53 (at 43–5).

122 SRO, B/A/1/3, f. 127r.

123 Bodleian, Ashmole MS 794, f. 108v.

124 R. N. Swanson, 'Books of Brotherhood: Registering Fraternity and Confraternity in Late Medieval England', in D. Rollason, A. J. Piper, and M. Harvey (eds), *The Durham Liber Vitae and its Context* (Woodbridge, 2004), 233–46.

125 SRO, B/A/1/3, ff. 10v–11r.

126 Bodleian, Ashmole MS 794, f. 56v.

127 R. N. Swanson, *Indulgences in Late Medieval England: Passports to Paradise?* (Cambridge, 2007), 156.

128 Bodleian, Ashmole MS 794, f. 108v.

129 A. J. Kettle (ed.), *A List of Families in the Archdeaconry of Stafford, 1532–3* (being *SHC*, 4th series, VIII, 1976).

membership, a conclusion drawn from internal evidence in the document, in particular the inclusion of a significant number of dead members, and the lack of any discernible secular purpose.¹³⁰ The Lichfield cathedral fraternity had a truly mass membership numbering in the tens of thousands, the bulk of whom were of humble stock. A considerable number in each community joined – even the shortest lists contain twenty or so adults and their children – and they are listed according to their status, with the parish clergy and gentry at the head. A membership of tens of thousands in just one archdeaconry may seem very high indeed, but fund-raising by other cathedral fabric fraternities is known to have occurred on a substantial scale. In the second half of the 15th century at Wells and Salisbury around 500 writs (soliciting contributions) were issued each year, and other fraternities are known to have collected the names of their members on a large scale.¹³¹ In 1533–4 the confraternity of St Wilfrid of Ripon had a book listing the names of its members in the deaneries of Nottingham, Newark, and Bingham.¹³² Even so, the tens of thousands of names on the Lichfield list are hard to reconcile with the relatively modest sums for which the fraternity was farmed at this time. As only £6 13s. 4d. was raised in 1532 for half the farm of two counties, Staffordshire and Derbyshire, it seems likely that the farm was heavily discounted and that the true income was higher.¹³³

The method used to compile the list can be pieced together from the document itself.¹³⁴ The names of members were collected on a Sunday or feast day over the course of almost a year, parish by parish and street by street in larger townships. The variations between parishes, and even between streets in the same township, in what was recorded and how it was recorded indicate that local agents, perhaps parish clerks, drew up initial lists. These were then collated and copied up by two different scribes, who were probably employed by the fraternity's questors. The principal obligation of membership, briefly set out in a mid 15th-century summary of the spiritual benefits granted to fraternity members, was an annual payment of alms to the cathedral to support its fabric, but no indication is given of the sum expected. A contemporary document adds a further obligation to visit the cathedral and relics each year.¹³⁵ It seems likely, therefore, that new or revised lists of names were made each year.

Elite fraternity The elite cathedral fraternity at Lichfield is an even more shadowy body than its mass counterpart. Little is known about it beyond the admission of a dozen members recorded in the chapter act books. It was comparable to those at Lincoln and Salisbury which attracted members of the royal family and aristocracy,¹³⁶ but the Lichfield fraternity drew its membership from the diocesan rather than the national elite. Humphrey Stafford, earl of Stafford and later first duke of Buckingham (d. 1460), was admitted in 1429 and Richard Beauchamp, earl of Warwick (d. 1439), in 1434;¹³⁷ Bishop Arundel of Exeter followed in 1502.¹³⁸ A further nine members were admitted on the same day, 24 September 1512: the earl and countess of Derby, Sir Henry Willoughby and his wife, Master Anthony Fitzherbert and his wife, Master Thomas Comberford and his wife, and Helene Basset, widow.¹³⁹ Thomas Stanley, second earl of Derby (d. 1521), and Sir Henry Willoughby (d. 1528) of Wollaton (Notts.) were men of national importance, prominent in the diocese: the core Lancashire estates of the Stanleys lay in the diocese and Sir Henry Willoughby had important interests in Warwickshire where he was a justice of the peace.¹⁴⁰ All five families had local connections with Lichfield or the cathedral. A junior branch of the Stanleys was settled at Elford (Staffs.), and one of them, George Stanley (d. 1509), was buried in the cathedral.¹⁴¹ Sir Henry Willoughby's Warwickshire interests centred on his manor and residence at Middleton, seven miles south of Lichfield, whilst

130 About 3%, 1500 names, have crosses next to them but this is an underestimate as several deceased wives are listed without a cross: Kettle (ed.), *Families in Archdeaconry of Stafford*, pp. vi–xi.

131 Swanson, *Indulgences in Late Medieval England*, 158–9. The Brotherhood of St Andrew at Wells regularly issued 480 writs a year: L. S. Colchester (ed.), *The Fabric Rolls of Wells Cathedral* (Wells, 1983), 12, 18, 24, 31, 38.

132 Swanson, *Indulgences in Late Medieval England*, 156–7.

133 SRO, LD/30/2/1/4, ff. 96r.

134 Kettle (ed.), *Families in Archdeaconry of Stafford*, pp. vi–xii.

135 R. N. Swanson, *Catholic England: Faith, Religion and Observance before the Reformation* (Manchester, 1993), 220.

136 The Salisbury fraternity is discussed in A. D. Brown, *Popular Piety in Late Medieval England: The Diocese of Salisbury 1220–1550* (Oxford, 1995), 51–2.

137 SRO, LD30/2/1/1, ff. 132r, 145r.

138 Ibid. LD30/2/1/3, f. 66v.

139 Ibid. LD30/2/1/3, f. 106r.

140 B. Coward, *The Stanleys, Lords of Stanley and Earls of Derby* (Chetham Society, 3rd series, 30, 1983), 1–27; S. J. Payling, 'Willoughby Family (per. 1362–1528)', *ODNB*, online edn ref:odnb/52802 (accessed 29 November 2019).

141 J. C. Wedgwood, *History of Parliament 1439–1509* (London, 2 vols, 1936), II, 797–9; Tringham, 'Early Eighteenth-Century Description of Lichfield Cathedral', 59.

Anthony Fitzherbert, a younger son of a leading Derbyshire family, was a highly respected judge and legal writer who had settled at Hamstall Ridware (Staffs.).¹⁴² Thomas Comberford, esquire, of Comberford in Tamworth, was escheator of Staffordshire from 1519 to 1521.¹⁴³ Helene Bassett is harder to identify but was probably Eleanor, the wife of Ralph Bassett, third son of William Bassett (d. 1498) of Blore.¹⁴⁴ The last member of the senior branch of the family at Drayton Bassett, Ralph, lord Bassett, had been buried in the cathedral in 1390. There seems to have been some overlap between the mass and elite fraternities, with some the latter's members also joining the former each year; four of the five admitted into the elite fraternity on 24 September 1512 whose principal residence was in the archdeaconry of Stafford also appear in the 1532–3 list of families.¹⁴⁵

Benefits of fraternity membership The spiritual benefits offered to members of the elite fraternity are not recorded but were probably similar to those at Salisbury: participation in all the masses, prayers, fastings, vigils, and other meritorious works of the cathedral clergy, in both life and death.¹⁴⁶ Those offered to the mass fraternity, which are much better documented, were substantial and had been accumulated over many years.¹⁴⁷ By the mid 15th century they amounted to 4,040 days of remission from purgatory granted by bishops of Lichfield, 12,000 days granted by other bishops, and a further twenty-one years granted by popes, as well as 2,434 masses a year and 452 psalters. In addition, prayers were said for them in the cathedral and parish churches of the diocese and a Christian burial was granted to members who would otherwise have forfeited it, such as suicides. The masses and psalters were offered by the cathedral and a total of twenty-two religious houses, almost all of them in the archdeaconries of Stafford and Salop, together with a handful in the archdeaconry of Derby (which had few religious houses). Significantly, none of the monasteries in the archdeaconries of Chester and Coventry offered any masses: each had a rival major religious house – St John's at Chester, the former cathedral, and St Mary's at Coventry, the co-cathedral. Nor did the friars, who were exempt from episcopal authority, offer any benefits. Fittingly, it was the cathedral that provided the bulk of the masses that were offered: four masses a day, two for the living and two for the dead, and on non-feast days in Lent a requiem for deceased members. On Sundays, unless there was a double feast, the clergy, as they processed into the choir, would stop at its entrance and say special prayers for the brothers and sisters of the fraternity. At parish level, all parish priests were required to celebrate thirty masses a year for fraternity members and on Sundays, before the aspersions, to lead the congregation in prayers for them with a recitation of the Lord's Prayer. As at other cathedrals, members of the Lichfield fraternity were also included in diocesan bidding prayers.¹⁴⁸ A late 15th-century Shropshire bidding prayer includes 'ye bredyr and ye systorys and ye gud dowers of Sent Chad' in the list of those to be prayed for.¹⁴⁹ Thus, through the masses and prayers said for its members, the mass fraternity was integrated into the worship offered by the religious houses and parish churches of the diocese as well as that of the cathedral; and through its attribution of some of these spiritual benefits to him, the fraternity maintained its strong connection with St Chad.

These spiritual benefits were consolidated by the third late-medieval bishop to promote the cult of St Chad, William Heyworth (d. 1447). Like Bishop Stretton, he is known to have had a strong personal devotion to St Chad, his patron saint.¹⁵⁰ In 1439–40 he drew up a document confirming the accumulated benefits discussed above and granted a forty-day indulgence of his own. Subsequently, it was discussed by the dean and chapter in May 1444, when they met to draw up a letter on 'indulgences and the benefits from St Chad', presumably as part of a campaign to promote their patron

142 J. H. Baker, 'Fitzherbert, Sir Anthony (c. 1470–1538)', *ODNB*, online edn ref:odnb/9602 (accessed 2 December 2019).

143 S. Shaw, *The History and Antiquities of Staffordshire* (London, 2 vols, 1798 and 1801), I, 433–4; A. C. Wood, *List of Escheators for England and Wales* (List and Index Society, 72, 1971), 155.

144 H. S. Grazebrook (ed.), *The Visitation of Staffordshire made by Robert Glover, al's Somerset herald, mareschall to William Flower, al's Norry kinge of armes, anno D'ni 1583* (London, 1883), 46–7.

145 They are listed under the location of their principal residence – the Fitzherberts at Hamstall Ridware, the Comberfords at Comberford (in Tamworth parish), and possibly Helene Basset at Blore: Kettle (ed.), *Families in Archdeaconry of Stafford*, 5, 24, 11.

146 C. Wordsworth (ed.), *Ceremonies and Processions of the Cathedral Church of Salisbury* (Cambridge, 1901), 147–9. I am grateful to the anonymous reader for this suggestion.

147 Swanson in *Catholic England*, 218–21 and 'Extracts from Lichfield Chapter Act Book', 134–7, 141–2.

148 For example, see the Exeter bidding prayer in D. N. Levine and N. I. Orme (eds), *Death and Memory in Medieval Exeter* (Devon and Cornwall Record Society, new series, 47, 2003), 337–9.

149 E. Calvert, 'Extracts from a Fifteenth Century MS', *Transactions of the Shropshire Archaeological and Natural History Society*, 2nd series, 6 (1894), 106.

150 Lambeth Palace Library, Register Archbishop Stafford, f. 154r.

saint and the cathedral fraternity. An undated draft letter by Bishop Heyworth to the clergy of the archdeaconry of Chester in a mid 15th-century formulary is probably part of the same campaign. In it, Heyworth urges the clergy there to promote the fraternity and the cathedral, 'his bride', the mother church of the diocese.¹⁵¹ Such letters seem to have had an impact on the laity, too. Humphrey Newton (d. 1536), a Cheshire gentleman, recorded the spiritual benefits offered by the fraternity in his commonplace book, carefully listing the number of 'pardon days', masses, and psalters.¹⁵²

THE ROLE OF THE CATHEDRAL CLERGY AND THE LAITY

The cathedral clergy were primarily engaged in the administration of the cult of St Chad rather than in its promotion or enhancement. Collectively the chapter – which was relatively poor by the standards of leading secular cathedrals such as Lincoln, Salisbury, and York – lacked the resources to develop it and little time was spent discussing the cult at chapter meetings. Individual clergy, however, were more engaged. Despite a dearth of surviving wills, several canons are known to have had a particular personal devotion to St Chad which they expressed in requests for burial close to his shrine or tomb or in an invocation in their will. As well as three deans, Canon Nicholas Lichfield (d. 1375) and Canon William Berford (d. 1450) requested burial near St Chad and Canon John Moreton established a chantry at his shrine at the east end.¹⁵³ Like Berford, Richard Delves (d. 1527) invoked the prayers of St Chad in his will and, as we have seen, William Admondeston promoted the new feast of the Translation and Robert Wolveden augmented the cult at York.¹⁵⁴ Even those whose devotional interests lay elsewhere were respectful of St Chad. Although Thomas Heywood (d. 1492), a remarkable long-serving 15th-century dean, dedicated his chantry to St Blaise, it also honoured St Chad and the Holy Trinity, and his gift of a new organ to the cathedral in 1482 was 'for the honour of St Chad'.¹⁵⁵ There is much less evidence about the role of the minor clergy, whose principal contribution was the day-to-day performance of the liturgy venerating Chad. The will of Richard Worcetur (d. 1504), a vicar choral who bequeathed a gold ring to St Chad, suggests they shared the devotion to the cathedral's patron saint.¹⁵⁶

The presence of leading early 16th-century magnates in the cathedral fraternity and Humphrey Newton's interest in its spiritual benefits shows significant lay support for the cult. This can be traced back to the early 14th century when Thomas, lord Berkeley (d. 1340), and his wife gave a gold brooch and two gold rings to St Chad's shrine,¹⁵⁷ and a century later, in 1433–4, Sir William Mountford, a Warwickshire knight in the service of the earls of Warwick, made a payment of 8*d.* 'to honour St Chad' (*in honore Sancti Ceadde*).¹⁵⁸ As this last offering was made in the same year that the earl joined the cathedral fraternity, it may have been a fraternity payment. Lack of evidence, particularly the scarcity of wills, makes it difficult to assess the extent of lay support from other groups in society, but the mass membership of the fraternity suggests widespread engagement.

THE REFORMATION AND AFTER

The cult of St Chad, like all other cults, was suppressed on the orders of Henry VIII in 1538. However, although the gold and precious jewels were removed, Bishop Roland Lee successfully petitioned the king to keep part of the shrine (*scrinia necessariis*) for the cathedral's use.¹⁵⁹ At considerable personal risk, Arthur Dudley (d. 1577), the son of Edward Sutton, Lord Dudley and a residentiary canon, removed and hid some of Chad's relics.¹⁶⁰ According to a 17th-century Jesuit account, he gave them to two of his nieces, who in turn passed them on to a neighbouring recusant family.¹⁶¹ A succession of Jesuit priests and Catholic families preserved them until, in 1841, some were placed

151 BL, Harley MS 2179, f. 100v.

152 Bodleian, MS Lat. Misc.c.66, f. 18r; D. Youngs, *Humphrey Newton (1466–1536): An Early Tudor Gentleman* (Woodbridge, 2008), 120–2.

153 Bodleian, Ashmole MS 794, f. 154r.

154 SRO, LD30/2/1/4, ff. 43v–6v.

155 Cox, 'Benefactions of Thomas Heywood', 625, 638.

156 SRO, LD30/2/1/3, f. 112.

157 Cox, *Catalogue of Muniments*, 201.

158 C. M. Woolgar (ed.), *Household Accounts from Medieval England* (Oxford, 2 vols, 1993) II, 433, 450.

159 Wharton, *Anglia Sacra*, I, 457–8.

160 A. B. Emden, *A Biographical Register of the University of Oxford A.D. 1501 to 1540* (Oxford, 1974), 675–6; SRO, LD30/2/1/4, ff. 82v–124.

161 M. W. Greenslade, *Saint Chad of Lichfield and Birmingham* (Birmingham, 1996), 14–17, 25–8.

in a reliquary in what is now St Chad's cathedral, Birmingham. Scientific examination of five bones from the reliquary in 1995 revealed that they date from the 7th century and belong to at least two and possibly five individuals. It is entirely possible, therefore, that some are those of the saint and thus, as a result of Arthur Dudley's action, St Chad's relics are still venerated today.

CONCLUSION

Arthur Dudley's devotion, and his willingness to defy Henry VIII to preserve Chad's relics, reflects both the strength of the saint's cult in the cathedral and wider loyalties to its patron saint. The late medieval cult was remarkably vigorous, undergoing significant development in the 14th and 15th centuries, and retaining substantial popularity in the diocese of Lichfield right up to the Reformation. This development was primarily the work of three notable bishops: Walter Langton, Robert Stretton, and William Heyworth. Above all, it was Bishop Langton's artistic ambition and wealth that ensured that St Chad's new shrine outshone many in the magnificence of its Parisian reliquary and the grandeur of its architectural setting, modelled on the Sainte-Chapelle. There was sufficient vigour for the cult to have five *foci*. As well as Langton and Stretton's great shrine behind the high altar, St Chad was also venerated in an upper chapel, called the chapel of St Chad's Head, from whose gallery his head and arm reliquaries were displayed to pilgrims. A third portable reliquary was used in the liturgy and probably in fund raising. In addition, the site of St Chad's tomb and the Mercian shrine in the nave remained a place of veneration and the site of prestige burials. The cult generated sufficient energy to sustain a new liturgical feast, his Translation, and in the early 15th century what was an essentially a local, diocesan cult, gained recognition and enhanced status across the whole province of Canterbury. Although St Chad's popularity is impossible to measure, the activities of his fraternities, which flourished on the eve of the Reformation, suggests that there was, indeed, widespread loyalty to the cathedral's patron, its 'glorious confessor'.

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TWO SETS OF MID-TUDOR CHURCHWARDENS' ACCOUNTS: YOXALL AND LICHFIELD ST MICHAEL

IAN ATHERTON and MATTHEW BLAKE

Churchwardens' accounts have become one of the foundational sources for local, social, and religious histories between the 15th and 18th centuries, with scholars reconstructing from them the annual round of community life and the impact on ordinary people of dramatic events such as the Reformation and the English Civil Wars, or of long-term changes such as the rise and fall of 'Merry England'.¹ Staffordshire, however, has only six sets of pre-Elizabethan churchwardens' accounts: those of Walsall, 1462–1531;² Adbaston, 1478–88;³ Wolverhampton, 1520–1634;⁴ St Mary's, Stafford, 1528–9 (a few entries only);⁵ Yoxall, 1541–55;⁶ and St Michael's, Lichfield, 1554–7.⁷ Only those of Walsall, Adbaston, and Stafford have previously been fully published. This is a much poorer survival rate than for many other counties: Somerset has 16 sets of churchwardens' accounts from before 1558, Suffolk 14, and Oxfordshire 12;⁸ other scholars have previously noted the much poorer survival rate of churchwardens' accounts the further north one goes.⁹ That scarcity for Staffordshire justifies the transcription below of the accounts for Yoxall, 1541–55, and Lichfield St Michael, 1554–7.

The Yoxall accounts come from the collection of a firm of Lichfield solicitors, Hinckley, Birch, and Exham, and were initially deposited in the William Salt Library, Stafford, in 1961.¹⁰ The whole collection, as pertaining to a Lichfield firm, was transferred to the Lichfield Record Office in 1993 but, on the closure of that office in 2018, it was transferred back to Stafford to the Staffordshire Record Office. Thomas Hinckley was admitted as steward of the rectory manor of Yoxall by the lord of the manor, Thomas Leigh, in 1806, and Hinckley and then the firm of Hinckley and Birch remained stewards of the manor for the rest of the 19th century.¹¹ It is probably that connection which explains the presence of these accounts, and one subsequent volume (of summary accounts only) covering the period 1586–1617,¹² in the collection. Nonetheless, these churchwardens' accounts are an outlier in the collection, as the earliest manorial document is a court roll from 1664.¹³

The Yoxall accounts have been noticed and occasionally used by earlier historians, most notably in Denis Stuart's social history of Tudor and Stuart Yoxall, and in the more recent *Victoria County History* volume on the Needwood Forest area, including Yoxall parish, and in the *Records of Early English Drama* volume for Staffordshire, but they have not been extensively studied.¹⁴

- 1 Seminal studies include David Cressy, *Bonfires and Bells: National Memory and the Protestant Calendar in Elizabethan and Stuart England* (London: Weidenfeld and Nicolson, 1989); Ronald Hutton, 'The Local Impact of the Tudor Reformations', in Christopher Haigh (ed.), *The English Reformation Revised* (Cambridge: Cambridge University Press, 1989), 114–38; Ronald Hutton, *The Rise and Fall of Merry England: The Ritual Year 1400–1700* (Oxford: Oxford University Press, 1994); Eamon Duffy, *The Voices of Morebath: Reformation and Rebellion in an English Village* (New Haven and London: Yale University Press, 2001); Valerie Hitchman and Andrew Foster (eds), *Views from the Parish: Churchwardens' Accounts c.1500–c.1800* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2015).
- 2 G. P. Mander (ed.), 'Churchwardens' Accounts of All Saints' Church, Walsall, 1462–1531', in *Collections for a History of Staffordshire* (William Salt Archaeological Society), 3rd series, 1928 (1930), 175–267.
- 3 Philip Morgan (ed.), 'Adbaston Churchwardens' Accounts, 1478–1488', in Philip Morgan and A. D. M. Phillips (eds), *Staffordshire Histories: Essays in Honour of Michael Greenslade* (*Collections for a History of Staffordshire* (Staffordshire Record Society), 4th series, XIX, 1999), 83–96.
- 4 The original book of accounts is still in private hands in the county, but a pencil transcript was made in the 1970s by Norman Tildesley of Willenhall and later deposited in the William Salt Library (225/81). What is apparently a copy of this transcript is in Wolverhampton Archives and Local Studies, D-NWT/14.
- 5 William Salt Library, Stafford, S. MS 366(1). For an edition see N. J. Tringham, 'A Pre-Reformation Churchwardens' Account for St. Mary's Church, Stafford', *Staffordshire Studies*, 15 (2003–4), 71–9.
- 6 Staffordshire Record Office [hereafter SRO], D. (W.) 1851/1/13/20.
- 7 Accounts for 1554–5 are SRO, B/C/5/exhibits/1. Rebecca Jackson and Nigel Tringham are thanked for their help in locating them. Excerpts from the accounts of 1556–7 were printed in Thomas Harwood, *The History and Antiquities of the Church and City of Lichfield* (Gloucester, 1806), 522–3.
- 8 Calculated from the listings in Hutton, *Merry England*, 263–93.
- 9 Hutton, 'Local Impact', 115.
- 10 Information kindly supplied by Dominic Farr of the William Salt Library.
- 11 SRO, D. (W.) 1851/5/8; D. (W.) 1851/1/14/7.
- 12 Ibid. D. (W.) 1851/1/13/21.
- 13 Ibid. D. (W.) 1851/1/13/2.
- 14 Denis Stuart (ed.), *A Clod of Clay, a Prison for my Soule: A Social History of Yoxall in the Sixteenth and Seventeenth Centuries* (Keele: University of Keele, 1990); Nigel J. Tringham, *A History of the County of Stafford* [hereafter *VCH Staffs.*],

THE ACCOUNTS

Yoxall The 1541–55 accounts for Yoxall, reproduced below, are written on five paper sheets, each folded in half, making a total of 20 pages. The leaves are of three different sizes: pp. 1–2 and 19–20 are formed by one sheet, 430 mm high by 310 mm wide, with pp. 3–4 and 9–10 written on another sheet of similar size; pp. 11–2 and 17–18 are formed by one sheet, 420 mm high by 290 mm wide, with pp. 13–16 written across another sheet of the same size; while pp. 5–8 are formed by a smaller sheet, 290 mm high by 310 mm wide. There could have been one or more gatherings of paper between pp. 18 and 19, which would also explain why the eight payments at the head of p. 19 appear as orphans, unrelated to the accounts on the preceding page (for 1548–9) or those that follow on p. 19 which are for 1554–5; these eight payments probably relate to 1549–50 with the remainder of the accounts from that year entered on a preceding folded sheet which is now lost. The accounts were conserved in 1962 and bound together to form a slim volume with green covers.¹⁵ The sheets are partially worn (though now conserved), leaving a number of entries only partially legible. Receipts and payments are usually listed separately. Each account is dated by regnal year, though a note at the end of the accounts for 34 Henry VIII (1542–3) suggests that the accounting year ended in May, at which point two new wardens were elected for the parish.¹⁶ Although the wardens held office for one year, there was significant continuity, with wardens frequently re-elected for a further term. Richard Cossall and Thomas Hodgkinson served for two years, 1541–2 and 1542–3, whilst Thomas Hygges and William Utting jointly served for four years, 1543–4 to 1546–7,¹⁷ and then Utting served for a further two years, 1547–8 and 1548–9. It is known that Hugh Hargreave and Robert Towers were wardens in May 1553, either at the end of the 1552–3 accounting year or the beginning of the 1553–4 one,¹⁸ and Hargreave was again, or more likely still, warden in 1554–5.

The surviving Yoxall accounts cover nine accounting years: 1541–2 (payments only), 1542–3, 1543–4 (partial receipts only), 1544–5, 1546–7, 1547–8, 1548–9, 1549–50 (a fragment of eight payments only), and 1554–5. There are no accounts at all, therefore, for the years 1545–6, 1550–1, 1551–2, 1552–3, 1553–4, 1555–6, and subsequent years. The accounting year 1548–9 concludes at the foot of p. 18, leaving p. 19 to commence mid-way through the payments of a different accounting year. Since the accounts for 1554–5 begin part-way down p. 19, the temptation is to ascribe these orphaned payments to the previous year, 1553–4, except for the fact that the last payment in this section is for ‘expenses at lychefeld for carying the church goodes before the lorde Ferrers’; as Walter Devereux, Lord Ferrers, was created Viscount Hereford in February 1550,¹⁹ these payments cannot relate to an accounting year later than 1549–50, unless the warden forgot Ferrers’ promotion or this payment was not accounted for until three years later. Neither is likely, and the probability is that the eight payments at the top of p. 19 are from the year 1549–50. That, and the fact that the remainder of this page is used for accounts from 1554–5, suggest that no accounts were returned for the years 1550–1 to 1553–4. A sense of accounting problems in the parish is reinforced by the disarray of those for 1554–5, which begin with the standard separation of receipts and payments, but on the final page they repeatedly switch between the two in the manner of a day book rather than summary accounts for the year. As Ronald Hutton has previously noted, churchwardens’ accounts tend to become disordered and fragmentary at times of tension or turmoil.²⁰

The first five years of accounts are those of both churchwardens in the parish, the last three extant complete sets being those of only one churchwarden, William Utting for 1547–8 and 1548–9, and Hugh Hargreave for 1554–5. The presence of accounts from only one churchwarden after the start of Edward VI’s reign is interesting. It may suggest that one churchwarden refused to act or return accounts, though that suggestion is rendered less likely since both churchwardens, Hugh Hargreave and Robert Towers, made the required return of church goods in May 1553 at the very end of

X: *Tutbury and Needwood Forest* (Victoria History of the Counties of England, Woodbridge: Boydell, 2007), 281–316; J. A. B. Somerset (ed.), ‘Records of Early English Drama Online: Staffordshire’ [2017], <https://ered.library.utoronto.ca/collections/staff/> [accessed 27 October 2020]. Hutton, *Merry England*, makes brief use of the Yoxall accounts (p. 87).

15 A modern typed note on the flyleaf of SRO, D. (W.) 1851/1/13/20, dates the conservation.

16 The second account book (SRO, D. (W.) 1851/1/13/21) reveals that between 1586 and 1593 the accounting year ran until the end of June or beginning of July; between 1594–8 it ended in the autumn (typically October or November); and that from 1607 it ran until April.

17 The accounts for 1545–6 are missing but is likely that Hygges and Utting also served for that year.

18 Walter Noble Landor, *Staffordshire Incumbents and Parochial Records (1530–1680)* (being *Collections for a History of Staffordshire* (William Salt Archaeological Society), 3rd series, 1915), 357.

19 *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004).

20 Hutton, ‘Local Impact’, 114.

Edward's reign.²¹ More probably, the change represents a variation in accounting practice. In some parishes each warden returned his own separate account. If that were the case in Yoxall from 1547, it would make these last three years' receipts and payments incomplete. However, comparison of the receipts and payments before and after 1547 argues against this. Although the sums gathered in and paid out varied considerably from year to year, particularly because the purchase of new bells in the 1540s was such a major expense, the receipts of the two wardens in 1542–3 (£3 1s. 8d.) and 1544–5 (£3 0s. 7d.) were very similar to those accounted for by Utting alone in 1548–9 (£3 16s. ½d.). It would seem, therefore, that the accounts after 1547 represent the total income and expenditure of the wardens, albeit accounted for by only one of them each year.

St Michael, Lichfield The second set of pre-Elizabethan churchwardens accounts reproduced below are for St Michael's, Lichfield, for the years 1554–5 and 1556–7, being the earliest extant churchwardens' accounts for the church from three surviving series. Those for 1554–5 are from a series of 25 accounts extending with many gaps down to 1731–2 preserved among the cause papers of the Lichfield consistory court. They were presented as evidence in suit in the late 1780s against the out hamlets (such as Burntwood, Fisherwick, Hammerwich, and Streethay) for non-payment of church rates. That was probably in the dean of Lichfield's peculiar court (in the jurisdiction of which St Michael's parish lay) but at some point they were transferred to the archives of the bishop's consistory. From there excerpts were printed by Marjorie Anderson in the 1960s, but the accounts were subsequently mislaid, only to resurface as the Lichfield consistory court papers were catalogued in 2020.²² Some of the later accounts and other papers from this collection, but not the accounts for 1554–5, were used for the Victoria County History volume on Lichfield published in 1990.²³ The accounts for 1556–7 come from a different series which extended to 1732 and was used by Thomas Harwood in his early 19th-century history of Lichfield.²⁴ They have since disappeared, so only Harwood's partial transcription and printed description survive. A third series, commencing in 1650, remained with the parish records and was deposited in the Lichfield Record Office; they were recently transferred to the record office in Stafford.²⁵

The accounts for 1554–5 are written in two columns on a single membrane of parchment and are undated, the heading being incomplete, but they can be dated by a combination of internal evidence and comparison with the accounts for 1556–7, in which the accounting year ended 'at the purification of our lady' (Candlemas, 2 February). A payment for ringing when Philip of Spain came to England, which was in July 1554, and the reasonable assumption that this set of accounts also began and ended at Candlemas (the first payment is for Maundy Thursday) show that they should be dated to February 1554–February 1555.²⁶ Harwood said nothing about the physical form of the 1556–7 accounts and extracted only what he called 'curious minutes'. Of the receipts, he itemised seven, amounting to £2 15s. 6d., 76% of the total receipts of £3 13s., and also mentioned 'Numerous entries' of sums received for lights at funerals ranging from 1d. to 6d., but gave no further details. Harwood also copied 23 payments, amounting to £1 10s. 2d., 40% of the total payments that year (£3 14s. 6d.). The 1556–7 accounts are also printed below, despite omissions and likely transcription errors.

THE COMMUNITIES OF YOXALL AND LICHFIELD ST MICHAEL

These accounts are a rich source for social history of these two communities. The parish of Yoxall in east Staffordshire consisted of two townships, one centred around Yoxall itself where most of the population lived during the 16th century, the other at Hoar Cross to the north. There were about 150 households in the parish during this period, suggesting a population of around 650. Mixed farming practices seemed to be the norm in Yoxall during the 16th century.²⁷ The parish lay to the south-

21 Landor, *Staffs. Incumbents*, 357.

22 Marjorie Anderson, 'Some early Churchwardens' Accounts of Lichfield St. Michael's', *Transactions of the Lichfield and South Staffordshire Archaeological and Historical Society*, 7 (1967), 11–20.

23 M. W. Greenslade (ed.), *VCH Staffs. XIV: Lichfield* (Victoria History of the County of Stafford, Oxford: Oxford University Press, 1990), 134–55. They are identified as L.J.R.O., B/C/5/Exhibits/Lichfield, St. Michael.

24 Harwood, *Lichfield*, 522–32.

25 Lichfield St Michael, churchwardens' accounts, 1650–1708, SRO, LD27/4/1.

26 Maundy Thursday in 1554 fell on 22 March.

27 Stuart (ed.), *Social History of Yoxall*, 15, 45. The multiplier used there is too high; the present editors have adopted Tom Arkell's suggestion of a multiplier of approximately 4.3: Tom Arkell, 'Multiplying Factors for Estimating Population Totals from the Hearth Tax', *Local Population Studies*, 28 (1982), 51–7. It must be emphasised that all such totals are only estimates.

west of the large expanse of Needwood Forest and on a route north from Lichfield to Uttoxeter. The river Trent formed the southern boundary of the parish, and the bridge that crossed the Trent from the neighbouring parish of King's Bromley to the south, known as Yoxall bridge or Trent bridge, is referred to several times in these accounts, as its maintenance was a key responsibility of the churchwardens: lands had apparently been given to the parish for its upkeep. A close of meadow in the parish which belonged to the chantry priests of the New College in Lichfield cathedral close was charged with an annual payment of 2s. 2d. to Yoxall parish, including 20d. for the maintenance of the bridge. Following the dissolution of the chantries at the beginning of Edward VI's reign the land was sold to London speculators. The annual charge for the bridge was supposed to be continued; it is not always possible to trace its receipt in the accounts, but the 20d. received of Mr Welles in 1554–5 'toward ye rep[ar]acion off trent brygge' might be the continuation of that rent charge.²⁸ The church, which stood on the west bank of the river Swarbourn (a tributary of the Trent) was dedicated to St Swithin until the 1560s but by 1571 the current dedication of St Peter's was being used.²⁹

St Michael's was one of four churches in the city of Lichfield, along with St Chad's at Stowe, St Mary's, and the cathedral. The questions of whether the first three were parish churches, or merely chapels of ease in one parish in which the cathedral was the only parish church, and whether there were boundaries between the churches, were disputed. The population of the city was probably just under 2,000.³⁰ St Michael's church stood on the eastern edge of the city, with a large (seven-acre) churchyard, the main burial ground for the city. As these and later accounts show, the profits from the pasturage of the churchyard and from cropping its trees were the principal sources of revenue for the church, with no levy regularly imposed until the 18th century.³¹ St Michael's had two churchwardens by 1463, who by an agreement of 1553 were to present their annual accounts to the bailiffs of the city, a practice which continued to at least the end of the century, though the 1554–5 accounts bear no trace of that procedure, and the 1556–7 ones were presented not before the bailiffs but another leading citizen, John Otley.³²

Both sets of accounts reveal the central importance of the church bells in the life of the community. Even in a normal year the bells demanded constant expenditure – repairs to bell wheels along with new ropes, oil, baldrics and the like. In addition, in 1546–7 Yoxall bought some new bells at a cost of over £46, a sum many times greater than the expenditure in a typical year. The new bells do not survive at Yoxall; although there is one pre-Reformation bell, the remaining five are of the 17th century or later.³³

The Yoxall accounts reveal aspects of the festive cycle, with receipts at 'the summer games' in 1542. Summer games were by then a well-established feature in the parish, for in 1500 an ordinance was issued that forbade anyone from leaving the manor for the duration of the games. They may have taken place on the feast of St Swithin in July.³⁴ Summer or May games were common in early Tudor England, held both as a communal celebration and as a means of raising funds for the parish.³⁵ Probably associated with those games was the riding of a hobbyhorse, which was used to collect money, a figure of Robin Hood, morris dancing, and the services of a minstrel. The loss of Jane Mynors's dish in 1542 suggests feasting was also involved. All these practices can be found in many other English communities in the late 15th and early 16th centuries. At St Mary's, Stafford, for example, the dancing of the hobbyhorse was a key part of fund-raising for the church.³⁶ The Yoxall accounts also show the custom of 'heaving' at Easter, another widespread practice. At Hocktide (the second Monday and Tuesday after Easter) the men of the community would go out one day and capture any women they found, releasing them only for a fee (which was paid to church funds), and on the other day roles would be reversed; at Yoxall it was the young men and women who

28 *Calendar of the Patent Rolls ... Edward VI* (6 vols, London: HMSO, 1921–9), III, 124–8.

29 *VCH Staffs.* X, 299.

30 *VCH Staffs.* XIV, 39, 134–55. There were said to be 400 households in the city in 1563; the claim in 1604 that there were 6,000 living in Lichfield is far too high: Landor, *Staffs. Incumbents*, 152; Albert Peel (ed.), 'A Puritan Survey of the Church in Staffordshire in 1604', *English Historical Review*, 36: 102 (1911), 338–53 (at p. 350).

31 Anderson, 'Early Churchwardens' Accounts', 12–14.

32 Harwood, *Lichfield*, 420–1, lists the bailiffs.

33 Charles Lynam, *The Church Bells of the County of Stafford* (priv. print., 1889), 38.

34 *VCH Staffs.* X, 293.

35 Hutton, *Merry England*, 26–34.

36 *Ibid.* 34; Douglas Johnson, 'The Stafford Hobby Horse', *Transactions of the Stafford Historical and Civic Society for 1974–1976* [n.d. but 1977], 59–64. (The *Transactions* was a special issue with its own title: *Old Stafford. Essays presented to J. Sidney Horne.*)

indulged in the practice (in some other communities it was the married women who went out).³⁷ These practices all seem to have ended in 1547–8, victims of the Reformation and Protestant animus against such festive customs.

RELIGIOUS CHANGE

Perhaps the greatest significance of these accounts is the light they shed on the processes of religious change in mid-Tudor England. The Yoxall accounts are particularly valuable in that they cover the short period of intense religious changes from the last years of Henry VIII's reign, through the first years of the determined move to Protestantism under Edward VI, and then the reversal of many of those changes and the reconciliation with Rome under Mary. Those from Lichfield St Michael can reveal only the Marian part of these events. Churchwardens, with their responsibility for the goods of the church, bore the brunt of many of the transformations demanded by the crown. Churches were forced to acquire newly approved texts such as service books and Erasmus's *Paraphrases*, and also to take down and give up what reformers saw as the trappings of popery such as images and roods under Edward, and then restore them in the next reign. Their accounts, therefore, are one of the best sources for the impact of religious change on individual parishes. Behind the terse entries for payments such as the 1s. 1d. paid 'at ye takyng dou[n]ne ye Immages' in Yoxall 1547–8 and then the 10s. 5d. 'payd for the rode and the ymages and to the clerke for setting them vppe' in 1554–5, or the 12d. 'for paentyng the Roode' at St Michael's in the same year, lie a wealth of religious change and the reorientation of the religious lives of parishioners and both the material refashioning and the mental and spiritual re-imagining of the physical spaces of the church building.

Churchwardens' accounts, indeed, have sometimes been used to expose resistance to some aspects of religious change. At Great St Mary's in Cambridge, for example, accounts reveal that the parishioners did not get rid of a number of devotional items banished from the Elizabethan church, including Mass vestments, pyx, and altar candlesticks, until 1568, and that they did not completely remove the rood loft until 1569–70. No doubt on top of any innate religious conservatism, the previous three decades of religious change and reversal had taught them to be cautious.³⁸ The Yoxall accounts, however, do not reveal such foot-dragging. Rather, they show the responsiveness of the parish to change. Ordered to buy Erasmus's *Paraphrases*, they did so within a few months of its publication; required to take down images in 1547–8, they complied and then obediently restored them when demanded a few years later under Mary. Indeed, Yoxall bought the *Book of Homilies* (called in the accounts 'ye booke of ye com[m]union') in 1548–9, when only 19 parishes out of a sample of 91 did so, making them more compliant than many other rural or provincial wardens.³⁹

The Yoxall accounts show the pace of change imposed by the crown in the 1540s and 1550s. Before the death of Henry VIII in 1547, there are few signs of the great religious changes he had brought to the church, beyond the purchase of 'ij p[ro]cesseners in englysse' in 1544–5. The use of English in some services apart, the accounts suggest the full panoply of the devotion of the Mass continued, as the law directed: new albs were made in 1544–5, and that same year the pyx and two crosses were mended and an altar cloth blessed, and in the last year of Henry's reign (1546–7) one of the crosses was again mended, and a new corporal cloth for the consecrated elements at the Eucharist was given to the parish and blessed. Also in Henry's last year the parish was still participating in an annual procession to Lichfield cathedral with the Pentecostal offerings or Chad farthings, a practice known at the cathedral since at least the 14th century.⁴⁰ That year the wardens paid for two poles for bearing streamers to be carried to the cathedral. After the accession of Edward VI in 1547 all such payments ceased: those practices were no more. Also disappearing from the accounts after 1547 was the purchase of wax for candles and the making of torches and tapers. Before that year the parish had paid for 6 or 6½lbs of wax each year, to be made into tapers and the like at a typical cost to the parish of around 5s. a year; in 1544–5, for example, wax and tapers cost 5s. 2d., representing nearly 8 per cent of the wardens' total expenditure. After 1547, with the ban in that year's royal injunctions on lights in church (except for two on the altar), wax and tapers do not feature in parish expenditure. The year 1547 also saw the ending of the practice of paying for lights

37 Hutton, *Merry England*, 26.

38 Ian Atherton, 'Bishops of Ely, 1559–1667', in Peter Meadows (ed.), *Ely: Bishops and Diocese, 1109–2009* (Woodbridge: Boydell, 2010), 175–209 (at p. 180).

39 Hutton, 'Local Impact', 124. Hutton's sample did not include Yoxall.

40 M. W. Greenslade (ed.), *VCH Staffs. III* (Victoria History of the Counties of England, London: Oxford University Press, 1970), 150.

(to encourage prayers for the dead) at funerals, which hitherto had been a regular form of revenue. Indeed, the note under the second year of Edward VI (1548–9) that seven people had paid nothing for burial fees, might be taken to suggest that some of the more powerful in the village – for these fees were for burials in church, reserved for the local elite, and included members of the Morres (or Marrys) and Welles families, two of the most significant in the parish – were taking advantage of religious change in order to evade paying their customary dues.⁴¹ The outcome of that attempt is not known, but by 1554–5 with the restoration of Roman Catholicism, the practice of having lights in church had been restored. While the Yoxall accounts for that year do not include any receipts for lights at funerals, those from St Michael's do for both 1554–5 and 1556–7.

The accounts of both churches also show the speed with which many aspects of Catholic practice were restored under Mary. At Yoxall, rood and images were restored in 1554–5. More informative are the accounts of Lichfield St Michael. Easter 1554 was celebrated there with much of the traditional ritual and Holy Week liturgy, including the observation of Maundy Thursday and frankincense to cense the altar. A new, wooden Easter Sepulchre was created (for the host and crucifix to lie in from Good Friday to Easter Day) at a cost of over £1, representing nearly two-fifths of the parish's total expenditure that year. As Eamon Duffy has noted, the Easter Sepulchre was the crux of the Holy Week liturgy, expressing dramatically the Catholic doctrine of the Eucharist, and had been one of the key targets of Protestant reformers.⁴² Also in 1554–5 the high altar (presumably already restored) was decorated with hangings; the rood was painted; new liturgical books, including a Mass book, were purchased; and a brass cross obtained. In addition to Easter, the ritual year of Corpus Christi (with procession), Christmas, and Candlemas, was celebrated. Not surprisingly, the surviving 1556–7 accounts for St Michael Lichfield (as printed by Harwood) show that the Marian Catholic liturgy continued, including payments for the observance of Maundy Thursday, incense, the pascal candle, and the Corpus Christi procession. St Michael's was by no means unusual here: by the end of 1554 every parish in a sample of 134 with surviving churchwardens' accounts had rebuilt the high altar and had at least begun the process of obtaining the required church plate and liturgical utensils, and most parishes continued further embellishments until Mary's death.⁴³

In connection with the many religious changes introduced by the crown in the 1540s and 1550s, the over-riding impression given by these accounts is the compliance of the parish. In that respect they probably say more about the machinery of the Tudor state for enforcement than about the inner religious beliefs of individuals. On personal conviction the evidence of will preambles examined by Stuart, admittedly a highly problematic source, suggested the absence of early Protestantism in Yoxall before the mid 1560s.⁴⁴ The accounts, meanwhile, show the frequency of visitations, the means by which the crown, bishops, and other diocesan officials such as archdeacons enforced religious policy and outward obedience. Each year recorded in the accounts the Yoxall wardens made at least one trip to appear before the visitors. Each occasion cost money (ranging from 2*d.* to 4*s.* 4*d.*) in expenses and fees. In 1547–8 the wardens had to pay the costs of appearances before the king's visitors at Burton-upon-Trent and other visitations at Hanbury, Lichfield, and Uttoxeter; in 1549–50 there were appearances before visitors at Tamworth and Uttoxeter, and before royal commissioners for church goods (charged with surveying the parishes' surplus plate and vestments, no longer needed for the reformed service) at Lichfield; in 1554–5 the wardens were responsible for appearances before commissioners at Uttoxeter and Cardinal Pole's legatine visitation at Lichfield (the most expensive of all, as befitting an appearance before a papal legate). St Michael's accounts are less informative here, saying nothing of commissioners or legatine visitors in 1554–5, suggesting the importance for historians of not relying on a single set of accounts. The Lichfield wardens may have accounted for those visits in the now lost return of 1555–6, or have omitted the expense altogether. Nevertheless, in 1556–7 their accounts show the expense of yet another visitation. By such means were the English 'Reformations' created at parish level.

Clergy receive scant notice in the accounts, even though other sources show that both Yoxall and Lichfield were awash with clerics. In the Yoxall accounts there is only one mention of the rector, Roger Stockley – as a former warden of All Souls College, Oxford, he may have been non-resident, though when he drew up his will in March 1556 he described himself as being 'of Yokeshall'. Of

41 For the position of the Morres/Marrys and Welles families at the pinnacle of Yoxall society, see *VCH Staffs.* X, 288, 298, 309; and Stuart (ed.), *Social History of Yoxall*, 15, 24, 113–115.

42 Duffy, *Stripping of the Altars*, 29–35.

43 Hutton, 'Local Impact', 129.

44 Stuart (ed.), *Social History of Yoxall*, 55–60.

the other clergy known to have served in the parish, as curate or chantry priest, only two, John Marbury and Harry Berdmore, are mentioned in the accounts. Richard Marres, priest, who died early in 1543; John Atkyns, a chantry priest who witnessed a will in the parish in 1544; Humphrey Smith, curate between 1536 and 1547; Thomas Mason, chantry priest from 1533 (or earlier) until 1548 but seemingly remaining in the parish (for he was a witness to wills in Yoxall in 1556 and 1564); and Ralph Parker, curate from 1552, are all unnoticed.⁴⁵ St Michael's accounts mention receipts from the prebendaries of the cathedral, but make no other mention of any of the many clergy who thronged around the city and cathedral. In part, the absence of the clergy is a product of the form of accounts produced by two leading layfolk of the parish each year. In addition, however, their absence reveals a truth about the nature of 16th-century communities, that it was the laity, or at least the local lay elite who, increasingly in the 1540s and 1550s under royal supervision, controlled the social, cultural, and religious lives of the English parish.

EDITORIAL CONVENTIONS

The texts of the Yoxall churchwardens' accounts, 1541–55, and of Lichfield St Michael for 1554–5 are reproduced here by kind permission of the Staffordshire Archive Service. The text is rendered as written, orthography and spelling unaltered, except that abbreviations have been extended and the omitted letters enclosed within square brackets; suspended letters (including 'li', 's', and 'd' for pounds, shillings and pence) have been brought down to the line. Erased letters and words, usually caused by the scribes changing their mind part-way through a word, are rendered ~~thus~~; interlined words and phrases <thus>; and gaps in the manuscript caused by deterioration are indicated as [*text missing*]. Headings to identify the accounting years have been added in square brackets. Harwood's transcription of entries from the 1556–7 accounts from St Michael are reproduced as printed in 1806, even though his transcription was only partial, some entries being summarised rather than transcribed wholly, and it is likely that he made some transcription errors.

45 For these men and their careers see Landor, *Staffs. Incumbents*, 357–9; Stuart (ed.), *Social History of Yoxall*, 55; The National Archives, PROB 11/40/90, will of Roger Stokeley of Yoxall, clerk, 1556.

Yoxall Churchwardens' Accounts, 1541–55

Staffordshire Record Office, D. (W.) 1851/1/13/20

p. 1

[1541–2]

Rychard Cossall and Thomas Hogkyn[son]

Warde[n]s of Yoxall an[n]o xxxiiij R[egi]s H[enrici] viij [1541–2]

Paymentes

Fyrst payd to Jhon b bryde plum[me]r for ye keyseyng [<i>text missing</i>] hunderth	x s
lede for fyre and warkemansh[i]pe [<i>text missing</i>]anne	
It[e]m for sawder to ye sawdering of <ye> gutt[e]r of northe syde of ye	ij s iiij d
churche	
It[e]m payd for di[medium] ⁴⁶ hunderthe shyngull ⁴⁷ for ye same gutter	vj d
It[e]m payd for wark[ma]nshype of ye same [<i>text missing</i>] w[i]t[h] mo to luyt	iiij s
harve	
It[e]m payd for [<i>text missing</i>] hunderth [<i>text missing</i>]ll ⁴⁸ to ye same gutter	[<i>text missing</i>]
It[e]m payd for pap[er]	ob ⁴⁹
It[e]m payd to master Salt for tymbar for ye same gutter and for sawyng	x d
It[e]m payd to Robyrt Wetton for beyryng cley to ye same gutter	ij d
It[e]m payd to marget Wyrall for wessyng of ye churche cloths	v d viij d
It[e]m payd in expenses for caryge of ye leede and at ye leyyng of the same	xx d
It[e]m expenses at ye visitacion at tamworth	ix d
It[e]m to John Kentt for makyng iij baldryckes for ye belles and me[n]dyng	ix d
on[e] bell stooke	
It[e]m for a bet rope bel rowpe	vii d
It[e]m for a ponde and a halfe of wax	ix ⁵⁰
It[e]m for making of iij tap[er]s <and expenses>	iiij d
It[e]m for a sacaryng bell ⁵¹	ij d
It[e]m to John glasyar of Alderwes ⁵² for glass and glasyng	ij s
It[e]m payd to Thomas Wyan to pay ye Kynges taxe	viij d
It[e]m payd for v ponde of waxe and for making	iiij s iiij d
It[e]m payd to John Lester for makyng the box key	ij d
S[um]ma	xxxviij s ix d ⁵³

p. 2

It[e]m payd to John Kent for makyng of a balderyck for a bell	[<i>text missing</i>]
It[e]m ye exspensses at Vtceter ⁵⁴ at ye visitacion	xiiij d
It[e]m payd to John lester for makyn a gogyn ⁵⁵ for the yatepost at	iiij d
Russhemedow	
It[e]m to margett W[<i>text missing</i>]all ⁵⁶ for wassyng of church clothys	[<i>text missing</i>]
It[e]m Rychard Frearson [<i>remainder of this and all the next line missing</i>]	
[<i>text missing</i>] pon]de of wax and makyng of iij tap[er]s	xvj d

46 i.e. half.

47 Possibly shingle.

48 Possibly 'shyngull' as in a previous entry.

49 i.e. *obolus* or halfpenny.

50 Not stated whether shillings or pence, though the latter is most likely since in the following year 2lbs of wax cost 12d.

51 A small bell rung at the elevation of the host during Mass. The parish had two in May 1553: Landor, *Staffs. Incumbents*, 357.

52 i.e. the neighbouring parish of Alrewas.

53 This line is added in a different hand and different ink.

54 i.e. Uttoxeter.

55 i.e. a gudgeon, 'The ring or "eye" in the "heel" of a gate which turns on the hook or pintle in the gate-post': *Oxford English Dictionary*.

56 Wyrall as elsewhere in these accounts.

It[e]m in expenses and offeryng w[i]t[h] ye crose at Lychfeld ⁵⁷	vj s ij d
It[e]m to John Swenson for makyng ye Russhe medow yate	vj d
It[e]m payd for a bell Rope and a trysselrowpe ⁵⁸	ix d
It[e]m payd to Robart Wetton for mendyng ye long buttes	iiij d
It[e]m spende at Vtcett[e]r at ye visitacion	ij d
It[e]m to John Kent for makyn a balderycke for a bell	ij d
S[um]ma	xi s vij d
Summa to[tali]s soluc[ionem] hoc an[n]o ⁵⁹	xlix s iiij d

p. 3

[1542–3]

Rychard coss[all]⁶⁰ Thomas hogkynson churchewardyns of Yoxall an[n]o
xxxiiij R[egi]s H[enrici] viij [1542–3]

Fyrst receywed at ye summar game	xv s j d
It[e]m receywed of Nycolas Feccher for lyght at the beryyng of hys wyffe	vj d
It[e]m receywed of John Lester for yrone ⁶¹	xiiij d
It[e]m of hobbyhorse money	vj s vj d
It[e]m of John Bette for rent	iiij s
It[e]m of Ryc[hard] Fleccher for rent	iiij s iiij d
It[e]m of Jone campden for rent	iiij d
It[e]m of Wyllyam hygges for rent	j d ob
It[e]m of Margere Har[<i>text missing</i>] ⁶²	
It[e]m of John Bette for Rent	iiij s
It[e]m of chanthe p[rie]se of lychffelde ⁶³	ij s ij d
It[e]m of hugh hargrewe for Rent	iiij d
It[e]m of Ruthe Wyffe for rent	iiij d
It[e]m of Rychard Salt for rent	ij s
It[e]m of John berdemore for rent	xvj s ij d ob
It[e]m rec[eived] for leyng Mastres ffitzh[er]bert yn ye Churche	iiij s iiij d
It[e]m rec[eived] of Thomas Wylson for a old yate	iiij d
S[um]ma	lvj s iiij d ⁶⁴
It[e]m rec[eived] of Emott Mynors for rent w[i]t[h] arrerages	xviiij d
S[um]ma	lxj s vj d
S[um]ma to[tali]s recept[arum] p[ro] tribus an[orum] ⁶⁵	vij li xiiij s
	j d ob
S[um]ma to[tali]s recept[arum] cu[m] vj li ix s viij d rec[eptum] in pixide ⁶⁶	xiiij li iiij s
	ix d ob

p. 4

payd for ij pondes of wax and makyng	xij d
It[e]m payd to Jane Myn[er]se for dysshe lost at ye som[er]game	viiij d
It[e]m payd for lyme for ye chyrch wall	v d
It[e]m to Hary Tylar makyng of ye same	xij d
It[e]m payd for iiij pondes of waxe and for ye makyng of same	iiij s

57 Several parishes in the diocese, including Alrewas and Longdon, maintained the tradition of carrying their processional cross with their Pentecostal offerings to the cathedral in Lichfield: J. Charles Cox (ed.), *Catalogue of the Muniments and Manuscript Books Pertaining to the Dean and Chapter of Lichfield* (being *Collections for a History of Staffordshire* (William Salt Archaeological Society), VI (2), 1886), 93.

58 Probably a rope used when erecting a trestle, truss, or other framework, perhaps in connection with a bell frame: Carole Rawcliffe (ed.), *The Norwich Chamberlain's Accounts 1539–40 to 1544–45* (Norfolk Record Society, 83, 2019), 397.

59 The sum total of payments this year.

60 No doubt Cossall.

61 i.e. iron.

62 Probably Harwell (as below).

63 The chantry priests of New College in the cathedral close at Lichfield: *VCH Staffs.* III, 166.

64 This line is erased.

65 Sum total of receipts for three years.

66 The sum total of receipts with £6 9s. 8d. received in a small box.

It[e]m payd at Vtceter at ij vicitations ye kyngs and bysshops	ij s
It[e]m payd to margett Wy Wyrall for wassyng the church cl[oths]	[vj d] ⁶⁷
[text missing] for makyng the towne buttes	iiij d
It[e]m payd for waxe and ye makyng of iiij tap[er]s	x d
It[e]m payd to Robart towrs for a belrowpe	x d
It[e]m payd to Ryc[hard] Fleccher for Rent iij yeres	vj d
It[e]m payd for makyng ye careclowthe ⁶⁸	iiij d
S[um]ma soluc[ionem] hoc an[n]o ⁶⁹	xj s vj d
S[um]ma tot[alis] soluc[ionem] p[ro] trib[us] an[n]is p[re]ci[den]tis ⁷⁰	viiij li xxj d ob
M[emorand]um oppon ye accompt of Ric[hard] Cossall and Thom[a]s	vi li xviiij s iiij d
Hogekynson fynysshed xiiij die may an[n]o xxxvto R[egis] H[enrici] Octau	
[1543] remayneth yn ye boxe w[i]t[h] xv s of hevying money	
Which is delyv[er]ed to Thom[a]s Higgs and Will[ia]m Vtting nowe electyd	
wardens for ye yere to come.	

p. 5

[1543–4]

Thomas hygges and Wyll[ia]m Vtting churchwardyns of Yoxall an[n]o R[egis]
H[enrici] viij xxxv [1543–4]

Receytes

Fyrst receyved at bereyng of Wyll[ia]m Wry[<i>text missing</i>] for lyght	vj d
It[e]m of homffrey turner at bereyng of hys ffather for lyght	vj d
It[e]m of Rychard m[ar]shall for Rent	xx d
It[e]m ye bereyng of oldeacur Wyffe for lyght	vj d
It[e]m receyved at Est[er] the heywyng of yong men and meydens	v s
Ryc[hard] [<i>text missing</i>] ⁷¹ for rent	ij s
John berdmore for Rent	xxj s ij d ob
John Bett for Rent	[<i>text missing</i>]
Hugh hargreve for Rent	iiij d
Issabell Ruthe for Rent	iiij d
Jone campden for Rent	iiij d
Rychard Fleccher for Rent	iiij s iiij d
John Hygges for Rent	v d
Hugh collyar for Rent	vj d

p. 6 blank

p. 7

[1544–5]

Thomas hygges and Wyll[ia]m Vtting churchwardyns of yoxall an[n]o
R[egis] H[enrici] viij xxxvj [1544–5]

Receytes

John Berdmore for Rent when Wyll[ia]m hygges was warden	xvj s ij d ob
It[e]m ye hobyhorse money	v s vj d
It[e]m at ye beryall of Wyll[ia]m hogkynson and hys wyffe ⁷²	viiij d
It[e]m at ye beryall of s[ir] hary berdmore ⁷³	vj d

67 Part of this entry is worn away; all that remains of the sum is the terminal 'jd'.

68 A care-cloth was a cloth 'held over (or placed upon) the heads of the bride and bridegroom as they knelt during the marriage-service': *Oxford English Dictionary*.

69 Sum total paid this year.

70 Sum total of payments for the three preceding years.

71 Possibly 'salt'.

72 William Hogkynson made his will on 30 October 1544; he had died by 10 November when an inventory of his goods was taken: Stuart (ed.), *Social History of Yoxall*, 129.

73 No Staffordshire cleric of this name is known, but he may possibly be identical with Hugh Berdmore, vicar or curate of Weston-upon-Trent in 1532–3: Ann J. Kettle (ed.), *A List of Families in the Archdeaconry of Stafford 1532–3* (being

It[e]m receyved of yong men and yong wemen ⁷⁴	v s viij d
It[e]m ye bereyng of margeri brooks	iiij d
It[e]m [text missing] ⁷⁵ collyar for rent	vj d
It[e]m hugh hargrewe for rent	iiij d
It[e]m Ryc[hard] Fleccher for rent	iiij s iiij d
It[e]m Iss Issabell Ruthe for rent	iiij d
Jone Champden for Rent	iiij d
Hugh hen onneyley for ye inclosyng of Synffeld reve ffor Rent	iiij d
It[e]m ye beryall of margeytt Sgaoulton for light	v d
John bett for Rent	viiij s
John berdmores for Rent	xvj s ij d ob
Rychard Salt for rent	ij s
S[um]ma	iiij li vij d ⁷⁶

p. 8 blank

p. 9

[1544–5]

Thomas hygges and Wyll[iam] vtyng churchwardyns an[n]o R[egi]s H[enrici]
viiij xxxvj [1544–5]

Paymentes

Fyrst at Lychffeld ye offeryng	xij d
It[e]m in Exspenses at dynner	iiij s j d
John byrde ye plum[m]ar for iiij days warke	ij s
It[e]m hys s[er]ver	viiij d
It[e]m for costes of ye caryge of lede to lyff Lychffeld and to rychard Rychard seryngar for ye caryge home and cowd not have it	x d
John bryde for x pondes of Sawder	iiij s vij d
It[e]m for lede nels	iiij d
It[e]m to Wyll[iam] cowp[er] for mendyng of ye flattrowse ⁷⁷	iiij d
The [text missing] mendyng pyxte	ij d
The vicitation at vtcetter	xj d
John Kentt for mendyng ye trent bryge	ij d
Hugh Shypton for ansswereryng a vicitation at vtcetter	ij d
The costes at lychffelde when we delyv[er]yd ye money yt was <geydered> for deffense of ffeyth ⁷⁸	xij d
Jamys Wotton for tymbar for the trent bryge	iiij s iiij d
for sawyng ye same tymbar	xvij d
Wyll[iam] cowp[er] for iiij days warke of ye same tymbar	xviiij d
Thomas carter ij days	viiij d
For ye costes ye same tyme	xij d
John Kent for mendyng the bell whels and ropys	ij d

Collections for a History of Staffordshire (Staffordshire Record Society), 4th series, VIII, 1976), 57; Landor, *Staffs. Incumbents*, 311–12.

⁷⁴ Possibly 'heaving money' as received the previous year also.

⁷⁵ Probably Hugh.

⁷⁶ This line is entered in a different ink.

⁷⁷ This term has not been identified, but since William Cowper was frequently paid for carpentry, it was probably some form of timber work, perhaps related to the bell frame.

⁷⁸ Probably the fourth payment of the subsidy of 1540, the deadline for which was 4 February 1544. The preamble of the act (32 Henry VIII c. 50) justified the grant because the king had brought his 'subjectes out of all blyndnes and ignoraunce into the true and p[er]fecte knowledge of Almyghtye God, by his moste holye worde; [and] The abolysshing also of the Bishop of Rome and his usurped auctoritie'. The churchwardens' accounts of Charlwood (Surrey) include a similar payment in 1545: 'My expense to Cobham to deliver the money for the defence of the faith', 10d. John Caley *et al.* (eds), *Statutes of the Realm* (11 vols in 12, London: Record Commission, 1810–28), III, 812–24; *First Flowers: By a Literary Amateur* (London: Thorp and Burch, 1825), 217.

It[e]m ij p[ro]cesseners in englysse ⁷⁹	vj d
It[e]m iij quartars of russelles ⁸⁰ for ye canopyne and ye rope	xviij d
It[e]m the subside to hugh marres for church landes ⁸¹	ij d
It[e]m the lampe corde	ij d
<i>p. 10</i>	
Paymentes the yere afforesaid	
It[e]m a belrowpe	viiij d
It[e]m for makyng of ij racheytes for ohylder	iiij d
It[e]m payd to ye cronner ⁸² at Stafford	iiij s iiij d
It[e]m in Exspenses at ye medow lane	xij d
It[e]m for halowyng of an auter clothe	ij d
It[e]m for vj ponde of new waxe	iiij s iiij d
It[e]m for makyng of it and olde waxe in torchetes and tap[er]s	xj d
gev a tyncker for scowryng of the lampe and for mendyng of it	vjj d
The vicitation at vtet[er]	xij d
It[e]m payd to the man that warned the ledeweynis	iiij s iiij d
It[e]m in Exspenses in goyng fforth wyth the ledeweynis	vj s viij d
It[e]m a tyncker for mendyng bothe the crosses ⁸³	iiij d
It[e]m payd to the man that makyth the Saltpeter at burton for yese of carydge	iiij s
of wode	
It[e]m to margett Wry Wyrrall for wahssyng of the churchclothys	viiij d
It[e]m payd ffor xiiij yardes of cloth to make ij aulbes and di[midium] yard of	ix s x d
black sey ⁸⁴ and makyng ⁸⁵	
It[e]m to Ryc[hard] Fleccher for Rent	ij d
It[e]m alowed John berdmore for Repracions	xxij d
Ryc[hard] Frearson ffor scowryng ye kanopyne and ffor the oyle	vjj d
It[e]m makyng a lock and a Key	iiij d
S[um]ma	iiij li v s viij d ⁸⁶

p. 11

[1546–7]

Thomas hygges and Wyll[iam] vtyng church wardyns off Yoxall an[n]o R[egi]
s H[enrici] viij xxxviij [1546–7]

Receytes

Fyrst Receyved of John lester	xxvj s viij d
It[e]m of hugh onneyley	xix s viij d
It[e]m off Nycolas Fleccher for bereyng hys wyffe in ye church	ij s
It[e]m of Will[iam] au[er]yll	xij d
It[e]m Receyved of Ryc[hard] cosshall	v li xiiij s iiij d
It[e]m of Wyll[iam] Sh Schacullton to ye byyng of ye belles	ij s
It[e]m Recewed of Edmod bardyll of lychffeld at thre paymentes	xx li
It[e]m of John berdmore for Rent	viiij s
It[e]m of Edward harwell for ij oxen in ye meddo	vij d

79 Archbishop Thomas Cranmer's English translation of the litany, which in June 1544 the bishops were ordered by the crown to enforce in every parish. The litany was a major part of processions, hence the commonly used name 'processioner': Alec Ryrie, *The Gospel and Henry VIII: Evangelicals in the Early English Reformation* (Cambridge: Cambridge University Press, 2003), 51–2; J. E. Foster (ed.), *Churchwardens' Accounts of St. Mary the Great Cambridge from 1504–1635* (Cambridge Antiquarian Society, Octavo Series, 35, 1905), 107.

80 Russel was a strong twilled woollen cloth: *Oxford English Dictionary*.

81 The subsidy became an almost permanent feature of royal taxation in the 1540s, with subsidies being levied in 1541, 1542, 1543, 1544, 1546, and 1547: Roger Schofield, *Taxation under the Early Tudors 1485–1547* (Oxford: Blackwell, 2004), 220.

82 Probably the coroner.

83 In May 1553 the church had one latten cross: Landor, *Staffs. Incumbents*, 397.

84 Say, a light, twilled woollen fabric resembling serge: *Oxford English Dictionary*.

85 In May 1553 the church had three sets of priest's vestments with albs, one of black say, one of red say, and one of white damask, and two sets of deacon's vestments, one of silk and one of say: Landor, *Staffs. Incumbents*, 397.

86 This line added in different ink.

It[em] receyved of John harden ye mynstrell toward ye payment of ye belles	viiij d
It[em] ffor lyghtes at ye beryall of Wyll[iam] au[er]yll	vj d
It[em] Recewed of Robart Fleccher toward ye belles	v s
It[em] of ye colege prese of lychfeld for Rent	ij s ij d
It[em] Receywed for a bellweyle	xx d
It[em] for goyng w[i]t[h] ye hobbyhorse	xiiij s iiij d
It[em] of Master Rychard Welles for lyght	viiij d
It[em] of Nycolas Fleccher for bereyng of hys syst[er] in ye churche and for lyght	ij s iiij d
It[em] at bereyng of Wyll[iam] banckes for lyght	iiij d
It[em] at ye bereyng of Wyll[iam] hatton for lyght	iiij d
It[em] Receyved of ye yong men and medens at Ester for heywyng money	ix s
It[em] ye bereyng of Jone Kynn[er]sley for lyght ⁸⁷	iiij d
John bett for Rent	viiij s
Thomas lowott for Rent	v d
<i>p. 12</i>	
Receytes	
John berdmore for Rent	viiij s ij d ob
Hugh collyar for Rent	vj d
Jone campden for Rent	iiij d
Hugh hargreve for Rent	iiij d
Rychard Fleccher for Rent	iiij s iiij d
The beryall of John cowper for lyght	iiij d
Hugh on[n]eyley for Rent <for ye severall of sinsell Reve>	iiij d
Per S[um]ma Rec[eptarum]	xxxj li xj s iiij d ob

p. 13

Paiementes

Thomas hygges and Wyll[iam] vtyng church wardyns off Yoxall An[n]o R[egi]s H[enrici] viij xxxviij [1546–7]

Paymentes

Fyrst at lychffeld the offering	xj d
It[em] the clerke	j d
It[em] the at Dynner ⁸⁸	iiij s viij d
John hardyn the mynstrell	ij d
It[em] the morres Da[u]nsse of lychffelld	iiij d
It[em] ffor beryng ij stremer polles to lychffeld ⁸⁹	ij d
Wyll[iam] Crysterson of Rydware ⁹⁰ for a strem[er] pole	vij d
Robart Wetton ffor grauellyng ye Ende of the hallebryge ⁹¹	iiij d
It[em] ffor ye ffyrst paymente ffor ye belles	xx li
It[em] for ye bellfframe w[i]t[h] wheyles clap[er]s and Irunstuffe	xxx s
It[em] ffor ij weyneropes to whey ye belles	ij s iiij d

87 Joan Kynnsley made her will on 6 March 1546/7; she had died by 24 May when an inventory of her goods was taken: Stuart (ed.), *Social History of Yoxall*, 129.

88 Presumably intended for 'then at Dynner'.

89 In his will made in 1513 and proved the following year, Richard Stokley, a chantry priest in London, left to the parish church in Yoxall (where he had been baptised) an antiphoner and £2 for 'a fayre stremer of cloth of silk to be garnysshed with gold letters and scripture and frynged with silk': Ida Darlington (ed.), *London Consistory Court Wills, 1492–1547* (London Record Society, 3, 1967), no. 7.

90 Probably the William X'porson of Pipe Ridware who was charged with maintaining a bill without horse in the muster roll of 1539: W. Boyd (ed.), 'Muster Roll, Staffordshire, A.D. 1539', in *Collections for a History of Staffordshire* (William Salt Archaeological Society), new series, IV (1901), 213–57 (at p. 230).

91 Hall bridge over the River Swarbourne lay in the centre of Yoxall village on the road to Barton-under-Needwood: *VCH Staffs.* X, 284, 294.

It[e]m ye <costes> ffor ye belles when they where bowght fyrst at burton	vj s vij d
Derby lychffeld and bramley abbates	
The last payment at lychffeld for ye belles	xix li
It[e]m payd to Edward Gryffyn ffor ij wyckes warke	iiij s
It[e]m to Wyll[iam] cowper <and hys son[n]e> ffor ij wyckes warke and on[e] day at ye makying of the bell fframe	vj s vij d
It[e]m to margeytt harwell ffor me[<i>text missing</i>] ⁹² and drynke to Edward Gryffyn ij wyckes w[i]t[h] other costes	v s iiij d
It[e]m John hyll on[e] day warke	ii[<i>text missing</i>]
It[e]m the costes at the Reryng of [<i>text missing</i>] belles	iiij[<i>text missing</i>]
It[e]m ye caryge of ye belles to lychffeld	[<i>text missing</i>]
It[e]m Wyll[iam] eo cowp[er] for on[e] day warke and mendyng of ye medow yate	xj d
It[e]m payd at burton at ye weyng of ye belles by ye handes of Ryc[hard] Salt	viiij s iiij d

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Paymentes

It[e]m payd to Wyll[iam] oldacur for iiij days wark at ye belles	xvj d
It[e]m hys serwand iiij days warke	xij d
It[e]m for ther mete and drynke and ffor bred and ale a[t] ye reryng of ye ffyrste bell	iiij s j d
Wyll[iam] cowper ffor hewyng and sawyng of ij peses of tymbar yt hengyth ye fyrste bell and for on[e] day warke	xiiij d
Ryc[hard] Frearson for makying of Irun[n]e stuffe for ye belles	xx d ij s j d
It[e]m ye makying of iiij bawldryckes for ye belles	vj d
It[em] a locke for ye stepulle dore	viiij d
It[em] payde to mastres pott for on[e] ponde of waxe and for makying of v tapers for ye lampe	x d
It[em] John wevre for a new Rope to mak ij bell Ropes	x d
It[em] a hop of Irun[n]e for a bell	j d
It[em] for helpe vpe and done brede and ale	v d
It[em] for v pondes of waxe and makyn of old and new waxe and ye costes	iiij s iiij d
It[em] ye visitacion at Tamworth	xx d
It[em] to Ryc[hard] Frearson for mendyng of a crose	iiij d
It[em] for ij pondes of Iren to mend ye thyrd bell clap[er]	iiij d
It[em] ffor halowyng of a corp[er]s clothe ⁹³ ye w[hi]c[h] Anne hollond gaffe	iiij d
It[em] a baldryck of a bell	ij d
It[em] to ye constable <for> subysde	ij d ij s
It[em] to Ryc[hard] Fleccher for Rent	ij d
It[em] to margeytt wyrrall for wayssyng ye churche clothys	viiij d
It[em] for ij bell ropes	xij d
p[er] S[um]ma solut[ionem]	xliij li xviiij s viiij d

p. 15

[1547–8]

Wyll[iam] vttyng church warden The Receytes ye fyrst yere of Edward the vj
[1547–8]

Fyrst receyved of ye churche Wardens of barto[n] ⁹⁴ for ij bell brasses	iiij s
It[em] of ye college prestes of lychffelde	ij s ij d
It[em] Receyved for iiij peysse of Sylver lackyng of ij ounces	iiij s vj d

92 Probably 'mete'.

93 Corporas (or corporal) cloth, a cloth on which the consecrated bread and wine are placed during the Mass, and which is also used to cover them after the service: *Oxford English Dictionary*.

94 Presumably Barton-under-Needwood.

It[em] of Master Docter Dakyns ⁹⁵ to ye Reypracions of the churche	iiij s iiij d
John berdmores ffor Rent	xvj s ij d ob
John bette for Rent	viiij s
Hugh collyar for Rent	vj d
Jone campden for Rent	iiij d
Hugh hargrewe for Rent	iiij d
John Sharles for Rent	iiij s iiij d
Rychard marshall for Rent	xx d
It[em] for a chales ⁹⁶	lviiij s
P[er] S[um]ma Recept[arum]	cij s iiij d ob

p. 16

The paymentes ye ffyrst yere of Edward ye Syxte [1547–48]

Fyrst ye offeryng at lychffeld	xj d
It[em] ye clerk	j d
It[em] ye costs at Dynner	iiij s ij d
It[em] to Robyn hode marresda[u]nce ⁹⁷ and John harden	xij d
It[em] ffor halffe a hyde of whyteledder for baldryckes	xiiij d
It[em] ij bell Ropes	xij d
It[em] to ye constable for bey kun[n] money ⁹⁸	xij d
It[em] payed to mastrys mynars for tymber for ye tent bryge to make planckes	xxij d
Ryc[hard] Stryngar for makynge a Sawpyte	ij d
John hetthe for Sawyng of ye same tymber	ij s x d
Rychard marshall for ye caryge of ij lodes of ye same tymber	vj d
Wyll[iam] cowp[er] for iiij days warke at ye trente bryge	xviiij d
It[em] in brede and ale at ye leying of the planckes	iiij d
It[em] ye Kynges vycitation <and ye iniunccions> at burtton ⁹⁹	iiij s
It[em] iiij lockes ffor ye cofer iiij keys iiij stawbels ¹⁰⁰ ij hasps	xviij d
It[em] for makynge a letterne	iiij d
Rychard Frearson for a bonde of [text missing]nne for ye letter	iiij d
It[em] for a bawldrycke for a bell	ij d
It[em] ye vycitation at vteter	viiij d
It[em] Rychard Frearson for tentynge ¹⁰¹ ye clocke	iiij s iiij d
It[em] ij bellrops	xiiij d

95 John Dakyn (c.1506–58), who received the degrees of Bachelor of Civil Law (1524–5) and Doctor of Civil Law (1528–9) from Cambridge University. Apparently a former monk of St Mary's, York, he was chancellor of Wells 1543, and in 1548 was preferred as rector of Kirkby Ravensworth, Yorkshire (North Riding) and prebendary of Bilton in York Minster. He was later (1551) archdeacon of the East Riding: *ACAD. A Cambridge Alumni Database*, <http://venn.lib.cam.ac.uk/> [accessed 27 October 2020]; Joyce M. Horn and David M. Smith, *Fasti Ecclesiae Anglicanae 1541–1857: Volume 4*, York Diocese (London, 1975), 25. Although a Yorkshireman, he had links with the diocese of Coventry and Lichfield: The National Archives, C1/1260/4–5.

96 A royal order for communion in both kinds for the laity which was part of *The Order of Communion* of Easter 1548, presumably required a larger communion cup, perhaps making smaller ones surplus to requirements: Francis Procter and Walter Howard Frere, *A New History of the Book of Common Prayer* (London: Macmillan, 1902), 38. In 1553 Yoxall church had one chalice with a silver paten: Landor, *Staffs. Incumbents*, 357.

97 The figure of Robin Hood had been adopted into May or summer festivities across England in the 15th century, but he was also popularly associated with Tutbury, eight miles to the north-east of Yoxall: J. C. Holt, *Robin Hood* (revised edition, London: Thames and Hudson, 1989), 148–51, 159, 167.

98 Possibly this payment is connected to the custom of the Wychnor flitch. 'Bacon rent' and 'bacon silver' were collected at Wychnor, just a couple of miles from Yoxall, in the 15th century: *VCH Staffs.* X, 277–8.

99 In 1547 Edward VI ordered a general visitation of England, suspending the power of the bishops, archdeacons, and other clergy to visit the church; there were four commissioners for Midlands dioceses including Coventry and Lichfield. The royal injunctions of 1547 condemned practices such as pilgrimages, image worship, use of the rosary, parish processions, and the burning of lights in church (except two candles on the altar). Eamon Duffy called the injunctions 'a significant shift in the direction of full-blown Protestantism' and suggested that the royal visitation precipitated 'the most sweeping changes in religion England had yet seen'. John Strype, *Memorials of the Most Reverend Father in God Thomas Cranmer* (2 vols, London: George Routledge, 1853), I, 209; W. H. Frere and W. P. M. Kennedy (eds), *Visitation Articles and Injunctions of the Period of the Reformation* (3 vols, London: Longmans, Green, 1908–10), II, 103–30; Duffy, *Stripping of the Altars*, 450–3.

100 i.e. staples (part of a lock).

101 i.e. attending to: *Oxford English Dictionary*.

It[em] ye costes at ye takyng dou[n]ne ye Immages ¹⁰²	xij d
It[em] ye vicitation at hanbery	vij d
It[em] ye wicitation at Vtceter	xvj d
It[e]m ye vicitation at lychffeld	ijs vij d
It[e]m to margett Wyrrall for wassyng the churche clothys	vj d
S[um]ma solut[ionem]	xxxij s xj d

p. 17

[1548–9]

Wyll[iam] Vtting churchwarden The Receytes ye Secun[n]de yere of Kyng
Edward ye Syxte [1548–9]

Fyrst of Edmode bardell for laste payment of ye belles	xlvi s
It[em] for ye lyttelbell claper	xij d
It[em] of ye kynges bayly for ye colege of lychffeld ¹⁰³	vj d
Hugh collyar for Rent	vj d
Thomas lowote for Rent	v d
Jone campden for Rent	iiij d
John Sharles for Rent	iiij s iiiij d
It[em] for Irun[n]e Rynges and puter chandelers	xviiij d
John berdmore for Rent	xv s ij d ob
Hugh hargrewe	iiij d
John bett for Rent	vij s
per S[um]m rec[eptarum]	iiij li xvj s ob
The bureyngs in ye churche vn payd	
Robart campden	Homffrey welles
Jamys marres	Dorowthe Welles
Jeys marres	George Welles
Roger marres	
S[um]ma to[ta]lis Recept[arum] p[ro] thys trib[us] annis	xl li ix s vij d
M[emorand]um in surplus	l s v d

p. 18

Wyll[iam] Vtting churchwarden

Paymentes

The Secunde yere of Kyng Edward ye vj [1548–49]

Fyrst payd ffor meate and drynke and at ye mendyng of ye hee ways	xvj d
It[em] to the Sumn[n]er ¹⁰⁴ for ye book of prayer ffor prynces of scotland ¹⁰⁵	vj d
It[em] for makyng ij bawldryckes and a buckule for ye belles	v d
It[em] ij belropes	xviiij d
It[em] to Edward harwell for tymbar to make Reyles at ye trent bryge	x d
John Kent and hys son[n]e ij days wark	xx d
Edward harwell for Sawderyng ye gutters of ye church	x d
It[em] for a new gowgyn for a bell	vj d
It[em] to John Kentt and a nother to helpe hym <at ye mendyng of ye belles>	x d

102 The 1547 royal injunctions ordered that all images 'abused with pilgrimage or offering of anything made therunto' be taken down and destroyed: Frere and Kennedy (eds), *Visitation Articles*, II, 116.

103 Following the dissolution of the chantries in Lichfield cathedral in 1548, the duty of paying the Yoxall churchwardens on account of the former chantry priests' holding of a close of meadow in the parish passed to the king's bailiff, though he paid only 6d. and not 2s. 2d. as previously.

104 The summoner or apparitor was an official of a court, in this case no doubt of the Lichfield consistory court.

105 In May and July 1548 the privy council ordered that prayers be said on Sundays and holy days for victory and peace in Scotland, in response to the difficulties of the English campaign there, the so-called 'Rough Wooing', designed to force the Scots to fulfil the Treaty of Greenwich of 1543 which provided for the marriage of Edward to Mary of Scotland. The form of prayers to be used in each parish, *A Prayer for Victorie and Peace* (London, 1548), was dated 10 May 1548: Natalie Mears, Alasdair Raffie, Stephen Taylor, and Philip Williamson (eds), *National Prayers: Special Worship since the Reformation. Volume I: Special Prayers, Fasts and Thanksgivings in the British Isles, 1533–1688* (Church of England Record Society, 20, 2013), 29–31.

The costes at lychffeld beffore ye commyssenners cons[er]nyng ye church goods ¹⁰⁶	iiij d iij s
The takyng dou[n]ne of ij belles	ij s vj d
It[em] for makyng of ye church wale	ij d
It[em] ye vicitation at Vttceter	xv d
It[em] ye turnyg of ye broke	viiij d
It[em] ye paraphrase of Erasmus ¹⁰⁷	v s iiij d
It[em] ye booke of ye com[m]union ¹⁰⁸	v s
It[em] ye <ij yeres> Rent of sharles <churche> closse	iiij d
S[um]ma Solut[i]onem	xxvj s viij d
S[um]ma to[tal]is solut[i]onem p[ro] thys trib[us] annis ¹⁰⁹	xlvi li xviiij s
	iiij d
M[emoran]d[um] ¹¹⁰ Et sic in solut[i]onem plus qua[m] in recept[orum] ¹¹¹	vj li viij s vij d ob
Inde rem[anent] in pixide ad vltim[um] co[m]pitu[m] ¹¹²	iiij li xvij s xj d
It[em] in man[ibus] Rob[er]t marres de arr[eragiis] suys ad vltim[um] co[m]pitu[m] ¹¹³	iiij s iiij d
 p. 19	
[1549–50?] ¹¹⁴	
It[em] payd for naylys	vj d
It[em] spend at lychefeld p[re]sentyng ye chur[ch] goodes	iiij s
It[em] at ye visitacio[n] at Uttoxat[er]	ij s j d
It[em] at ye visitacio[n] at Tamworth	ij s viij d
It[em] to payd to S[ir] John marburye ¹¹⁵ for Wrytyng the regester boke ¹¹⁶	viiij d
It[em] payd to John Stath[a]m for syngyng bokes bought at lychefeld ¹¹⁷	viiij d
It[em] payd for brede and wyne for the churche	xxij d
It[em] expenses at lychefeld for caryng the church goodes before the lorde Ferrers ¹¹⁸	xxij d
S[um]ma solut[i]onem	l s ix d

106 Several royal commissioners enquiring into the goods and possessions of chantries, declared dissolved in 1547, were active in Staffordshire in 1548: Landor, *Staffs. Incumbents*, 402–4

107 Desiderius Erasmus, *First Tome or Volume of the Paraphrase of Erasmus upon the Newe Testamente* (London, 1548), which was published on 31 January 1547/8. Edward VI's royal injunctions of 1547 ordered that, within twelve months of the end of the visitation, each parish had to provide a copy of Erasmus' *Paraphrases* in English; parishes were also to acquire a copy of the bible in English within three months. Half the cost of these books was to be borne by the parishioners, and half by the incumbent. Frere and Kennedy (eds), *Visitation Articles*, II, 117–18. The absence of any mention of the purchase of a bible in these accounts perhaps suggests that while the Yoxall churchwardens paid for the Erasmus, the rector paid for the English bible.

108 Probably Thomas Cranmer, *Certain Sermons, or Homelies* (London, 1547). The 1547 royal injunctions decreed that one of these homilies should be read every Sunday: Frere and Kennedy (eds), *Visitation Articles*, II, 129. The description of them here in the accounts as a book of the communion is explained by the preface of the *Homelies* (sig. Aii') setting out that one should be read 'euery Sondaye in the yere, at hygh Masse, when the people be moste gathered together'.

109 Sum total paid these three years.

110 This word is added in the left-hand margin in different ink.

111 And so in payments above that in receipts

112 And there remains in the box from the last account.

113 In the hands of Robert Marres of his arrears from the last account.

114 The payments at the head of p. 19 must belong to a different accounting year, probably 1549–50.

115 'John Marburye, curate of Yoxall', witnessed the will of Katherine Dudley of Yoxall on 22 December 1551: H. Sydney Grazebrook, 'Junior Branches of the Family of Sutton, alias Dudley', in *Collections for a History of Staffordshire* (William Salt Archaeological Society), X (2) (1889), 93.

116 The earliest extant register for Yoxall parish begins in 1645, and the earliest surviving bishops' transcripts for the parish begin in 1664: SRO, D. 730/1/1a and B/V/7/1/759/1.

117 Possibly these were metrical psalms, several editions of which by Thomas Sternhold (added to by John Hopkins) and others were published in 1549–50: Rivkah Zim, *English Metrical Psalms: Poetry as Praise and Prayer, 1535–1601* (Cambridge: Cambridge University Press, 1987), 124–5.

118 Walter Devereux (c. 1489–1558), third Lord Ferrers of Chartley; in 1550 he was created Viscount Hereford: *Oxford Dictionary of National Biography*.

[1554–5]

Recepto[r]es anno p[ri]mo marie reginie et anno iido pheleppe et marie
[1554–5]

In primis rec[eived] of berdmore for ij yerres rents	xxxij s v d
It[em] rec[eived] of Robart salt to one hal ¹¹⁹ the yerres rent of bettes howse	iiij s
It[em] rec[eived] of John Charles	ij s iiij d
It[em] rece[ived] of Ryc[hard] M[ar]shall	xx d
It[em] rec[eived] of Wyll[iam] browne for lache medo	vj d
It[em] rec[eived] of the p[ar]son of hanburyes bequest ¹²⁰	iiij s iiij d
It[em] rec[eived] of M[aste]r Welles towarde ye rep[ar]acion off trent brygge	xx d
It[em] rec[eived] of Robart Salt for the same	xij d
It[em] rec[eived] of yong Mastres mare for the same	vj d
Payme[n]ts anno p[ri]mo et ijdo	
It[em] in p[ri]mis payd for bell ropes	vij s
It[em] to geselyng for saying tymber for trent brygge	iiij s
It[em] to John Kent and Ryc[hard] cowp[er] for Worke	x d
It[em] to Ryc[hard] cowp[er] a nother tyme	vj d
It[em] for mendyng the belles	vj d
It[em] to Robart Johnson for pavyng the church flowre	xij d
It[em] for Wytlyme and a skynne of parchement for a Tabur ¹²¹	x d
It[em] to s[ir] John Marburye for wrytyng the regest[er] boke	iiij d
It[em] for shyngle nayles	iiij d
It[em] to Ryc[hard] Frereson hath rec[eived] for viij yerres for kepyng of the ¹²²	iiij marke ¹²³
It[em] for makyng of the belle clap[er] and yron to hit	xiiij d
It[em] at visitacion at alton	xxiiij d
It[em] for the bokett for holy Wat[er]	vj d
<i>p. 20</i>	
It[em] payd for the rode and the ymages and to the clerke for setting them vppe	x s x d
It[em] payd for lyghtes	iiij s ij d
It[em] for the cardynals Visitacio[n] at lychefeld ¹²⁴	iiij s iiij d
It[em] at Vttoxat[er] before com[m]issio[n]s	xx d [sic] ij d
Receytes	
It[em] receyved of marschall	xx d
It[em] receyved of lovot	xx d
It[em] of m[istres]s Jone Camdyn	vj d
It[em] receyved of hugh collear	xviiij d
It[em] received of charlys	ij s
Paymentes	
It[em] tymbre that they hadde of me Hugh Harregreve ¹²⁵ to trent brygge <it is to moche>	xvj s

119 i.e. half.

120 The will of John Hurte or Harte, rector of Hanbury since 1536, was made 27 May 1552 and proved 24 July 1552. In it he gave 3s. 4d. towards the repair of Yoxall bridge, along with several other charitable bequests including money for the repair of Dove, Tutbury, and Wychnor bridges: Landor, *Staffs. Incumbents*, 115, 117; SRO, B/C/11, John Hurte (1552).

121 A kind of drum.

122 No text is missing at this point; the scribe did not complete the entry.

123 A mark was two-thirds of a pound (13s. 4d.) so 4 marks was £2 13s. 4d.

124 Cardinal Reginald Pole conducted a visitation of England in 1556 as part of the programme of restoring England to Roman obedience. Among the devotional items that each parish was ordered to acquire were a holy-water stoup, sprinkler, and a vessel for carrying holy water, and a rood and rood loft, hence the payments recorded here for a bucket for holy water and for the rood and images: Duffy, *Stripping of the Altars*, 545–6.125 Hewe Hargreve was recorded as churchwarden (with Robert Towers) in the Yoxall return of church goods of 14 May 1553 in the last year of Edward VI's reign: Landor, *Staffs. Incumbents*, 357.

It[em] cowp[er] and John [text missing] ¹²⁶ hadde for mendyng of the breeke of the broke and the medoe yate and tymbre to ye same	ij s
It[em] owyng to M[aste]r Welles for cc shynguls Recytes	xviiij d iij s
It[em] of sh Charles Payd	iiij s iiiij d
It[em] payd to Thom[a]s collear for Wrytyng	iiij d
It[em] to newbrowe ¹²⁷ Receytes	iiij d
It[em] I have receyved of the same tymbre that we hadde to trent brygge Paydde	ix s
It[em] payde to alport for ij belle ropes Rec[eived]	ij s ij d
Impri[mi]s of M[aste]r Parson ¹²⁸ for Auerelles Leas ¹²⁹ for iiij years rentt Peyd	viiij s
Impri[mi]s to M[aste]r P[ar]son for a boke	vj s
It[em] for lyme Rec[eived]	xviiij d
It[em] of M[ist]ris Camden S[um]ma rec[eptarum] S[um]ma tot[alis] solu[tionem]n	vj d x li xviiij s viiiij d viiij li xiiij s ij d ix li xviiij s

Lichfield St Michael Churchwardens' Accounts, 1554–7

Staffordshire Record Office, B/C/5/exhibits/1

and

Thomas Harwood, *The History and Antiquities of the Church and City of Lichfield*
(Gloucester, 1806), 522–3

[1554–5]¹³⁰

The Accounte of Thomas Crist[er]son and Will[ia]m Frereson church wardens of Sent Michell fro
the fest of [blank]

col. 1

Reyceytes	
In pr[i]m[i]s in the box	j d
It[e]m of Richerd Harpar and John price for ij dedd ashys	xx d
It[e]m for the croppes of the Asshys	xxj s iiiij d
It[e]m of breybendars ¹³¹ for towelles at ester	iiij d
It[e]m Reyceyvid for xiiij Kye ¹³² of the first Gras in the church yard	xix s vj d
It[e]m Rec[eived] for xix Kye and a hayffe ¹³³ at the Second Gras	xix s vj d

126 No doubt John Kent who appears elsewhere in these accounts for work including with Robert Cowper and on Trent bridge.

127 Newborough, four miles north of Yoxall.

128 i.e. Roger Stockley, rector of Yoxall from 1540 until his death in 1558: Landor, *Staffs. Incumbents*, 357.

129 Averell Leys (or 'Heyes') was a field in Yoxall mentioned in a tithe case of 1586 and a sale of 1608: SRO, B/C/5/1586/6; William Salt Library, M. 479.

130 These accounts, SRO, B/C/5/exhibits/1, are for 1554–5, the date given by the payment for ringing for the arrival of the prince of Spain, which was in July 1554. They are wrongly dated in an endorsement at the front of the membrane in a 20th-century archivist's hand 'Churchwardens Account: St Michael's Lichf 1544–5 see Entry for ringing for the Prince of Spain's Arrival'.

131 Probably the prebendaries of Lichfield cathedral.

132 i.e. cows.

133 A heifer.

It[e]m of mr Feknam ¹³⁴ for the iij Gras	viiij d
It[e]m of Thom[a]s Hyll ¹³⁵ for the guest of the father ¹³⁶	iiij s iiiij d
It[e]m of will[ia]m Frereson for a Seyt Rome ¹³⁷	iiiij d
It[e]m of Henry Syrell like man[ne]r	iiiij d
It[e]m of will[ia]m Druery lyke man[ne]r	iiiij d
It[e]m of Thom[a]s Foster lyke man[ne]r	iiiij d
It[e]m Receyvyd for beryalls lights and for mynnyng Days ¹³⁸ as hit dothe apeyre by a byll of percelles	xij s
Summa	iiiij li viij s j d
paymetes for reparacions and other emplymentes of the churche	
In pr[i]m[i]s for bred and Ale on sheyrethursday ¹³⁹	iiij d
It[e]m for a clapper	iiij d
It[e]m for charcole and frankyncence	ij d
It[e]m for casting moldewarp ¹⁴⁰ hyllokes	iiiij d
It[e]m dychyng and heyegyng the churche yarde	xij d
It[e]m to iij workeme[n] for croppying and kyddyng ¹⁴¹ v days	vij s vi d
It[e]m kyd bondes	vij d
It[e]m ij li of wax made in tapers w[i]t[h] the olde stuff	xx d
It[e]m for v li of wax makyng for the seypulker the pashall and the Judas lyght ¹⁴²	iiiij s
It[e]m for a masse boke and a precessioner to John Barben	ij s
It[e]m paid for mendyng a Gabbe ¹⁴³ in the churche yeard a stryng and a pas- chall pyn ¹⁴⁴	iiij d
It[e]m for Raylles and the reylyng by twyge tuys crofte and the churche yarde	viiij d
It[e]m for bayryng of the Crosse and the channypeys ¹⁴⁵ on corpos cristy day ¹⁴⁶	iiiij d
It[e]m payd for pynyng of the Kye at the ferst Gras	iiij d
It[e]m paid for a plate and mendyng of the tryne Gate	iiij d
It[e]m paide to the clerke	iiiij s viij d
It[e]m for Ryngyng when the prynce of Spane come in to yngland ¹⁴⁷	vj d
It[e]m Halffe a yerd of bukeram ¹⁴⁸ to hang the hye Alter	iiiij d
It[e]m for pynnyng of the Kye at the last Gras	ij d
It[e]m to Richerd Harper and Thom[a]s Foster for mendyng the belles whelles <i>col. 2</i>	viiij d
It[e]m to will[ia]m elkyns for workemanship at the churche yate Gate	xvj d
It[e]m to will[ia]m lee for mendyng churche yerde hedge	ij d
It[e]m to Thom[a]s Smyth for paentyng the Roode	xij d

134 Possibly John Feckenham, innkeeper and member of the city corporation – sheriff in 1558 and bailiff in 1560 and 1580 – who died in 1585: Harwood, *Lichfield*, 370, 420–2.

135 Possibly the Thomas Hyll (probably a plumber), who was paid 4d. for pipes for the water conduit in 1552: Harwood, *Lichfield*, 390.

136 Possibly a payment for a celebration of a Mass of the Holy Ghost.

137 Seat room, i.e. the rental of a pew.

138 Days of remembrance or commemoration such as month's mind or obits, from 'min', to remember or commemorate: Elisha Coles, *An English Dictionary* (London, 1677); *Oxford English Dictionary*.

139 Sheer Thursday, another name for Maundy Thursday: *Oxford English Dictionary*.

140 i.e. moles.

141 Kidding, binding up into 'kids', bundles or faggots: *Oxford English Dictionary*.

142 The Judas light was a candle representing Judas Iscariot used in the Holy Week liturgy: Thomas North, *A Chronicle of the Church of S. Martin in Leicester* (London: Bell and Daldy, 1866), 57–8.

143 i.e. a gap.

144 Pins were inserted into the paschal candle to represent the five wounds of Christ. See Clive Burgess (ed.), *The Church Records of St Andrew Hubbard, Eastcheap, c1450–c1570* (London Record Society, 34, 1999), 134.

145 Canopies.

146 Corpus Christi was 24 May in 1554.

147 Philip of Spain landed on the Isle of Wight on 19 July 1554 and arrived in Southampton the following day in preparation for his marriage to Mary I on 25 July in Winchester. Royall Tyler (ed.), *Calendar of Letters, Despatches, and State Papers Relating to the Negotiations between England and Spain, Preserved in the Archives at Simancas and Elsewhere. Vol. 12, January–July 1554* (London: HMSO, 1949), 319–22.

148 Buckram, a linen cloth: *Oxford English Dictionary*.

It[e]m to the Same Thomas for Glasynge the wyndows abowt the churche	iiij s iiij d
It[e]m to the clerke for his wages	iiij s
It[e]m for facyng A portea ¹⁴⁹	iiij d
It[e]m for a lanturne	xij d
It[e]m payde for tymber at the Grate of the churche yarde and workemanship of the Same	ij s iiij d
It[e]m for the Seypulker to John Waller	xviiij s
It[e]m to Thom[s]s Clerke Smyth for iiij plottes for the Same	iiij d
It[e]m Naylles for the Same	ij d
It[e]m for caryage of the seid <Seypulker> tymber to the place and for bred and Ale	x d
It[e]m to will[ia]m Hollecrofte for workema[n]ship and Settyng vp of the Same	vj d
It[e]m to will[ia]m Elkins and his man for mendyng the Seycond bell frame	viiij d
It[e]m to Recherd Harper for neyles and to Hoppys for the seid frame	iiij d
It[e]m to the same for a goochyn ¹⁵⁰ for the tryne gate	ij d
It[e]m for washyng of the churche clothys	ij s
It[e]m for castyng snowe of the churche and making cleyne the Grate at the churche yaete	vj d
It[e]m for mendyng the hedge of the seid churche yarde by mr fecknam	ij d
It[e]m to m[aste]r bardell for a brason crosse	vj s viij d
It[e]m for makyng tapers w[i]t[h] the wolde stuff	iiij d ob
It[e]m lyke man[ne]r	iiij d
It[e]m payde for wax and makyng the tapers	xiiij d
It[e]m for ij li of wax made in tapers	ij s ij d
It[e]m for ij li of tawllow candulles at cristom[a]s	v d
It[e]m payd for the Holly candull on candulm[a]s Day	xij d
It[e]m mendyng of the tapurs w[i]t[h] the owlde stuffe	iiij d
It[e]m lyke man[ne]r	iiij d ob
It[e]m to Smythe for mendyng the Glasse wyndows	ij d
It[e]m parcheme[n]t to make the counte boke	iiij d
It[e]m wrytting of the Same	xij d
It[e]m for bred and Ale to the seyde counte	xviij d
Sum[m]a totalis	iiij li xviiij s viij d
 Vt quo rem[anent] in pixid[e] ¹⁵¹	 viiij s v d

[1556–7]¹⁵²

the thyrde and fourte yeres of the raynges of our Sovraign Lord and Lady
Philipp and Mary, by the grace of God, Kynge and Quene of England, &c.

[1556–7] for one holle yere endyd at the purificacion of our lady last past,¹⁵³
made before Master Ottellyes¹⁵⁴ of the sayd Cytye, and others

Recevyd, for the buryall of Alis Puleson	iiij s iiij d
Recevyd, of Thomas Wylkynson for a shete rowme ¹⁵⁵ in the Churche	iiij d
Recevyd, of the Prebendaryes at Eyster	iiij d
Recevyd, in Eyster Wycke gather with the Wax Cake	xj s
Recevyd, for the fyrste grasse of the Churche yarde	xxiiij s
Recevyd, of the Clerke for Charyte money	xij d
Recevyd, for the later grasse of the Churcheyarde	xv s vj d

149 A portable breviary: *Oxford English Dictionary*.

150 i.e. a gudgeon.

151 So that there remains in the small box. This entry is written across both columns at the foot of the account.

152 These accounts are printed here from the extracts in Thomas Harwood, *The History and Antiquities of the Church and City of Lichfield* (Gloucester, 1806), 522–3

153 Candlemas, 2 February.

154 John Otteley or Otley, gentleman, the bishop's steward and a leading citizen of Lichfield: SRO, LD30/10/1/17(i); William Salt Library, SD Pearson/1147; Harwood, *Lichfield*, 496; *VCH Staffs.* XIV, 112; The National Archives, E40/13437.

155 Seat room, i.e. the rental of a pew.

Numerous entries of sums from one penny to six-pence for lights at funerals¹⁵⁶

Summa recep[torum]	iiij l[i] xiiij s
Payd, for bredde and ale on Shawe thursday	iiij d
Payd, for charcolle and ffrankensens	iiij d
Payd, to the Clerke (his quarter's wages)	ij s ij d
Payd, for pavyng of a grave	iiij d
Payd, for spredyne of molle hyllocks in the Churche yarde	viiij d
Payd, for the tapers	x d
Payd, for vij lb ¹⁵⁷ of wax that made the pascall, and a great taper wode ¹⁵⁸ light	viiij s
Payd, for making of the same	vij d
Payd, for a tynne botell	x d
Payd, for wax and makynge the wode light	xj d
Payd, for mendynge a bell whele and stuffe for hit	iiij s vij d
Payd, for carryenge of the Cross and canapeys, and to the Clerk on Corpus Christi daye	vj d
Payd, for iiij quateris of wax and makynge of hytt, with the old stuffe	xiiij d
Payd, for wrytyng of the Vysitac[i]on bill	iiij d
Payd, for pynnyng of ij bye ¹⁵⁹	ij d
Payd, to the Gayle ¹⁶⁰	ij s ij d
Payd, for ij pounds of wax and a halfe, and makynge of hyt withe old stuffe	ij s xj d ob
Payd, for a horse loade of lyme	vj d
Payd, for iiij lb of tallowe Candyll	xv d ob
Payd, for v yarde of Wyer	vij d
Payd, for a gyrdyll ¹⁶¹	ij d
Payd, for the holly Candylls	x d
Payd, for a pownde of wax and makynge of hitt	xiiij d
Summa resolu[tionis] ¹⁶²	iiij l[i] xiiij s vj d

156 This entry is evidently Harwood's summary of a section of the receipts.

157 So rendered by Harwood; it is likely that the clerk wrote 'li' (libras) for pounds as both weight and money.

158 Possibly Harwood's transcription error for 'wolde', i.e. old.

159 No doubt a transcription error for 'kye', i.e. cows.

160 Possibly a payment to the prisoners in the gaol in Lichfield, which stood behind the guildhall: *VCH Staffs.*, XIV, 80.

161 A cord worn to bind an alb as part of a set of vestments: *Oxford English Dictionary*.

162 The total of payments.

EARLY COAL AND IRONSTONE MINING ON CANNOCK CHASE

CHRISTOPHER M. WELCH

(I) INTRODUCTION

The Industrial Revolution was built on coal and iron. But the conventional dates of the Revolution – about 1780 to about 1830 – tend to obscure the fact that mining coal and iron ore in Britain had a long history before the age of canals and steam power, and coal was a significant, even dominant, fuel long before the 18th century. One statistic stands out – in 1700 Britain's coal output has been estimated to have been five times as large as the whole output of the rest of the world.¹ And coal in particular, as the first fossil fuel and still a very significant one, remains highly topical today.

Cannock Chase, in the centre of the historic county of Staffordshire, has as long a history of mining for coal and iron ore as any other British coalfield, going back to the 13th century and ending in the 1990s, and this long history has left an extensive physical and documentary legacy. Although most of the physical legacy of the last two centuries has been carefully swept away, earlier mining is still reflected in the survival of hundreds of features that are the result of the extraction of coal or iron ore, concentrated in the area of exposed Coal Measures in the south-east corner of the Chase in and near Beaudesert Park (fig. 1).

In 1993 the author carried out a survey of a limited number of the features while working for Staffordshire County Council, and a lidar (light detection and ranging) survey of Cannock Chase carried out in 2016 as part of the *Chase Through Time* project has allowed far more of them to be recorded.² Crucially, the results of the lidar survey allow the features to be considered as a whole across the area, where many are now obscured by vegetation.

In addition to the surface archaeological record, the early mining industry here has extensive contemporary documentation, and this can also be investigated to add to our knowledge about the development of mining in the period before the use of steam power became widespread.

After discussing the historical and geological background and the features themselves (parts II to IV), part V looks in detail at the archaeological record offered by the lidar survey and proposes an interpretation of the surface features in terms of the technology that might have given rise to it. In part VI the documentary sources are discussed, and any clues offered there about technological development examined. In the first part of part VII an attempt is made to date the features, although the archaeology of coal and iron ore mining shares with all historical archaeology the almost proverbial difficulty, in the period before reliable maps become commonplace, of relating documentary sources to actual old things on the ground. The rest of part VII is a discussion of what appear to be the key factors in coal and iron ore mining on the Chase, and part VIII concludes with a discussion on the character of mining there and suggestions for further work.

This article will cover the period from the late 13th century, when the earliest documentary references occur, to about 1816, a slightly arbitrary date chosen because it was when the last shallow mines were said to have closed in Beaudesert Park, the part of the Chase where most of the features survive. The investigation of the documentary sources in part VI concentrates on the time between the mid 16th and mid 18th centuries – between the end of the medieval period and the traditional start of the Industrial Revolution. Before the mid 16th century documentary evidence is limited, whereas after the mid 18th century there is such a profusion that it has been dealt with only so far as it helps an understanding of the features.

There are, of course, social and economic and political dimensions to mining, but the focus here is on the technological aspects of coal and iron ore mining on Cannock Chase, on how the basic problem of getting the coal and iron ore out of the ground was solved.

A brief introduction to coal and iron ore might be useful at this point. Coal is a sedimentary rock formed from the remains of tropical forests that flourished in the Upper Carboniferous period, between 290 and 320 million years ago. Once buried, heat, time, and pressure converted the plant remains into a material whose main interest to mankind lay in the fact that it provided a concentrated form of carbon which burned well. It generally occurs in seams in a range of thicknesses, from a

1 E. A. Wrigley, *Continuity, Chance and Change* (1998), 54.

2 For the project see: <https://historicengland.org.uk/research/current/discover-and-understand/landscapes/cannock-chase/> It was a partnership between Staffordshire County Council, Historic England, and the Heritage Lottery Fund.

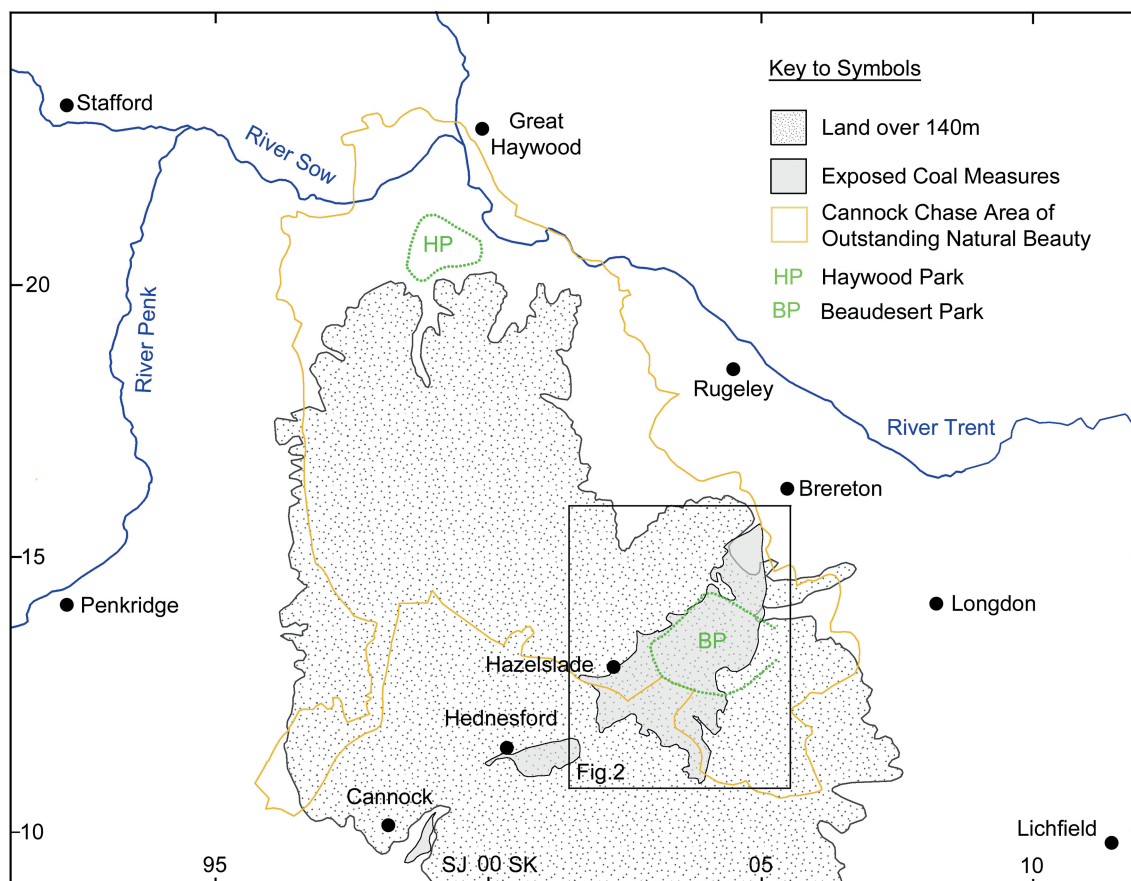


Fig. 1 Cannock Chase and surrounding area

few inches to several feet. The Thick Coal of the Black Country, which could be around 30 feet thick, was unusual. The seams have often been broken and contorted by later earth movements, and then sometimes exposed at the surface by subsequent erosion. Often they lie between other kinds of rock, and might form between 2 to 5 per cent of the total thickness of the coal-bearing strata, but many seams will be too thin to be mineable, or of a low quality with impurities.³

In the Cannock Chase area iron ore occurs as clay ironstone, which often occurs in association with coal seams. In the slightly acidic water that would have been a result of the decay of the tropical forests, iron can travel a long distance (as ferrous iron), but once it met less acid waters it would have been deposited.⁴ It often occurs as a thin bed of nodules, regularly in the strata just above and sometimes below coal seams. The iron usually occurs as the mineral siderite (FeCO_3) together with variable amounts of clay.

Where the coal- and ironstone-bearing strata reach the surface, the coalfield is described as exposed, and nearly all mining before the 19th century was confined to exposed fields. There is an often-repeated description of the early development of coal mining which commences with coal being dug out where it actually emerged at the ground surface – at the outcrop. Little evidence is offered that this was done on any scale, and as will be discussed below there is good reason to believe that to extract any useful coal, some sort of overburden usually had to be dug through, and the same applies to ironstone.⁵ Most coal and ironstone was therefore extracted from either a shaft dug down to it or, where topography allowed, from a drift or adit driven into the seam from a hillside.

At any significant depth, coal and ironstone mining presents problems. Human beings have not evolved to cope with the environment that would naturally prevail down a hole dug into Coal

³ A. Trueman, *The Coalfields of Great Britain* (1954), 1.

⁴ H. Cleere and D. Crossley, *The Iron Industry of the Weald* (Merton Priory Press, 2nd edn, 1995), 10–13.

⁵ For example, A. R. Griffin, *Coalmining* (1971), 2. The exception would be in the Thick Coal where it was close to the surface, and where extraction could be more like recent opencast mining due to the thickness of the seam: Robert Plot, *The Natural History of Staffordshire* (1686), 129.

Measure geology – they could be drowned, or suffocated by lack of oxygen, or killed by falling rock or by the detonation of explosive gases. Much mining technology involved the development of techniques to avoid these outcomes, not always successfully, and from the beginning the annals of coal mining are full of accounts of the deaths and injury of miners.

The Romans certainly used coal, but there is virtually no evidence of its widespread use after that until the 13th century. But by the start of the 14th century, virtually every coalfield has some form of documented mining, and Cannock Chase is no exception.⁶ Iron ores, on the other hand, have been extracted at all periods from the Iron Age onwards.

Previous research

This part of Cannock Chase has long been noted for the extensive remains that are a result of early mining. In the Geological Survey sections published in the mid 19th century, numerous ‘old coal pits’ are noted on a section which ran through Castle Ring and into Beaudesert Park.⁷ In the 1860s, as the great expansion of deep-mining locally was taking place, William Molyneux wrote a series of articles for the *Mining Journal Railway and Commercial Gazette* about earlier mining, and commented on the hollows of old coal workings and the old oak trees that were growing on them.⁸ In 1906, George Cockin, a geologist with antiquarian interests, published ‘The Ancient Industries of Cannock Chase’ which combined his knowledge of the local geology with some historical research.⁹

Another geologist with antiquarian interests was Thomas Cantrill, who surveyed the area for the Geological Survey and who contributed the relevant section of the geological memoir published in 1919.¹⁰ His ‘field slips’, the six-inch scale maps on which he made his field notes, are held by the British Geological Survey at their offices in Keyworth. He was an amateur and observant antiquary and he noted all manner of archaeological features in his survey work, but in particular early mine workings and iron production sites.¹¹

(II) HISTORICAL BACKGROUND

Until the creation of the Cannock Chase Area of Outstanding Natural Beauty (AONB) in 1958, the area known as Cannock Chase was never clearly defined and the name referred simply to a large tract of unenclosed heathland and woodland in central Staffordshire. When William Yates mapped it in 1775, it extended as far south as Watling Street, but the area was progressively reduced and today the AONB is the smallest in England, covering only 69 square kilometres. What remains is largely unenclosed heathland and woodland, mostly above the 140m contour (fig. 1). At the time of the Domesday survey the area today within the AONB lay largely within the manors of Cannock, Haywood, and Rugeley. Cannock and Rugeley were held by the king and were heavily wooded, with Cannock having the single largest wood in the whole survey.¹² Haywood was held by the bishop of Chester. Beaudesert is mentioned by name in 1259 and the bishops may have had an episcopal manor house there by then.¹³ In May 1290, after a protracted legal struggle the bishop, Roger de Meuland, was granted Rugeley and Cannock manors for the payment of £1,000, thereby giving him control of a single tract of countryside which he turned into the hunting ground – a chase – known as Cannock Chase.¹⁴ Meuland had already created a park in Haywood at the northern end of

6 For a detailed discussion, see J. Hatcher, *The History of the British Coal Industry, volume 1: Before 1700* (1993), chapter 2.

7 J. Beete Jukes, *Horizontal Section 23 South Staffordshire Section No. 1* (Geological Survey of England and Wales, 1853; revised 1865).

8 W. Molyneux, ‘Cannock Chase and its Coal Mines’, *Mining Journal Railway and Commercial Gazette*, I (25 July 1863); II (15 Aug 1863); III (5 Sept 1863); IV (26 Sept. 1863). (Copies held in Rugeley Library).

9 *Transactions of the Burton-on-Trent Natural History and Archaeological Society*, V (1906), 137–43.

10 G. Barrow, W. Gibson, T. C. Cantrill, E. E. L. Dixon, and C. H. Cunningham, *The Geology of the Country around Lichfield including the Northern Parts of the South Staffordshire and Warwickshire Coalfields* (Memoirs of the Geological Survey, England and Wales, 1919).

11 Field slips are hereafter referred to as ‘Cantrill’ followed by the relevant Ordnance Survey 6” map sheet number. Cantrill also wrote a layman’s guide to coal mining: *Coal Mining* (1914).

12 O. Rackham, *Ancient Woodland* (1980), 113–15.

13 H. E. Savage (ed.), *The Great Register of Lichfield Cathedral known as Magnum Registrum Album* (William Salt Archaeological Society, *Collections for a History of Staffordshire*, 1924), 101–2 (no. 219). The surviving listed remains of the house have a late 15th-century core.

14 J. Birrell (ed.), *The Forests of Cannock and Kinver: Select Documents 1235–1372* (Staffordshire Record Society, *Collections for a History of Staffordshire*, 4th series, XVIII, 1999), 136–9. The chase was a private hunting ground within the much larger royal forest of Cannock, for which see A. J. Kettle, ‘Forests’, *Victoria County History of Staffordshire*, II (1967), 335–58 (at pp. 338–43).

the Chase, and it seems likely that Beaudesert Park at the southern end was created after the 1290 grant, because it encloses parts of Rugeley and Cannock manors, as well as the bishops' adjoining manor of Longdon. The majority of the surviving early coal and ironstone mining features are within Beaudesert Park, the earliest documentary references to mining in this area dating from a survey of episcopal estates made in 1298.¹⁵

In 1546 several of the episcopal estates in Staffordshire were granted to Sir William Paget, including Cannock, Haywood, Longdon, and Rugeley, and they remained in that family's hands until the 20th century.¹⁶ Henry VIII's secretary of state, Paget was created Baron Paget of Beaudesert in 1549, and the family thereafter rose through the peerage, the eighth baron becoming the first Earl of Uxbridge in 1714. The earldom died out with the ninth baron but was recreated for the tenth in 1784. The latter's son – Henry Paget, the hero of Waterloo – was created the first Marquess of Anglesey in 1815.¹⁷

In essence, then, the Chase had two principal landowners, the bishops until 1546 and the Paget family thereafter. One other local family is also part of the story. The Arblasters held land called Arblaster Hayes (later known as Brereton Hayes) until, deeply in debt, the family sold it to the Pagets in 1615. Arblaster Hayes contained a significant part of the exposed Cannock Chase coalfield in addition to that already held by the Pagets, and the transaction led to useful documentation which will be discussed below.

(III) THE SURFACE FEATURES

The lidar survey suggests that there are at least 1,350 features on Cannock Chase which are mostly the result of the sinking of shafts in connection with the exploitation of coal or ironstone. These range from relatively ill-defined depressions in the ground only a few metres across to substantial mounds of material perhaps 2m high and 20m across, often with a deep depression in the centre marking the site of the shaft. Not surprisingly, the bigger mounds seem to relate to the deeper workings, and it seems reasonable to assume that the bulk or all of the material in the mound is what was excavated in sinking the shaft. It is not clear whether shafts were deliberately backfilled after they had gone out of use. Documentary references to backfilling are few and where substantial mounds still exist, backfilling must have been only partial. The conical 'crater' in the middle of most of the bigger mounds could be the result of such partial backfilling, perhaps into a shaft temporarily blocked part way down with old timber. It is often said that in some cases a tree was simply pushed down the shaft and spoil piled on top.¹⁸ Alternatively, the crater at the centre of a heap of upcast debris might be explained not by purposeful backfilling but by the collapse of material behind the upper parts of a shaft lining, which was usually of timber. It is also important to remember that some features may in fact have been fully backfilled and are perhaps no longer identifiable on the ground.

For the rest of this article, the term 'shaft' will be used as shorthand for any feature which is a hollow in the ground caused by the presence of a shaft, with or without a surrounding upcast mound. The general distribution of the features can be seen on fig. 2, which also shows the location of some of the later shafts recorded on plans associated with 19th- and 20th-century collieries.

Because of their density and because the features are not always clearly defined, fig. 2 indicates only the distribution of the shafts and does not attempt to show every one. But even so, it can be seen that they broadly fall into two types. There are densely packed groups of shafts, which on the ground have either small mounds or no obvious upcast at all, and which appear to have no regular pattern except that they generally follow the contours; they are evidently relatively shallow and located near the outcrop of the coal. Then there are shafts, mostly with substantial upcast mounds, that are spaced some distance apart and have some sort of relationship with each other, often being

15 Staffordshire Record Office (hereafter SRO), D. (W.) 1734/J/2268 (the survey is discussed again below).

16 I. H. Jeayes (ed.), 'Calendar of the Longdon, Lichfield and other Staffordshire Charters &c. formerly at Beaudesert ... in the possession of the Marquess of Anglesey at Plas Newydd', in *Collections for a History of Staffordshire*, 1939 (Staffordshire Record Society, 1940), 110 (no. 1735); S. R. Gammon, *Statesman and Schemer* (1973), 114.

17 The Marquess of Anglesey [George Charles Henry Victor Paget], *One-Leg. The Life and Letters of Henry William Paget, First Marquess of Anglesey, 1768–1854* (1961); F. S. Andrus, 'The Paget Family', *Transactions of the Ancient Monuments Society*, 29 (1985), 136–49.

18 J. W. Dean, 'Old Mine Shafts and their Hazards (paper no. 4161)', *The Mining Engineer*, 126 (1967), 372; Derbyshire County Council, *Treatment of Disused Lead Mine Shafts; A Guide to Good Practice* (2007), section 4.1.

in rows or an approximate grid formation. The two types correspond to the ‘close-spaced’ and ‘wider-spaced’ shafts identified by Barnatt in the uplands of the Peak District.¹⁹

All of the features discussed here fall within or near the edge of the exposed Productive Coal Measures of the northern part of the South Staffordshire coalfield.²⁰ The southern part of the South Staffordshire coalfield is usually defined as lying south of the Bentley Faults, which run east–west to the north of Wolverhampton and Walsall: this is usually referred to as the Black Country or Dudley part of the coalfield. For convenience, the northern part – the area of interest here – will be referred to as the Cannock Chase coalfield. The actual area of exposed coal measures within the Cannock Chase coalfield is only a small proportion of the whole, as the greater part of it is covered by glacial drift. It forms a rough triangle (figs 1 and 2), about three miles long on its east side, perhaps two miles wide at the southern base and over three miles long on the long side. Along the north-western side of the triangle, the Coal Measures are overlain by the pebbly and very free draining Cannock Chase Formation (formerly the ‘Bunter Pebble Beds’), giving rise to the hilly and deeply dissected topography of the rest of the Chase. The south side of the triangle is bounded by the edge of the covering of Boulder Clay, which covers most of the rest of the Cannock Chase coalfield.²¹ This cover prevented mining in much of the rest of the coalfield until technology allowed deeper workings to penetrate it in the 19th century. The eastern side of the triangle is emphatically defined by the Eastern Boundary (or Rugeley) Fault, with a throw of around 1,700 feet (520m). Beyond that, the Coal Measures lie below the overlying Triassic rocks, where the coal was reached only in the 1950s.²²

A large part of the northern part of the triangle was occupied by the medieval Beaudesert Park, approximately three sq. km of the roughly six sq. km of exposed coalfield, and this is where the majority (around 800) of the features survive today. The area of the Park is today largely Forestry Commission woodland, and many of the features are almost inaccessible in areas of dense growth. A small group located south-west of the Park along the south side of Bentley Brook are simply a continuation of those within the Park.²³

North of Beaudesert Park, the triangle of the exposed field narrows towards its apex, and a significant complex of surviving earthworks of early workings are concentrated here within what is known today as Brereton Hayes Wood, but which was formerly known as Arblaster Hayes.²⁴ There are around 450 features in this area.

South of Beaudesert Park the triangle widens, and it seems that historically workings here were generally and rather vaguely referred to as being in Cannock Wood, a reflection of the former status of this area as being still heavily wooded in the 16th century. This area was largely unenclosed until the 19th century, but within it were two significant enclosures, the New Hayes, just south of Beaudesert Park, and Red Moor. Cannock Wood is now the name of the modern village.

In the Cannock Wood part of the coalfield, features survive in the New Hayes and there are a few features south of that. A group of very ploughed-out features in a layout resembling the six points on a dice were apparently sunk in the area where there is drift cover. But compared with the complexes in Beaudesert Park and Arblaster (Brereton) Hayes, all the surviving groups of features in the Cannock Wood area are only islands between 19th-century mining, urban development, and later 20th-century opencast extraction.²⁵ The survival of so many features in Beaudesert Park and in

19 The terminology is defined in J. H. Rieuwerts with J. Barnatt, ‘Coal Mining on the Peak District’s Eastern Uplands during the 16th to early 20th centuries’, *Mining History*, 19/4 (Winter 2015), 4. For other detailed descriptions, also see articles by J. Barnatt: ‘Coal Mining near Buxton: Thatch Marsh, Orchard Common and Goyt’s Moss’, *Mining History*, 19/2 (Winter 2014), 17–107; ‘Coal Mining near Buxton: Dane, Blackclough and Knotbury Collieries’, *Mining History*, 20/4 (Spring 2019), 57–87; and ‘The Coal Mines of Bugsworth, Beard and Ollersett Moors’, *ibid.* 103–29.

20 In current terminology, the exposed coalfield includes the Pennine Middle Coal Measures and a small area of the Pennine Upper Coal Measures, but the older term of Productive Coal Measures is retained here. Where the term ‘Coal Measures’ is used this refers to the Productive Coal Measures. The area of the exposed Coal Measures shown on figs 1 and 2 is mostly based on the British Geological Survey 1:10560 Sheet SK01SW (1955), with minor amendments based on the mapping available on the BGS GeoIndex: <https://www.bgs.ac.uk/geoindex/>

21 There are a number of other isolated areas of exposed Coal Measures within the Cannock Chase Coalfield, but these are not considered within this paper.

22 A. R. Yearsley, *Surveyor’s Report for the Brereton Colliery Abandonment Plans, December 1960*, 2 (copy held by the Coal Authority).

23 References here to Beaudesert Park are to the medieval Old Park. The New Park, to the east of Beaudesert Hall, is an 18th- or early 19th-century creation.

24 It was still known as Arblaster Hayes in 1763: SRO, D. 603/N/5/2. This area will be referred to hereafter as Arblaster (Brereton) Hayes or just Brereton Hayes as appropriate.

25 For example, Cantrill recorded pits in New Hayes that have subsequently disappeared beneath spoil tips, and the Park Pits at Cannock Wood Colliery, sunk to the Old Park coal in advance of the main shafts, encountered earlier workings whose surface manifestation must have been removed (Coal Authority Abandoned Mine Plans 8255).

Arblaster (Brereton) Hayes may be a result of decisions by landowners in the 19th century, management by the Forestry Commission after World War One, and the designation of Cannock Chase as an Area of Outstanding Beauty in 1958. But it is worth observing how writers like Cantrill, Molyneux, and Cockin, all writing before the substantial development of the 20th century, were struck by the profusion of features within the Park, which implies that the contrast existed then.²⁶

Information from later mining

Mining in the 19th and 20th centuries has left a legacy of information which allows an interpretation of the relationship between the early workings and the local geology. Following the Coal Mines Regulation Act, 1872, and subsequent legislation, owners were required to submit plans of abandoned mines to the Secretary of State, and these plans are still held by the Coal Authority at their offices in Mansfield (Notts.). Obviously, there are no plans of the early workings that are considered here, as they were abandoned long before 1872. But two later mines took coal from beneath the area in and around Beaudesert Park in the 19th and 20th centuries, and the geological situation recorded in the deeper seams on their abandonment can (with limitations) be extrapolated upwards towards the surface and the early workings, and this has been helpful in understanding the relationship between the surface features and the underlying geology.

To the north lay Brereton Colliery, whose Brick Kiln shafts were sunk in about 1864 (see fig. 2). They represented the latest in a complex of workings in the Brereton area, but the works were concentrated there from about 1920 onwards until the mine ceased drawing coal in 1960.²⁷ To the south lay Cannock Wood Colliery, formerly the Wood Pits component of Cannock and Rugeley Colliery, whose shafts were sunk in 1866 and which was closed in 1973.²⁸ These two collieries worked various coal seams which lay below most of the area of earlier workings in Beaudesert Park and the area to the south.²⁹

(IV) GEOLOGY

Coal and Ironstone

There are around fifteen significant coal seams within the Cannock Chase coalfield, of which probably seven are encountered at or near the surface.³⁰ Calculations based on the depths and relationships with the deeper seams recorded in Brereton and Cannock Wood Collieries confirm that the main seam exploited by the earlier workings in both Beaudesert Park and Arblaster (Brereton) Hayes is likely to have been the seam called the Old Park, evidently taking its name from the former. It is one of the better quality coals and was recorded at Cannock Wood Colliery as being three feet (0.9m) thick. At West Cannock Pit No. 1 (about 4km west of Beaudesert Park), where it was worked as the Main Hard, it was five feet thick and yielded a good band of house coal, another band free from sulphur, and the rest adapted for steam and forge purposes.³¹ A sample analysed in 1962 from West Cannock No. 5 Colliery (about 2km west of Beaudesert Park, where it was seven feet thick) showed that there it had a moderate sulphur content (if the very high amount in an inferior band was excluded), and that generally it was a moderately good seam.³² It was worked for a small area around the Park shafts when they were first sunk in the 1860s at Cannock Wood Colliery but with that exception Cannock Wood and Brereton Collieries worked only deeper seams.³³

26 The estimates of the number of features is approximate because some of the complexes are so dense that it is not possible to determine exactly how many there are. An actual total of 1,600 might be realistic.

27 Yearsley, *Surveyor's Report*, 1. Only shafts recorded on Abandoned Mine Plans that are relevant to the discussion in this paper are shown on figs 2, 3, and 11: Barrow, *Geology around Lichfield*, 74.

28 Barrow, *Geology around Lichfield*, 77; K. Edwards, *Cannock and Rugeley Colliery Company Ltd and its Collieries 1864–1973* (Cannock Chase Mining and Historical Society, 2006), 31. For convenience, Wood Pits and Brereton Brick Kiln will be referred to by the names used in their latest days: Cannock Wood Colliery and Brereton Colliery.

29 The principal Coal Authority Abandoned Mine Plans consulted were: for Brereton, WM/164/21, 22, 24, 26, and 27 (Bass and Yard seams), and for Cannock Wood WM/822/3, WM/823/2 and 7, and WM/887/19 and 62 (Bass, Yard and Heathen seams).

30 G. H. Mitchell, *The Geology of the Northern Part of the South Staffordshire Coalfield (Cannock Chase Region)* (Wartime Pamphlet No. 43, 1945), fig. 3, 30.

31 Barrow, *Geology around Lichfield*, 99–100, 243. The seam is named in the section for Cannock Wood Colliery as the Old Park (at p. 235), and is apparently the earliest reference to it by this name.

32 Coal Survey Laboratory Report D6G2/43R.3130S (held by BGS Keyworth in Deep Mine Data Box 2325).

33 Part of the abandonment plan for the Old Park seam is reproduced in Edwards, *Cannock and Rugeley Colliery*, 20, where it is stated to be 4ft 2ins thick. The section given in Barrow (where it is stated to be 3ft thick) is from the Ventilation shaft,

Some other seams were worked in the period of interest here; in particular, cannel coal, prized for the way it gave out light as well as heat, was noted by Robert Plot in 1686 and Celia Fiennes in 1698.³⁴ Cannel was worked until about 1874 at the No. 6 Pit at Wimblebury (about 2km south-west of Beaudesert Park), where the seam was only 11 inches thick and appears to have been fairly high in the local sequence of seams.³⁵

South of Beaudesert Park there is a substantial fault whose effect is to bring down seams from higher in the sequence, and south of that fault the seam that was probably worked in early workings would have been the Bottom Robins, a coal of secondary value which was extensively worked opencast in the 20th century. The seam is described as being between six and nine feet thick, but often with dirt partings (thin beds of non-coal material within the seam).³⁶

All the Cannock Chase coals are non-coking and so unsuitable for iron making, which is probably why the well-established charcoal-fired iron-making industry of the area never developed into a coal-fired one.³⁷ On the other hand, coal has long been preferred to charcoal by smiths, and the Chase coals undoubtedly fuelled their hearths locally; this is considered below in a discussion of potential markets.³⁸

Ironstone was also found and mined on the Chase, occurring as bands or nodules. The 1298 survey referred to iron mines as being in Rugeley manor and the contemporary coal mines as being in Cannock manor.³⁹ The boundary between the two manors runs through Beaudesert Park, although it might be at this period that the Park was regarded as a part of Longdon manor. If so, the iron mines referred to would probably have been in Arblaster (Brereton) Hayes, where iron-making debris was indeed found during the survey of 1993.

Cockin said that there was good ironstone just above the Old Park seam, and the published section for Cannock Wood Colliery confirms this.⁴⁰ A note from financial accounts of a late 18th-century colliery records six measures of ironstone occurring in the eight yards above the 'Shallow Coal', possibly referring to the Old Park coal.⁴¹ The ironstone beds were thin, often only a few inches, and this will have led to a different approach to extraction from the thicker coal seams, as discussed below.

The historical references to ironstone mining on the Chase all suggest that the quality of the ore was a problem. A report written in 1590 for Fulke Greville, after he had taken a lease of ironworks on the Chase, lists five mines of ironstone but only one was at 'Canck' – three others were in the Walsall area. The ironstone from the Cannock mine is described as 'Colshire', which both the report and Robert Plot, writing a century later, agreed tended to produce a brittle iron.⁴² Possibly for this reason, the lowest quality of ironstone from the Dudley area was known as 'Cannock' or 'Cannot' stone.⁴³ There are sporadic references to ironstone mining on the Chase in accounts for the ironworks in the 1580s, two of which refer to stone from Arblaster (Brereton) Hayes, and one from 'Cawne Hill', probably located just south of the Park. A miner called Alton was paid to search for ironstone in 1582.⁴⁴

When the coal mines in Beaudesert Park were leased in 1543, the digging of ironstone (if any was found) may have been forbidden.⁴⁵ Leases for coal mining are always distinct from those for ironstone mining, and no accounts have been found that refer to both coal and ironstone being raised from the same mine. In 1595, for example, a survey referred to one mine of black coals and one mine of cannel coals in Cannock Wood leased by Gilbert Wakeringe. In contrast, the 'Black Mine',

but the abandonment plan reproduced by Edwards appears to show a fault running through that shaft which might explain the discrepancy.

34 Plot, *Staffs.*, 125–6; C. Morris (ed.), *The Illustrated Journeys of Celia Fiennes* (1982), 147–48.

35 G. M. Cockin, 'The Ancient Industries of Cannock Chase', *Transactions Burton-on-Trent Natural History and Archaeological Society*, 5 (1906), 138–40; I. P. Stevenson and G. H. Mitchell, *Geology of the Country between Burton upon Trent, Rugeley and Uttoxeter* (Memoirs of the Geological Survey of Great Britain: England and Wales, 1955), 16.

36 Mitchell, *Geology of Northern Part of South Staffordshire Coalfield*, 12.

37 A. J. Taylor, 'Coal', in *VCH Staffs.* II, 68–107 (at p. 77).

38 Hatcher, *History of British Coal Industry*, 17, 422–25.

39 SRO, D. (W.) 1734/J/2268, ff. 20 and 21v.

40 Cockin, 'Ancient Industries', 141; Barrow, *Geology around Lichfield*, 235.

41 SRO, D. 603/M/1/72.

42 A. C. Jones and C. J. Harrison (eds), 'The Cannock Chase Ironworks, 1590', *English Historical Review*, 93 (1978), 798–9; Plot, *Staffs.*, 161. In addition, the ironstone may simply have run out. See the discussion on Greville's lease (below).

43 Plot, *Staffs.* 160; W. J. Arkell and S. I. Tomkiewich, *English Rock Terms* (1953), s.v. 'Cannock(s)'.

44 SRO, D. (W.) 1734/3/3/212, ff. 49r and 50r (1577); D. (W.) 1734/3/3/214 (1581; the five loads of stone are described as having been got by the colliers, which refers here to the charcoal burners); D. (W.) 1734/3/3/215 (Cawne Hill and Alton).

45 Ibid. D. (W.) 1734/2/3/112c (lease to Thomas Pomfret). The wording is ambiguous.

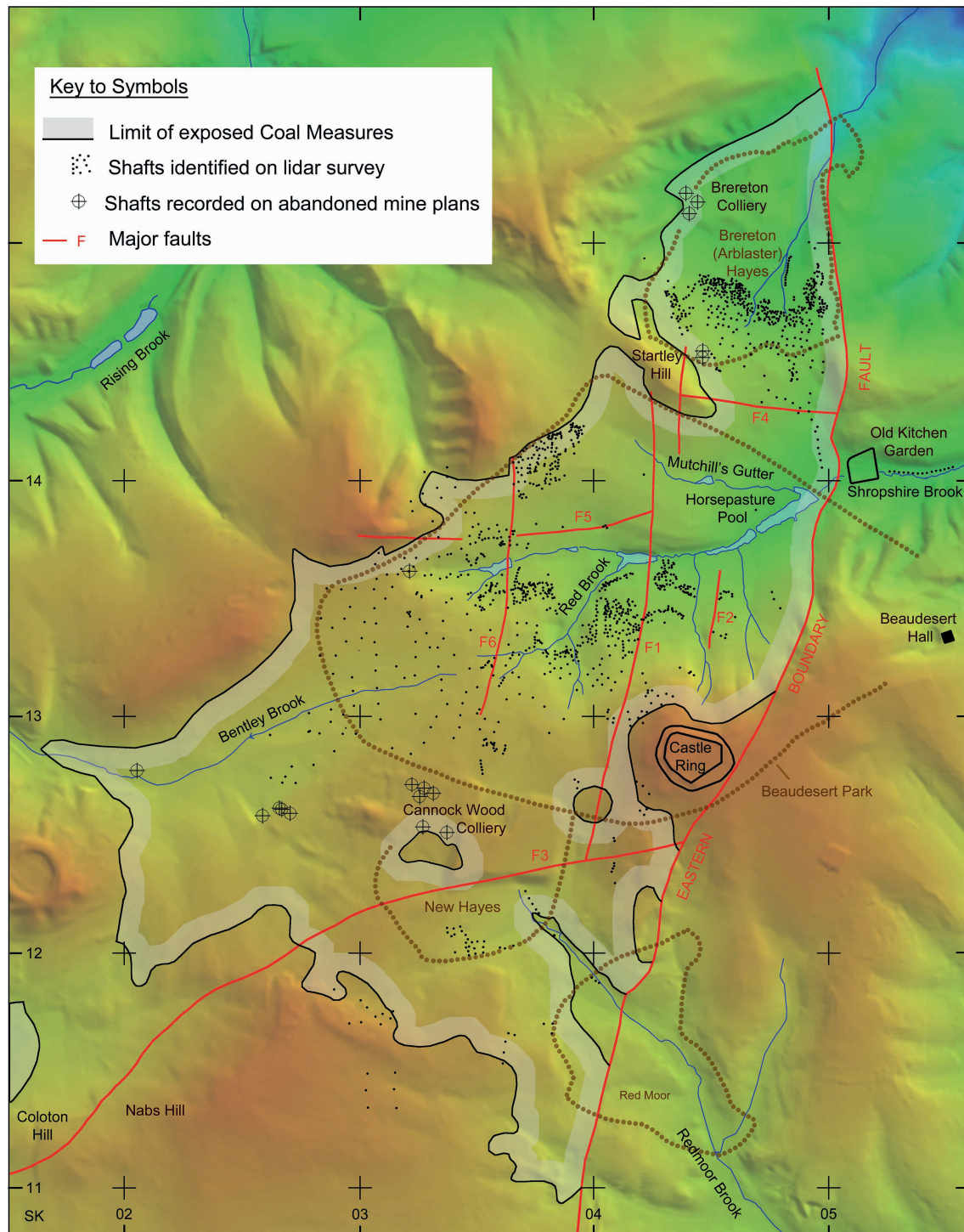


Fig. 2 Area of coal mining features. The distribution of the shafts identified on the lidar survey is indicative only. Geological information by permission of the British Geological Survey (see text for sources). Location of shafts recorded on abandoned mine plans by permission of the Coal Authority 2020. All rights reserved.

also in Cannock Wood, was for ironstone and was leased by Fulke Greville as part of his ironmaking operation.⁴⁶ Greville eventually ceased to mine Chase ironstone entirely during the term of his lease.⁴⁷

The presence of iron pyrite and marcasite in the coal seams themselves (rather than in the ironstone) also causes the characteristic red staining seen in streams in and around Beaudesert Park – the

⁴⁶ Ibid. D. 1720/3.

⁴⁷ Taylor, 'Coal', in *VCH Staffs*. II, 111.

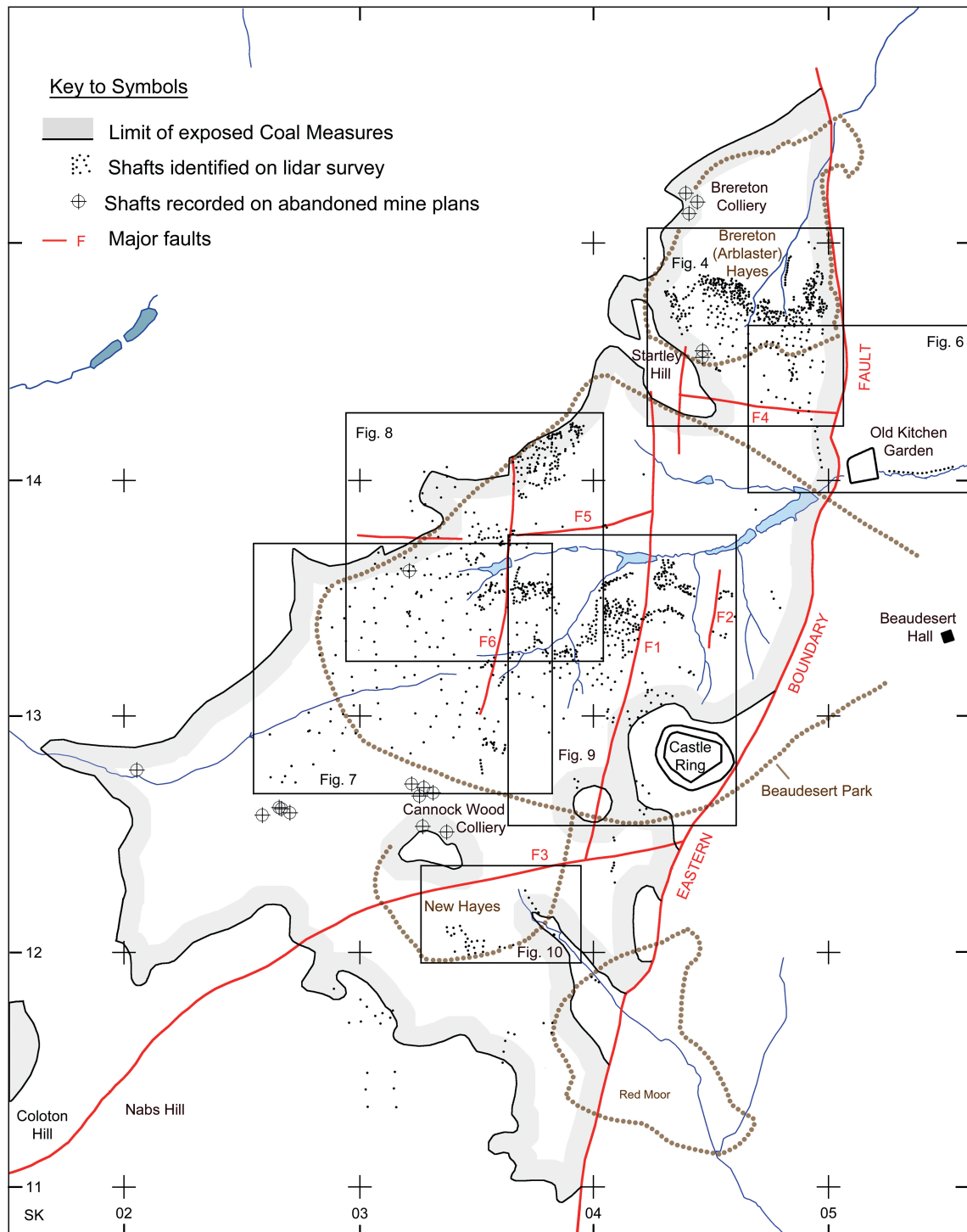


Fig. 3 Key to lidar images. Geological information by permission of the British Geological Survey (see text for sources). Location of shafts recorded on abandoned mine plans by permission of the Coal Authority 2020. All rights reserved.

‘redmyres’ referred to in 1595 (probably the modern Red Brook) and Red Moor (Redmore) to the south of the Park probably reflect the presence of ferruginous water which deposited iron oxide.⁴⁸

Water drained from the mines caused environmental problems. In 1585 it was stated that two new pools in Beadesert Park had no fish because they had been destroyed by the water coming from the coal pits.⁴⁹

48 L. Thomas, *Handbook of Practical Coal Geology* (1992), 232.

49 The National Archives (hereafter TNA), E 164/49, f. 29v.

Topography and faults (fig. 2)

The coal seams in the Cannock Chase coalfield are relatively flat compared with those in some other coalfields, and so the location of the outcrop of the seams is governed by the fairly hilly topography of the southern part of the Chase. The area is heavily faulted, however, and an understanding of both the topography and the faults is necessary before an attempt can be made to interpret the surface remains.

Beaudesert Park pale enclosed a valley along whose floor runs a stream called the Red Brook as far as Horsepasture Pool (one of a number of pools created along its course) and then the Shropshire Brook. A few nameless tributaries join the Red Brook above Horsepasture Pool, and a stream called Mutchill's Gutter flows into the lower end of Horsepasture Pool. The Shropshire Brook flows out of the Park at about 130m above ordnance datum (AOD), whilst on the valley's southern flank the ground rises steeply to the Iron Age hillfort of Castle Ring, the highest point on Cannock Chase at over 240m AOD. The western section of Beaudesert Park forms a plateau above the heads of the Red Brook and its tributaries at around 195m AOD, and beyond that the ground falls slowly westwards and is drained by the Bentley Brook which flows down a shallow valley towards Hednesford.

Along the north-western side of the Park, the ground rises towards the Triassic sandstones, where the Brereton–Hazleslade road runs along the boundary at about 200m AOD, and just beyond the northern corner of the Park lies the Triassic near-outlier of Startley Hill. Between that hill and the Eastern Boundary Fault, about 500m to its east, is a saddle which reflects that fact that the exposed and more easily eroded Coal Measures continue northwards between Startley Hill on one side and the Eastern Boundary Fault on the other. The modern Startley Lane runs along this saddle.

North of the saddle, the ground falls into Arblaston (Brereton) Hayes and on down towards Brereton Colliery and the Trent Valley. A stream which rises in the Hayes and flows down through Brereton once formed the boundary between Rugeley and Longdon manors (and parishes) and was described in 1595 as the 'pearle [stream] that cometh from the Colepittes'.⁵⁰ South of the saddle the ground falls towards Mutchill's Gutter.

South of Beaudesert Park and the high point of Castle Ring, the ground falls away slowly southwards and is drained by the Redmoor Brook and its tributaries.

In very general terms, the Old Park coal was first exploited where the streams have cut down through the geology to expose it, but the situation is complicated by a series of significant faults. Analysis of faults is a complex matter. Larger faults have tended to be avoided by miners and so their precise location and structure might not appear on mine plans.⁵¹ They can change their 'throw' (i.e. their vertical displacement) along their length, or die out altogether. They can appear in groups, with parallel 'synthetic' faults having the same direction of throw as a main fault, and 'antithetic' faults throwing the other way and cancelling out some of the overall displacement. But they are an important factor in the location of mining in the Cannock Chase coalfield, and an attempt has been made here to identify those that appear to be significant, with their inferred surface position shown on fig. 2. The analysis must be understood as conjectural, particularly as the surface location and throws of faults is extrapolated upwards from deeper seams.

In a useful thesis, Barnsley identified three groups of faults, two of which are relevant here. Group A faults have throws in excess of 100 feet, and can actually consist of a belt of separate fault planes up to 100 yards (91m) wide. Group B faults have throws between 20 and 100 feet (6–30m) and tend to die out laterally rather sooner.⁵²

The largest fault in our area of interest, and most definitely in Barnsley's Group A, is the Eastern Boundary (or Rugeley) Fault, which forms the eastern boundary to the exposed coalfield, with a throw of around 520m.

To the west a cousin of the Eastern Boundary Fault runs between 500 and 800m north–south past the west side of Castle Ring. The surface position of this fault is labeled on fig. 2 as F1 but it must be emphasized again that this is conjectural.⁵³ It is based on an assumption that it is a high-angle normal coalfield fault (with a dip of between 60 and 70 degrees) and that its surface position is marked by a scarp running northwards through Beaudesert Park (seen on fig. 9). Such scarps are

⁵⁰ SRO, D.1720/13

⁵¹ Trueman, *Coalfields of Great Britain*, 38.

⁵² G. B. Barnsley, 'The Stratigraphy and Structure of the Cannock Chase Coalfield' (unpublished PhD thesis, University College London, 1964), 251–2.

⁵³ The location shown on fig. 2 corresponds reasonably with the conjectural location shown on the 1:10560 Geological Survey sheet (Provisional Edition SK01SW (1955)). I am extremely grateful to the geologist Steve Box for his thoughts on this matter, although he is not responsible for the conjecture.

usually the result of the reactivation of geologically ancient faults by recent mining. In essence, coal has been dug from one side of the fault and not the other, causing the ground on the ‘dug’ side to subside.⁵⁴ F1 is a group A fault and about 140m to its east there seems to be another fault, F2, which is antithetic to F1 (i.e. the throw is in the opposite direction). What happens in between these two is unknown, and they may in fact represent the edges of a fault zone, with many smaller faults forming a highly complex structure. The combined throw of the whole structure is approximately 80m to the east in the area of Beaudesert Park.

The F1/F2 ‘fault zone’ formed the boundary between the 20th-century workings of Brereton Colliery, which was worked progressively southwards the strip between it and the Eastern Boundary Fault, and Cannock Wood Colliery, which worked northwards on the west side of it.

Fault F1 meets fault F3 at its southern end. This fault is also a Group A fault and runs roughly east–west through New Hayes, where it has a throw of about 100m to the south. As noted above, this separates an area to the north, where shallow workings would have exploited the Old Park seam, from the area to the south, where it is more likely to have been the Bottom Robins seam that was dug.⁵⁵

The other three key faults are all smaller and fall into Group B. F4 runs east–west, possibly meeting a continuation of the F1/F2 fault zone at its west end, and has a throw of 20–23m to the south.⁵⁶ Like the others it may well be composed of more than one actual fault. F5 also runs east–west with a throw to the south of about 15m,⁵⁷ whilst fault F6 runs north–south with a very variable throw of 7–13m to the east. F6 has a complex junction with F5, north of which the throw is unclear and may be to the west.⁵⁸

There are many other faults within the area, but these generally have less of a throw and are not indicated on fig. 2. The extensive faulting, allowing water to percolate through the ground, may be why water has always been something of a preoccupation with Cannock Chase mining. Both the references from the survey of 1298 referred to above mention the problems caused by rain, and water caused a serious accident in 1908, when Coppice Pit in Brereton Colliery was flooded and three miners were drowned.⁵⁹

(V) DESCRIPTION OF THE SURFACE FEATURES

It is within this framework of topography, seams, and faults that coal mining took place, and the features can now be looked at in more detail. The images seen in figures 4 and 6–10 are lidar visualisations, that is, visualisations of the data recorded by the lidar survey, which is a method of determining the three-dimensional location of any given point by using a laser, in this case carried by an aircraft. The important point to bear in mind is that these are not photographs, but visualisations created by processing the lidar data, of which there is a choice – the one that has been used here involves modelling the image as if light was being shone upon the surface from sixteen different directions. The lidar data is processed to remove vegetation and buildings, allowing the actual surface of the ground to be ‘seen’. It should be borne in mind that particularly dense vegetation can prevent lidar data being collected, and some areas where features appear to be absent could be the result of this. All images are orientated conventionally, with north at the top.⁶⁰

54 L. J. Donnelly, M. G. Culshaw, and F. G. Bell, ‘Longwall mining-induced fault reactivation and delayed subsidence ground movement in British coalfields’, *Quarterly Journal of Engineering Geology and Hydrogeology*, 41 (2008), 301–14.

55 Barrow, *Geology around Lichfield*, 77, refers to a fault through the New Hayes as having a throw of 348 ft and Cannock Wood plans show a throw of 330 ft (Coal Authority Abandoned Mine Plan WM/822/3, Heathen Seam).

56 Shown as 70 ft throw in the Bass seam, but appears to be less in the overlying Yard: Coal Authority Abandoned Mine Plans Brereton, WM/164/21 (Bass) and WM/164/22 (Yard). This fault seems to have represented the southern limit of working from Brereton Colliery until the 1920s.

57 Throws given as 45 ft and 54 ft in the Bass seam: Coal Authority Abandoned Mine Plans WM/887/19.

58 In the section 400–600m south of the junction with F5, throws appear to be between 23 ft and 42 ft in the Heathen, and 20 ft in the Bass: Coal Authority Abandoned Mine Plans WM/887/62 (Heathen) and WM/887/19 (Bass). North of that section is conjecture. Fault F6 probably continues south as far as fault F3.

59 H. Johnstone, ‘Report to the Right Honourable the Secretary of State for the Home Department on the Causes of and Circumstances Attending an Irruption of Water which occurred at Brereton Collieries, South Staffordshire, on 15 February 1908’. The Coppice Pit flooding was probably the result of encountering the very porous overlying Triassic geology.

60 The technique is explained in *Using Airborne Lidar in Archaeological Survey: the Light Fantastic* (Historic England, July 2018). The lidar data was downloaded from the ‘Chase Through Time’ website, and was processed using the Relief Visualisation Toolbox, version 1.3, (c) ZRC SAZU (2016). The hill-shading from multiple directions option was chosen, using 16 directions and a sun angle of 25 degrees.

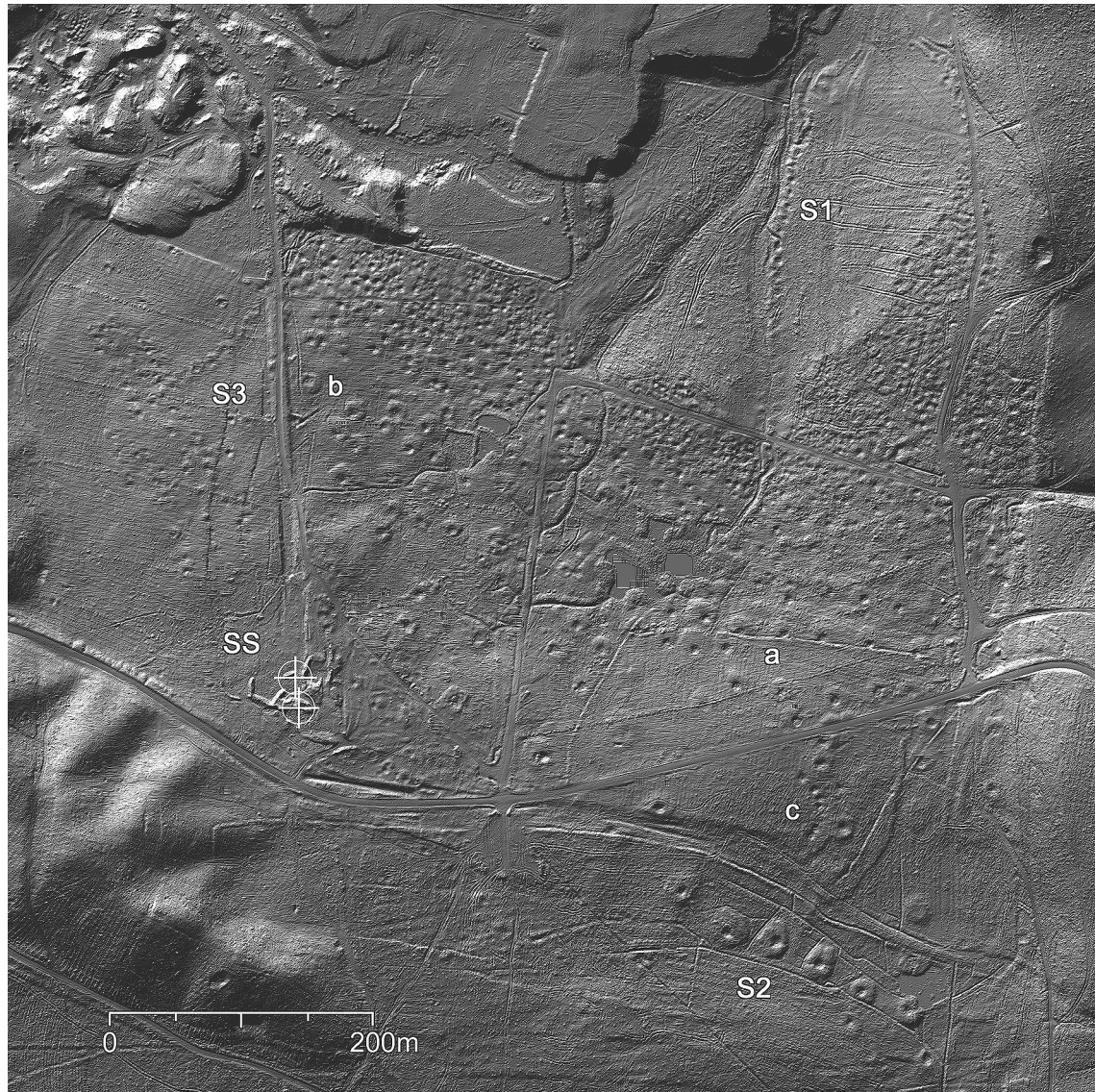


Fig. 4 Brereton Hayes. S1, S2, and S3 are soughs. SS = Startley Shafts. See text for features a, b, and c. Lidar DTM 4 May 2016 © Historic England; *source* Staffordshire County Council/Fugro BV Geospatial. Location of shafts recorded on abandoned mine plans by permission of the Coal Authority 2020. All rights reserved.

Brereton Hayes and Shropshire Brook (figs 4 and 6)

This group of features is outside Beaudesert Park (although partly within Arblaster (Brereton) Hayes), but is a good place to start because it contains the whole range of features seen elsewhere.

On fig. 4, the modern Startley Lane can be seen running west–east across the lower part of the image: this was a re-alignment in the early 19th century of the original route which can be seen running down to the south-east corner of the image.⁶¹ The location of the Eastern Boundary Fault is evident, running north–south and forming the eastern boundary to all the mining features, and the isolated Triassic outcrop of Startley Hill is in the south-west corner. The spoil tips of Brereton Colliery are in the north-west corner of the image.

The ground falls away northwards from Startley Lane, and most of the shafts are located on this slope. Along the northern margin of the main area of features there is great profusion of closely and irregularly spaced features, small surface hollows which are mostly just above the 140m contour. An approximate height for the actual outcrop of the seam would be 137m AOD, and the seams locally

⁶¹ The re-alignment is shown on SRO, D. 603/H/3/13.

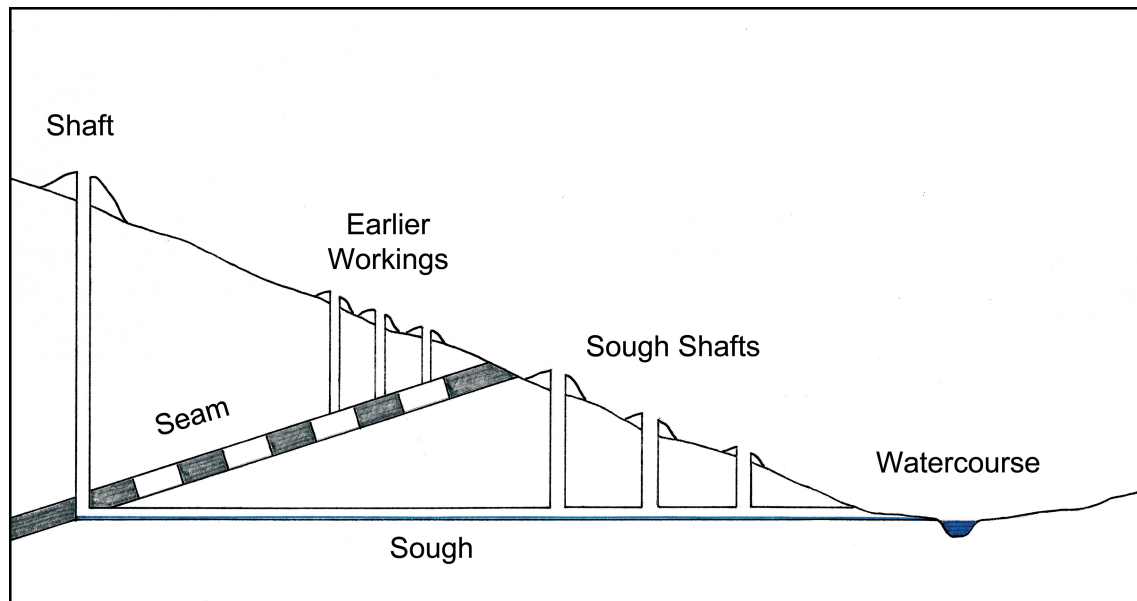


Fig. 5 Schematic section through a sough and shafts

dip at about 1:20 in a south-west direction.⁶² Some features may well have been lost beneath the spoil tips of Brereton Colliery to the north-west.

With a few exceptions, even the shallowest, smallest, most closely-spaced features appear to be the result of shafts (mostly without recognisable surrounding upcast mounds) rather than opencast pits, and were therefore dug through some depth of overburden. This contrasts with the often expressed statement noted above that the earliest coal workings in Britain were simply dug at the outcrop, just below the topsoil. The reason for this is probably that coal oxidises at shallow depths, as a result of contact with oxygenated groundwaters, a fact recognised by Plot, who noted that the shallowest coal was converted to a 'shale, smut, or dross, that will not burn'.⁶³ In effect, there has to be some overburden for the coal beneath to be worth burning. The situation may be the same with ironstone, which breaks into unusable small fragments at depths of less than around 1.2m.⁶⁴

As there are no contemporary records of which seam was being worked here, it is necessary to look at later abandonment plans for details and depths of seams lower down in the sequence, and then extrapolate upwards to the features seen in the image. Thus, in the 1920s the Yard seam was worked directly below the outcrop at Brereton Hayes at about 50m AOD, about 87m lower than the height of the outcrop. Although this does not match exactly the vertical separation recorded in other sections, it suggests that the most likely coal seam being worked here is the Old Park. But some of these shafts could have been dug for ironstone – the presence of iron slag was noted here in the 1993 survey – and only very close examination would determine their purpose. As noted above, ironstone occurs in thin beds in the ten metres or so above the Old Park coal.⁶⁵

62 Coal Authority Abandoned Mine Plan 11070 (Brick Kiln Pit, Brereton Collieries, Fifth Coal Workings).

63 Plot, *Staffs.* 130; L. Thomas, *Handbook of Practical Coal Geology* (1992), 42–3.

64 H. Cleere and D. Crossley, *The Iron Industry of the Weald* (Merton Priory Press, 2nd edn, 1995), 19.

65 The standard section shown on the Abandoned Mine Plans for Cannock Wood Colliery (on WM/887/62 Heathen Seam) suggests a true, stratigraphic, separation of the Yard from the Old Park of about 72m. But an underground borehole about 1.6km to the north-west, in seams that do not locally dip sharply, suggests a separation of about 86m (*Cannock Wood Surveyor's Report* (Coal Authority WM822), Lower Heathen, 7, Underground Borehole no. 4). Other published sections appear to agree either with the Cannock Wood Colliery section or the borehole: the Red Hill borehole, east of the Eastern Boundary Fault, suggested 80m (although the dip is admittedly unknown: Stevenson and Mitchell, *Geology of Country between Burton upon Trent, Rugeley and Uttoxeter*, 123–5), Pool Pits section suggested 83m (Barrow, *Geology around Lichfield*, 234), but the Wimblebury section suggested 71m (*ibid.* 237). It is worth noting that the Cannock Wood (underground) and Red Hill boreholes record an Upper and Lower Heathen, as does the *Cannock Wood Surveyor's Report*, and so the significant difference in the sections might actually reflect a seam split in the Heathen seam. In general, it seems that the Old Park seam within the Beaudesert Park area is 80–86m above the Yard rather than the 72m suggested by the Cannock Wood Colliery standard section, and this appears to fit the other limited evidence available. That standard section itself is apparently based on a vertical separation of Heathen and Old Park recorded from the Deep Shaft, but both the Shallow Shaft and the Ventilation Shaft sections (on the same Abandoned Mine Plan) suggest the separation is around 5m greater. For ironstone see Cockin, 'Ancient Industries', 140–1, and the Wood Pits (Cannock Wood Colliery) Section given in Barrow, *Geology around Lichfield*, 235.



Fig. 6 Startley Lane and Shropshire Brook. Sough S2 with numbered shafts. OKG = Old Kitchen Garden. Lidar DTM 4 May 2016 © Historic England; *source* Staffordshire County Council/Fugro BV Geospatial.

Two shafts known as the Startley Shafts were sunk in the Hayes in 1872 (see fig. 4: SS), and details of their sections would have been valuable, but frustratingly no known section was produced. There is very little information about the shafts other than some articles written in 1977 for the *Rugeley Times* by L. W. Higgs, who evidently had access to records that the present author has been unable to trace.⁶⁶ The shafts were investigated in the 1950s and found to be 168 feet (51m) deep.⁶⁷ As they were sunk from a height of about 170m AOD, they must have gone down to a seam at about 119m AOD. Locally, the lower seams have a dip of about 1:20 to the south-west, and so a seam at about 119m AOD at the bottom of the Startley Shafts would correspond with the seam considered to be outcropping at around 137m AOD some 360m to the north-east.⁶⁸

Moving southwards and upslope from the shallowest workings just above the outcrop, the group of shafts at 'a' on fig. 4 fall into the Barnatt category of wider-spaced shafts (as noted above: text on note 19), and three, or possibly four, rows of five or six shafts each can be discerned aligned approximately east-west. They are quite different from the irregular close-spaced shafts downslope to the north. As the ground slopes northwards and the seam dips south-westwards, the deepest shafts are in the southernmost row, and were dug from a ground level of around 150m AOD and will be between 16 and 22m deep. The middle row of shafts will be about 15m deep and the northern row around 10–11m deep. Within each row, the shafts are 30–40m apart, and are likely to be connected by levels driven underground to serve as roadways and airways, and it can also be presumed that the seam was worked updip (i.e. up the 'slope' of the seam) from each level. The lowest level – the one connecting the southernmost group of shafts – is likely to have served as the drainage route for the mine, and where it may have drained to is discussed below. Beyond this hypothetical reconstruction it would be unwise to draw too many conclusions, but Hatcher has reproduced a reconstruction of Griff Colliery in Warwickshire which would have given a similar pattern of features at the surface.⁶⁹

Although the pattern is less clear, a band of wider-spaced shafts continues along the contours to the WNW, as far as 'b' on fig. 4, where it ends against what may be the continuation of the F1/F2 fault zone.

At 'c' on fig. 4 is a group of five or six close-spaced shafts, quite unlike the surrounding wider-spaced features. These are at approximately the right height to have been sunk to the Eight Feet (shown on more recent maps as the Wyrley Bottom) seam. Mitchell stated that this seam depreciates markedly to the east and south-east of the coalfield, and so it might be this is limited shallow working of a thinner seam.⁷⁰

A significant feature in fig. 4 is the line of shafts at S1. Since these are sunk from a surface level below the outcrop, they are not in themselves intended to work a seam. The interpretation offered here is that they are the result of the creation of a 'sough' – a tunnel driven beneath the coal seams to drain the water away northwards into the stream which flows towards Brereton.⁷¹ To help create the tunnel a line of shafts has been dug, in a similar way to which canal and railway tunnels were created in a later age, each sunk to give access, to bring out the driving waste and for ventilation. The important point to appreciate with soughs is that they are driven level or very nearly so, so their depth below the ground surface, and thus the depth of the shafts, increases as they head away from the point – the 'tail' – where they drain into a surface watercourse. S1 has about sixteen obvious shafts over a distance of 150m, each about ten metres apart, although there is a suggestion in the image that they continued further south. Soughs could be either tunnels or open surface drains or both, and on the ground a substantial negative feature runs 30–40m north of the most northerly recognisable shaft, which may represent the surface ditch which took the water from where it exited the underground sough to the nearby watercourse somewhere around the 123m contour. This watercourse was the 1595 'pearle that cometh from the Colepittes' referred to earlier.⁷²

66 Copies of the articles, dated 21 and 28 April and 5 May 1977, are held at Brereton Library, and the author is very grateful to Ruth Brook for tracking them down. For the Startley shafts see also K. Edwards, *The Brereton Collieries 1791–1960* (2005), 25–6.

67 Yearsley, *Surveyor's Report*, list of old shafts appended to report.

68 Coal Authority Abandoned Mine Plans WM/164/22, Yard Seam; 11070 (Brereton Collieries Fifth Coal Workings).

69 Hatcher, *History of British Coal Industry*, 203.

70 Mitchell, *Geology of Northern Part of South Staffordshire Coalfield*, 8.

71 Locally, the pronunciation might have been 'sow' rather than 'suff', at least until the end of the 16th century (e.g. pits and ditches called 'Le Sowghes': Jeayes (ed.), 'Calendar of Marquis of Anglesey's Charters', 112 (no. 1744). See also *New Shorter Oxford English Dictionary* (1993), s.v. *sow* and *sough*.

72 SRO, D. 1720/13.

It is also worth noting that the sough follows the floor of the little valley so far as is possible, probably to reduce shaft depths. But, for obvious reasons, the shafts were dug at a respectful distance from the adjacent stream.

Writing in 1672, George Sinclair was quite unequivocal that soughs were driven level, without the fall that might be considered necessary for them to drain effectively (and they were, obviously, referred to as 'levels'). On the other hand, Georgius Agricola in 1556 said that all tunnels (presumably including soughs) would normally have a fall of 1:100.⁷³ Even with a slight fall, with a height at the tail of 123m, Sough S1 would have served to drain most coal above that height, which would include the workings at 'a' discussed above, where the deepest coal was at about 130m AOD. It shares a feature with some of the other soughs – the line of shafts seems to stop once they reach the area of the earlier shallow workings, or even before they pass beneath the outcrop. Possibly once the sough passed beneath the earlier workings (where the sough would be about 11m deep), the technique of tunnelling which involved frequent shafts along the line was abandoned for something else that has left no surface trace. Possibly it was considered too hazardous to sink through potentially unstable and flooded workings, or possibly those workings themselves were utilized in some way. But whatever the reason, a consequence is that it is difficult to be exactly sure what sough S1 is draining, although it was most likely intended to connect somehow to the workings at 'a'. If so, it would have led to a point where it connected with the level connecting the southern (deepest) row of shafts there (the level is effectively an extension of the sough along the strike of the coal), and coal would be worked updip (i.e. northwards) of that row of shafts. Figure 5 is a very simplified interpretation of the arrangement when seen in section.

South of Startley Lane the ground falls southwards, where there is another sough (S2). The route of the predecessor to the current road can be seen running towards the south-east corner of fig. 4, and this is the location of the road as shown on Yates's 1775 *Map of Staffordshire*. Fig. 6 shows this area, and also the full extent of sough S2, a more impressive piece of engineering than S1. The location of the Eastern Boundary Fault is evident and Startley Lane can be seen, as well as the 18th-century Old Kitchen Garden (fig. 6: OKG) at the southern edge of the image, with the Shropshire Brook flowing through it.

Sough S1 drained northwards and was intended to empty into the stream which flows northwards down towards Brereton, but sough S2 was intended to drain in the opposite direction, southwards into the valley of the Shropshire Brook. The fact that S2 is around 1,000m in length, where S1 is in the region of 400m, suggests that S2 is later in date, simply because the shorter and easier one would have been created first. There are a number of possible explanations as to why this switch in direction was made, and these are discussed below in part VII when the date of the soughs is considered.

There are twenty-nine shafts which appear to be related to sough S2 (numbered on fig. 6), numbers 1 to 15 following the floor of the valley of the Shropshire Brook as it flows through what is almost a narrow ravine. Immediately adjacent to no. 1, the brook is at about 122m AOD. Nos 1 to 7 follow one approximate alignment, running WSW, and then nos 8 to 15 run westwards towards the Old Kitchen Garden. The total length here (from no. 1 to no. 15) is about 280m.⁷⁴

The Old Kitchen Garden was one of two walled gardens belonging to Beaudesert Hall. The exact date of its creation is unclear, but probably in the late 18th century and probably after mining had ended in Brereton Hayes.⁷⁵ Its creation led to there being a significant gap between nos 15 and 16, which is about 280m further to the west, but 16 is in fairly close alignment with nos 8 to 15.

At no. 16, the sough turns north into the bowl-shaped valley, with Startley Lane at its head, which seems to have been known as Sweakham.⁷⁶ As the route is now heading uphill the shafts got progressively deeper (although the sough itself remained approximately level), as evidenced by the increasingly prominent spoil mounds that surround them. There is possibly a branch running north

73 G. Sinclair, *The hydrostaticks, or, The weight, force, and pressure of fluid bodies, made evident by physical, and sensible experiments together with some miscellany observations, the last whereof is a short history of coal, and of all the common, and proper accidents thereof, a subject never treated of before* / by G.S. (1672), 298–9; G. Agricola, *De Re Metallica* (1556), using translation by H. C. and L. U. Hoover (New York and Dover, 1950), 133.

74 It is possible that the lower section of S2, from nos 1 to 15, has nothing to do with the rest of the system, nor with coal mining at all. If so, it is difficult to see what other purpose it served. One possibility might be that it is connected with drainage of the Old Kitchen Garden, but the Shropshire Brook is already culverted beneath the Garden in a brick- and stone-lined channel. It is hard to see why a separate drainage system would have been needed alongside the Brook.

75 C. M. Welch, 'Old Kitchen Garden, Beaudesert, Longdon; Research Report' (unpublished report, Staffordshire County Council, 1992).

76 In 1748/9 the area was referred to as 'Swecom', so possibly the name contains the 'cumb' element describing the topography here (SRO, D. 603/M/1/82); M. Gelling and A. Cole, *The Landscape of Place-Names* (2000), 103.

from no. 24 to 24b and perhaps on northwards from there. But the main line turns quite sharply NW from nos 24 to 29. The most likely explanation is that somewhere around no. 23 the sough passed through fault F4 and met the coal seam it was intended to drain, which at this location would be very approximately at a height of 125m AOD. (The small shaft west of no. 24 and south of no. 25 may represent an attempt to locate the fault.) Once through the fault, and into the coal, the sough was then driven through the coal along its strike (from no. 24 to no. 29), to act as airway and roadway as well as to drain it. Coal would be taken from the updip side, presumably as far as the area already taken by the band of workings running from 'a' to 'b' on fig. 4.

On fig. 4 it is possible to discern a continuation of the sough onwards towards the north-west, although the features are too disturbed by later activity to allow certainty.

The tail heights for both soughs are very close to each other (about 123m AOD for S1 and 122m AOD for S2). But S2 is more than twice as long as S1 (1,000m as opposed to about 400m). Also, for the reasons given above, S2 was probably later than S1 and would therefore drain coal lying at a lower level than S1. It must therefore follow that S2 has much less of a fall than S1.

Accurate measurements were evidently critical in surveying the correct positions for soughs prior to their commencement, and the surveyors went to great lengths (literally) to find the lowest feasible point at which to discharge. It is worth noting, for example, that the upper section of sough S2 could have discharged into the Shropshire Brook just west of the Old Kitchen Garden (near no. 16) at a height of about 130m AOD. To discharge into the brook where it did, well to the east of the Old Kitchen Garden, at a height of around 122m AOD, it was apparently considered worth creating a tunnel around 560m long. And that section was not tunnelled through Coal Measure clays and shales, which at least are fairly impervious, but through the very porous pebbly sandstone of the Sherwood Sandstone Group; the sough here, therefore, must have been lined, possibly with brick, or otherwise the brook would have simply run down through the pebbles and straight into it. (Investigation of features 1 to 15 on the ground does indeed suggest that they were caused by some form of structure collapsing underground and several of them are fenced off today). All this work to create just an extra eight metres of fall.

Returning to fig. 4, another probable sough, S3, running north-east to south-west, is seen amongst a group of features which do not appear to be wider-spaced shafts, but are considerably higher than the outcrop height to the east. This area is affected by faults associated with the continuation of the F1/F2 fault zone and the underlying geology is complex. Possibly these shafts are connected with extraction of the Eight Feet (Wyrley Bottom) seam, or with ironstone working. The purpose of the sough here is difficult to explain, and at the north-east end it is probably confused by earthworks associated with the former railway incline to the Startley shafts.

Western end of Beaudesert Park (figs 7 and 8)

The western end of Beaudesert Park forms a fairly level plateau around 195m AOD, beneath which the coal seams lie reasonably flat, but with undulations and small faults. Most of the features here are within Beaudesert Park, with a few lying just outside along the valley of the Bentley Brook. The coal-mining features across much of this area are large, typically spaced 50–70m apart and evidently in some intentional relation to each other, and many have substantial mounds. They are very much in the 'wider-spaced shaft' category, but more widely spaced than those seen at 'a' in fig. 4. The actual depth of some of the workings is fortunately easy to obtain as boreholes were drilled in the area in 1967 and these are shown on fig. 7. Borehole 3 (BH3) was 125 feet (38m) deep when it encountered the Old Park goaf (i.e. the level from which coal has been removed), and the shafts in this area will be a very similar depth. Borehole 4 (BH4) was 134 feet deep (41m) when it encountered the Old Park seam, and Borehole 5 (BH5) found the Old Park seam at 160 feet (49m). The shafts adjacent to these boreholes are the deepest in Beaudesert Park, and these depths may well be towards an absolute depth limit for working without the benefit of steam pumping or winding.⁷⁷

Some of the features towards the west side of the image in fig. 7 have causeways, or ramps, running from them. These might have been connected with the low-lying and possibly once boggy ground of the head of Bentley Brook, and they were most likely to be raised trackways for bringing away the coal got from these shafts. Similar causeways are found, for example, in the Peak District

⁷⁷ M. W. Flinn, *The History of the British Coal Industry, volume 2: 1700–1830. The Industrial Revolution* (1984), 114, 128.

Borehole locations on Coal Authority Abandoned Mine Plan WM/822/3 (Heathen). In BH5 the main part of the Old Park seam was recorded as 45 ins thick. Another borehole located at SK0326813215 recorded no Old Park seam at all, although it is surrounded by old shafts (WM/887/62).

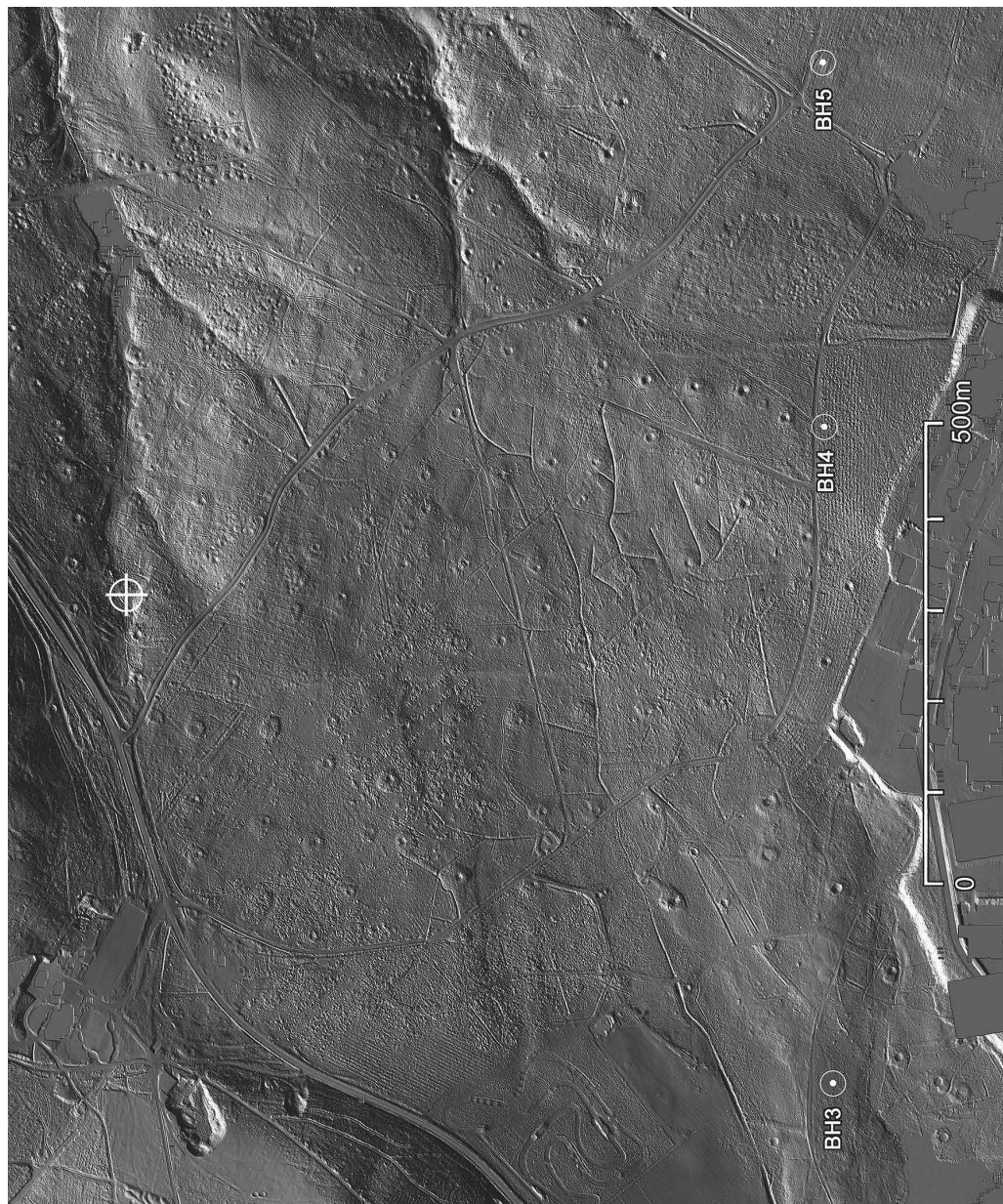


Fig. 7 Western end of Beaudesert Park. BH3, BH4, and BH5 are borehole locations. ⊕ = location of old shaft recorded on abandonment plans, by permission of the Coal Authority 2020. All rights reserved. Lidar DTM 4 May 2016 © Historic England; *source* Staffordshire County Council/Fugro BV Geospatial.

at the Goyt's Moss Colliery where they cross wet ground and date to the second half of the 18th century and first half of the 19th.⁷⁸

The Abandoned Mine Plans for Cannock Wood Colliery all indicate an 'old shaft' just to the south of Rugeley Road (indicated on figs 7 and 8), but no information about it is given in any of the accompanying surveyors' reports. It is shown on the Ordnance Survey First Edition of 1884, and this might be where the information originally came from.⁷⁹ Beete Jukes recorded a section 'between Sugars Lodge and Lodge Barn in Beaudesert Old Park' with a five-foot thick coal seam at 71 feet depth (21.7m).⁸⁰ It is tempting to equate the Ordnance Survey map shaft with the one recorded by Beete Jukes, as the location fits reasonably well. At the very least, the depth given by Beete Jukes is not implausible, and over most of this western part of the Old Park, where the very widely spaced shafts are found, the depths to the Old Park coal would be typically in the range of 20–40m.

There is an evident regularity to the disposition of the shafts in the western end of Beaudesert Park, so much so that the location of lost or obscured elements can be guessed at. The arrangement is reminiscent of the 'Lancashire' system, and would be the result of the type of shaft-sinking described by 'J.C.' in *The Compleat Collier* of 1708, where 'Head-ways' are driven to the cardinal points of the compass and new shafts sunk once they have gone beyond a workable distance, leading in places to a very rough grid pattern of features.⁸¹ The difference on the Chase is that depths and distances are considerably less than those suggested by 'J.C.'.

Between boreholes 4 and 5 on fig. 7 there is strip of very disturbed ground about 100m wide, and aligned north–south. Very small tightly-clustered features can be seen, evidently the result of very shallow working, and even more irregular than the lowest features seen on fig. 4. Fault F6 may control the western edge, and the eastern edge in places has the look almost of having been nibbled at by giant rodents, and may be the result of opencast pits rather than shafts.

It is possible that these features are related to ironstone. Although all Ordnance Survey maps dating back to the First Edition of the 1880s identify 'Stonepit Green' as lying around 750m to the north east, a copy made of a detailed map that was surveyed between 1819 and 1824 shows the name here, where this strip of features is located, rather than at the more recent Ordnance Survey location.⁸² The Old Series One-Inch Ordnance Survey also has the words 'Stoney Green' here, agreeing with the 1819–24 estate map,⁸³ and 'stone' in the South Staffordshire coalfield usually meant ironstone.⁸⁴ On his field slips T. C. Cantrill noted the presence of 'old shallow pits in shale ground' near this point and also the presence of a number of slag heaps to the west of them, something which indicated ironmaking in the area.⁸⁵ Possibly, there were two locations known as Stonepit Green, but the suspicion must remain that the name travelled down to the bottom of the valley, perhaps in error, during the 19th century.

Alternatively, if these shallow workings were for coal rather than ironstone, they were not being worked for the Old Park coal, as this was found at a depth of 160 feet (48.9m) below the ground surface in borehole no. 5, a short distance away and bored from approximately the same height. The vertical position would be in the region of the Benches seam, but there is little evidence of that seam being worked elsewhere nearby. Near Cannock Wood Farm, approximately 500m SW of Cannock Wood Colliery, it was excavated opencast in 1943; the abandonment plan records no earlier workings and there are none seen in the adjacent area.⁸⁶

Figure 8 shows an area to the north-east of fig. 7, where the Brereton–Hazleslade road (Rugeley Road) runs from north-east to south-west, following quite closely the boundary between the Coal Measures to the south-east and the hilly terrain characteristic of the local Triassic geology to the north-west. There is a group of about thirteen shafts north-west of the road in an area tightly bounded by higher ground on three sides. This area was known as Pleachley, and is significant because it is

78 Barnatt, 'Coal Mining near Buxton: Dane, Blackclough and Knotbury Collieries', 81–3.

79 Staffordshire 1:2500, 51:3 (surveyed 1882, published 1884).

80 J. Beete Jukes, 'On the Geology of the South Staffordshire Coal Field', *Records of the School of Mines*, volume I, pt II (1853), 234.

81 Flinn, *History of British Coal Industry*, 50; 'J.C.', *The Compleat Collier* (1708), 43–4.

82 SRO, D. (W.) 1821/5. The map (hereafter referred to as the 1819–24 estate map) is a copy made in 1863 but appears accurate in other respects.

83 Sheet 62: Lichfield (1834).

84 Beete Jukes, *South Staffordshire Coalfield*, 162.

85 Cantrill, Staffordshire 51NE.

86 Coal Authority OC82, which states that this was the Old Men's coal (i.e. the Bottom Robins), but Mitchell, *Geology of Northern Part of South Staffordshire Coalfield*, 9, states that this was the Benches.

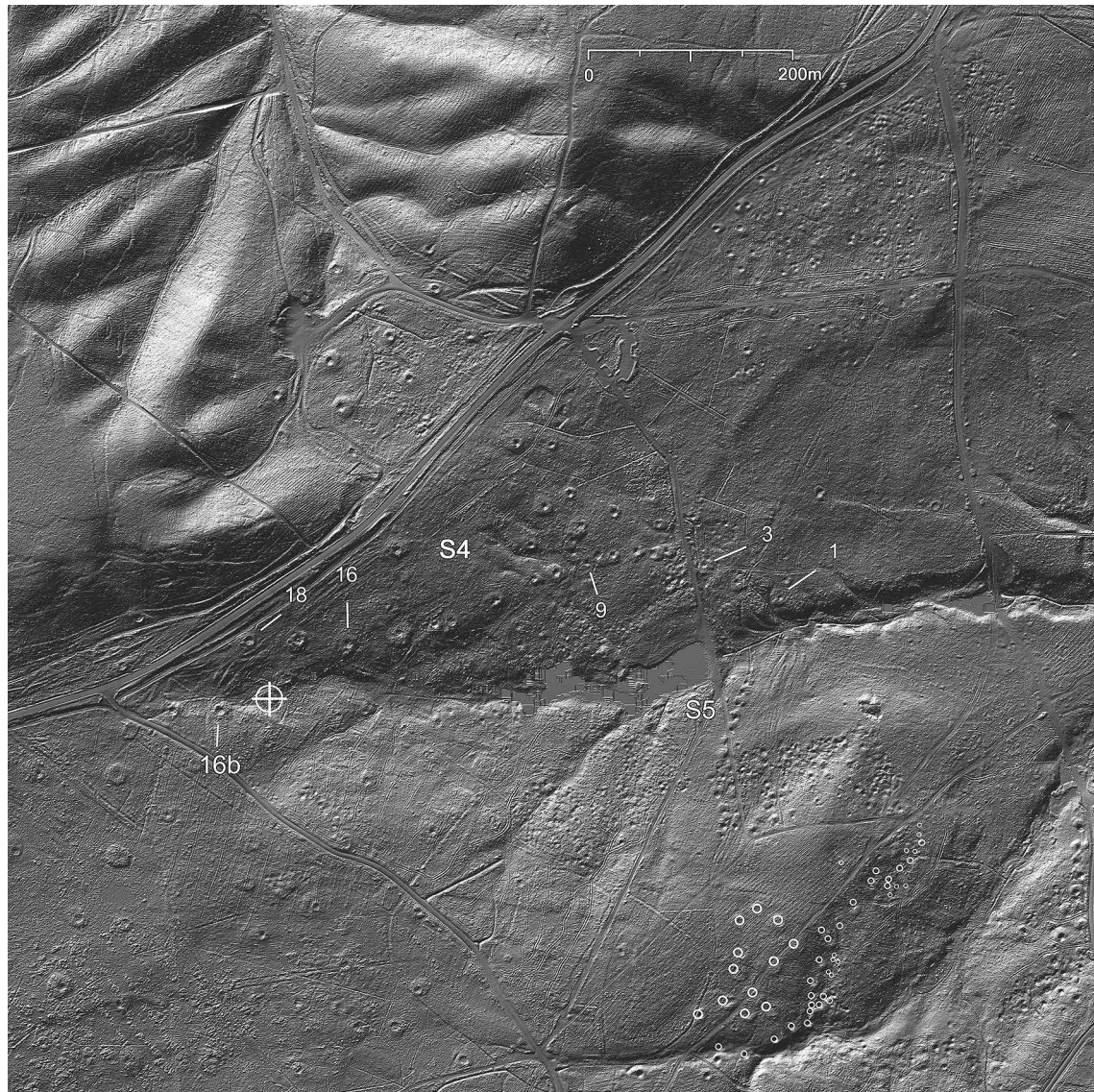


Fig. 8 North-western part of Beaudesert Park and Pleachley. Sough 4 with numbered shafts, and sough 5. ⊕ = location of old shaft recorded on abandonment plans, by permission of the Coal Authority 2020. All rights reserved. White circles indicate location of shafts identified in 1993 survey and subsequently lost. Lidar DTM 4 May 2016 © Historic England; *source* Staffordshire County Council/Fugro BV Geospatial.

one of the few areas where we can be reasonably certain of the date of the workings, probably in the middle three decades of the 18th century.⁸⁷

In the centre of the image is a small fishing pond, with clusters of small close-spaced workings to the north and south. The pond is crossed at its eastern, dammed, end by a track which leads via a dog-leg north and then north-west to Rugeley Road. In the other direction the track continues just east of south in a straight line beyond the pond and runs into a rectangular-shaped group of slightly larger but still close-spaced shafts. These are separated from the group of shafts directly south of the pond by an evident gap, and this corresponds with the approximate position of fault F6, which runs north-south in the vicinity of the eastern end of the pond. The actual outcrop of the coal is somewhere along the northern edge of the rectangle, probably marked by a quarry-like feature in the north-east corner of the rectangular group. This might be modern, but seems to represent an attempt to find the actual seam at outcrop.

In the north-east corner of the image, another group of close-spaced shafts lie on the south side of Rugeley Road, and these are probably bounded on their western side by the line of fault F6. This is

⁸⁷ 'Old Pleachley' on SRO, D. (W.) 1821/5; see p. 115 for discussion of the date here.

the equivalent of the rectangular-shaped group to the south of the stream, and here the actual outcrop is probably somewhere along the southern edge of the group. This group, adjacent to Rugeley Road, is significantly higher up the valley side than the southern, rectangular, group, because another fault, F5, runs east–west between the two groups and throws the Rugeley Road group higher. With throws of perhaps 7–15m, neither fault F5 nor F6 are major faults, but the image demonstrates how much the close-spaced workings are controlled by them and by the topography.

From the south-east corner of the rectangular group, clusters of close-spaced shafts lead round the contours and along the north-western flank of the next valley over, along which the Red Brook flows. Features in this location were surveyed in 1993, but by the time the lidar survey was flown they had apparently been largely destroyed, possibly as part of subsidence remediation works. The location of the shafts surveyed in 1993 has been plotted as small white circles on fig. 8, where it can be seen that there is a characteristic band of close-spaced workings with some wider-spaced workings to their west.

There are also soughs in the image in fig. 8 of which sough S4 is worth looking at in detail. It appears to consist of a main line of 18 shafts, progressing up the north side of the valley in an approximately westerly direction. Some of them appear as pairs (e.g. nos 13 and 14), which might be the result of re-excavation, perhaps after the original shafts had collapsed. At the tail end, east of the modern track leading up to Rugeley Road, the route is unclear, but shafts 1, 2, and 3 run in a straight line from a point on the stream which would be at about 161m AOD. From that point the line runs for about 150m to the track.

From the track the line of shafts proceeds westwards for about 90m with five shafts (nos 4 to 8), then turns WSW for about 260m to shaft no. 16, where there seems to be a junction. One line runs west about 100m for two shafts to no. 18, and another branch runs about 140m WSW for two shafts, past the ‘old shaft’ discussed above, to no. 16b. From the tail to 16b the total distance is about 640m.

The route of sough S4 seems to have been chosen to avoid the close-spaced (and presumably earlier) workings north of the pond, as it skirts round them where one might otherwise have expected a more direct line. Possibly the presence of earlier workings presented problems which they preferred to avoid.

A reliable interpretation of the situation underground in this area is made difficult for a number of reasons. The precise dip of the Old Park seam, and the location of faults, can be inferred only from the disposition of the Heathen seam below it, as recorded on the Abandoned Mine Plan for that seam.⁸⁸ A number of faults run through the area, in particular fault F5 which runs east–west; possibly, sough S4 cut through it somewhere between shafts 9 and 16. It seems likely that S4 was initially intended to drain coal to its north, including the Pleachley area across Rugeley Road, if only because that is the nearest coal to the tail of the sough and would be the first to be reached.

The extension towards from no. 16b must have been intended to drain coal to the south-west, and in theory, at least, it could have drained the Old Park coal as far south as borehole 4, some 750m away (see fig. 7), where the seam was at around 165m AOD. It may well have had a significant function in draining much of the western end of Beaudesert Park (most of the area seen in fig. 7, in fact), but although seams over this area dip only slightly, there are significant undulations and small faults, and drainage here may have been greatly facilitated by some form of pumping to supplement the sough, in locations where only a small ‘lift’ would make mining possible.

Another sough might have been expected to drain into the Red Brook, whose head is centre right of fig. 7, but there is little obvious sign of one.⁸⁹ Going the other way, westwards out of the Park, there is insufficient fall in the Bentley Brook for that to be of any use.

Also seen on fig. 8 is sough S5, marked by a line of shafts which seem to lead around the western edge of the rectangular area of close-spaced shafts, with a discernible tail at the northern end which drains into the stream 50m or so upstream of the tail of sough S4. There are six very clear shafts, with perhaps another two disturbed by a modern track. The first is sunk from a level around 4.5m above the tail (which is at about 165m AOD); the fifth has been sunk from a ground level about 10m above the tail. The shafts are only about 12m apart, and so in appearance have more in common with sough S1 at Brereton Hayes than either sough S2 or S4. On the ground it forms an impressive monument in its own right, with the spoil from each shaft almost appearing to fall into the next shaft down the slope. As with the others, its line becomes less clear as it proceeds away

⁸⁸ Coal Authority Abandoned Mine Plan WM/887/62.

⁸⁹ A line of four or five tiny shafts can be seen running north-east into the southern tributary branch of the Red Brook, but it is too high to drain the area significantly.

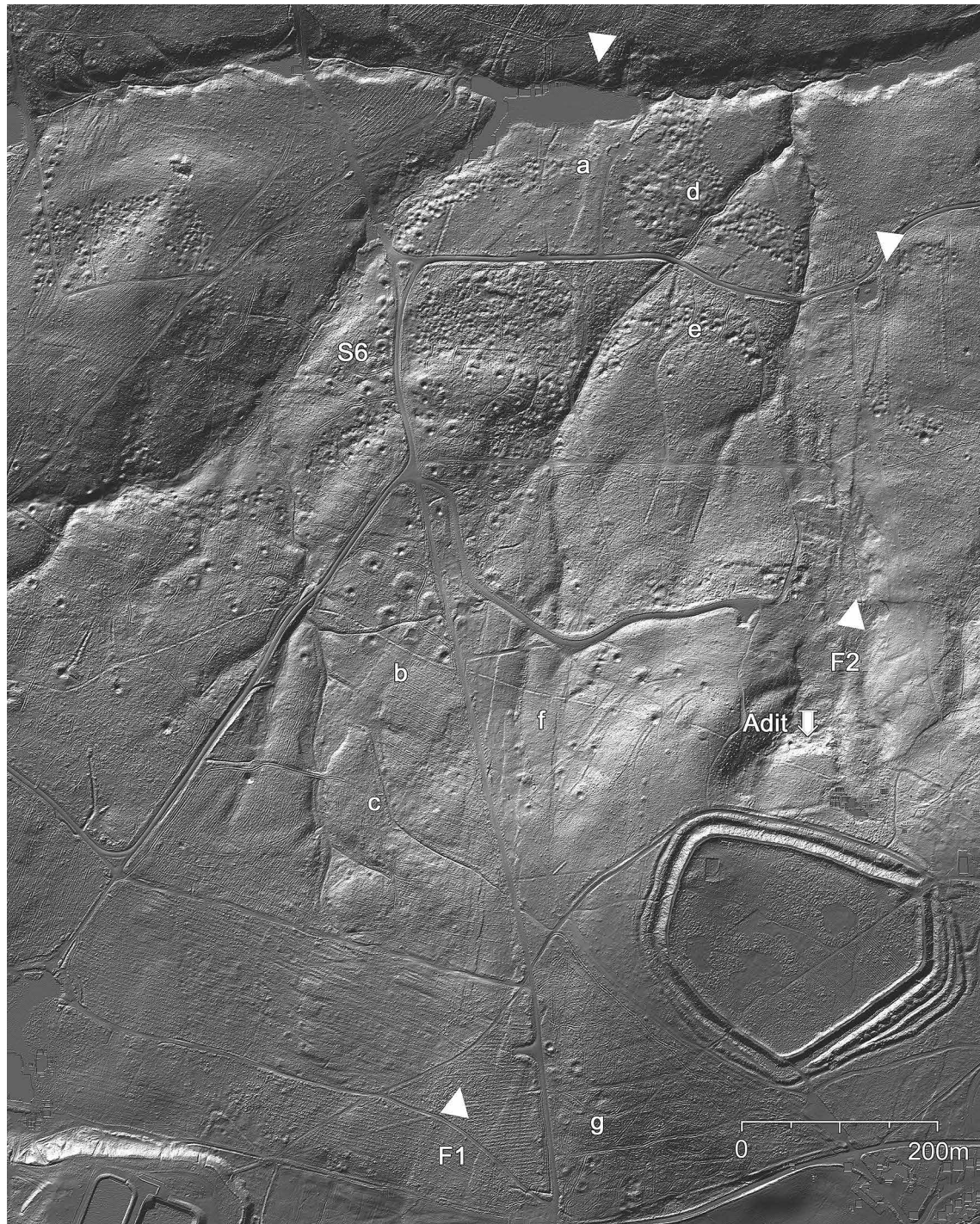


Fig. 9 Central Beaudesert Park. Sough 6. Faults F1 and F2 indicated by white triangles (indicative only). See text for features a to g. Lidar DTM 4 May 2016 © Historic England; *source* Staffordshire County Council/ Fugro BV Geospatial.

from the tail, and whether it continues beyond the eighth shaft is uncertain, although a case could be made for it draining the wider-spaced and now-destroyed shafts to the south.

Central Beaudesert Park (fig. 9)

Figure 9 shows the area to the east of that shown in figs 7 and 8. The Red Brook flows north-east into another fishing pond, where it joins the stream from the pond seen in fig. 8. In the south-east corner the Iron Age monument of Castle Ring forms a very prominent feature, and in its north-west corner

is the highest point on Cannock Chase, at about 240m AOD. As the water in the fishing pond at the top of the image is at a level of about 148m AOD, there is a steep slope between the two locations.

The fault F1 runs south–north centrally across the image, and appears to be manifested at the surface by scarps in the ground, possibly the result of extraction from Cannock Wood Colliery causing the fault to reactivate.⁹⁰

A strip of close-spaced shafts can be seen crossing and then running along the south-east flank of the little valley of the Red Brook – essentially a continuation of the workings seen in fig. 8, following the contour. These continue as a fairly narrow strip south of an arm of the fishing pond and terminate against the line of fault F1 at the point labelled as ‘a’. Between that strip and the east–west track to the south, there is a noticeably bare area, and then south of the track there is a roughly rectangular area of very close-spaced random shafts, bounded on the north and west by tracks, east by fault F1, and south by a rise in the ground. The area is about 160m east–west and 80m north–south and is shown on Ordnance Survey maps from the 1880s onwards as Stonepit Green, but as discussed above there is a possibility that this name has migrated from an area to the south-west.

There are a number of explanations for the pattern here. One is that the features in the area south of the track relate to the exploitation of a coal seam, and that a small east–west fault (roughly north of the track) has thrown the same seam down to the north, where it has been exploited by the strip of features leading to ‘a’. An alternative is that, in the area south of the track, thin beds of ironstone were exploited which occur above the coal seam, in which case the name Stonepit Green would indeed be appropriate. Perhaps only detailed geological examination of the features would resolve this point, but if these features were exploiting ironstone the density of the features may be a characteristic of this kind of mining, with many small shafts sunk immediately next to each other.

One other feature worth noting in passing is the ditch and bank that cuts NNE–SSW across the upper two arms of the pond. South of the pond it has been almost completely destroyed by the strip of shafts referred to above, and so it must predate them.

Running north–south alongside the modern track is what appears to be another sough, S6, with six to eight shafts marking its route. The tail might actually be close to the south-west arm of the pond, but as it meets the strip of shallow features there it is impossible to be certain. As with other soughs, the route seems to have been chosen to avoid earlier workings, in this case the ‘Stonepit Green’ complex. The destination was evidently somewhere amongst the wider-spaced shafts above and south of that complex.

Moving south again from Stonepit Green, the shafts become more widely separated, and at ‘b’ there is a distinctive grid of eight or more features, which look very similar to the group in Brereton Hayes at ‘a’ on fig. 4. They consist of two rows about 30 to 35 metres apart, each having four shafts separated by 30 to 40 metres, and a single shaft to the south looks like it might have been intended as the first of a new row. The spacing is closer than the nearby features in the western end of the Park shown in fig. 7, and sough S6 was possibly intended to drain them.

South and uphill again, at ‘c’ there is a fairly indistinct group of very small shafts, similar to those discussed that lay between boreholes 4 and 5. As with the latter, the position might suggest the shafts at ‘c’ were intended to exploit the Benches (or possibly the Eight Feet (Wyrley Bottom) seam, or they could have been related to ironstone extraction. Their eastern boundary is probably controlled by fault F1, and there is a suggestion that they continue in a band to the south-west.

Returning now back down the slope to the pond, the group at ‘d’ look like a continuation of the features at ‘a’ across fault F1. But as they are on the other side of that fault where it appears to be at the surface, this must be unlikely. Because neither Cannock Wood nor Brereton Colliery mined extensively in this zone, the exact pattern of faulting cannot be determined, and it is possible that the features at ‘d’ represent the exploitation of seams that have been thrown down from much higher in the sequence.⁹¹ Further upslope another band of similar features appears at ‘e’. Neither ‘d’ nor ‘e’ have a corresponding band of wider-spaced shafts upslope from them, and both end quite abruptly against a small stream valley to the east.

At ‘f’ there are a few larger shafts. As they are at least 40m higher than the band at ‘e’, with no other features between them, it is unlikely they exploited the same seam as those at ‘e’, but one would

⁹⁰ See pp. 84–5 above for a discussion.

⁹¹ The fault zone was crossed from Cannock Wood Colliery in the decades around 1900, and the Abandonment Plan shows a great complexity of intersecting faults in the Deep Seam, which is far below the Old Park seam: Coal Authority Abandoned Mine Plan WM/211/10 (Deep). The pattern of headings suggests the purpose might have been to try to understand the relationships underground, perhaps with no more success than achieved here.



Fig. 10 New Hayes. Sough 7. See text for feature a. Lidar DTM 4 May 2016 © Historic England; *source* Staffordshire County Council/Fugro BV Geospatial.

expect a corresponding band of close-spaced shafts somewhere on the slope below them where the seam outcrops. They may have exploited the same seam as in 'Riley's Mine', which was worked by an adit rather than by shafts (as discussed below). On this steep slope the coal might have been normally worked near outcrop by adits or 'slopes' which have left no trace. Unusually, the group at 'f' have slight but distinct hollow-ways running to the south-west, possibly formed here because they are cutting across the gravelly drift which caps the Coal Measures at this location.

There is another group of shafts at 'g', at the top of the slope and on the edge of the drift deposit on which Castle Ring was constructed. These lie too close to fault F1 for any reliable identification of which seam was worked, but it was presumably the same as at 'f'. On the 'field slip' Cantrill noted that they were 'the last worked in the Park'.⁹² That note was given within apostrophes, by which he was probably indicating that the information was hearsay and not independently verified, but there seems no reason to doubt it. William Molyneux said that the 'Beaudesert Collieries' gradually died out after 1810 and were entirely closed in 1816.⁹³

Riley's Coal Mine (fig. 9)

On the northern side of Castle Ring, Cantrill described a seam four or five feet thick exposed at 'an old level', and about 130 feet above another exposure which itself lay 100 feet above another.⁹⁴ The location of this adit is shown on the 1:10560 BGS map, and approximately on fig. 9.⁹⁵ In the same location Molyneux described a seam nine feet thick, with another apparently not very far below it four feet thick. He appears to have opened up an old adit in the thicker seam and followed it in for about ten yards and this seems very likely to have been the 'old level' found by Cantrill forty or so years later, despite the difference in the description of coal seam thickness.⁹⁶ The sections published by Beete Jukes in 1853 also show two outcrops on this slope, although their vertical separation is different again to anything described by either Cantrill or Molyneux.⁹⁷ Molyneux reported that this was traditionally the site of 'Riley's Coal Mine', but offered no indication of the date.

Cantrill made the wise point that little confidence can be put in any correlation of the seams here. The 1:10560 BGS map suggests the seam being exploited by Riley's mine might be the Bottom Robins. Molyneux said that the coal from Riley's mine was known as 'Duffer's Coal', and it wasn't highly prized.⁹⁸ The mine is interesting as an example of a drift-mine, being the only known example in this area until the Brereton Day Drift was dug between 1925 and 1927.

New Hayes (fig. 10)

A group of features survive in the area of the New Hayes, and these are shown on fig. 10 at 'a'. West and north of them, any features have been obliterated by the spoil from Cannock Wood Colliery, and their survival serves to emphasise the impact of more recent mining has had on earlier features. They have a very approximate grid pattern, spaced a minimum of 20m apart, and so are slightly more closely spaced than the shafts in rows at 'a' in Brereton Hayes, and are less regular in layout.

Outside Beaudesert Park and so in the Cannock Wood area, these features are located within New Hayes, first referred to the mid 14th century.⁹⁹ They are also south of fault F3, through which a rock heading (an exploratory tunnel) was driven from Cannock Wood Colliery in the 1930s, encountering the Brooch seam directly beneath the features at a depth of 136m AOD.¹⁰⁰ The next seam up in the sequence is the Bottom Robins, which should lie stratigraphically 43m higher up at about 179m AOD, and as the features in this group were dug from between 188m and 196m AOD, they are likely to have exploited that seam. The feature directly over the location where the Brooch

92 Cantrill, Staffs 51NE.

93 Molyneux, 'Cannock Chase and its Coal Mines', III.

94 Barrow, *Geology around Lichfield*, 76.

95 Geological Survey of Great Britain 1:10560, Sheet SK01SW (1955) (hereafter BGS 1:10560 map).

96 Molyneux, 'Cannock Chase and its Coal Mines', II.

97 J. Beete Jukes, *Horizontal Section 23 South Staffordshire Section No. 1* (Geological Survey of England and Wales, 1853, revised 1865).

98 Mitchell, *Geology of Northern Part of South Staffordshire Coalfield*, 13; Molyneux, 'Cannock Chase and its Coal Mines', V. *Duffer*: 'One who sells trashy goods as valuable' (Oxford English Dictionary). If this mine was exploiting the Bottom Robins, the next one down of Cantrill's three exposures could be the Brooch and the lowest the Benches, but it can remain no more than a suggestion. See Mitchell, *Geology of the Northern Part of South Staffordshire Coalfield*, 10, who thought the lowest of the three was the Brooch, which is how it is recorded on the BGS 1:10560 map. This is right in the F1/F2 fault zone, and there are other thinner seams in the sequence.

99 Jeayes (ed.), 'Calendar of Longdon, Lichfield ... Charters', 76 (no. 1575b).

100 Coal Authority Abandoned Mine Plan WM/822/3 (Heathen).

was encountered is at an elevation of 195m AOD, which suggests a depth of around 16m down to the coal. Not far to the south, beyond the area shown on fig. 10, the Bottom Robins was worked opencast and the seam was separated into two leaves, the top 2 feet 2 inches thick and the bottom 4 feet 9 inches, and a bed of ironstone lay just above. Mitchell described it as the top coal of any considerable importance.¹⁰¹

In the centre of fig. 10 a band of what may be very shallow workings can be seen running in a distinct curve north-eastwards. East of that band sough S7 runs SSE–NNW from the road called Cumberledge Hill, represented by five (or possibly seven) shafts over 150m. It could have run into the Redmoor Brook adjacent to the road at about 181m AOD, but there is a slight indication of another shaft on the downstream side of the road about 60m from it, on the same alignment but on the south-west side of the stream. About 230m downstream from the road Cantrill noted on the field slips that there was a strong flow of ‘iron water’ from an adit, and further downstream still (beyond the area shown in fig. 10) a line of shafts continue to a point about 340m from the road.¹⁰² If that does represent the tail of the sough, its height there is about 173m AOD and the whole identifiable length would be about 500m. The tail height would be sufficient to drain areas of the Bottom Robins coal south of fault F3, and this could include the workings seen on fig. 10, but how they might be connected cannot be determined.

Sough S7 may well relate to the sough referred to at this location in 1641, as is discussed in detail below.¹⁰³ South of New Hayes are other groups of shafts, most of which probably worked the Bottom Robins. Some of them appear to be within areas of drift cover, and might be related to mining from a period later than those to the north.

In the angle between the east boundary of New Hayes and the south side of Beaudesert Park (see fig. 2), a small group of close-spaced and very degraded features straddle the presumed surface position of fault F3. Cantrill noted ‘old pits’ there, and used them to determine the location of an outcrop which he plotted on his field slip, and which is recorded on the BGS 1:10560 map.¹⁰⁴ In his published description he did not identify the seam, and indeed cautioned about attempting to do so given the significant faulting, but on the 1:10560 map the seams are identified as the Bottom and Top Robins; this identification may have been made as additions to the map in the 1950s, but on what basis is not known.¹⁰⁵

(VI) DOCUMENTARY EVIDENCE

There is extensive documentary evidence for coal mining in the Cannock Chase area from 1298 to the early 19th century. The earliest references are followed by fairly sporadic ones through the period when the Chase was the property of the diocesan bishop, and there is no way of knowing how intermittent or otherwise mining might have been, as the financial accounts are not continuous. In general, the bishops appear to have leased out the mines, without taking a direct interest. The last lease was for 21 years from December 1543 to a Thomas Pomfret.¹⁰⁶

For the last four decades of the 16th century and the first of the 17th, fairly good documentation exists. Accounts survive for 1562–63, 1567, and 1568, and there is an almost continuous run from 1573, when a significant input of capital seems to have occurred, to 1582. But in 1583, Thomas Paget, Baron Paget and a Catholic, fled the country and his estates (including the mines and ironworks) were seized by the crown. Perhaps not surprisingly, no accounts exist for that year, but Richard Bagot, the commissioner for recusancy in Staffordshire, was instructed by the Lord Treasurer, William Cecil, Lord Burghley, to take over the estate administration, which involved receiving all the accounts from the various officers who had served Paget, including those from the mines.¹⁰⁷ Accounts for 1584 and 1585, therefore, are in the records of the Exchequer.¹⁰⁸ For reasons which are discussed below,

101 Coal Authority WMOC98, which seems fairly clear that no early workings were encountered in the area of opencast, although features are visible alongside in the lidar images: Mitchell, *Geology of Northern Part of South Staffordshire Coalfield*, 12.

102 Cantrill Staffs 51NE. Much of the area south of the road has been worked opencast more recently.

103 See p. 110.

104 Cantrill, Staffs 51NE.

105 Barrow, *Geology around Lichfield*, 76.

106 For an abstract see SRO, D. (W.) 1734/2/3/112c.

107 A. G. Petti (ed), *Roman Catholicism in Elizabethan and Jacobean Staffordshire* (Staffordshire Record Society, *Collections for a History of Staffordshire*, 4th series, IX, 1979), 9–14.

108 The annual accounts which I have been able to find are: SRO, D. (W.) 1734/3/3/247 and /246 (1562–63); 1734/3/4/49 (1567); 1734/3/4/53 (1568); 1734/3/3/248 (1574), evidently preceded by the undated 1734/3/3/258 which runs from

coal mining temporarily ended in September 1585, and a survey of 1588 confirms that the mines were then in 'decay'.¹⁰⁹ In 1589 the coal mines were leased by the crown to a Gilbert Wakeringe.¹¹⁰

Thomas Paget died in 1590, and in 1597 his son William Paget, a protestant, petitioned the crown for the restoration of his estates. This was done, but the huge annual rent-charge that was demanded became a long-standing problem for the Paget family thereafter.¹¹¹ Paget was restored to the peerage by James I and this was confirmed by statute in 1604. After 1597 Paget set about recovering the Wakeringe lease, and started to invest in what had perhaps become a rather run-down industry, giving rise to a useful set of documentation.

Apart from a few accounts in the earlier part of the 17th century, which are nonetheless very useful, records for the rest of that century are thin, although there is a useful inventory of 1688 when the mines in both Cannock Wood and Beaudesert Park were leased to a William Porter for 21 years.¹¹² A set of accounts exist for 1697–1714, because the Porter lease was terminated early, and the mines were again leased out in 1715.¹¹³ A single year's accounts survive for June 1738 to June 1739, and then an exceptionally complete set of accounts run continuously from 1743 onwards until the early 19th century.¹¹⁴

The available documentation thus allows coal and ironstone mining activity to be looked at in detail for certain periods, but it is important to realize that we have no information for the gaps in between.

Late thirteenth century

The earliest references to mining in the area occur in a survey of episcopal estates made in 1298, shortly after Walter Langton became bishop of Coventry and Lichfield. For Rugeley manor it records:

The mines of iron (*minera ferri*), when the workers are able to work in the same without rain (*absque pluvia*), could be worth 12*d.* each week of the year, except in the quindenies of Christmas, Easter, and Pentecost.

And for Cannock manor:

There is in the same place a coal mine (*minera carbonum*), and provided the workers are not hindered by storm (*dummodo operarii per tempestatem non impediuntur*) it can be worth 48*s.* p.a.¹¹⁵

The respective boundaries of Rugeley and Cannock manors seem to have been fairly stable over time, and a consideration of their relationship with known geology places the Rugeley iron mines somewhere either in the northern part of Beaudesert Park or in Brereton Hayes.

Fourteenth, fifteenth, and early sixteenth centuries

Throughout the 14th century, the bishops leased 'picks' at sixpence per week.¹¹⁶ For example, in the accounting year 1308–9, they leased four picks for the 12 weeks between Michaelmas (29 September) and Christmas 1308, four picks for 32 weeks from February to Michaelmas 1309, and another pick from late February. In the same year, 3*s.* 1*d.* was paid for nine cartloads of coals carried to Lichfield, perhaps connected with Bishop Langton's building work in the cathedral close.

Profits are recorded in 1309–10 and 1310–11, none for 1311–12, but again for 1312–13 and 1313–14, after which there is a gap in the accounts, with the next mining entry not until 1359–60. This last entry names the miners, who seem to have worked according to season, mainly in the spring, summer, and autumn (in contrast to the 1309–10 accounts). For example, a John of Derby paid for one pick for four weeks to 24 April, and then added another pick for the next 23 weeks to the end of the accounting period at Michaelmas.

April 1573; 1734/3/4/93 (1575); 1734/3/3/251 (1577); 1734/3/4/106 (1578); 1734/3/3/252 (1579); 1734/3/4/119 (1580); 1734/3/4/126 (1581); 1734/3/4/133 (1582); and The National Archives, E 101/632/17 (1584) and E 101/632/15 (1585). The accounts generally run from January to the following December. I have not found an account for 1583.

109 Warwickshire County Record Office, CR931/173.

110 Jeayes (ed.), 'Calendar of Longdon, Lichfield ... Charters', 112 (nos 1743 and 1744).

111 J. Sutton, '“Loyalty and a Good Conscience”: the Defection of William, Fifth Baron Paget, June 1642', in P. Morgan and A. D. M. Phillips (eds), *Staffordshire Histories: Essays in Honour of Michael Greenslade* (Staffordshire Record Society, *Collections for a History of Staffordshire*, XIX, 1999), 131.

112 A draft of the lease is SRO, D. 603/E/5/4.

113 Ibid. D. 603/F/3/1/17 (accounts July 1697 to July 1714); D. 603/E/5/7 (lease of August 1715).

114 Ibid. D. 603/M/1/1–68.

115 Ibid. D. (W.) 1734/J/2268, ff. 20 and 21v. My thanks to Nigel Tringham for the translations, and for carrying out the research on which the next section is based.

116 Accounts from 1308–9 to 1366–7, within the entry for the Longdon manor, are in SRO, D. (W.) 1734/J/2057.

The use of the term ‘pick’ as a unit for which payment was made was a simple way of relating payment to output, assuming that each pick – presumably reflecting a single hewer – represented a similar output over time. How many actual workers were involved is not known – all we can tell is that John of Derby paid for at least two hewers, one of whom might have been himself, but there were also presumably workers at the surface to raise the coal.

The account for 1360–61 contains the interesting note that the new bishop, Robert Stretton, had removed all the miners from the park, evidently meaning Beaudesert Park, although it does not tell us why.

The format of the accounts changed slightly during the 15th century.¹¹⁷ The bishops now appear to have taken a fixed rent (i.e. a ‘farm’) for each lease of the mines, rather than renting out individual picks, although there is a small payment in the accounts for 1424–5 for three men working (presumably mining) for three weeks. There are references to mines during the 1420s, although in 1425–6 it was stated that there was no ‘winning’ (*lucr*).

There follows a gap in the accounts until 1443–4, when there is a very useful reference to three different mines: one in the park, one of coals under the ‘castle’ (*subtus castrum*), and another of coals next to the new trench (*iuxta le niewtrench*). The ‘castle’ is most likely a reference to Castle Ring, the Iron Age hill-fort, with the mine located on the slopes below rather than actually underneath it, although either location is feasible geologically. If the ‘new trench’ is connected with mining, it would be the earliest reference to drainage on the Chase, and apparently refers to an open ditch designed to drain the coal, rather than an underground tunnel. The 1444–5 account again refers to all three operations, although once more there was no ‘winning’ in that year.

Accounts for 1456–7 are ambiguous, but might suggest that the bishops were taking a royalty related to output, and they also refer now to an ‘old park’ rather than just the park. The account for 1461–2 is slightly less ambiguous, and seems to record both a fixed rent (the ‘farm’) and a royalty based on output, but it is impossible to be certain. It states that there was no profit from the mine, perhaps related to the unstable political situation at the time, but refers back to 1457–8 when there was an income of 25s., which might have been related to output.

The same lack of profit was noted through to 1466–7, but in the 1468–9 account the bishop is given as having licensed some of his tenants to dig for coal, the bishop taking a third of the actual coal output and the tenants the rest. Perhaps in the absence of any financial return from the mines, he took the view that this was the only way he could acquire fuel for his houses at Beaudesert and elsewhere.

In 1470–1 it seems that a William Fox and a Ferys Smyth were paying a fixed rent of 40s. each year, and possibly they also paid 3s. for the profit of the coals (i.e. a royalty based on output). References through the 1470s state that there was no income from either fixed rent or output, but in 1477–8 a total of 2s. was received for four cartloads of coal, which might have been a royalty-related income.

In 1491–2 a Thomas Wallesse paid 27s. 8d. for the ‘farm’ (a lease) of the mine in the old park, and 12d. for a way to it.¹¹⁸ The mine was again in the bishop’s hands in 1497–8, and no profit from it, but the profit had been 30s. (above the income from the fixed rent) when the mine had previously been leased for eight years to Richard Sale, Edmund Edmundson, Thomas Wales, and Ralph Snede. Wales is very likely to have been the Thomas Wallesse mentioned in the 1491–2 account, whilst Snede is probably an ancestor of the Sneads who feature as bailiffs of the Pagets in the late 16th and early 17th centuries.¹¹⁹

The 1507–8 accounts record that there was nothing from the farm of the coals in the old park, because the mine had been destroyed by course of water (*per cursum aque*). There is then a gap before the next set of accounts, but the same statement occurs in 1521–2.¹²⁰ There was evidently an ongoing problem – in accounts for 1541–2 it is again recorded that the mine was flooded.¹²¹ If it is the case that the mine had flooded by 1507–8 and stayed that way for at least three decades, there has to be a suspicion that mining consisted of more than shallow shafts and that the depths reached were sufficient for water to be a significant problem.

117 Accounts from 1423–4 to 1480–1, within the entry for the warden of Beaudesert Park or just Beaudesert, are in *ibid.* D. (W.) 1732/3/2/1–3.

118 Accounts from 1485–6 to 1507–8, within the entry for Beaudesert, are in *ibid.* D. (W.) 1734/J 2046.

119 See p. 110, note 165.

120 *Ibid.* D. (W.) 1734/3/2/10, m. 4.

121 *Ibid.* D. (W.) 1734/J/1949, m. [13d.].

The lease of 1543

By a lease of 1543 the bishop gave a Thomas Pomfret of Longdon, a 'naylor', 21 years in which to dig for coal within Beaudesert Park and 'Cankewood'.¹²² Output was limited by restricting the number of men who could work there to nine, although if the 'vayne of Coles habound' more men might be set on work. The wording of another clause is ambiguous, but appears to prohibit the extraction of ironstone if it is found. Timber was to be provided free for the mine and for a sough.

The lease would have still had eighteen years to run when William Paget acquired the Beaudesert estates in 1546, and Paget family accounts for coal mining in 1562–3 have an annuity being paid to 'powfrettes wyffe'. Perhaps the lease had been bought out after Pomfret died.¹²³

From 1573 to 1585

The set of accounts running from 1573 to 1585, and all kept by a William Hankin, seem to relate to the exploitation of a particular area within Beaudesert Park (and not in Cannock Wood). They start on 18 April 1573, when a sough was begun, evidently the first phase of the development of what was in effect a new mine.¹²⁴

Apart from referring to the start of work on the sough, the accounts given only a few dates marking progress on it, but an approximate calculation can be made from the number of days for which men are paid: this suggests that it took about 30 weeks and was completed by the end of November. The team working on it seems to consist of about twelve men, one of whom (named Trubshawe) worked for a total of 155 days. There is no indication how the sough was dug, in particular whether it took the form of an adit connecting with a series of shafts along its route. There is only a single reference to a 'pytte' being excavated in relation to the sough itself, by one Alton, who was paid for five days in week 4 or 5, but the fact that a team of around a dozen men was involved suggests that they cannot have all been at a single working face proceeding into the hillside – there would not have been room enough for this – and so some of them must have been involved in sinking shafts and removing spoil.

By week 8 the going may have been getting tough: 6s. 8d. given to the men on Paget's orders may have been a reward. By week 23 candles had become necessary, perhaps a sign that the sough was getting deeper and the shafts were not providing sufficient light to work by. Ropes were expensive and perhaps were getting longer; in week 4 or 5 two ropes cost 20d. in total, but thereafter another four ropes cost 5s. each. Sleds are made, presumably to drag spoil to the point of extraction at shaft bottoms or to the tail. Timber was being prepared regularly; one single payment is for two hundred planks.

Before 29 September (about week 23), work had begun on digging the shafts to reach the coal which the sough was intended to drain, and this was started by a team consisting of men called Cooke, Wayte, and Nevison, and indeed, Cooke and Nevison ceased to appear in the sough accounts around weeks 19 or 20, as they had been moved to the new work. It is not certain how many shafts were sunk at this point. Details of actual coal production start with payments to the hardworking Trubshawe, who had been paid for constant work during the thirty preceding weeks in the sough, but from 15 November he received payments for the first shaft producing coal. This shaft is referred to as the 'sowghe pytte' and is thus probably the first one sunk to the sough once this reached the coal seam. Thereafter, other shafts were opened up, probably down to a heading that would have been driven along the strike of the seam as a continuation of the sough through the coal itself. By December there are up to four shafts at work. Further payments are made 'For Synckinge of the sowe pyttes sence the xviiiith of februarye', and presumably 'sowe' here represents an alternative spelling of 'sowghe', and refers to more of these deep shafts sunk along the line of the heading where it ran through the seam. There is little to indicate whether the mine involved shallower shafts, up dip from the deep ones like the one at Griff colliery in Warwickshire in 1604, but the fact that

122 Ibid. D. (W.) 1734/2/3/112c.

123 Ibid. D. (W.) 1734/3/3/247. The description of Pomfret as a nailer is interesting. The lease is probably exactly contemporary with Leland's visit to Birmingham where he commented on the number of nailers. It seems unlikely Pomfret himself was a nailer if he could finance the lease: J. Chandler, *John Leland's Itinerary: Travels in Tudor England* (1993), 471.

124 The accounts for the sough are in SRO, D. (W.) 1734/3/3/258, followed by accounts for initial coal production in D. (W.) 1734/3/3/248. The first few accounts in the latter run repeat the last few in the former. In almost all the historical documentation looked at in producing this paper, the accounts refer to pits, but the term shaft is used throughout this paper to avoid confusion.

some shafts are specifically called 'sowe' suggests there could have been other shafts which were up-dip of here and were shallower.¹²⁵

The accounts made after the sough was brought to the coal generally record the amount of coal from each shaft in terms of how much it was sold for, with the miners' wages already taken out.¹²⁶ Payments for timbering the shafts and for ropes and candles are also recorded. Possibly due to more strict accountancy requirements following the seizure of the mines by the crown after Thomas Paget's flight abroad in November 1583, the accounts for 1584 and 1585 are more detailed, and payments to the miners themselves are recorded, usually as paid to a named banksman and his two, or more commonly three, fellow workers, all of whom generally got 6d. a day.

In accounts for the years that follow the construction of the sough, the sinking of new shafts is recorded in virtually every year. In the two years when actual dates are given, 1584 and 1585, this shaft-sinking activity seems to begin around Easter, presumably as soon as the weather could be relied upon to be reasonably dry, and might run for seven or eight weeks.¹²⁷ In 1579, twelve shafts were sunk, but there is no way of knowing if this is unusual. In 1585, the final year, three shafts were sunk and three were in use, something helpfully confirmed by a survey that year which stated that there were six coal shafts, three of which had already been sunk and three of which were almost sunk.¹²⁸ The general pattern seems to be of three or four shafts in use, while another three or four are in development, and so the twelve shafts recorded in 1579 might have been unusual.

Despite the wealth of information on coal raised and money paid, there is frustratingly little detail which might allow for determining the location of these workings, although they were certainly in Beaudesert Park. There are a few references that indicate the depths involved: James and Robert Alton were paid for shafts that were 6 and 8 yards deep, and a sinking is mentioned at 9½ yards. This does not prove that there were not any deeper shafts, but as will be seen below in connection with the 1597–1600 period, there is good reason to think that the techniques available locally prevented sinking much below this depth. A few payments were also made for 'tonelynge', which might mean driving headings (connecting passages) between shafts, and the distances given were between six and 8½ yards.¹²⁹

A depth of up to 10 yards or so suggests that the shafts were located fairly close to the outcrop, and if a minimum of three shafts were dug each year, there must be at least thirty sunk during this period, and probably more. But as seen on the lidar visualisations, the belt of land immediately uphill of the outcrop in Beaudesert Park is usually riddled with many close-spaced shafts, and so it is impossible to distinguish any specific shafts that can be reliably associated with the accounts for this period.

Hatcher has calculated the output of the Beaudesert Park mine over this period, and his figures suggest around a fairly steady 1,000 'loads' a year, which might amount to some 1,500 tons. This figure falls around 1582, and in the last two years of the run of accounts the total costs go up sharply in relation to the output, leaving very little profit.¹³⁰ The mine ceased production entirely on 25 September 1585.

The reasons for this cessation may have had little to do with economics or geology. Following Thomas Paget's flight in November 1583, the Paget industrial enterprises had been run by his officers, including the clerk for the mines, William Hankin, rendering accounts to Richard Bagot, who was acting for the crown. In July 1585 the Lord Treasurer, William Cecil, wrote to Bagot that he had information that the coal mines had been 'badlie used', that timber was being wasted, and that Hankin's accounts were badly kept. Cecil duly ordered him to cease production, which happened in September, and after examining the accounts Myles Bainham, the Queen's Receiver, and Henry Vynning wrote to Bagot in February 1586 that the queen was 'but slenderly answered of the p(ro)fette of the Coole Mynes'. They had found that Hankin was 'unwillinge to deale any further in these causes', perhaps because he had been running the mine without anyone questioning his competence since 1573 and was now feeling rather aggrieved. He probably invited them to find someone else

125 E. G. Grant, 'A Warwickshire Colliery in the Seventeenth Century', *Dugdale Society Occasional Paper* (1979), 9.

126 See above note 124 for references to the coal production accounts up to 1585.

127 TNA, E 101/632/17 (1584) and E101/632/15 (1585).

128 Ibid. E 164/49, f. 29v.

129 SRO, D. (W.) 1734/3/3/248.

130 Hatcher, *History of British Coal Industry*, 357, table 10.A.5. I believe that the accounts for 1583 are missing, and that the last two years should therefore be 1584, and 1585 to 25 September.

to run it, and they duly appointed a Richard Almond.¹³¹ Whatever the truth, profits had declined sharply in the previous two years. The ironworks had shown a similar decline in profits over the same period and suspicions of embezzlement had also been raised there.¹³²

Yet, although Bainham and Vynning had expressed their confidence that the mine would be profitable once Almond had taken it over, the coal mines were described as in 'decay' in 1588.¹³³

Leases to Gilbert Wakeringe and Fulke Greville, 1589

Perhaps the crown had by 1588 realized that these were coal mines and not gold mines, and that they needed closer attention than Richard Bagot was able to offer remotely. And possibly because the government had more significant issues on the international scene to attend to in 1588, mines in both Beaudesert Park and Cannock Wood were in February 1589 leased to Gilbert Wakeringe, who wrote to Richard Bagot that he 'had a mind to set a pit or two a work to trie how the work will do, nowe this sommer tyme'. Presumably all went well because he also took the lease of the mines in the New Hay (i.e. New Hayes) and Redmore (Red Moor) in December.¹³⁴

At the same time that the coal mines were leased, the significantly more profitable ironworks was leased to Fulke Greville.¹³⁵ With it came the ironstone mines, but as already noted there were doubts about the quality of ironstone from the Chase and also suspicions that it was running out. A few years earlier, in May 1581, Paget's ironmaster Thomas Powntes had reported in respect of the ironstone mines:

I had ij olde mynes wche I have digged stone in this iij or iiij yeares and I made accompte they wolde have lasted yet one yeare more; and trewly even nowe against this tyme they have deceived me and are worne owt so that my men are forced to come forthe of theme.¹³⁶

In 1588 Richard Bagot wrote to Burghley offering the view that there was perhaps no more than 10 years supply of ironstone, and that some was coming from old workings that had been re-opened.¹³⁷ Nevertheless, an inquiry in 1595 reported that there 'hath bine Iron stone goten' in Cannock Wood at a place called the Black Mine, which was leased by Fulke Greville. The use of the past tense might suggest that he had given up ironstone mining on the Chase shortly before.

As frequently happens with the documentary record when the mines were leased rather than being worked in hand, the profusion of detailed evidence on coal mining stops once the mines were leased to Wakeringe and there is no indication of whether he had any more success than the crown. Mining seems to have continued for at least a few years into his lease, because the 1595 inquiry stated that there was one mine of 'blacke' coals and one mine of cannel coal, both apparently in Cannock Wood, and that hollies had been felled for the use of the mines.¹³⁸

William Paget, William Wilkins, and William Rice, 1600

In 1597 William Paget petitioned the crown for the return of his father's estates and he set about recovering control of the coal mines. It is worth noting that he made no such attempt with respect to the previously much more profitable ironworks: Greville's lease on the ironworks ended in 1610 and Paget then leased the remaining furnace and forge on the Chase to Thomas Chetwynd.¹³⁹

There is various correspondence in the Paget papers relating to the recovery of Wakeringe's lease of the coal mines. A surviving undated draft agreement is endorsed, presumably by Wakeringe, that he wanted a 'reasonable consideration for the whole term' rather than a rent, and another undated draft agreement appears to set out the agreed terms.¹⁴⁰

All was evidently settled to everyone's satisfaction and William Paget then set about either developing a new mine, or redeveloping an existing concern. Accounts date from 1600, and one heading reads:

131 Folger Shakespeare Library, Washington D.C. (USA), Bagot L.a.310 and L.a.919. Almond may subsequently have become lessee in his own right: C. Owen, *The Leicestershire and South Derbyshire Coalfield, 1200–1900* (1984), 48–9.

132 C. Welch, 'Elizabethan Ironmaking and the Woodlands of Cannock Chase and the Churnet Valley, Staffordshire', *Staffordshire Studies*, 12 (2000), 30.

133 Warwickshire County Record Office, CR931/173.

134 SRO, D. 1721/3/290; Jeayes (ed.), 'Calendar of Longdon, Lichfield ... Charters', 112 (nos 1743 and 1744).

135 Welch, 'Elizabethan Ironmaking', 51.

136 SRO, D. 603/K/1/6/47.

137 Folger Shakespeare Library, Bagot L.a.75.

138 SRO, D. 1720/13.

139 Welch, 'Elizabethan Ironmaking', 52–3.

140 SRO, D. (W.) 1734/1/4/86; D. (W.) 1734/1/4/130.

The charges of synkinge the first Colepitt by Will[ia]m Wilkins appoyntement, but wrought by Will[ia]m Ryce Thomas Procter John Haire and his sonne by day wages.¹⁴¹

These names have not appeared before, but the men's geographical origin is given in a summary account, referring 'the newe pitt made by Cole Oarton men'. Coleorton is in the Leicestershire coalfield, whose early and precocious development has been documented by Colin Owen,¹⁴² and it seems almost certain that William Rice and his team of sinkers had skills developed in the context of the Leicestershire field, and were brought in by Paget in 1600 to develop his mine. William Rice was back on his home ground by 1606, when he 'and his fellows' were sinking shafts for the Earl of Huntingdon at Thringstone, near Coleorton.¹⁴³

As for William Wilkins, he appears to have acted as what might now be considered a consultant mining engineer, but at an earlier time would have been called a 'viewer'. It seems reasonable to suppose that he came from a Coleorton family that was well-known for its involvement in coal mining in the later 17th century.¹⁴⁴ Evidently, the new mine needed new skills, but exactly what Wilkins and the Coleorton men brought can only be inferred from the documents.

The first shaft was started by 5 April 1600 and seems to have been completed by 14 June, when it was 31½ yards deep. Around the middle of May, Thomas Clark was paid for carrying a 'turne barrell', which was the winding drum for the shaft top.

The second shaft was started on 16 June, as soon as the first had been completed. One noticeable difference between the first and second shafts is that in the second one the Rice team were paid for sinking 'by the ell' (traditionally forty-five inches), not by day wages. At this period, although they were a feature of Cannock Chase mining, day wages were unusual in most coal mines; in contrast, payment by depth sunk or coal mined was more usual, and this was how Rice and his fellows were paid at home in the Leicestershire field.¹⁴⁵ Possibly some renegotiation of their Cannock Chase contract had taken place. By 2 August the shaft was 16 ells deep (20 yards).

On 26 July a third shaft was started by Rice, Procter, and Haire, and sinking in the second shaft was halted at this point. Again, they were paid by the ell, and this time payments distinguish between depths sunk in stone or in 'earthe'. The latter does not have the same meaning as a modern reader might think (i.e. topsoil), as it appears to have been lower down than the stone. To contemporary miners, earth would have been clay or shale, as opposed to harder stone, and Rice and company were paid 5s. for sinking an ell in earth and 8s. for sinking an ell in stone.¹⁴⁶ By 23 August this shaft was given over due to water problems at 14 ells (17.5 yards) – no doubt giving the Cannock miners the satisfaction of knowing that the 'experts' from Leicestershire had been defeated by the water of the Chase. Work then seems to have been resumed on the second shaft (with payments uniformly 8s. for each ell): a boy was paid for picking up small coals and a new 'turne barrel' was made for the shaft, which was 23 ells deep (28.75 yards).

At some point, William Rice was paid for driving a 'heade' from the first to the second shaft, and this was stated to be a distance of 26 yards. Twenty loads of coal were produced from this exercise, and were delivered to Beaudesert House. It is not clear when in the sequence this heading was driven, but it may have been started before the second shaft was finished.

The accounts include the costs of 'making a devyce with Older poales to put awaye the earthe dampe out of the Coalepyttes'. Exactly what form this device took is not explained, but it does sound very much like some form of forced ventilation, with the 'Older' (? = alder) poles being used as piping, perhaps with bellows being used to provide a draught. George Agricola depicts a range of such devices which were available from at least the mid 16th century, but possibly they were new to Cannock Chase and might be one of the innovations brought by the Leicestershire men.¹⁴⁷ 'Earth dampe' is probably 'black damp' or 'stythe', the result of air being deprived of oxygen, either through

141 Ibid. D. (W.) 1734/3/3/255. There is a lot of repetition in these accounts – this reference is from f. 5r. All reference to these accounts are from this document unless the 'summary account' (1734/3/3/253a) is specified.

142 Ibid. D. (W.) 1734/3/3/253a. This is possibly a summary account by Almond, Paget's bailiff, who had replaced the disgraced Hankin in 1586. There is a Coloton Hill near Wimblebury, and mining certainly took place there and the name is occasionally spelt as 'Coal Orton' in later documents, but it seems unlikely that miners from there would be given a specific appellation. Also, the son of John Haire, one of the Coleorton men, was sent to fetch William Wilkins who evidently came from Leicestershire, presumably because he knew where to find him.

143 Owen, *Leicestershire and South Derbyshire Coalfield*, 56.

144 Ibid. 97.

145 Hatcher, *History of British Coal Industry*, 390–1.

146 Arkell and Tomkeieff, *English Rock Terms*, s.v. 'earth'.

147 Agricola, *De Re Metallica*, 207–11.

chemical oxidation processes underground or simply through the miners' breathing. The result is a mixture of nitrogen and carbon dioxide, without oxygen, which can be fatal.¹⁴⁸

To make the device, craftsmen were brought in from outside, this time a Thomas Wrighte of Burton and two other men with him.¹⁴⁹ They were paid for six days 'with meate and drinke' at 6*d.* a day each, a one-off supper at 9*d.*, and 6*d.* for a week's lodging for all of them. For a further two days they were paid 12*d.* a day each, but without meat and drink. Wherever they made the device, Thomas Clark (who had transported their 'turn barrel' back in May) was paid 6*d.* to carry it to the mine. Before 14 September, Proctor and Rice and two local men had been paid for a day for 'settinge downe' the poles into the second shaft. This evidently required experienced oversight, as John Haire's son was paid 12*d.* to fetch William Wilkins (presumably from Leicestershire), and Wilkins had 6*d.* 'bestowed' on him in bread and drink on the day of installation. This was in addition to payments of 20*s.* on each of three occasions when he visited the works.

The 'devyce' was not the only method of ventilation, as the accounts refer to 'a lampe to keepe fyre in the pytte, for asswageinge of the earth damp'. This will have consisted of some form of 'fire basket' for burning coals, which would have been suspended in one of the shafts (which would have been termed the 'upcast' shaft at a later date) to create an air current strong enough to pull the 'damp' out of the workings. This is an early reference, 80 years before Robert Plot described the process in his *Natural History of Staffordshire*.¹⁵⁰

At around the same time as the Rice team started on their shafts, William Alton was paid for sinking two further ones. He is quite likely to be a local man and may well have been related to the Altons who appear in the 1573–85 accounts noted above. When Alton's first shaft reached the coal (by 12 April 1600), it was only seven yards deep, much shallower than the Rice team shafts. He was then paid for 'workinge through the coale to the bottome by meanes of the water in them', an odd phrase which might simply mean that he had flooding issues to deal with in the seam, or that he was excavating a sump (a hole) below the coal for water to run into.

Alton then started a second shaft, which was 14 yards deep when he was paid for it on 22 May. Then, and perhaps significantly, the Rice team was brought in and paid for four days sinking the 'same pytte yet deeper'. To do this, they were taken off the sinking of their own first shaft on about 24 May, because there is an obvious gap in their payments for it around that date. It is very tempting to see the 14 yards as a depth beyond which Alton could or would not work, but which the Coleorton men could continue because of their experience of sinking what was then on Cannock Chase an unusually deep shaft. Exactly what enabled them to do this is not clear; it cannot have been related to the 'devyce', because that is not installed until the following September. It should be recalled here that the 1573–85 accounts suggested that the shafts then dug by local men were no more than ten yards deep.

The difference between the two completed shafts, those dug by Rice and his fellows (31.5 yards and 28.75 yards), and those started by Alton (7 yards and something over 14 yards) is significant for another reason. Nowhere in Beaudesert Park is the topography and dip of coal seams such that shafts of these different depths could be part of the same inter-connected system without being an unrealistic distance apart. It seems likely, therefore, that the Alton shafts represent a sinking using the local traditional methods, perhaps in order to get production going quickly, while the deeper shafts dug by the Coleorton men were still not in production until October. But we cannot know whether this is actually what transpired because no accounts for actual production survive.

It is likely that Alton's shafts were a continuation of earlier workings, because payments are made to two men for four days for 'scowringe the tayle of the olde soughe'. This could even be the sough dug in 1573, unless another one was dug during Gilbert Wakeringe's lease.

On 25 September 1600 a new sough was started by the Rice team, having just completed their second shaft. It might be significant that this team dug their shafts to the coal first and then started their sough, whereas in 1573 the sough was dug first and the shafts to the coal followed. The beginning of the sough was attended by William Wilkins, who was paid to 'oversee and appoynte' the works, and up to 11 October the team was paid for 14 days work. This sough had shafts sunk along its course, as a William Ashmore was paid to sink one shaft 4½ yards deep by 4 October and another 5 yards deep the following week. Six pounds of candles were also bought. Frustratingly,

148 *Historical Review of Coal Mining, Mining Association of Great Britain* (1924), 278; Cantrill, *Coal Mining*, 111.

149 The construction of wooden tubes did require a three-man team: T. J. Oertling, *Ships' Bilge Pumps; A History of Their Development, 1500–1900* (1996), 12.

150 Plot, *Staffs*. 138.

at this point the compiler of the accounts handed over the task to someone else and no further information survives for the mine. The summary accounts do have one useful piece of additional information, however: they note that the ‘length of the newe soughe will contay[n] xxiiii xx yards’, that is, 24 score yards or 480 yards in total.

The accounts also include in great detail the costs of building a smithy to service the mine, right down to the price of the lock for the smithy door. The building was thatched, which might seem a strange choice given its purpose. Interesting in its own right for the details of a small Elizabethan industrial building, the investment in associated plant demonstrates that this mine was intended to be in work for a significant period.

The overall impression of the development of this mine in 1600 is of a well-planned exercise, requiring the co-ordination and timing of several different groups and operations. But the plan was also flexible, as it needed to be when dealing with something as uncertain as coal mining. The Rice team was moved from their first shaft to Alton’s second when it was seen as necessary, and the third shaft dug by the Rice team was simply given up when it became overwhelmed by water, without any comment in the accounts. Expensive expert advice was summoned as needed, specialist equipment was constructed and transported, and accommodation and expenses were found for the three Burton carpenters. Wilkins’s main role seems to have been as an experienced supervisor or ‘viewer’, who presumably offered technical and organizational advice; whether he actually did the planning and co-ordination is not known.

As with the earlier accounts, there is little indication of where these shafts were located, other than that they were in Beaudesert Park. But two completed shafts were 31.5 yards (c. 29m) and 28.75 yards (c. 26m) deep, and 26 yards (c. 24m) apart, and there are groups of shafts seen on the lidar visualisations that might fit this description. As discussed above (p. 97) a group at ‘b’ on fig. 9 consists of two rows about thirty to thirty-five metres apart, each having four shafts separated by thirty to forty metres. Comparison with known seam depths suggests that the most northern feature in the group represents a shaft about 24m deep, and the most southern, a shaft about 34m deep, so depths and dimensions are broadly comparable with the shafts discussed above. And (as it happens) if sough S6 drained these shafts, it would be about 480 yards long, as described in the summary account. Perhaps no more can be said other than that this is a group of shafts which could be the result of the type of mining carried out by Rice and his team.

Randolpe Cope’s mine of 1602

The 1600 mine was in Beaudesert Park. Outside the Park, in Cannock Wood, Gilbert Wakeringe had evidently sub-let his interest to a ‘Randolpe’ (or ‘Randole’) Cope. On 18 April 1602 an apparently illiterate Cope set his mark to an agreement, whereby William Paget paid him a cash sum, covered the rent due to Wakeringe, and Paget took Cope’s interest in the Cannock Wood workings. The mine there was in production, as Paget paid for one hundred and ten loads of coal already on the bank.¹⁵¹

As part of the transaction, Cope apparently dictated a report on the prospect for the mine.¹⁵² In it, he stated there were four ‘Colepyttes’ and one ‘water pytte’, which had to be kept in work drawing water day and night. No sough is mentioned; evidently the mine relied for drainage on the water pit alone, from which water was brought up in buckets or by pumps. Two of the shafts were into the seam, and were presumably producing coal. Of the other two, one had reached the coal and the other needed a yard and a half before doing so. Between these two shafts, a ‘heade’ was required, which needed to be 60 yards long – a surprisingly long distance and considerably longer than the heading driven by William Rice in 1600. Cope noted that this needed to be done quickly, ‘least when hote weather commeth the worke bee hindered by the earth dampe’.¹⁵³

Cope predicted that the mine would produce eighty loads of coal each week, which, if he meant ‘wayne’ (i.e. cart) loads, suggests upwards of eighty tons a week and so around 4,000 tons annually, which would be a very high output at this period.¹⁵⁴ On the other hand, this is not an actual account of coal produced and there may have been an interest in exaggerating the mine’s profitability. The report was presumably dated to around the same time as the April 1602 agreement, and Cope considered that the mine would be able to produce coal until the following February, but he is specific

151 SRO, D. (W.) 1734/3/253b.

152 Ibid. D. (W.) 1734/3/254.

153 Plot, *Staffs*, 140, noted that dams were more prevalent at the end of the summer.

154 The sale price of the coal was given as 2s. 6d. a ‘loade’. In 1585 a ‘wayne’ load was sold at 2s. 8d. and a horse load at 2d., so it seems that Cope meant a ‘wayne’ (or cart): TNA, E 101/632/15.

that it would then be exhausted with no potential for further development; so, unlike the 1600 works, it was never intended to be long-lived.

There is no indication of where this mine was, other than in Cannock Wood and not Beaudesert Park, and as has already been noted, subsequent mining has removed the majority of features outside the Park.

Arblaster (Brereton) Hayes, 1595–1641

The 1595 inquiry noted earlier also set out the boundaries of Rugeley manor. In the area of Beaudesert Park, they approximately followed the 19th-century parish boundary, crossing over ‘Swecome’ and:

Soe into Arblaster heyces to ye heade of the pearle that com[m]eth from ye Coolepittes descending by the pearle through Brereton towne ¹⁵⁵

Arblaster Hayes was the earlier name for what was later known as Brereton Hayes, on the north side of Beaudesert Park.¹⁵⁶ The earlier name derives from the Arblaster family of Longdon, local gentry who were reasonably prosperous until the later 16th century. Rowland Arblaster had already sold all the wood from the Hayes to Thomas Paget in 1579 for his ironworks, and on two occasions during the period of felling the ‘colliers’ (in this case meaning charcoal makers) dug a few loads of ironstone as well.¹⁵⁷ The estate passed through a brother to his nephew Thomas Arblaster, who seems to have impoverished himself trying to finance his debt-ridden in-laws. In 1601 he mortgaged Longdon property which included ‘four mines of coal’, and by January 1612 he was in prison, presumably for debt.¹⁵⁸ William Paget spotted an opportunity and he bought Arblaster Hayes in November 1615 for £1,100, a sum which suggests that he anticipated a substantial profit from the mines there. The grant specifically assigned Paget rights to make a ‘sough or watercourse’ through lands of some existing occupiers, and to dig ‘pittes’ for finding coal and ironstone.¹⁵⁹ The grant also mentioned a ‘Smithes Croft’, which must have been close by; that, and the ironstone, and slag from ironworking found during the survey made in 1993 indicates some local ironworking.

A single year’s account for 1641 is of particular interest at this point in the discussion. For coal mines in Beaudesert Park and Cannock Wood, as usual, the payments and allowances section also contains the following:

Dispersement at the New sowghe intended for Arblaster Hayes, within the tyme of this Accompte the summe of £88 9s. 0d.¹⁶⁰

As discussed in part V, there are three soughs identified from surface features within Arblaster (Brereton) Hayes (S1, S2, and S3, figs 4 and 6). Is this ‘New sowghe’ of 1641 possibly one of them? The possibility will be pursued in part VII because it might allow a sough represented by surviving features to be fairly reliably dated.

No accounts have been found that refer to any subsequent mining in Arblaster (Brereton) Hayes (until the development of the later 18th-century mines there), although the evidence on the ground of hundreds of shafts shows that there must have been a long history of extraction. A single reference to birch wood being cut there and carried to ‘the Several Pitts in the said Hayes’ dates from 1715, when they must have been in use.¹⁶¹

It is worth noting that Cantrill recorded ‘old pits’ for ironstone in the northern part of Brereton Hayes, and the shaft section for the nearby Old Engine Pit recorded ironstone above the Second Coal, which would be fairly shallow at this location. All of this northern area has been completely remodeled by subsequent mining.¹⁶²

Seventeenth century: Beaudesert Park and Cannock Wood

Accounts of the bailiff Richard Snead survive for the single year 1612, and these are accompanied by the half-year account for the same year running from March to Michaelmas. There were coal works

¹⁵⁵ SRO, D. 1720/13.

¹⁵⁶ Ibid. D. 603/N/5/2 describes it as separated only by a road from that part of Beaudesert Park called Startley.

¹⁵⁷ Welch, ‘Elizabethan Ironmaking’, 48–9; SRO, D. (W.) 1734/3/3/212 (1577) and 1734/3/3/214 (1581).

¹⁵⁸ W. Boyd (ed.), ‘Final Concords ... of Staffordshire, 1589 to 1603’, in *Collections for a History of Staffordshire* (William Salt Archaeological Society), first series, XVI (1895), 206; W. F. Carter, ‘Notes on Staffordshire Families’, in *Collections for a History of Staffordshire* (William Salt Archaeological Society), 1925, 8–9.

¹⁵⁹ SRO, D. 603/A/3/23.

¹⁶⁰ Ibid. D. (W.) 1734/3/3/261.

¹⁶¹ Ibid. D. 603/N/4/12.

¹⁶² Cantrill, Staffs 45SE; Barrow, *Geology around Lichfield*, 229.

in both Beaudesert Park and in Cannock Wood, and shafts were being sunk and ‘heades’ (headings) being driven in both places. Both places also had soughs that were worked on, the one in Beaudesert Park quite possibly the one started in September 1600. The accounts also mention a small amount of cannel coal being dug in Cannock Wood, and sold separately from the main output. From both places, the greater proportion of coal was extracted in the first half of the year (i.e. spring/summer).¹⁶³

A further set of accounts also by Richard Snead survive for March 1623 to March 1624. Again, both Beaudesert Park and Cannock Wood are producing coal, with some cannel from the latter. In contrast to the figures given in the 1612 accounts, the price paid for the coal differs significantly, with Beaudesert Park coal selling at 5s. a dozen (approximately a ton) and Cannock Wood coal at 4s. a dozen, the difference presumably relating to quality, something that might be connected with the fact that the Bottom Robins seam was extracted in Cannock Wood rather than the better quality Old Park seam.¹⁶⁴

There is also a set of accounts drawn up by Thomas Snead for 1641.¹⁶⁵ This has some very useful detail of the digging of soughs (including the one in Arblaster Hayes already mentioned), and the section relating to mining in Cannock Wood is worth repeating in full:

Disbursed at the sowghe in Cankwood: and first at the Great Sowghe there, being a continuation of that begun divers years since in the Red moore, thence brought up into the Newhay, soe driven on toward the upp mine – the charge whereof ariseth to £20 11s. 8d.

At a Leavell Head in the Newhay, being a branch of the sowgh last mentioned, and undertaken to draine a parcel of drownd Cole in the newhay, lying on the North side this Great Sowghe £9 18s. 10½d.

Lastly, at a Levell Head in Cank wood set forth partly to drain, and partly to discover the extent of the mine towards Quintons Lodge £7

The location of these soughs can be identified with some degree of precision. They were intended to drain the coal within the ‘Newhay’ (the present New Hayes), and as with the soughs discussed previously, the strategy would have been to find a location at as low a level as possible within an adjacent valley, and to drive a level under the coal that it was intended to mine. In this case, the adjacent valley was that of the Redmoor Brook, which flows mainly in a south-easterly direction, crossing the road called Cumberledge Hill at the south-east corner of New Hayes, and flowing on down through Red Moor. Sough S7 has been discussed above – a series of features seen on lidar and recorded by Cantrill running for around 500m from the New Hayes alongside the Redmoor Brook, to a point where the height of the tail is about 173m AOD.¹⁶⁶ This is in precisely the location where one might expect the ‘Great Sowghe’.

It will be recalled that a large fault (F3) runs roughly east–west through New Hayes, with a throw to the south of around 100m, bringing the Bottom Robins seam close enough to the surface to be worked opencast after World War Two in the area between Red Moor and New Hayes. This is likely to be the seam that sough S7 was intended to drain. A short distance west of where the Redmoor Brook crosses the road called Cumberledge Hill there is the isolated group of features (shown in fig. 10) which have survived 19th-century mining activities, and it is calculated that the Bottom Robins would here lie at about 179m AOD. As the seam dips gently southwards, we can be confident that it could be drained by sough S7, although whether it actually drained the features seen in fig. 10 is not clear.

It is, however, unlikely that sough S7 could drain the Old Park coal north of the fault F3 on its own. Not far from the fault and to its north, the shaft section at Cannock Wood Colliery recorded the Old Park coal at about 164m AOD, too low to be drained effectively by this sough (whose tail is probably at 173m AOD), unless it was supplemented by some form of pumping.¹⁶⁷

The 1641 accounts show that the main sough had been ‘brought up’ into New Hayes some years before (possibly it was the sough that was referred to in 1612), and it was now being continued towards the ‘Upp Mine’. A branch had been taken from the main sough in the New Hayes to deal with a localized problem of drainage. Finally, another sough level had been taken, in the ‘Cankwood’ rather than in the New Hayes, towards Quinton’s Lodge. This is probably an earlier name for Cooper’s

163 SRO, D. (W.) 1734/3/3/259 is the full year account, 1734/3/3/256 is the half year.

164 Ibid. D. (W.) 1734/3/3/260.

165 Ibid. D. (W.) 1734/3/3/261. The Sneads had a long association with the Pagets. William Snead features in many of the later sixteenth century documents, and he died in September 1612 (Rugeley parish register). Possibly he was the father of Richard, who passed the family business on to Thomas.

166 See p. 100 above.

167 Barrow, *Geology around Lichfield*, 235.

Lodge, about a kilometre to the west, and if this is correct this branch ran westwards from the main line, perhaps along the south side of New Hayes.

By the end of 1641 we can see that an extensive drainage system was in place to allow the extraction of the Bottom Robins seam south of the large fault running through the New Hayes, and the system was being extended westwards to test how far the coal extended in that direction. As already noted, at around this time another major sough was being created on the other side of Beaudesert Park in Arblaster (Brereton) Hayes, and the accounts make it clear that coal was being extracted in Beaudesert Park itself. As in the 1623–24 accounts, the coal from Beaudesert Park was selling at 5s. per dozen, whereas Cannock Wood coal fetched only 4s. per dozen.¹⁶⁸

Late seventeenth- and early eighteenth-century leases

In October 1688 William Paget, Baron Paget (from 1678), drafted a lease to a William Porter of all the coal mines in Beaudesert Park, in the unenclosed land in Cannock Wood, in 'New Hay', and in the ground of Thomas Quinton 'now enclosed' (probably related to the Quinton's Lodge mentioned in 1641 and possibly the later Cooper's Coppice).¹⁶⁹ Attached to the draft is a schedule of equipment and capital items in the mines at the date of the proposed lease, including all the timber 'settings' for each mine, probably as an indication of the timbering in the main roadways and thus also an indication of the level of development of the mine.

The list of 'settings' refers to eleven shafts in the Park, seven at the 'Lower Delph' and four at the 'Upper Delph'. Three further shafts are referred to in the 'New Hay Delph' and either sixteen or eighteen in the 'Cannock Wood Delph'. Evidently the mining had now moved significantly beyond its earlier confines within the Park and the area to the south was beginning to acquire a greater significance, whilst there is no reference at all to Arblaster Hayes.

Of the shafts referred to, a number are described as either new or old 'pitts'. Ten out of the 30 or 32 are described by the individual banksman's name, and it is reasonable to assume that only those so described actually produced coal. The equipment list starts with a record of 21 'Turnbarrells', 20 'Heade Geare', and 20 ropes, suggesting that some of the shafts that were either being sunk or had been recently exhausted were also fully equipped. The impression given is of a landscape with shafts and winding apparatus at their tops scattered over it but with only some of the shafts actually producing coal at any one moment in time. Moreover, it is interesting that the shafts had both windlass barrels and headgear. Often at mines more generally at this date it is thought that windlasses were placed directly over the tops of shafts, set within a simple frame (as described by Celia Fiennes, see below), but it is unclear whether this method is being referred to here, or whether the windlasses had been set to one side and a separate head-frame placed over the shaft.¹⁷⁰

The equipment also included 86 'Wind Troughs', 'being 178 yards', along with three pairs of bellows and three lamps – the 'troughs' (probably pipes of some sort) and bellows undoubtedly connected with ventilation and the 'lamps' presumably 'fire baskets' placed in shafts to draw air. The workings were also equipped with mineral-exploration gear in the form of 21 auger lengths which apparently total 30 yards, with two 'heads', four 'Doggs', and two 'punches'.

In addition, there were 48 yards of pump trees and 84 yards of pump rods. Given the rods, the 'trees' must have been simple 'churn' pumps. With these pumps the pump rods went down the wooden, circular cross-sectioned pipes or 'trees' which were often formed of hollowed-out tree trunks. The iron rods had a simple leather valve at the bottom, while there was a cross-head handle at the top used to raise and lower the rod. With hand-operated pumps such as these, water could only be raised by not much more than 20 feet vertically. It may well be that this was sufficient if they were being used to bring water up to sough level where mining was taking place a short distance below this; in effect they were supplementing the 'free' drainage provided by gravity.¹⁷¹

The final item on the list comprises two beams, four gudgeons, and four hoops, all of them almost certainly parts of shaft-top windlasses. 'Gudgeon' was the standard mining term at the time for the

168 It is sometimes said that Cannock Chase miners were used by Prince Rupert at the second siege of Lichfield in 1643, but it is much more likely that the miners were from Leicestershire and were brought in by Henry Hastings: C. Owen, *Leicestershire and South Derbyshire Coalfield*, 62; Hatcher, *History of British Coal Industry*, 322. My thanks to Dr Ian Atherton for information on this matter.

169 SRO, D. 603/E/5/4.

170 John Barnatt, pers. comm.

171 John Barnatt, pers. comm.; J. H. Rieuwerts, *Glossary of Derbyshire Lead Mining Terms* (Peak District Mines Historical Society, 1998), s.v. 'Churn Pump'.

iron rods at the ends of a 'turntree' or winding barrel, which formed the axle that was set into a hole in the support frame.¹⁷²

After about ten years the lessees (now including Richard Blackbourne and Edward Greenwood) quarrelled and the works were repossessed by Paget,¹⁷³ resulting in a complete sequence of accounts from 1698 to 1714.¹⁷⁴ These have little detail on the techniques being employed, but they refer to shafts in the 'New Hays', Beaudesert Park, and Cannock Wood, the number of shafts producing at any one point in time ranging between 9 and 12 until the last two years when 6 and then 7 shafts were in production. On the face of it, this might be taken to represent a running down of the colliery prior to a new lease in 1715, but as will be seen below, the contrary is true.

William Paget, Baron Paget, died in 1713 and in May 1714 his successor was appointed Envoy Extraordinary to Hanover, and this may be why the mines were once again leased out. In the event, he refused to go without being made an earl. Queen Anne promised him the title when he came back but he still refused to go. Anne died in August 1714 and George I gave him the title of Earl of Uxbridge two months later and made him a Privy Counsellor. In 1715 he resigned all his offices anyway.¹⁷⁵

The new lease made in 1715 to John Marshall and Ralph Weston specifically excluded any workings in Beaudesert Park, although a clause does allow it with the earl's permission.¹⁷⁶ It refers to 'new Cole pitts Sough pitts Soughs and Draynes', and there is a clause that obliges the earl to sell timber to the lessees if they cannot get it anywhere else within eight miles.

A schedule attached to the lease lists sixteen shafts with their locations and equipment. Two new shafts are at 'Bentley Brook', probably somewhere near the modern Hazleslade. It would be tempting to equate these with the shafts seen on the lidar visualisations outside Beaudesert Park and south of the Brook (seen in the south-west area of fig. 7), but there has been much development in this area and other features may well have been lost. Three shafts are at 'Nabs Hill', which is shown on the 1819–24 estate map at a position that corresponds roughly with NGR SK020113, and Cantrill noted old shafts at precisely this location on his field slips (see fig. 2 for location).¹⁷⁷ There is then a long list of shafts under the heading of the New Hayes (which name seems to have now replaced the older 'New Hay'), although two of them are described as being in the Broad Hayes, and it may be that they are not all located in the New Hayes. If that is true, the location of the Broad Hayes is unknown – it would be tempting to suggest that it is an alternative name for Arblastar (Brereton) Hayes, but there is no evidence for this. There is, however, other evidence that mining was taking place in Arblastar Hayes at this time, as it was claimed in 1715 that a large amount of timber had been felled there by the order of the earl's bailiff and taken to the 'Severall Pitts' in Arblastar Hayes.¹⁷⁸

Returning to the schedule attached to the 1715 lease, six of the shafts are named by reference to the banksmen and so were evidently producing coal. Accounts running up to July 1714 also refer to six shafts,¹⁷⁹ and as one of the shafts at Nabs Hill was also 'in worke', there was a total of seven in production. A further eight of the sixteen were described as having been either just sunk or just started in production. Far from being a run-down mine, it was in the middle of a significant development phase.

Most of the shafts were furnished with ropes, foot hooks, (turn)barrels and gudgeons for winding, corves (the large baskets in which the coal was raised), and pairs of 'jumals'; the last word possibly an alternative spelling of 'gimmal' and perhaps some sort of chain to attach to the corves. Some of the shafts have 'headstakes', presumably headstocks. Apart from some 'trunks' to draw water with, there is no further reference to drainage equipment and it is unclear whether these trunks were churn pumps or not. There is a set of augers (which might even be the ones referred to in 1688) and a good stock of materials to make corves. On the whole, the level of technology involved seems limited when one considers that Newcomen's first steam engine was already working a few miles away in the Black Country, and the pattern of short-lived shafts with others being sunk in advance would have been recognizable to the miners of a century earlier.

172 W. Hooson, *The Miners Dictionary* (1747), s.v. 'Gudgeon'.

173 Hatcher, *History of British Coal Industry*, 359.

174 SRO, D. 603/F/3/1/17.

175 Andrus, 'The Paget family', 139.

176 SRO, D. 603/E/5/7.

177 Ibid. D. (W.) 1821/5; Cantrill, Staffs 51SE.

178 SRO, D. 603/N/4/12.

179 Ibid. D. 603/F/3/1/17; four of the banksmen's names correspond. In the schedule, four of the banksmen are Copes, perhaps descendants of Randolpe Cope.

Hatcher has tabulated the output of the Cannock Chase mines. In the 1612 accounts, the output for Beaudesert Park was 2,423 dozens and for Cannock Wood 1,866, and assuming that a dozen refers to a dozen horseloads of two hundredweight each, this represents a total of about 5,100 tons. By the 1622–23 accounts the totals were 1,313 and 1,694 respectively (total of 3,600 tons), but by 1641 Cannock Wood was far ahead, with 824 dozens coming from Beaudesert and 5,137 from Cannock Wood (total of 7,200 tons). By the late 1690s the amount from both areas combined was around 8,000 or 9,000 dozens (around 10,000 tons), so even if significant changes in the technology are not discernible over the 17th century, a significant increase in output certainly is.¹⁸⁰

Robert Plot, Celia Fiennes, and Thomas Holcroft

At the end of the 17th century and again in the middle of the 18th century, the Cannock Chase mines benefited from the observations of three very different but equally astute observers.

Robert Plot was the first professor of Chemistry at Oxford University and the first Keeper of the Ashmolean Museum. Having visited Staffordshire probably in 1679–80, he published *The Natural History of Staffordshire* in 1686,¹⁸¹ in which, over twenty-five pages, he discussed coal and coal mines in a description which virtually sets the stage for the Industrial Revolution. In Staffordshire one could be forgiven for thinking it had already started.

The main contribution to an understanding of Cannock Chase mining is Plot's reference to cannel coal. This particularly attracted his attention due to its ability to be turned into ornaments, or carved into coats of arms, notably those of William, Lord Paget. He also commented:

...this *Coale* is dug in the *Park* adjoining, also belonging to his Lordship, about 20. 30. or sometimes 40 fathoms deep, lying between other beds of a softer kind.¹⁸²

This statement presents problems, because nowhere in Beaudesert Park is there any evidence of workings before the 19th century at anything like 40 fathoms (240 feet) in depth. The actual wording used itself suggests a degree of uncertainty, but Plot was an excellent observer and his observation should not be dismissed, although it seems to have been based on information given to him rather than the first hand experience of coal mines which he gained elsewhere.

The daughter of one of Oliver Cromwell's colonels, Celia Fiennes travelled throughout England in the late 17th and early 18th centuries, keeping an account which is justly famous for observations on a huge range of subjects. She knew about coal, distinguishing, for example, between caking and non-caking coal in Newcastle-upon-Tyne.¹⁸³ Her description of the coal mines in Derbyshire are evidently those of a non-specialist, but accurate enough to show that miners there were using a pillar-and-stall method and hand-winding the shafts.¹⁸⁴ Like Plot, she had a fascination for cannel coal, commenting on it wherever she found it.

Her aunt, Anne Fiennes, was married to Charles Wolseley of Wolseley on the northern edge of Cannock Chase, which she visited in 1697 and where she stayed for a longer period in 1698. On the 1697 visit she commented on cannel coal from the Chase, and noted that 'they have come to the end of this veine and so there is none within 6 or 7 mile'.¹⁸⁵ In the account of her 1698 stay she gave more detail, noting that the locals used coal exclusively, and commented on its quality and the fact that it 'burns light', although she again noted that the best of it, the cannel coal, had been lost. She actually visited Beaudesert, and the account is worth quoting in full:

Another day I went to Boudezworth the Lord Pagets house, and passed by the Coale pitts where they were digging, they draw up the coale in baskets with a little wheele or windlass like a well, its very good. This parke is of large extent and some of those pitts are in it, the Channell Coales; but the water has overflow'd some of them and spoyl'd their digging.¹⁸⁶

In this short passage she helpfully confirms that winding at the Cannock Chase shafts did not involve any horses, that some shafts are in Beaudesert Park and some outside it, and that the cannel shafts were in the Park. There is the familiar reference to the struggle with water, and the phrasing suggests that it is the cannel shafts that have been flooded and thus lost.

180 Hatcher, *History of British Coal Industry*, 358–9, table 10.A.6.

181 M. W. Greenslade, *The Staffordshire Historians* (Staffordshire Record Society, 4th series, XI, 1982), 55.

182 Plot, *Staffs.* 126.

183 Morris, *Journeys of Celia Fiennes*, 176.

184 *Ibid.* 103.

185 *Ibid.* 112.

186 *Ibid.* 148.

Thomas Holcroft, a future playwright, lived in the Rugeley area in the 1750s when he was a child, and was sent by his father to collect coal from the Chase mines to sell in Rugeley, and so was the only one of our three observers to be actually involved in the industry. In his memoirs he offers a few details which give a very real picture of the realities of the coal industry for men and animals. He was sent with a single ass, and the roads could be so poor that the animal got stuck, and he was obliged to 'run from coal pit to coal pit, to request the man who turned the wheel to come and help me.' On one occasion, at a location which the context suggests might have been around Startley Lane, the force of the wind felled the overloaded animal, and he remarks that he was unable to unload it because the coal was brought from the shafts in such masses, that three of these large lumps of coal were generally an ass load.¹⁸⁷

Prospecting near Mutchill's Gutter in 1749

Looking at fig. 2, it is noticeable that, other than those relating to sough S2, there are virtually no features at all between fault F4 and the pools along Shropshire Brook to the south. But the Old Park coal must lie under this area, and a similar thought evidently occurred to the earl of Uxbridge's mining specialists, because three trial shafts were dug there early in 1749. One is described as being a hole on 'Swecom' which hit the 'Top Cole' at 47 yards (43m) from the top of the shaft; the 'Top Cole' might be the Eight Feet (Wyrley Bottom) seam, which is the next seam above the Old Park coal in the local sequence. Another shaft was dug on 'the far side of Muchills Gutter', which is the tributary that runs east towards Horsepasture Pool, where the coal was found at 43 yards (39m) from the top of the shaft.¹⁸⁸ If both shafts encountered the same Eight Feet seam, it will have been obvious to the miners that the Old Park coal was too deep under the Gutter to be reached with the limited technology they were prepared to spend money on. The geological reason is that fault F4 throws the seams 20–23m southwards, and this, coupled with a general dip southwards, puts the Old Park coal below the depth at which drainage by sough was possible, there being nowhere suitable to drain to. This demonstrates the extent to which the location of these early workings was controlled by faults and drainage.¹⁸⁹

From 1743 to 1811

Paget family papers contain an almost continuous sequence of accounts from 1743 onwards,¹⁹⁰ the start coinciding with the succession of Henry Paget as earl of Uxbridge on his grandfather's death. The new earl was determined to extract as much profit from his estates as possible, and the fact that the mines were run in-hand throughout both his life-time and most of his successor's is probably related to the legal and physical battles that he and his keepers had with the locals, principally over the establishment of rabbit warrens on the Chase, and culminating in riots in early 1753. The whole story was covered in detail in 1975 by Douglas Hay, who relates that a Henry Brindley and Thomas Birch, two local and prosperous farmers, had in 1748 agreed with the earl to lease the mines at £400 per annum. Before the lease was signed Uxbridge changed the terms to allow him to terminate it after seven years, a condition to which any lessee would have been unlikely to agree. Hay states that Brindley and Birch had previously held a lease of the mines. If they had in fact taken over the Marshall and Weston lease of 1715, this would have fallen in about 1736, and indeed there is a single year's account for 1738–39, indicating that the mines were back in hand then. Hay speculates that it was the earl's refusal to renew the lease on the old terms that led Brindley and Birch to join the opposition to Uxbridge over the rabbits.¹⁹¹ The coal industry did not exist in isolation, but was connected to all kinds of other ways in which resources were extracted from the Chase.

The 1743–1811 run of accounts consist mostly of weekly statements of coal mined and sold, with an annual summary. The sheer number of statements – they run into thousands – has prevented a detailed investigation and only a limited number have been examined in order to allow questions of location and technology to be established. They would, however, offer an excellent basis for a

187 T. Holcroft and W. Hazlitt, *Memoirs of the Late Thomas Holcroft* (1816), 46–9.

188 SRO, D. 603/M/1/82. A third shaft was dug 'at top of Muchills Gutter', where the coal was at 54 yards down. There are features in the area which could correspond with these exploratory shafts.

189 More recent mining was legally limited to greater than a certain vertical distance from the surface, and so the Old Park was too shallow to be taken by Brereton Colliery. The coal is still there.

190 SRO, D. 603/M/1/1–68 is the main series.

191 Ibid. D. 603/F/3/1/17; D. Hay, 'Poaching and the Game Laws on Cannock Chase', in D. Hay and others (eds), *Albion's Fatal Tree; Crime and Society in Eighteenth-Century England* (1977), 224.

much more detailed examination of a small coalfield in the era immediately preceding the adoption of steam engines.

For most of the period (in the small sample of accounts examined) the mining was concentrated in five locations. The most useful information for determining these locations is contained within the bills for carrying timber to the mines which are included with the accounts, because they describe in some detail where the timber is being taken from and to. As an example, a Mr Turner presented a bill for carrying timber in February and March 1746 to 'pleachley', to 'coalorton', to the 'Cennil pitts', to the 'Cassil pitts', and to the 'top of the park'.¹⁹² With one exception, these can all be located with some confidence.

Pleachley is most likely to be the area shown as 'Old Pleachley' on the 1819–24 estate map and described in the accompanying survey as covering 26 acres.¹⁹³ It lies outside Beaudesert Park in a location where the exposed Coal Measures extend across Rugeley Road in an area surrounded by Triassic hills. It contained about thirteen fairly widely-spaced shafts with large tips, discussed in the description of fig. 8 in part V above. On his field slip, Cantrill indicated five features here and annotated them: 'These pits about 20 yards deep were working in 1744'.¹⁹⁴ The depth would be about that expected if these were sunk to the Old Park seam. The group of shafts were being drained by a sough: in March 1748 two boys were paid for cleansing the 'Pleachley-sough', and in March 1750 payments were made for bringing up a 'head-sough' there.¹⁹⁵ This sough must be related to sough S4, which was most probably created initially to drain Pleachley, before it was extended to drain a bigger area of the western Park. References to Pleachley continue to 1764, after which no further ones have been found, but it must be emphasized that this apparent absence is based on only a sample of the large amount of documentation. The 1764 reference was to six days' spent boring at what had become known by then as Old Pleachley.¹⁹⁶

Coalorton is Coloton Hill which the 1819–24 estate map locates slightly west of the Nabs Hill that was referred to in the lease of 1715 (see fig. 2 for location).¹⁹⁷ The seam exploited there would have been the Bottom Robins, rather than the Old Park, and the shafts would have had to penetrate only a few metres of drift cover. Not far to the south was the location of the Cannock Chase No. 6 plant, which extracted cannel coal in the 1870s, but in between the two locations there is the continuation of the large fault F3 which runs through New Hayes, and so these shafts are unlikely to be extracting cannel coal themselves. A number of references in the middle of the 1750s refer to a sough at Flash Lane, helpfully confirmed to be at Hednesford.¹⁹⁸ If this is the modern Splash Lane, then any sough here would be in the logical position to drain the shafts at Coloton Hill.

The *Cennil pits* must be cannel shafts, but the limited documentation that has been consulted resolutely refuses to give any clue as to where they were. Although the amounts of cannel coal raised were invariably small, output was almost continuous through the period. Getting cannel coal, however, may have presented a particular problem. Appended to some accounts for March 1774 is a note which states that the payments to colliers for getting the cannel coal were 'good', but:

Ye men got ye above kennels at ye hazard of their Lives, being got in ye winter, and ye work so very dampy. So I hope it will please my Lord to have his kennels got in ye summertime.¹⁹⁹

Possibly 'dampy' refers to the methane that made cannel coal so highly desirable for gas production later on. As might be expected, the cannel shafts, wherever they were, had their sough.²⁰⁰

The *Cassil pitts* must be somewhere near Castle Ring. As noted above in part V, some shafts near the Ring were identified by Cantrill as being the last worked in Beaudesert Park, although he uses apostrophes and he may have been recording hearsay only. As might be expected, there was a sough to these shafts, referred to as the 'Castle sough' in 1749, but none of the features present today around Castle Ring suggest the presence of a sough and it remains unlocated.²⁰¹

¹⁹² SRO, D. 603/M/1/3.

¹⁹³ Ibid. D. (W.) 1821/5.

¹⁹⁴ Cantrill, Staffs. 51NE. Cantrill does not here use the apostrophes that he uses elsewhere, presumably to indicate information that is hearsay, which suggests he had access to documentary evidence, but the relevant accounts in the 1743–1811 set do not refer specifically to Pleachley in 1744.

¹⁹⁵ SRO, D. 603/M/1/5 and D. 603/M/1/7.

¹⁹⁶ Ibid. D. 603/M/1/21.

¹⁹⁷ Ibid. D. (W.) 1821/5.

¹⁹⁸ e.g. ibid. D. 603/M/1/12.

¹⁹⁹ Ibid. D. 603/M/1/30; the same document records the theft of fourteen hundredweight of cannel coal.

²⁰⁰ e.g. ibid. D. 603/M/1/7.

²⁰¹ Ibid. D. 603/M/1/7.

The *top of the park* is too vague in itself to be located with certainty, but the reference is probably to the plateau at the western end of Beaudesert Park (shown on fig. 7), which is where Yates' *Map of Staffordshire* shows 'Coal Pits' in the 1770s. A more precise location in this area is given in December 1776 when the reference is to 'sinking upon ye Lawn in the Park' and another to a sinking of 10½ yards on the Lawn.²⁰² The Lawn is shown on modern maps at the very western end of the park.

The very earliest accounts in this sequence, for 1743–44, suggest there were three shafts at work, but the number expands in the next year to seven and from then on there are typically around a dozen shafts in use at any one time across the five areas. The precise process of development of the local mines from the mid 18th century onwards would require a detailed analysis of the entire run of 1743–1811 accounts, and perhaps also investigation of the voluminous family correspondence. Time has not permitted this, but the following few details are offered in the absence of that analysis.

William Molyneux reported that the 'Beaudesert Collieries' gradually died out after 1810 and were entirely closed in 1816.²⁰³ But it is not clear exactly what he meant by the Beaudesert Collieries. He was probably using the documents now in the Staffordshire Record Office (D. 603/M), but these may refer both to shafts in Beaudesert Park and to a separate mine called the Park Colliery outside it. This latter colliery might be the mine leased to Daniel Wade, William Hackwood, Francis Benton (innkeeper), Francis Benton (collier), and Matthew Brindley in February 1776, and for which the earl of Uxbridge agreed in September of that year that they could construct a steam engine. The location is described as being upon the 'Chace of Cannock Wood near Hednesford'.²⁰⁴ The engine might have been a second-hand one from Tipton in the Black Country.²⁰⁵

The Ordnance Surveyor's Drawing surveyed in 1815–17 shows a 'coal mine' outside the park and south of Bentley Brook,²⁰⁶ and Greenwood's 1820 *Map of Staffordshire* shows the 'Park Colliery' in the same area, although the latter map has symbols indicating shafts on both sides of the brook. Cockin shows an 'Old Waterloo Pit' at about this location, which at least gives a *terminus post quem*.²⁰⁷ The 1819–24 estate map refers here only to an Old Coal Pit Field, which would make sense for a colliery closed in 1817, and the same map also refers to a 'Machine Piece', which is north of Bentley Brook, just outside the park and just south of Rugeley Road. It would be useful to investigate this area as potentially the location of the 1776 engine, although 'machine' does not necessarily equate to a steam engine.²⁰⁸ The abandonment plans for Cannock Wood Colliery show a group of shafts located around SK027126 (about 600m west of the colliery; see fig. 2). The accompanying Surveyor's Report stated that two of them were brick-lined and nine feet in diameter, but that there was no more information on them: consequently, they cannot be connected with Cannock Wood Colliery and are possibly the site of the Park Colliery.²⁰⁹

The same abandonment plan for Cannock Wood Colliery shows a shaft further west of the last group, in Hazleslade, at SK02061277 and located adjacent to Bentley Brook (see fig. 2 for location). The 1819–24 estate map shows this location as a 'colliery', possibly the Hazleslade Colliery operating in 1818 when operated by a Mr Turner and abandoned in 1824.²¹⁰

Further west again, Yates's 1775 *Map of Staffordshire* shows 'Coal Pits' south of Hednesford at a location which suggests that these must have penetrated the drift that covers the Coal Measures in that area.

On the other, Brereton, side of Beaudesert Park, shafts were sunk on the land belonging to the first Earl Talbot in the 1790s. Within the former Arblastar Hayes, owned by the Pagets since 1615, the Hayes shafts were sunk in about 1817.²¹¹ The closure of the mines in Beaudesert Park and the

202 Ibid. D. 603/M/1/33 and 34.

203 Molyneux, 'Cannock Chase and its Coal Mines', III (in his discussion of the 1743–1811 accounts).

204 SRO, D. 603/M/1/83; the agreement refers to an area of five acres, and there is an undated plan (D. 603/M/1/84) which shows five acres adjacent to 'R. Benton's Works' which must relate to this, but I have been unable to locate this on the modern map.

205 Ibid. D. 603/K/9/13. Undated, but it seems to be associated with the 1776 lease and agreement. This may well be the first steam engine in the area, as legal advice to Earl Talbot in 1791 implies there was no engine in the Brereton area by then, but it does also refer to an engine on the Uxbridge land (D. 240/E/C/1/20/34).

206 Ordnance Surveyors' Drawings Sheet 258.

207 Cockin, 'Ancient Industries'.

208 SRO, D. (W.) 1821/5 (map); D. 603/H/5/2 (key), the land parcel is no. 858.

209 Coal Authority Abandoned Mine Plan WM/822/3 (Heathen).

210 Flinn, *History of British Coal Industry*, 45; Molyneux, 'Cannock Chase and its Coal Mines', III. Any venture at this location would probably have fallen foul of the Hazleslade Fault.

211 Edwards, *Brereton Collieries*. Forty-four shafts in the Brereton area (mostly not shown here on figs 2, 3 and 11) are listed in an appendix to Yearsley, *Surveyor's Report*.

new ventures outside it are most probably connected with the return of the Earl of Uxbridge to Beaudesert after having lost his leg at Waterloo and his subsequent creation as the Marquess of Anglesey. Molyneux thought it was his concern for the impact on the landscape of the Park that ended mining there, and that may well have been the reason, although the shift to Brereton will also have been influenced by the presence of the Trent and Mersey canal.²¹²

(VII) DISCUSSION

Dating the features

Bringing together the physical and documentary evidence, two main points can be made at the outset. Firstly, taken as a whole, the documentary record tends to confirm a model of the development of the coalfield over the centuries, starting near the outcrop and spreading outwards across the exposed coalfield, until by the later 18th century the workings were hard against the overlying Triassic geology or the drift cover, as at Pleachley. There was also a general tendency for workings to get deeper over time, as one might expect. There is a risk, however, in wholeheartedly accepting the reasonable assumption that there was a steady progression from shallow workings to deep workings and that the date the workings can be inferred from their depth. Other factors are involved: the quality of the coal, the capital resources available, and the technical abilities of the miners.²¹³ Nevertheless, in broad terms mining started somewhere near the outcrop and got progressively deeper. Secondly, in the Cannock Chase coalfield 'free' drainage (i.e. drainage by gravity, through soughs) was possible even until the last shallow mines in Beaudesert Park were closed in the early years of the 19th century, and the late continuance of long-established mining techniques is arguably the most defining feature of Cannock Chase coal mining.

The earliest references to mining in the area occur in the 1298 survey of the diocesan bishop's newly acquired manors of Rugeley and Cannock, but these are highly unlikely to establish the date when mining actually started on the Chase. Subsequent medieval financial accounts, while interesting in their own right, offer little that could allow specific features to be dated precisely, although the reference to workings *subtus castrum* in the 1440s does pin the location down to somewhere on the slopes below Castle Ring (and thus probably somewhere on fig. 9).

For the latest date of mining in Beaudesert Park itself, there is the report by William Molyneux that it ended in 1816, and we have evidence as to where this might have been, because Cantrill noted that a group of shafts just south west of Castle Ring (fig. 9:g) were the last worked in the park.²¹⁴

At least, therefore, we can state with confidence that any features within Beaudesert Park will most probably date from between the end of the 13th century and 1816. But this relates only to the park, not the area beyond, and leaves a date range of over five hundred years; trying to be more specific than that presents a challenge.

One other possibility needs to be addressed before we move on, if only to be mostly dismissed. Some of the shallow features could be much more recent, possibly the result of excavation by striking miners in the 20th century. Although the Anglesey Estate was certain that there were no outcrop workings taking place in August 1926, three months into the 1926 strike (itself largely over by November), it did acknowledge that there had been extensive 'pickings' at Castle Ring during 'the last strike', presumably that of 1921: they may have been on the outcrops identified by Cantrill on the steep slope below Castle Ring.²¹⁵ But this earlier strike lasted only three months, and it is unlikely to have accounted for the creation of many features, and of course Molyneux, Cockin, and Cantrill all recognized the extensive complex of features in the area before those strikes had taken place.

It seems likely that a technical development of some significance took place at the start of the 17th century, and if recognizable in the archaeological record, it might help with dating the features. As we have seen, William Paget brought men from Leicestershire to Beaudesert in 1600, and there is reason to think that these men were capable of sinking shafts that were deeper than had been customary locally. Accounts suggest the local miners could reach depths up to something like 14 yards, whereas the Leicestershire men could reach thirty. There is a risk in assuming that by chance

212 Molyneux, 'Cannock Chase and its Coal Mines', IV. The various and excellent publications of the Cannock Chase Mining Historical Society cover the local mining history from the 19th century onwards in great detail.

213 Griffin reproduces a photograph of striking miners working a shallow shaft in 1912. Apart from the use of a bicycle wheel as winding gear the arrangement would have perfectly recognisable to an Elizabethan miner: Griffin, *Coalmining*, 149.

214 Molyneux, 'Cannock Chase and its Coal Mines', III; Cantrill, Staffs 51NE.

215 SRO, D. (W.) 1821/11; Barrow, *Geology around Lichfield*, 76.

a technological leap has been recorded in a fairly isolated set of accounts – it is possible that similar developments happened at an earlier date and were then forgotten. But as no more than a working hypothesis, it can be suggested that surface features representing shafts greater than around 15m deep are likely to be later in date than 1600. A similar development may have happened in another small coalfield: writing *c.* 1602 George Owen recorded that shafts in Pembrokeshire were ‘twelve, sixteen or twenty fathoms’ deep (*c.* 22–37m), where in ‘old time four fathoms’ (*c.* 7m) was ‘counted a great labour’, and a similar increase in depth may have taken place there, perhaps in the later 16th century.²¹⁶

There are two areas where the place name Stonepit Green suggests ironstone rather than coal mining, and it is possible to offer a date for when that ended. As discussed in part V, the use of the name for two separate locations might be the result of a 19th-century mapping error, but both areas have a distinctive and rather confused pattern of very small features. Ironstone was raised elsewhere in the study area, although features relating to that activity are probably indistinguishable from the shallowest coal workings, but if the workings in the two Stonepit Greens were for ironstone, they must be earlier than the end of the 16th century, when the historical evidence suggests that ironstone mining had ceased completely.

Some of the coal workings within and near Beaudesert Park can be dated with confidence. As seen in the discussion of the 1743–1811 accounts, there are contemporary references to the shafts at Pleachley in the 1740s, 50s, and 60s, something independently confirmed by Cantrill’s notes that the shafts there were in use in 1744. He reported that the shafts were about 20 yards deep, which is plausible. The thirteen or so shafts there are between 50 and 70m apart, with substantial mounds, and form the rough grid pattern which is seen across a much broader area of the western part of the park.

William Yates’s county map of 1775 indicates shafts in the western part of the park, and financial accounts from the 1770s refer to sinking in the Lawn in the same area, so it seems beyond doubt that some, if not all, of this pattern of 50–70m spaced shafts with big mounds on a rough grid represents 18th-century mining. Depths are variable, from the 20 yards (18m) suggested by Cantrill in Pleachley to the 49m-deep shafts suggested by the borehole evidence and apparently the deepest within Beaudesert Park where depth can be determined.

Bringing all the evidence together, we can be confident, within Beaudesert Park at least, that coal mining had begun by the 1290s and ended in 1816. Ironstone mining ceased towards the end of the 16th century. With coal mining features, it can be suggested that the majority of the close-spaced and apparently randomly-placed small shafts of less than an estimated 15m deep date from the 16th century or earlier, whilst by the middle of the 18th century, as in the western part of the park (figs 7 and 8), coal mining was characterised by shafts arranged in an approximate grid and separated by 50–70m, with depths up to 50m but potentially much less.

This division into close- and wider-spaced shaft mining corresponds with that defined by John Barnatt for coal mining in the Peak District. But on the Chase there may have been an earlier intermediate type of arrangement of wider-spaced shafts, with depths up to around 30m and shafts arranged in parallel rows or a rough grid and a separation of around 30–40m, like those discussed in part V and seen in Brereton Hayes (fig. 4: a), in the central Park (fig. 9: b), and in New Hayes (fig. 10: a). The development of this type of early wider-spaced shaft mining could be associated with the employment in 1600 of the Leicestershire men, who were apparently able to get deeper than the local miners, and the key difference between early and later wider-spaced mining is in the spacing of the shafts, which tend to be in the range 50–70m in the later type.

The three patterns of features and their date ranges can be summarised as follows:

Close-spaced shaft mining: shafts less than about 15m above the seam and arranged in an apparently random fashion dating from anywhere between the 13th century and about 1600.

Early wider-spaced shaft mining: shafts arranged in well-defined grid or rows, separated by about 30–40m, with some or all deeper than 15m, probably later than about 1600.

Later wider-spaced shaft mining: shafts separated by 50–70m in an approximate grid, but with variable depths up to 50m, and probably 18th to early 19th century.

216 G. Owen, *The Description of Pembrokeshire* (Gomer Press, 1994), 92.

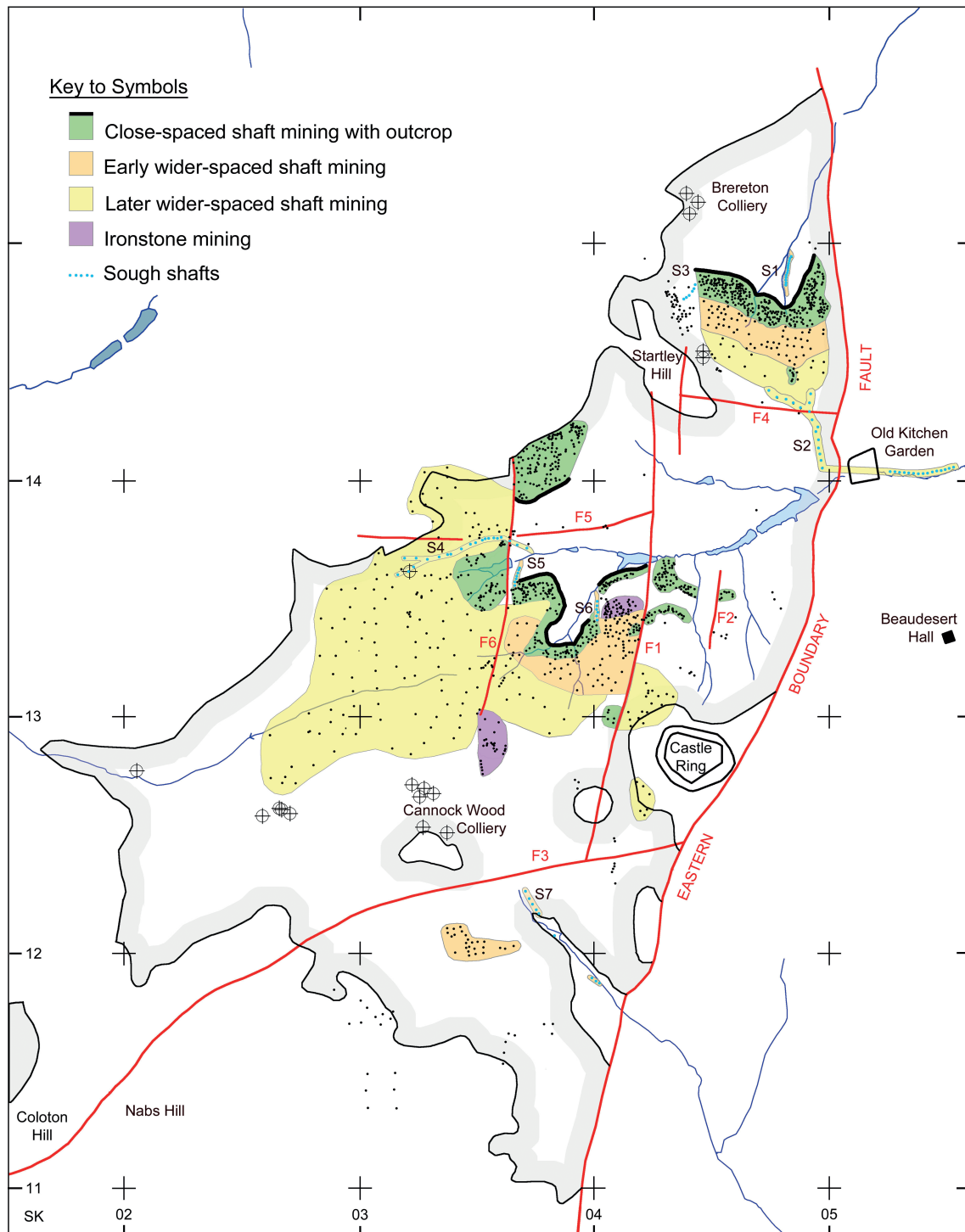


Fig. 11 Hypothetical classification of the pattern of features. Geological information by permission of the British Geological Survey (see text for sources). Location of shafts recorded on abandoned mine plans by permission of the Coal Authority 2020. All rights reserved.

Exactly when early wider-spaced shaft mining gave way to the later variety (assuming there was a straightforward transition) is unknown. As already discussed, the type of mining introduced around 1600 may have given rise to the early wider-spaced shafts, and some of the later ones can be fairly confidently dated to the mid 18th century; the transition must therefore have occurred between those two dates, in the 17th or early 18th century.

Figure 11 represents an attempt to define these three types of arrangement on the ground, together with the approximate inferred position of outcrops and the two areas which might be related to

ironstone mining. The division between the early and later wider-spaced mining is somewhat arbitrary, and the lines could probably have been drawn in different locations. But the division between close-spaced and both early and later wider-spaced shaft mining is more reliable, and probably reflects a significant difference in the approach to working underground. In fig. 11 also the sough shafts (coloured blue) have been given a shaded background to indicate the areas of extraction to which they are thought to relate. (Some shafts do not lie within any shaded areas because they cannot be classified with any confidence).

In terms of mining depth, the maximum, at least within the Beaudesert Park area, seems to have been about 50m. Depth may also be a defining factor in the transition from close-spaced to wider-spaced shaft mining; the introduction of new techniques by Leicestershire miners around 1600 apparently allowed mining below 15m or so and thus the development of the early wider-spaced shaft mining. But having got past that limiting depth, depths could be quite variable. The deepest workings (up to 50m) are indeed found in the area of the later wider-spaced shafts, but the ones in Pleachley that can be closely dated to the 1740s, 50s, and 60s are only about 20 yards (18m) deep.

In contrast to the shafts, more confidence can be put on the date range for some of the soughs. The physical evidence for soughs S1, S2, and S3 in Arblaster (Brereton) Hayes was described in part V, and the documentary reference to a 'new' sough there in 1641 in part VI. This reference offers the possibility that one of these three soughs was this 'new' sough and so can be dated quite closely, so it is worth pursuing in detail.

Two alternative and different possibilities need to be considered first. One is that the 1641 sough was somewhere else in Arblaster (Brereton) Hayes, and subsequently lost beneath the later workings of Brereton Colliery or any of the other mines in that area. Arblaster (Brereton) Hayes covers a large area, with the mining features seen on fig. 4 occupying only the southern part. The Old Park seam obviously was not worked north of its outcrop, and the next seam down in the sequence is the Heathen. Is the recorded sough related to that seam? The Heathen was encountered in the sinking of the shafts at Brereton Colliery as goaf (i.e. a previously worked area), and so must have been worked before those shafts were sunk. But the goaf was at a height of around 107m AOD, whilst further north, the same seam was encountered in the Old Engine Pit at about 103m AOD. Any attempt to drain the Heathen would therefore require a sough draining it at something around the 100m contour, which would be almost in Brereton; this would have been difficult, even more so given that Paget did not own that land, and so the possibility can be rejected.²¹⁷

The other possibility is that the 1641 sough has no surface manifestation. This seems unlikely, as discussed above in connection with the 1573–85 works, but it cannot be discounted. And with three reasonable candidates before us in the form of S1, S2, and S3, there seems no reason to postulate a fourth sough for which we have no physical evidence.

Working then with the hypothesis that one of the three soughs marked in fig. 4 was the one referred to in 1641 as having been started, which one was it? We cannot tell if being called a 'new' sough means that it replaced an old one – it could simply be the first one in that area. But as we know there had been mining there since the 16th century, it seems unlikely the 1641 reference is indeed to a first sough. Of the three soughs identified in this area, S1 and S3 both drain northwards through Arblaster (Brereton) Hayes, but S2 drains south towards the Shropshire Brook and is likely to be later than S1 and S3, if only for the fact that being longer it required considerably greater effort to construct.

The switch from draining northwards (the direction of S1 and S3) to going south (the direction of S2) could be explained by the acquisition of Arblaster (Brereton) Hayes by William Paget in 1615, because (unlike the previous owners) Paget was then in a position to take a sough down to the Shropshire Brook through his own land.²¹⁸ Any sough going in that direction would have to date from later than 1615. A reasonable hypothesis, therefore, is that S1 and S3 date from before 1615 and were later replaced by S2, and that S2 is the most likely candidate for the sough referred to in 1641.

The difference between soughs S1 and S2 has been discussed above in part V in the description of the features in Brereton Hayes, but it is worth noting again. Because it is later, S2 is likely to have drained an area of deeper coal than sough S1, and the area it served is suggested on fig. 11,

217 See shaft sections in Barrow, *Geology around Lichfield*, 229–31. The Heathen is tentatively identified with the Brereton Second coal in Mitchell, *Geology of Northern Part of South Staffordshire Coalfield*, 7, but even if the identification is incorrect, it does not alter the argument. An eighteenth century proposal to drain Lord Uxbridge's mines this way was never carried out (SRO, D. 240/E/C/1/20/34).

218 The Pagets may also have wanted to avoid their mine water running down into the disputed manor of Brereton.

based on predicted depths of the Old Park seam. But the tail heights of S1 and S2 are almost the same, so the longer and later sough S2 must have had less of a fall along its whole length than S1. This might be a reflection of an improvement in the accuracy of levelling techniques between the dates of the two soughs.

Sough S4 in Beaudesert Park can be dated with a little more confidence. We have seen that there was a 'Pleachley-sough' by 1748, and that the Pleachley shafts were in use in the 1740s, 50s, and 60s. S4 was certainly well-placed to drain that area, and in the absence of any other physical evidence for a sough serving that purpose, it is reasonable to suggest S4 began life as this 'Pleachley-sough'. But if it was subsequently extended to drain a significant part of the later wider-spaced mining west of fault F6 and south of the sough, then most of that mining must date from the 1740s or later, exactly as the documentary and cartographic sources indicate. There is no obvious sign of any other soughs draining this area, and drainage would be essential. The coal seams over much of the area west of fault F6 are almost flat, which is why the mining there extended over such a large area, but exactly how the drainage was achieved remains unclear, and as already suggested it may be that pumping played a complementary role. Whatever the case, it seems likely that sough S4 dates from the 1740s and may have played a significant role in draining the western part of Beaudesert Park.

Soughs S5 and S6 are related to the areas of early wider-spaced mining, which is apparently confined to the area between faults F1 and F6. They seem deliberately to avoid areas of close-spaced shafts, and S6 could be aimed at a specific group of early wider-spaced shafts seen in fig. 9:b. The spacing and depth of that group is very close to the description given for the Wilkins and Rice mine in 1600, and a sough dug from the deepest part of the group would be nearly exactly 480 yards (420m) long, as recorded in 1600. The evidence cannot be pushed much further than that an early 17th-century date would be possible.

Sough S7 can be dated with greater confidence. It seems likely that it was the 'Great Sowghe' referred to in 1641, when being extended and branches were being taken off it.²¹⁹ It was too shallow to drain the Old Park seam north of fault F3, and its connection, if there was one, with the workings to the west (fig. 10:a) is unclear, and it cannot be used to reliably date them, but it was deep enough to drain them.

All of the above can be no more than a working hypothesis, and it does leave questions. Why, for example, is the early wider-spaced mining confined to the east of fault F6 (which is not a major fault). When did the early wider-spaced shafts give way to the later ones? Given that Hatcher identifies a significant increase in output in the 17th century,²²⁰ is there a connection?

Underground Working

An obvious feature of mining is that a significant part of the activity took place underground, and has left no direct trace on the surface. Accordingly, it would be hazardous to place too much reliance on surface features to explain how the coal and ironstone were actually worked underground, but some observations can be made.

Firstly, in relation to coal mining, the term 'bellpit' should probably be rejected. It may have originated with Robert Galloway, who described 'bell-' or 'bee-hive' pits. The description given in most secondary sources is that either a gradually widening shaft was dug so that an area of the seam could be extracted once it was found, or that the seam was excavated and much of the overburden directly above removed at the same time. The result of either method would have been an excavation that resembled a bell in section. It is usually claimed that excavation continued until the point at which the miners knew from experience that the limit had been reached. Beyond that limit the lack of support meant that the whole pit would cave in. This must rest on the premise that some miners experimented beyond that limit. But they would then have been unlikely to have been in a position to benefit from that experience, or to share it with anyone else. This would also be entirely contrary to later mining practice where the seam was generally left intact around the shaft, precisely because that was the only exit from the mine.²²¹ It also would have involved the removal of tons of profitless overburden out of the mine, something that miners of all periods have avoided where they can.²²²

²¹⁹ Above, pp. 110–111.

²²⁰ Above, p. 113.

²²¹ Cantrill, *Coal Mining*, 86.

²²² The Wimblebury cannel mounds are a later exception that proves the rule. The cannel coal dug there was in a narrow seam and tons of overburden had to be removed, which gave rise to the mounds: Cockin, 'Ancient Industries', 140. See Rieuwerts with Barnatt, 'Coal Mining', 2, for a discussion of bellpits.

As Galloway himself noted, no contemporary records exist of any extraction of coal by this method, and it is noticeable that almost all the examples to which he referred related to ironstone mining.²²³ Ironstone occurs in beds that are typically much thinner than coal seams, and some removal of overburden would be necessary to physically get at it, and so some form of 'bellpit' might have been necessary. But for coal there was usually a lower limit of seam thickness below which it was not practical to extract, and depending on the quality of the 'roof' it might have been necessary to leave some coal in to provide support.²²⁴ (It would be a worthwhile exercise to attempt to determine which Cannock Chase shafts were excavated for ironstone, perhaps through an archaeological test pit or trench in the surrounding spoil heap, in order to determine whether there is a discernible pattern which differs from that of coal shafts.)

Although they are the most numerous on the Chase, it is the shallowest close-spaced shafts that present the most difficult problems of interpretation. A key question is whether these shallow shafts were connected to each other underground. Where there is drainage by a sough, the shafts would have to be connected by the extension of the sough through the coal at the lowest level of the workings. It is very likely that the shafts described in the 1573–85 accounts, for example, were connected in that way. But shafts might not need to be connected if some other form of drainage was used, or if it was not needed at all (although it is hard to see why that might have been). In the Forest of Dean, for example, there was a legal requirement that no miner could sink a 'water pit' closer than twelve yards to another's, and the context of the many discussions about this makes it clear that a single shaft is envisaged by the term 'water pit'. The degree to which this might be peculiar to the Forest (as with so much else in mining there) is unknown.²²⁵ There is extensive evidence from the mid 14th century onwards that soughs were used elsewhere in England, either in the form of open ditches or tunnels, and they were evidently often a necessity in coal mining from the earliest days.²²⁶ And for the sough to work, all of the workings would have to be connected to it underground, and some form of connection between shafts would have been necessary to achieve this.

Both the early and later wider-spaced shaft mining on Cannock Chase definitely involved underground connections. The critical challenge was to find the lowest point in the seam from which water could be extracted, either up a shaft or along a sough. From that point, an approximately level heading could be driven through the coal itself, and shafts sunk down to that heading as necessary. Where a sough was used, the heading was in effect an extension of the sough, but driven through the coal. From that heading the miners worked updip, as far as they could before they ran into earlier, shallower workings. As the miners took out the coal updip, they might sink shallower shafts for ventilation or extraction and these could be considerably shallower than those along the lowest level heading, which is one reason why simple depth is an unreliable guide. Water trickling into the works down shafts and from feeders would run down to the lowest-level heading. The rows of shafts seen at 'a' on fig. 4 may well have been the result of this process.

The extensive pattern of the later wider-spaced mining in the western part of Beaudesert Park and west of fault F6 is harder to interpret in detail. The coal there is relatively flat rather than dipping and some of the shafts seem to run in approximate north–south, slightly curving lines for over 500m, which suggests some form of primary heading was involved, and the direction of the lines might have been governed by the 'cleat' of the coal (i.e. the way in which it naturally breaks). Some form of pillar-and-stall extraction was presumably involved, but this must be supposition – neither the documentary nor the visible archaeological record offer evidence for exactly how the coal was won underground.

This almost complete lack of information about underground activity is a result of the actual organisation of labour. The documentary record offers details of the depth of shafts and lengths of soughs, and how much they cost and who dug them. But once past the development stage, the only information normally recorded is how much coal was produced and what it was sold for. The key man was the banksman, who accounted for the coal dug and sold, and through most of the study period the individual shafts are identified by the banksman concerned. Who organised the work underground, who decided what coal to dig and what to leave as pillars (assuming it was pillar-and-stall extraction) is undocumented. The miners generally worked in small teams – typically in the

223 R. Galloway, *Annals of Coal Mining and the Coal Trade*, vol. 1 (1898), 32–4.

224 Flinn, *History of British Coal Industry*, 93; Plot, *Staffs*, 148.

225 C. Hart, *The Free Miners of the Royal Forest of Dean and St. Briavels* (Lightmoor, 2002), 256. See Rieuwerts with Barnatt, 'Coal Mining', 3–4, for a discussion of connecting shafts.

226 Galloway, *Annals*, 42, 56.

16th century the banksman with three other men, and as the same small number of surnames crop up repeatedly over time, it seems to have been a family-based workforce. This is an area where further research would undoubtedly be fruitful, particularly where named miners could be matched against other records.

Drainage

It has been noted that the depths of shafts do not increase with time in a simple linear fashion, and there must be some other factors at work, of which the key one is likely to have been water. Were it not for water, 'J.C.' wrote in 1708, a colliery 'might be termed a Golden Mine to Purpose'.²²⁷ In coalfields where the topography permitted, the principal weapon against the water was the sough or level, and the area it drained determined the area that could be mined: as a Forest of Dean miner told the 1831 Dean Forest Commission, 'The level always has the command of the mine'; it was the 'mother' of the mine.²²⁸

Drainage was a key issue on the Chase, and the soughs, and particularly their date, are critical in understanding how the technology developed. Even the close-spaced shaft mining will have required some form of drainage, and *le niewtrench* of 1443–4 is an indication of one form that it might have taken.²²⁹ Even later, the 1589 lease to Gilbert Wakeringe referred to ditches called 'Le Sowghes', so open ditches may well have been used alongside adits even at that date.²³⁰

As already noted, there are several locations where soughs have left a clear archaeological trace. Digging soughs in the Cannock Chase coalfield involved nothing like the epic timescales of Derbyshire lead mining, where soughs through hard rock could have taken up to a century to complete.²³¹ Through the clays and shales of the coal measures they seem to have reached the coal within a few months, but they still represented significant engineering works. And it is hard to imagine the effort involved in digging a tunnel only a few feet high for hundreds of yards through hard, wet clay and shale, in a claustrophobic environment lit only by a candle. Once the sough reached the coal it would be extended by a heading through the seam, which (in theory) could continue as far as the coal continued.

We have seen that the Cannock Chase soughs are identifiable in the section before the coal was reached by the lines of features above them identifying where shafts had been sunk to the sough. George Sinclair stated that the shafts were only for the purpose of ventilating the sough,²³² but given that the shafts relating to sough S5, for example, are only 12m apart, they must have had some other purpose, probably relating to the extraction of spoil. There is a very great variability in the distance between sough shafts. A 17th-century colliery in Lancashire had shafts over 100 yards apart along its sough, and a colliery in Nottinghamshire had sough shafts every 40 yards in 1660.²³³

Sough shafts on Cannock Chase do not all run in a straight line, and Sinclair gave a clue as to why this might be: the shafts were not sunk directly above the line of the sough itself, because anything falling down them would fall into the sough.²³⁴ The miners would therefore have had a choice as to which side of the sough they wanted to sink the shaft, and in Beaudesert Park that could easily have been dictated by the presence of substantial trees or some other obstacle, meaning that an apparently irregular line of shafts might well sit over a fairly straight sough.

Sinclair also wrote that soughs were driven level, whilst according to George Agricola (who probably had the greater experience of mines) they should have a fall of about 1:100. Sinclair said that the best way of ensuring they were level was by the presence of standing water throughout (although this cannot have made their excavation any more pleasant than it already was).²³⁵ Whether there was a fall or not, the soughs evidently quickly clogged up with sludge or debris, and it is not surprising that payments were regularly made for 'scouring' or 'cleansing' them.

Perhaps the most notable aspect of soughs is the accuracy in levelling required to make them function effectively. Where the seams do not dip significantly, and where suitably low drainage

227 'J.C.', *The Compleat Collier*, 24.

228 Hart, *Free Miners*, 302.

229 Above, page XX.

230 Jeayes (ed.), 'Calendar of Longdon, Lichfield ...Charters', 112 (no. 1744); Hatcher, *History of British Coal Industry*, 212–13.

231 J. H. Rieuwerts, *History and Gazetteer of the Lead Mine Soughs of Derbyshire* (1987), p. ix.

232 Sinclair, *Hydrostaticks*, 302.

233 Hatcher, *History of British Coal Industry*, 215; R. S. Smith, *Early Coal-Mining Around Nottingham, 1500–1650* (1989), 55.

234 Sinclair, *Hydrostaticks*, 302.

235 Ibid. 298–99; G. Agricola, *De Re Metallica*, 133; see also Nef, *British Coal Industry*, I, 357.

locations are not readily available, only a small error in levelling could leave large areas of coal unworkable. The apparent improvement in levelling between soughs S1 and S2 has been noted above.

Power

As noted above in 1743–1811 period, steam power does not seem to have been utilized in the area until the 1770s at the earliest. In other coalfields waterwheels were occasionally used from the 16th century onwards (if not before) to power pumping and winding equipment installed both underground and at the surface, but no documentary or physical evidence has been found for them on Cannock Chase. A much more common alternative to water power was horse power, but there are no references to horses on the Chase for drainage, winding, or any other purpose other than in transporting the coal; and in the 1690s Celia Fiennes related that winding was done by human muscle.²³⁶ Although various types of horse-driven machinery were available for both winding and drawing water through most of the period considered here, horses were expensive to buy and to feed and the Pagets evidently saw no reason to invest in them.²³⁷

Coal Quality

The quality of coal evidently mattered. As discussed in part IV, the coal mined south of fault F3 was probably from the Bottom Robins seam (usually referred to as the Old Men's Coal). Sold for less than the Old Park coal in the 17th century, it was probably mined at Riley's Mine, where it was known as Duffer's Coal, possibly a comment on its quality. Like most coal seams, the Old Park seam itself had different 'leaves' of different qualities, although there is no evidence that they were sold separately.

The Cannock Chase coalfield was well known for its cannel coal, although this was never a significant part of the actual output in terms of tonnage at any period. It seems to have been a curiosity, and valued because it gave out light as well as heat, and both Plot and Fiennes mention it. Plot's statement that it was excavated at depths of 20, 30, or 40 fathoms is puzzling, and it is very difficult to locate precisely where it was excavated. Accounts from 1595, 1612, and 1623–24 all locate the cannel as coming from Cannock Wood, rather than Beaudesert Park, but both Plot (visiting in 1679–80) and Fiennes (1697) are quite clear that the cannel mines in their time were in the Park.

Cannel coal was dug until 1874 from the Cannel Pits (or No. 6 Plant), near Wimblebury, and their spoil tips survive today. The seams in that area dip north-west and it is likely that earlier workings dug the cannel to the south-east between the Cannel Pits and the outcrop – Cantrill notes a shaft 23 feet deep in that area.²³⁸ This area is a reasonable candidate for the late 16th- and early 17th-century references to cannel extraction, but we cannot be certain.

The location of cannel mines in the Park is harder to explain, as Plot and Fiennes cannot both be ignored, but one possibility is that areas of the Old Park seam itself were actually cannel. Cannel coals are different to humic coals: they do not necessarily extend as far as other coal seams, and they can even occupy hollows in the surface of an extensive coal seam.²³⁹ In a borehole on the Longdon side of the coalfield, the Old Park coal itself was a cannel,²⁴⁰ and in 1798 Stebbing Shaw suggested that the upper part of the seam near Beaudesert, presumably the Old Park, was cannel.²⁴¹ The cannel dug at Wimblebury is thought to have occurred at a position within the sequence too high for it to have occurred anywhere within Beaudesert Park, with the possible exception of the area between faults F1 and F2, where the real throws are unknown.²⁴²

As a final possibility, the Cannock Wood Colliery section recorded a cannel coal a few metres below the Old Park seam, but describes it as being only four inches thick.²⁴³

Timber

One component of the industry that requires attention is the use of timber for props and lining shafts. Sawing and transporting timber was an expense at all periods, and one of the accusations levelled at the mine bailiff William Hankin in 1585 was that he had wasted timber, at a time when the local

236 She said the same of the pits near Chesterfield: Morris, *Journeys of Celia Fiennes*, 103.

237 Hatcher, *History of British Coal Industry*, 218–33.

238 Barrow, *Geology around Lichfield*, 80; Cockin, 'Ancient Industries', 140.

239 Trueman, *Coalfields of Great Britain*, 4.

240 Stevenson and Mitchell, *Geology of Country between Burton upon Trent, Rugeley and Uttoxeter*, 15.

241 Stebbing Shaw, *The History and Antiquities of Staffordshire*, I (1798), 222.

242 Stevenson and Mitchell, *Geology of Country between Burton upon Trent, Rugeley and Uttoxeter*, 16.

243 Barrow, *Geology around Lichfield*, 235.

iron industry had stripped around 19,000 trees from Teddesley Hay alone over the previous seven years.²⁴⁴ Timber decays rapidly in the conditions in mines, and the 1715 lease referred to some timber being 'old', presumably meaning that it was decaying.²⁴⁵ Given that it is generally accepted that the Chase was largely denuded of woodland in the late 16th century, it is surprising that it was still able to supply sufficient timber for the mines into the 18th century. Any debate about the balance between wood and coal as fuel needs to take into account the fact that coal mining itself used a large amount of timber.

Location and survival

Looking at fig. 2, it is striking how much of the exposed coalfield lies within the three early large enclosures, taken out of the largely unenclosed medieval Cannock Chase. Beaudesert Park covers around half of the area, and Arblaster (Brereton) Hayes and New Hayes add significantly to that. It is also noticeable that the main concentration of mining features lie within these enclosures, although it needs repeating that much of the southern part of the coalfield lies outside the Cannock Chase Area of Outstanding Natural Beauty and has been subject to development and agriculture which might have removed any surface remains. That said, it seems that workings were initially restricted to areas which were enclosed. The 1589 lease to Gilbert Wakeringe specifically refers to mines in 'Newheye' and 'Redmore',²⁴⁶ but the 1688 lease to William Porter refers quite unambiguously to coal works in unenclosed parts of Cannock Wood.²⁴⁷

The creation of Beaudesert Park in the late 13th century was most probably the result of episcopal love of hunting, but the potential of industrial development may also have been a factor. Arblaster (Brereton) Hayes and New Hayes were two of several probably late medieval enclosures around the edge of the Chase, and their location may be unrelated to mining. But the practical reason for the concentration of early workings in enclosed areas may be that there was less of a risk either to people or their stock falling down abandoned shafts (or at least less liability), because they were not areas of land where the locals enjoyed common grazing rights. Possibly there were legal issues as well, and David Brown has shown how the need to endorse mining rights was a key motive in enclosing on Cannock Chase in the period of parliamentary enclosure.²⁴⁸ Another possible reason might be connected with theft of coal, either by the miners themselves or other locals, as confining extraction to enclosures would allow the transport of minerals to be controlled. In the 1560s the gates to Beaudesert Park had locks on them:²⁴⁹ a poacher might be able to get in and out, but it would have been difficult to take a train of loaded horses unnoticed.

The survival of so many features in Beaudesert and Arblaster (Brereton) Hayes is fortunate. Nineteenth-century writers commented on the profusion of old workings there, and so the pattern of survival is possibly not simply dictated by 20th-century land use. On the other hand, it is very clear that subsequent mining from the second half of the 19th century, and particularly during the 20th century, has obliterated large areas of surface features, and this may be why well-preserved mining landscapes can be found in smaller coalfields (such as the Clee Hills in Shropshire), where there was no major extraction into the 20th century.

Evidence for markets

Although the main purpose of this article has been to examine the date and technology involved in the features seen in the Cannock Chase coalfield, there is also some good archaeological evidence for transport of coal to market, which is worth considering.

244 Welch, 'Elizabethan Ironmaking', 46.

245 Cantrill, *Coal Mining*, 90; SRO, D. 603/E/5/7.

246 Jeayes (ed.), 'Calendar of Longdon, Lichfield ... Charters', 112 (no. 1744). The boundaries of the four enclosures on fig. 2 are conjectured mainly from the 1819–24 estate map. The southern boundary of Arblaster (Brereton) Hayes appears to be shown on SRO, D. 603/H/3/13. In 1554 the *Stere Clyffe*, assumed to be Startley Hill, was outside Beaudesert Park but adjoined it, but by 1763 it was within it: SRO, D. (W.) 1734/2/3/43 (1554) and D. 603/N/5/2 (1763) – the earlier position is indicated on fig. 2. *Le Newehey* and *Le Redmor* are mentioned in 1348, and Red Moor is associated with the briefly existing Cistercian abbey whose monks found Cannock Chase an uncongenial environment even by Cistercian standards, and who retired subsequently to the more hospitable environs of Stoneleigh in Warwickshire: Jeayes (ed.), 'Calendar of Marquis of Anglesey's Charters', 76; D. Knowles and R. N. Hadcock, *Medieval Religious Houses England and Wales* (1996), 124.

247 SRO, D. 603/E/5/4.

248 D. Brown, 'The Variety of Motives for Parliamentary Enclosure: the Example of the Cannock Chase Area, 1773–1887', *Midland History*, 19 (1994), 105–27.

249 SRO, D. (W.) 1734/3/3/246.

At first glance, the prospect for selling coal from the Chase to urban markets looks very unpromising, as the pre-19th-century population of Staffordshire generally is considered to have been sparser than for many other English counties. Moreover, the Shropshire, North Staffordshire, Leicestershire, and Warwickshire coalfields surround the Cannock Chase coalfield on the west, north, and east, and any market south of the Bentley Faults would have been abundantly served by the southern part of the South Staffordshire coalfield. The navigable sections of the Severn and Trent were many miles away, and Tamworth and Burton-upon-Trent were nearer to coalfields outside Staffordshire. The urban market for Cannock Chase coal can be identified with considerable confidence as being principally Stafford, about 15km north-west of Beaudesert Park, and Lichfield, around 8km to the south-east.²⁵⁰ To that might be added the large local villages of Cannock, Rugeley, and Penkridge.

Although accounts exist for Beaudesert in the period 1577–85, it is not clear if there were also ones (now missing) for Cannock Wood, and the figures might not represent the total output of the coalfield. But in 1612 the total output sold for Cannock Wood and Beaudesert together was 4,224 dozens. A dozen probably means a dozen horseloads, and a horseload would be about two hundredweight, so a dozen would weigh about 1.2 tons.²⁵¹ So the output at that time would be about 5,000 tons.

An approximate estimate of the demand for coal for domestic use (for cooking and heating) can be made. In the decade 1611–20 the population of Stafford has been calculated to be about 1,550;²⁵² and Lichfield, which had probably overtaken Stafford in size in the medieval period, had about 2,000 inhabitants in 1564, and a century later perhaps 2,500, roughly giving about 2,200 for the 1611–20 decade.²⁵³ The combined figures give a total population of around 3,700 in the two main towns. Wrigley suggests that domestic consumption of coal would have been about 0.31 tons per head nationally in 1700,²⁵⁴ and even if this level of consumption had been reached in the 1611–20 decade in the Cannock Chase area, it would suggest a total domestic consumption of perhaps only 1,200 tons, compared to the total output calculated above at around 5,000 tons.

The Cannock Chase coalfield was therefore producing a lot more coal than Lichfield and Stafford together might be expected to consume. It is unlikely that Rugeley, Cannock, and Penkridge, in size little more than large villages, and other smaller settlements, would have provided demand for the ‘missing’ domestic consumption.

At the other end of the century, Stafford was calculated to have a population of 1,836 in the decade 1691–1700, and Gregory King’s calculation for Lichfield was just over 3,000.²⁵⁵ As Hatcher’s calculation for the period 1697–1700 suggests average annual sales of 9,900 tons,²⁵⁶ and using the same figure for consumption per head (0.31 tons in 1700), this would mean a domestic consumption of 1,500 tons. However, the average suggested by Wrigley (0.31 tons per head) is a national average, whereas locally the amount of coal used domestically is likely to have been higher, given the proximity of the coalfield (Celia Fiennes commented that it was used exclusively in 1698). Using instead the consumption levels of 1850, when coal was almost the universal fuel for cooking and heating, it is suggested that 0.65 tons per head was consumed domestically. But even at this Victorian level a maximum of 3,100 tons would have been consumed in Stafford and Lichfield in around 1700, nowhere near the output of 9,900 tons.²⁵⁷

Nationally, Flinn suggests that domestic consumption was around half of all consumption in 1700, so the Cannock Chase coalfield seems to have had a much higher proportion of non-domestic consumption than the national average.²⁵⁸ Given the constraints arising from the lack of transport opportunities by water, and the presence of surrounding coalfields, it is fairly certain that significant demand arose from local industries.

250 A ‘Colyers Pleck’ is shown in a map of 1638 near the former Lichfield Greyfriars: T. Harwood, *The History and Antiquities of the Church and City of Lichfield* (1806), 484.

251 Hatcher, *History of British Coal Industry*, table 10.A.6; Nef, *British Coal Industry*, II, Appendix C, 372. SRO, D. 603/M/1/85 gives a table of equivalent weights used in the later 18th century in the Cannock Chase coalfield, with a horseload as two hundredweight, and a dozen as a dozen horseloads. In the 1580s, 16 horseloads equalled a wayneload (TNA, E 101/632/15), but whether the Elizabethan horseload is the same as the Georgian one cannot be known.

252 K. R. Adey, ‘Seventeenth-century Stafford: a County Town in Decline’, *Midland History* 2/3 (1974), 156.

253 C. J. Harrison, ‘Lichfield from the Reformation to the Civil War’, *Transactions of South Staffordshire Archaeological and Historical Society*, XXII (1982), 125–6.

254 E. A. Wrigley, *The Path to Sustained Growth* (2016), 179.

255 Adey, ‘Seventeenth-century Stafford’; A. J. Kettle (ed.), ‘Gregory King’s census of Lichfield, 1695’, in A. J. Kettle (ed.), *Early Modern Stafford and Lichfield* (Staffordshire Record Society, *Collections for a History of Staffordshire*, 4th series, XXVI, 2018), 133–228 (at p. 139).

256 Hatcher, *History of British Coal Industry*, table 10.A.6, 358.

257 Wrigley, *Path to Sustained Growth*.

258 Flinn, *History of British Coal Industry*, 252–53.



Fig. 12 Coalways near Haywood Warren

There continues to be debate on the question of whether there was a national fuel crisis in the 16th century. But there is reason to think that there was a local wood shortage and this may have been a factor in William Paget's decision to invest in coal mining rather than charcoal-fired iron making. Already in the 1540s Leland noted that wood had become an expensive commodity within living memory in Lichfield.²⁵⁹ From the 1560s onwards the woodlands of Cannock Chase were used to fuel the blast furnace iron industry, and largely through mismanagement they were considerably reduced. In 1624 Paget was advised that 'woode is worne almoste out of the Countey', and in 1686 Plot noted that the woods of Cannock Chase were 'most destroyed'.²⁶⁰

One potentially significant component of non-domestic consumption of Cannock Chase coal might have been the salt industry in the Trent Valley around Weston, thought to have started in the 17th century.²⁶¹ The evidence for this trade in coal lies in the archaeological and documentary evidence for packhorse traffic in that direction from the coalfield.

The lidar survey has identified numerous hollow-ways on the steeper slopes of that part of the Chase where the underlying geology is formed of the easily eroded 'Bunter Pebble Beds' (Cannock Chase Formation). Taking the form of deep and narrow erosion scars, often running in parallel (fig. 12), they are likely to be the result of the passage of heavily-loaded packhorses and their location alone suggests they were related to the transport of coal. Probably because they are confined to the Pebble Bed geology, which mostly lies north and west of the coalfield, they are not seen in the south-east direction towards the known market in Lichfield.

Figure 13 is an attempt to put the available evidence on a single map.²⁶² There seem to be five main routes, **Route 1** probably being the simplest to identify. It presumably left Beaudesert Park by the easiest route down the Bentley Brook valley and then climbed up to Pye Green. A survey of the woodland of Cannock Chase carried out in 1554 recorded that a 'coleway' divided woods known as the Great and South Borneley, and also Rugeley bailiwick from Trumwyn's, so it probably

²⁵⁹ J. Chandler, *John Leland's Itinerary*, 440.

²⁶⁰ Welch, 'Elizabethan Ironmaking'; SRO, D. (W.) 1734/3/4/170; Plot, *Staffs.* 38.

²⁶¹ A. J. Kettle, 'Salt', in *VCH Staffs.* II, 247.

²⁶² The following description contains a number of place names that will be familiar only to a reader fairly well acquainted with Cannock Chase, but they are identifiable on modern 1:25000 scale Ordnance Survey maps.

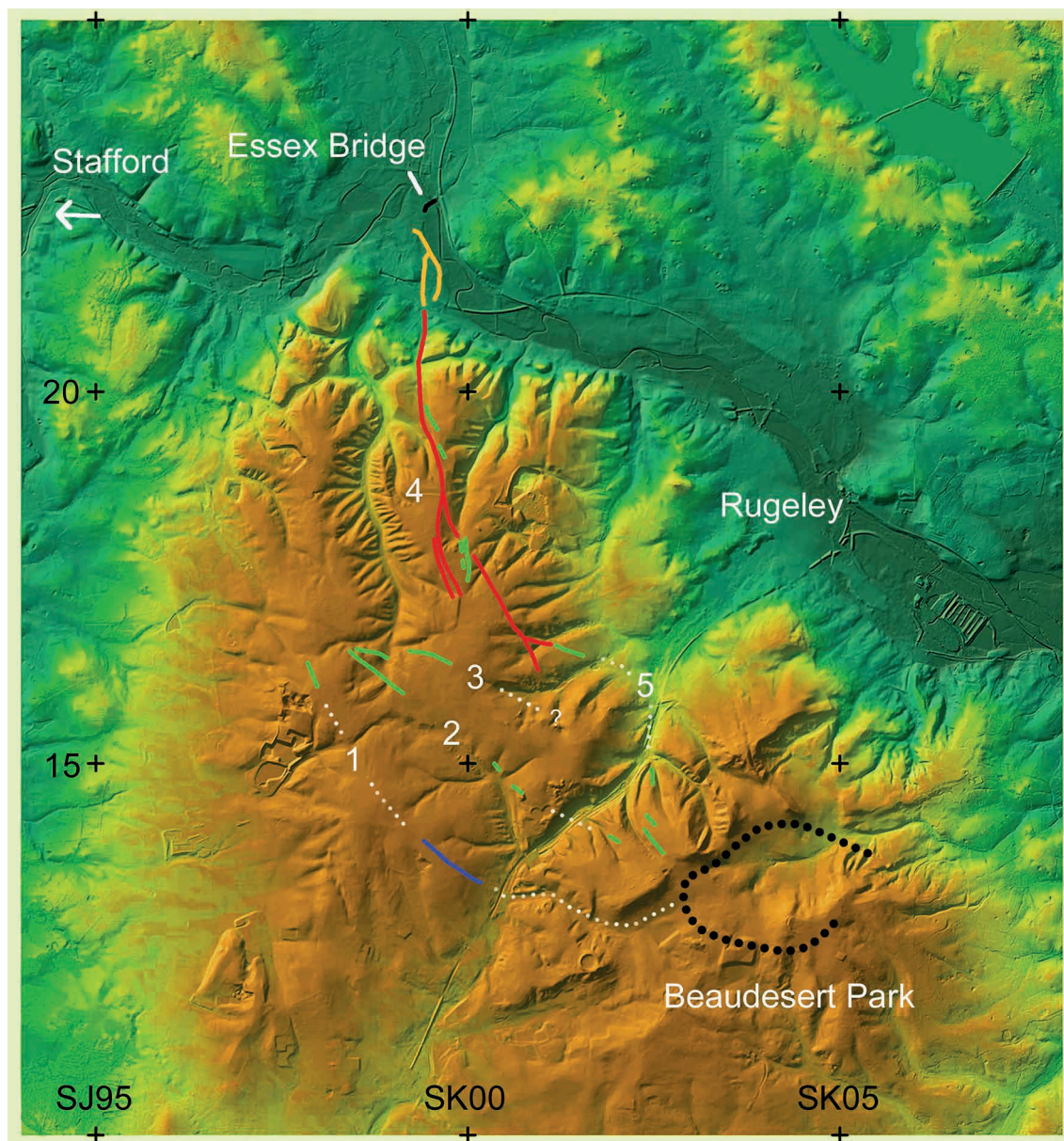


Fig. 13 Coalways on Cannock Chase. Blue = 'coleway' in survey of 1554 (SRO, D. (W.)1734/2/3/43); green = routeway identified in *Chase Through Time* Lidar survey; red = 'Old Coal Road' on estate map of 1819–24; yellow = routes in Shugborough (Stitt, 1970)

ran north-west approximately along the parish boundary between Rugeley and Cannock.²⁶³ It then continued past Broadhurst Green, but left the modern route to pass by Bednall Head. It is obviously heading for Stafford and after leaving the Chase probably followed the route of the present A34 into the town.

Route 2 is a variation on Route 1. It left Beaudesert Park near Sukers Lodge, and then descended into the upper part of the Rising Brook valley via Deercote Slade. Its route is then possibly obscured by development associated with the West Cannock No. 5 Colliery, but it then headed up Brindley Valley. It crossed Penkridge Bank Road somewhere west of the White House and went past Gospel Place, and then either followed the modern road along the Bednall Belt or joined Route 1. The

²⁶³ SRO, D. (W.) 1734/2/3/43. The name 'Borneley' subsequently became 'Brindley'. A survey of 1595 suggests the whole section of manorial boundary between Rugeley and Cannock from Broadhurst ('Braddockes') Green to Bentley Brook follows a coalway: SRO, D. 1720/13. See also a perambulation of the late 18th century which evidently refers to the same route past Deakin's Grave, near Pye Green: William Salt Library, Stafford, 101/41.

difference between Routes 1 and 2 may simply have been seasonal, with Route 2 avoiding the low-lying Coal Measure clays down the Bentley Brook valley in winter.

Route 3 is a short section that joins Route 2, and may be part of a route that originally followed the line of Marquis Drive.

Route 4 is perhaps the best documented. Sections of 'Old Coal Road' are shown on the estate map of 1819–24, and this either connects or corresponds with features identified by lidar and as shown on fig. 13. Some of the route is shown on Yates's 1775 *Map of Staffordshire*. The origin of Route 4 might be shared with Routes 2 or 3 or 5, as will be seen below, but the critical junctions have been obscured by the development of Rugeley Camp in World War One. The route is clearly shown on the 1819–24 estate map, starting somewhere in the region of Rifle Range Corner and following the ridge between the valleys of the Old Brook and the Sherbrook. Once past the rifle ranges associated with Rugeley Camp, the mapped route is reflected on the ground by a series of features, culminating in the most pronounced set as it descends west of Haywood Warren, where a number of deep hollow-ways run alongside each other, often merging or separating. It then crosses the track between Seven Springs and Stepping Stones and descends into the helpfully confirmatory Coalpit Lane Covert. It then crosses into Shugborough Park, where there are a number of potential routes by which it headed for its destination at Essex Bridge, passing past the front of Shugborough Hall.²⁶⁴ Essex Bridge itself dates from at least the 17th century and its low parapets (intended to avoid interference with the panniers carried by horses) identify it as a packhorse bridge.

Route 5 is rather more dubious, but features identified on lidar visualisations suggest a more easterly course from Sukers Lodge and down Rainbow Hill to Moors Gorse, then crossing the Stony Brook near the existing ford adjacent to the site of Fair Oak Colliery. It then crosses over to Birches Valley and meets with another route running north from Fair Oak Lodge, all indicated on the 1819–24 estate map. The junction between the two shown on that map suggests that it originally went in the Stafford direction but subsequently turned northwards to join Route 4.

The routes heading for Stafford (routes 1, 2, and 3) were evidently supplying the town, but the question remains as to where Route 4 (and 5) over Essex Bridge ultimately led, but wherever it was heading for, it was important enough to be recorded on a map drawn around forty years after the packhorse system must have gone out of use with the opening of the Trent and Mersey Canal in the 1770s. The next substantial settlement to which a route over Essex Bridge would be heading would be Stone, but that was unlikely to offer a significant demand, and is anyway closer to the North Staffordshire coalfield, as is the other potential candidate, Uttoxeter.

The most likely candidate for the coal's destination was the salt industry around Weston, some 14km north of the Cannock Chase coalfield and around 5km further on from Essex Bridge. The industry existed by the end of the 17th century and was given a very detailed account by Robert Plot, who wrote that it took a ton of coal to produce 14 bushels of salt. Between 1705 and 1720 an average of 32,000 bushels were sold each year, and unless very significant efficiencies had taken place since 1686, this suggests that over 2,000 tons of coal were being used each year in the early 18th century.²⁶⁵

There is surprisingly little written about packhorse transport. Each horse could typically carry about two hundredweight, so ten horses would carry a ton.²⁶⁶ Trains could be anything up to forty horses and they could travel up to thirty miles in a day, depending on the terrain.²⁶⁷ Two thousand tons of coal would require 20,000 horse journeys every year so the trade was considerable and the erosion features they caused are understandable. It would be very interesting to know more about this trade, which presumably ended with the opening of the Trent and Mersey canal in the 1770s.

The transport of Cannock Chase coal to Weston also raises an interesting question about Essex Bridge itself. Considered to be one of the longest packhorse bridges in England, its actual purpose has rarely been considered. Without question a packhorse bridge, with a narrow roadway and low parapets, it serves no discernible purpose in the communication network between the two nearest substantial settlements, Rugeley and Stafford, but it was clearly intended to allow the passage of a bulk commodity coming off Cannock Chase and heading northwards up the Trent Valley. The only obvious commodity from the Chase is coal, and its passage over the bridge is confirmed by the

264 SRO, D. (W.) 1821/5; F. B. Stitt, 'Shugborough, the End of a Village', in M. W. Greenslade (ed.), *Essays in Staffordshire History Presented to S. A. Burne* (Staffordshire Record Society, 4th series, 1970), 86–110.

265 Kettle, 'Salt', 247.

266 For horseloads see p. 126, note 251. Possibly the amount a horse could carry increased with improved breeding over time.

267 D. Hey, *Packmen, Carriers and Packhorse Roads* (2001), 64–7.

map and place-name evidence discussed above. The name Essex Bridge is said to have arisen in the 19th century in respect of a legend concerning Robert Devereux, Earl of Essex and Elizabeth I's favourite, until he was executed in 1601.²⁶⁸ Walter Chetwynd, writing in 1679, and reporting that the bridge then had 43 arches, rather more than the current fourteen, made no mention of the earl, saying only that it had been rebuilt 'in the last Age'.²⁶⁹ The various motives offered by later writers for its construction (allowing Queen Elizabeth or hunting dogs to cross the river) are rather implausible, but they do all share this association with the earls of Essex.²⁷⁰

If there is an association with the earls, a more likely candidate would be the son of Elizabeth's favourite, a well-known parliamentary general who died in 1646. Before his military career, he spent the 1630s on his family's Staffordshire estate at Chartley away from the royal court where he was becoming increasingly unpopular, and Weston, where the salt springs were located, formed part of that estate: he may well have had a strong incentive to invest in a significant piece of transport infrastructure to get Cannock Chase coal to any saltworks there.²⁷¹ This is entirely circumstantial evidence without the benefit of any solid proof, as the earliest reference to salt production at Weston is from Plot in the 1680s, but the hypothesis that Essex Bridge was built as a component of industrial infrastructure for the transport of coal is an intriguing one and worth pursuing.

In addition to salt, iron processing will have added to the demand for Cannock Chase coal. As only a large village, Rugeley will have added little to the total domestic consumption, but it was also a significant industrial settlement from at least the late 14th century when there were seventeen workers in iron there.²⁷² Although coal could not be used in primary ironmaking until the 18th century, it had long been preferred for all the subsidiary processes such as smithing, and Rugeley must have provided a significant industrial market.²⁷³

The foregoing all suggests that the apparently high proportion of non-domestic use for coal locally is not all that surprising, and might well explain certain characteristics of the local industry.

(VIII) CONCLUSION

The exposed part of the Cannock Chase coalfield was limited in area. At 6.6 sq. km, it compares with small coalfields like the Shropshire Clee Hills (about 10 sq. km), or the even tinier coalfield at Brown Clee (5 sq. km). It would be easy to suggest that small was synonymous with technologically backward, and a superficial reading of the documentary evidence discussed here might support that view. We have seen, for example, that in the early 1600s William Paget had to find expertise from Leicestershire to sink deeper than 15 metres, a century after shafts twice that depth were being sunk in that county.²⁷⁴ The comparison with somewhere like Wollaton in Nottinghamshire, where shafts were up to 40m deep in the 1550s and pumps were installed in the 1570s, is equally striking.²⁷⁵ It seems that horses were rarely or never used for raising either water or coal on the Chase, and steam power was not used there until the 1770s, decades after Newcomen's engine made its first appearance less than fifteen miles away in 1712. The difference is all the more noticeable given that the West Midlands as a whole was an area where steam was adopted more readily than anywhere else.²⁷⁶ The Cannock Chase coalfield had more in common with the Forest of Dean, where there was only one steam engine before 1788, but the factors involved there were quite different.²⁷⁷

But it would be wrong to simply regard the Chase coalfield as retarded in some way. David Edgerton has shown how old technologies can continue to thrive, when new ones have appeared elsewhere.²⁷⁸ Rather than remaining in the ignorance from which innovation would eventually release

268 Stitt, 'Shugborough', 90, n. 4.

269 F. P. Parker (ed.), 'Collections for a History of Pirehill Hundred', in *Collections for a History of Staffordshire* (William Salt Archaeological Society, 1914), 129.

270 T. Cockin, *The Staffordshire Encyclopaedia* (2000); D. Horovitz, *The Place-Names of Staffordshire* (2005), s.v. 'Essex Bridge'.

271 *Oxford Dictionary of National Biography*. As a Royalist, Chetwyn might have been reluctant to offer any credit to the third earl.

272 M. W. Greenslade, 'Rugeley', in *VCH Staffs*. V (1959), 149–73 (at p. 161).

273 Hatcher, *History of British Coal Industry*, 422–25.

274 R. F. Hartley, 'Lounge Site Revisited: Medieval Mining Landscapes at Coleorton, Leicestershire', in *Mining in the Landscape, NAMHO 2006 Conference Proceedings* (2006), 26.

275 R. S. Smith, *Early Coal-Mining around Nottingham*, 35, 43.

276 Flinn, *History of the British Coal Industry*, 120.

277 C. Fisher, *Custom, Work and Market Capitalism* (Croom Helm, 1981), 8.

278 D. Edgerton, *The Shock of the Old; Technology and Global History since 1900* (2006).

them, miners on the Chase chose the technology which best suited the purpose at the time and in the conditions prevailing. Like all coalfields, it had a particular character and history which was dictated by geology and topography, ownership and markets.

Starting with the last of these factors, it has been noted how the Chase was relatively remote from suitable means of transport until the arrival of the canals in the later 18th century. Local markets were limited – unlike in the East Midlands or Warwickshire there was no Nottingham or Coventry to supply. But there was a local market, which seems to have been more weighted to industrial use, including salt production and iron working, than domestic. Possibly a mixed market like this meant a steady, if not spectacular, demand which might not have been susceptible to drops caused, for example, by the ‘unseasonable weather’ that helped defeat the adventurer Huntingdon Beaumont in Nottinghamshire.²⁷⁹

Considering ownership, the fact that the coalfield was almost entirely in the hands of one owner meant that it was free of the destructive competition and occasional sabotage that happened, for example, in the Warwickshire coalfield in the 1720s and 1730s.²⁸⁰ Because the market was limited, if steady, there was little temptation for an adventurer to risk a fortune here. What capital investment there was seems to have been prudent and limited. The development by William Paget using experienced Leicestershire miners in 1600 cost a total of £58 2s. 6d., of which a 480-yard sough cost £5 5s. 1d. and William Wilkins’s advice £3.²⁸¹ Compared with the £1,000 that Henry Willoughby thought he might have to spend on a sough at Wollaton in 1549, this is not a large sum.²⁸²

The absence of competition may also have meant that output could be geared to sales, with no risk of other competitors filling the gap if demand outstripped supply.²⁸³ Conversely, the industry could then avoid the perennial problem found in other coalfields where supply outran demand.²⁸⁴

Finally, geology and topography gave the Cannock Chase coalfield much of its early character. Although it was heavily faulted, there were no steeply dipping seams comparable to those in the North Staffordshire or Warwickshire coalfields. And Cannock Chase is elevated above the surrounding countryside, so the potential for free drainage by soughing was greater than in some other coalfields. Consequently, there was not the need for the range of potentially expensive pumping equipment available to colliery owners from the 16th century, and this is probably the reason why steam power did not make an appearance until the 1770s. Also, single ownership meant that the complex disputes over the use of soughs by different groups of miners that happened in other coalfields would not occur here. Soughing may have been a traditional approach, but the evidence points to improvements in surveying and construction over time; by the 18th century miners on the Chase may well have brought the technology to an advanced state compared with earlier centuries.

The coal industry is in any case an odd mix of ancient and advanced techniques. It gave rise to the steam engine and the steam locomotive, but well into the 20th century the fuel that powered the Industrial Revolution was still being brought down in blocks by being undercut by a man lying on his side with a pick. Underground it would have been entirely recognisable to any of Paget’s Elizabethan miners.

The lack of technological innovation in the Cannock Chase coalfield can anyway be overstated. There were advances in mining methods in the coalfield, as with the Paget investment in the early 1600s. The family had made large profits from their iron making before 1583 when Thomas Paget fled the country, but when William Paget regained his lands and titles at the start of the 17th century he invested in coal mining, and leased out his ironworks. This very much followed the pattern set by other members of the peerage around this time.²⁸⁵ At this point he evidently felt it appropriate to introduce better mining methods, and the necessary expertise was available only a few miles away in a neighbouring county. Possibly the coal that could be reached by the traditional methods had run out, or possibly he needed to increase output to meet some new local demand, but either way

279 Smith, *Early Coal-Mining around Nottingham*, 68.

280 A. W. A. White, *Men and Mining in Warwickshire* (Coventry and North Warwickshire History Pamphlets no. 7, 1970), 44–5.

281 SRO, D. (W.) 1734/3/255.

282 Hatcher, *History of British Coal Industry*, 215. George Owen said that soughs in Pembrokeshire were ‘very chargeable’ and might cost £20 or more, rather more than Paget’s 1600 sough, but very much less than Willoughby’s (*Description of Pembrokeshire*, 92).

283 See Hatcher, *History of the British Coal Industry*, note to table 10.A.5, 357.

284 See for example Smith, *Early Coal-Mining around Nottingham*, 68.

285 L. Stone, *The Crisis of the Aristocracy 1558–1641* (abridged edn 1967), 164–70.

he decided to introduce deeper mining techniques which seem to have been available for at least a century a few miles away.

The historian John Nef has been repeatedly accused of exaggerating the expansion of industry generally, and in particular the coal industry, in the century before the Civil War.²⁸⁶ But there was certainly an increased output from the Cannock Chase coalfield during the 17th century, with the combined annual output for Cannock Wood and Beaudesert rising from around 5,000 tons in 1612 to nearly 10,000 tons by 1700.²⁸⁷ Only if these mines were considered as a single colliery would this output be considered exceptional in absolute terms, but nonetheless there is a substantial increase over the century.²⁸⁸ The increase came some time after the Paget investment of around 1600, and it is hard to see that it was a direct result of that, but as noted above in part VII where dating is discussed, there is some evidence from surface features that something changed in either the 17th or early 18th century that allowed fewer shafts to be dug, although the evidence for what it was (if it survives at all) lies underground. It could have been this change that contributed to the increased output, or possibly that increased demand was being met simply by digging shafts over broader areas. Either way, there was nothing holding output back.

On Cannock Chase three areas offer promising returns for further work. On the ground, detailed survey and possibly geological examination could help resolve some of the questions raised in this article. In particular, the very close-spaced shafts could be looked at in detail, and excavation of the spoil tips might offer an indication of what was actually being exploited. With the historical documentation, the very detailed accounts running from 1743 to 1811 would be worth a much fuller examination, perhaps alongside the extensive family correspondence of the earls of Uxbridge. A final area relates to the miners themselves. From the 16th century onwards we know the names of many of them, and a combination of parish registers and the extensive records of rents and leases in the Paget family papers might allow a reconstruction of the mining community over time.

In an excellent summary of his work on the subject of energy and human development written in 2011, Tony Wrigley offered an analogy between the forces released into the world by the Industrial Revolution, and the malign forces brought into the world by Pandora in Greek mythology.²⁸⁹ The analogy is not exact, because the forces released – which must include the exploitation of fossil fuels and the associated carbon emissions – could be thought of as beneficial, in contrast to the evil that Pandora released from her box. But today, as we become aware of the impact of those carbon emissions, the analogy is looking rather more apt. Coal is still a very significant fossil fuel. In 2020 it is expected that 8.17 billion tonnes will be produced globally, in comparison to the entire output of the British industry in 1800 (when it produced most of the world's coal) at just over 15 million tonnes.²⁹⁰ No historical or archaeological research can offer any suggestion as to how the malign forces might be put back in the box, and they may already have done irreparable damage. But that does not detract from our respect for the miners who found ways of getting the minerals out of the ground, and who unknowingly opened Pandora's box in the first place.

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286 In particular, in his 1934 article: J. U. Nef, 'The Progress of Technology and the Growth of Large-Scale Industry in Great Britain, 1540–1640' *Economic History Review*, 5/1 (1934), 3–24.

287 Hatcher, *History of British Coal Industry*, 358, table 10.A.6. The figures here are based on a dozen of 1.2 tons and the output figures in the table.

288 Hatcher, *History of British Coal Industry*, 66.

289 T. Wrigley, 'Opening Pandora's box: A new look at the industrial revolution' (2011; published online at <https://voxeu.org/article/industrial-revolution-energy-revolution>).

290 <https://www.globaldata.com/global-coal-production-set-to-grow-by-only-0-5-in-2020-as-production-in-china-disrupted-by-coronavirus-lockdown-says-globaldata/>; Flinn, *History of British Coal Industry*, 26, table 1.2.

AN IRON AGE PIT ALIGNMENT AT ENGLETON LANE, BREWOOD

STEVEN TEAGUE, CARL CHAMPNESS, and LEO WEBLEY

SUMMARY

Excavation at Engleton Lane, Brewood, revealed an Iron Age pit alignment. A total of 44 pits were revealed, extending over a length of 205m on a slightly sinuous south-west to north-east alignment, running downslope towards the River Penk. Each contained largely sterile fills suggesting that the pits were left open to silt up. A radiocarbon date of the mid 4th to early 2nd centuries cal BC from the lower fill of one pit indicates that this silting process was underway during the middle Iron Age. This is corroborated by the recovery of sherds of early or middle Iron Age pottery from another pit. Medieval pottery from the upper fill of a further pit could be intrusive. The pit alignment was later cut by a ditch of unknown date.

INTRODUCTION

Pit alignments are a characteristic feature of later prehistoric landscapes in many parts of the Midlands, though relatively few have been investigated in Staffordshire. Excavations by Oxford Archaeology ahead of development at Engleton Lane, Brewood, uncovered an example of probable middle Iron Age date. This article summarises the main findings of the fieldwork; the full report can be downloaded from the OA Library (OA 2020). The site archive will be deposited with the Potteries Museum and Art Gallery under accession code STKMG:2020:LH:15.

The site comprised pastoral fields at the north-eastern edge of the village of Brewood (NGR SJ 8881 0943; fig. 1). The ground lies at c. 90–95m aOD, sloping down very gently from the south-west to the north-east. The closest watercourse is the River Penk, located c. 350m north-east of the site. The geology of the area is mapped as mudstone and halite stone, with superficial deposits of diamicton (BGS online). Prior to the fieldwork reported here, no archaeological sites or pre-medieval finds were known within the site or its immediate vicinity.

The fieldwork began with a trial-trench evaluation of the 4.5ha development site in October and November 2019 (OA 2019). Nineteen trenches were excavated, one of which uncovered an alignment of undated pits. This trench was subsequently extended, to reveal a total of nine pits. The only other feature encountered in the evaluation was a post-medieval ditch.

A strip, map and sample (SMS) excavation was subsequently carried out in March 2020, comprising a linear area of 150m by 6m focused on the pit alignment, with three perpendicular extensions (fig. 2). A further three 2.5m- to 3m-wide trenches (SMS Trenches 1–3) were opened to the north-east of the main excavation area on the projected line of the pit alignment. Topsoil and subsoil were removed under archaeological supervision using a mechanical excavator fitted with a toothless bucket. Half of the pits within the main area were excavated by hand, in each case by half-sectioning. Those within the trenches to the north-east were planned but not excavated.

RESULTS

The main excavation area revealed an alignment of 37 closely spaced pits. A further seven pits were uncovered to the north-east within SMS Trenches 1 and 3. No pits were present within the third exploratory trench positioned further to the north-east (SMS Trench 2). The pits formed a slightly sinuous line orientated approximately NE–SW and extending for a length of at least 205m. They were typically spaced c. 0.5–1.0m apart, though measuring the distance between the central point of each pit the spacing becomes more consistent, rarely varying from 3.5–3.7m. In two places at the north-eastern end of the main excavation area, the spacing between pits was rather larger (up to 1.7m), suggestive of ‘missing’ pits.

The south-western terminus of the pit alignment may be represented by pit 2063, though it is also possible that the alignment continued beyond the excavated area after a larger than normal gap between pits. Similarly, it is not certain whether the north-eastern terminus of the alignment has been identified in SMS Trench 3; a pair of pits within this trench on a nearly perpendicular orientation to the rest of the alignment could mark the terminus, though it is also possible that this pair represents a change in the direction of the alignment, or that one of the pair is an unrelated feature.



Fig. 1 Site location

A total of 19 pits were excavated. Most of the excavated pits were sub-circular or oval in shape and had concave sides with a flat or slightly concave base (fig. 3). They varied from 1.94–3.34m long (mean 2.6m), 1.50–2.90m wide, and 0.36–0.73m deep (mean 0.55m). An exception was pit 2031, which measured 5.5m in length. This was also the only instance where two pits (2031 and 2026)

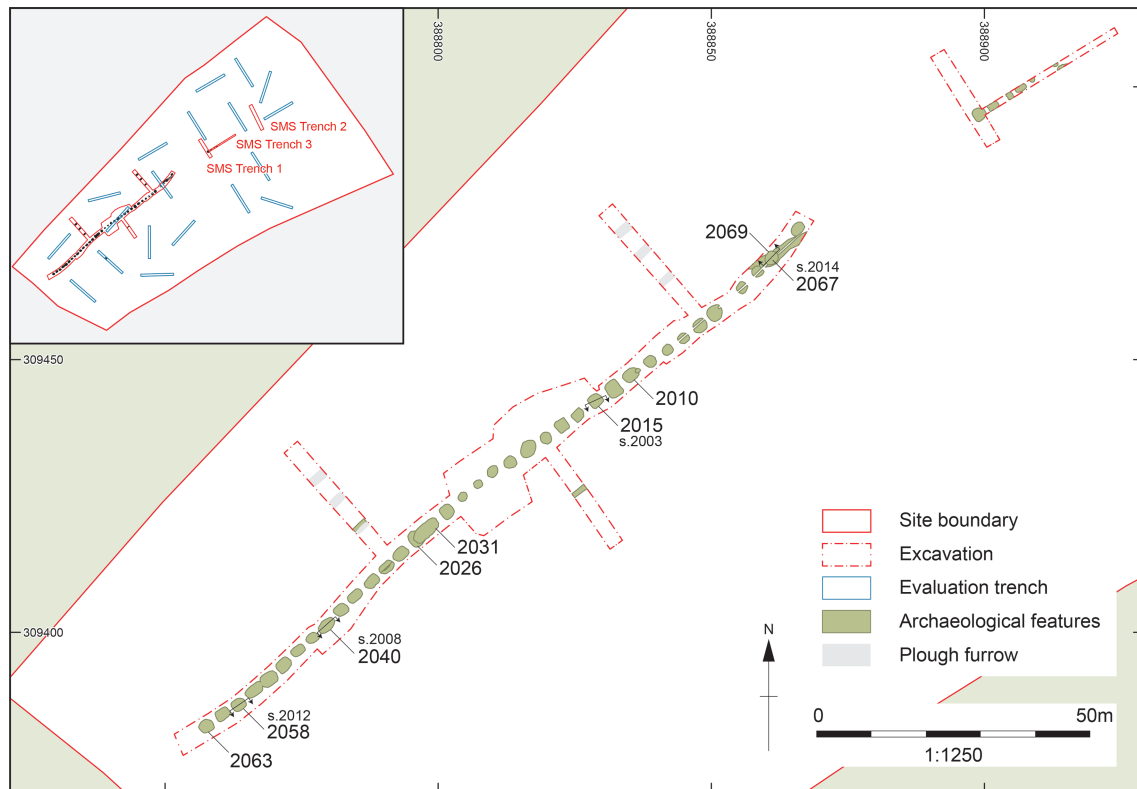


Fig. 2 Site plan

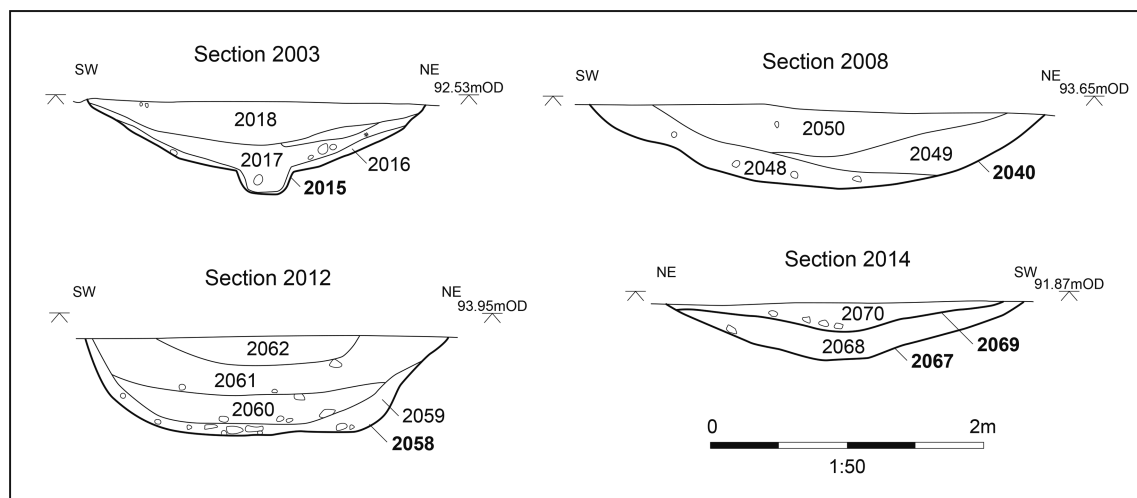


Fig. 3 Sections of pit alignment

apparently intersected each other, though the relationship between the two could not be established. Up to six fills were identified within the pits, though the majority contained only two or three fills. Within 12 of the pits the primary fill comprised a thick deposit of blueish silty or sandy clay with moderate to frequent small stones and occasional larger stones. These fills were sterile and rarely contained charcoal flecking. Their nature suggests that the pits were open for a sufficient time to allow water and debris to accumulate at their base. The secondary and upper fills were darker and sandier in composition and charcoal flecking was more prevalent.

Finds from the pits were limited to sherds of pottery recovered from the sole fill of pit 2067 and the uppermost fill of pit 2040. The pottery from pit 2067 comprises 14 small, highly abraded sherds (12g), all probably from the same vessel. The fabric contains a moderate quantity of quartz sand up

to 1mm in size, rare quantities of larger pieces of quartzite, and rare golden, glistening, plate-like pieces of probable pyrite. The sherds cannot be closely dated but are likely to be of early or middle Iron Age date. Two small sherds of medieval pottery resembling Deritend ware, probably dating to c. 1150–1350, were recovered from the uppermost fill (2050) of pit 2040. This could indicate that the pits remained as shallow hollows into the medieval period, though it might also simply be that the sherds are intrusive.

Bulk samples taken from five of the pits produced only sparse quantities of charred plant remains, limited to charcoal and a few wild seeds. Charcoal from a lower fill of pit 2015 (context 2017) has produced a radiocarbon date of 370–190 cal BC (SUERC-93868; Table 1), indicating that this pit had begun to fill during the middle Iron Age.

Evidence for activity post-dating the pit alignment was limited. Ditch 2069 was aligned approximately ENE–WSW and cut across pit 2067 (figs 2 and 3). It measured 1.50m wide and 0.22m deep and contained no finds. Cutting the northern edge of pit 2010 was a small circular pit (2009). It measured c 1.0m in diameter and 0.20m in depth and again contained no finds. To the north-west of the pit alignment, three NE–SW aligned furrows were revealed. One of these had been recut as a ditch or field drain that contained pottery and tile suggesting an 18th-century date.

TABLE 1 Radiocarbon date. The date has been calibrated using OxCal4 and the IntCal13 atmospheric calibration curve. The calibrated date range has been rounded out to the nearest 10 years

Lab. no.	Material	Context	Feature	$\Delta^{13}\text{C}$ (‰)	Radiocarbon Age BP	Calibrated Age 95.4% confidence
SUERC-93868	Charcoal (<i>Alnus/Corylus</i>)	2017	2015	–26.1	2198 ± 26	370–190 cal BC

DISCUSSION

Later prehistoric pit alignments are known in many areas of the Midlands, predominantly in river valleys. Where excavated, most appear to date to between the late Bronze Age and the middle Iron Age. A number of pit alignments are known from cropmark evidence in Staffordshire, though the few excavated examples are mostly in the eastern part of the county, particularly around the Trent–Tame confluence (Buteux and Chapman 2009; English Heritage 2014; Portch and Palmer 2020). Pit alignments have also been identified as cropmarks in Shropshire – as at Cotsbrook Farm, Stockton, 10 miles (16km) to the south-west of Brewood – but none have been excavated (Wigley 2017).

The purpose of pit alignments has been much debated (e.g. Waddington 1997; Halsted 2011), but it is now generally agreed that they served to mark landscape boundaries, perhaps between the areas used by particular households or community groups (Thomas 2003). The collective labour involved in their construction may perhaps have acted to reinforce community identity. They appear to have functioned more as token or symbolic boundaries than as impermeable physical barriers to the movement of people or livestock; generally there is no indication that the pits held posts, served as tree-planting holes or were flanked by an earthen bank. The evidence from Brewood is typical in suggesting that the pits had been left open to gradually silt up over time. The radiocarbon date from a lower fill of pit 2015 indicates that this feature had begun to infill at some point between the mid 4th and early 2nd centuries cal BC, a date range that falls within the middle Iron Age. This is corroborated by the recovery of early or middle Iron Age pottery from pit 2067. The general scarcity of artefacts or charred plant remains obtained from the pits suggests that there was no contemporary settlement in the near vicinity.

The excavated evidence shows that the Brewood pit alignment had a length of at least 205m, but its full extent has not been established with any degree of certainty. The double-pit arrangement seen in SMS Trench 3 may have marked the north-eastern terminus of the alignment, as no features were observed in the evaluation and SMS trenches beyond this point. Nonetheless, it remains possible that the alignment originally continued towards the River Penk, the present course of which lies a further 390m to the north-east (fig. 1). Pit alignments in many other parts of the Midlands run down towards and lie at right angles to rivers, as is the case for several of the alignments around Catholme (Staffs.), which appear to have divided the landscape into a series of blocks alongside the River Trent (Buteux and Chapman 2009). In some places in the Catholme area, there are coaxial

arrangements of pit alignments laid out at right angles to each other, a phenomenon also seen nearby in a cropmark complex at Kings Bromley (Staffs.) (Wardle 2017, fig. 8.6). This is not attested at Brewood, though it is conceivable that the paired pits at the north-eastern end of the alignment could represent a junction with a second alignment. A further element of the landscape context of some pit alignments, including examples at Catholme, Kings Bromley, and Cotsbrook Farm, is that they respect or were aligned upon older monuments such as Bronze Age barrows. This cannot be demonstrated at Brewood, as no such monuments are known in the area.

The possible intercutting of pits 2026 and 2031 hints at refurbishment of the pit alignment after its initial construction, but none of the other excavated pits showed any evidence for recutting or maintenance. This could be taken to indicate that the pit alignment fairly rapidly lost its role as a landscape boundary. This may not have been the case, however; some alignments elsewhere continued to hold significance even after the pits had been left to partially silt up, as the resulting hollows were selected for placed deposits of artefacts, animal remains or human burials during the later Iron Age or Roman period (Thomas 2003; Webley 2007). For example, at Ibstock (Leics.) (Clarke 2013), c. 32 miles (51km) east of Brewood, a cremation burial radiocarbon dated to cal AD 0–130 was interred in the top of one of the pits. Other pit alignments were engaged with during the later Iron Age by being recut as ditches, transforming them into less permeable boundaries (Thomas 2003). This does not seem to have been the case at Brewood; while the pit alignment was cut by ditch 2069, the latter followed a differing alignment and is not likely to represent a renewal of the same boundary. The date and function of the ditch remain unknown.

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Oxford Archaeology would like to thank RPS Group Ltd on behalf of Lovell Ltd for commissioning this project. Thanks are also extended to Shane Kelleher, who monitored the work on behalf of Staffordshire County Council (SCC). The project was managed for Oxford Archaeology by Carl Champness. The fieldwork was directed by B.J. Ware, who was supported by Liberty Bennett and Nicholas Jones. Survey and digitising was carried out by Simon Batsman, Matt Bradley and Aidan Farnan. The prehistoric pottery was analysed by Alex Davies, the post-Roman pottery and tile by John Cotter, and the charred plant remain by Richard Palmer. Thanks are also extended to the teams of OA staff that cleaned and packaged the finds under the supervision of Geraldine Crann, processed the environmental remains under the supervision of Rebecca Nicholson, and prepared the archive under the supervision of Nicola Scott.

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ARCHAEOLOGICAL FIELDWORK IN STAFFORDSHIRE 2020

SHANE KELLEHER

Thankfully, the Coronavirus pandemic, apart from an obvious hiatus at the beginning of the national lockdown in March/April, does not appear to have had a great deal of impact on the amount of archaeological work being carried out in the county over the past year. If anything, the workload of Staffordshire County Council's Historic Environment Team has increased during this period of uncertainty as architects, engineers, and planners spend more time at their desks developing and submitting planning applications, and as archaeologists catch up with their report backlogs whilst confined to their offices. As construction was not greatly impacted by the lockdown restrictions, a lot of archaeological fieldwork projects were unaffected and, as such, this summary will include a synopsis of archaeological work carried out in the county this year, and will report on some fascinating archaeological discoveries of recent(ish) years that have come to light in the backlog reports. As in recent years, the past year has often been characterised by archaeological evaluation work carried out in advance of housing developments, many of which have produced negative or negligible archaeological results. However, some sites, in addition to archaeological work carried out in advance of regeneration of public amenities, and the conversion/alteration of historic buildings, have proved particularly interesting, and a selection of these have been summarised below. A brief summary of archaeological work carried out in advance of HS2 has also been provided, in addition to an update on heritage/historic environment projects that the County Council has been involved with over the past year.

A targeted excavation following a phased evaluation comprising an archaeological desk-based assessment, a geophysical survey, and trial trenching, was carried out by ARS Ltd at the site of the new John Taylor Free School at Branston Road, Tatenhill. Located within the floodplain of the Trent Valley, this site revealed evidence of human activity and settlement since the Mesolithic period, when a possible trackway or functional posts was erected on an 'eyot' (i.e. a small island) within a water meadow. The use of this feature may also have continued into the Neolithic period, whilst a barrow was constructed on the eyot during the Bronze Age. Two Bronze Age circular-in-plan dwellings were also encountered on higher ground within the school site just beyond the floodplain, and it has been suggested that their small scale, as well as the paucity of associated artefacts, means that it is likely that they represented seasonal occupation (perhaps taking advantage of the abundant natural resources available in seasonal marshland on the edge of the Trent floodplain) rather than continual dwelling. The barrow, estimated to have a diameter of approx. 11.8m, survived as a ring ditch, and a sherd of Terra Sigillata from La Madeleine, dating to the Hadrianic or early Antonine period, was recovered from the uppermost fill on the western portion of the ditch, suggesting that the barrow was visible in the landscape into the 2nd century AD. Further pottery encountered in an isolated pit and residual finds in later contexts suggest the presence of human settlement in the immediate vicinity of the school site during the late Iron Age, whilst a number of Romano-British features, including buildings, a trackway, ditched enclosures, metalled surfaces with associated ovens, as well as pits and postholes, yielded a ceramic assemblage which has been described as being of regional significance. Medieval and later features encountered at the site included possible crofts, a hollow way, and a series of agricultural features such as ridge and furrow and ditches.

Archaeology Warwickshire carried out a targeted excavation at the junction of Limburg Avenue and Walsall Road, Lichfield, in advance of the construction of a new housing estate. This work was informed by a phased evaluation, which included a comprehensive programme of trial trenching, and identified thirteen pits forming an alignment focused on, or emanating from, an activity area comprising a house-sized ring gully, three four-post structures, often suggested as being raised granaries (two of which punctuated the pit alignment terminus, whilst the other was positioned immediately outside of the ring's eastern entrance), and a small group of oval clay-lined pits. The ring gully was found in association with a small amount of *briquettage*, a single sherd of pottery, and a large concentration of heat-cracked pebbles. It has been suggested that given the very low incidence of material culture and paucity of environmental evidence the site did not represent a conventional settlement but more likely functioned as an Iron Age 'arena' in which hot-stone technology and salt were used. A possible interpretation posited for the four-post structures is that they were scaffolds for the excarnation (exposure of corpses rather than burial) of human remains.

Another, albeit somewhat more mundane, Iron Age pit alignment was encountered during trial trenching at Engleton Lane, Brewood, in advance of a housing development. This was subjected to a targeted excavation by Oxford Archaeology, which revealed a total of 44 pits extending over a length of 205m on a slightly sinuous alignment running downslope towards the River Penk. The excavated pits were found to be largely sterile in terms of archaeology, suggesting that they had been left open to silt up, and are likely to have served to mark landscape boundaries. The full extent of the pit alignment was not established by the archaeological works, and it is possible that this represented part of a much longer landscape feature which ran towards the River Penk, the present course of which is a further 390m to the north-east. [This investigation is reported on in the present *Transactions*.]

A further targeted excavation, following a phased evaluation, was carried out at Hazelwall's Farm near Uttoxeter in advance of a housing development. The excavation, carried out by Trent Peak Archaeology, focused on the site of the medieval moated site of Blount's Hall, demolished in the 1770s. The work encountered building foundations on the moated platform, the moat itself, and substantial timbers which would have formed part of the causeway/bridge across the moat. The site is currently in the post-excavation stage and a more detailed summary of the results will be provided in next year's summary.

An archaeological watching brief carried out by The Environmental Partnership Ltd. during groundworks associated with the renovation of Victoria Park in Stafford, recorded evidence of 19th-century flooding events at the former riverbank edge, post-medieval water management features, and a late 19th-century stone retaining wall associated with Stafford mill. The latter has been reburied and preserved *in situ* behind the new amphitheatre.

In addition to below-ground interventions, the proposed demolition, conversion, or alteration of historic buildings has necessitated recording to be carried out this year in advance or during such works at a number of sites in the county. They include a comprehensive survey of Consall Hall, Consall, by ARS Ltd in advance of the conversion of the site into a hospitality venue, wellbeing hotel, and lodges. The work traced the development of the buildings from the initial construction of the hall, as a U-shaped Georgian country house, between 1810 and 1815 by a local industrialist John Leigh, its expansion in the mid to late 19th century, and heavy remodelling in the mid 20th century by the Podmore family. Continuing with the theme of Georgian country houses in the Staffordshire Moorlands, the Stoke-on-Trent Archaeology Service carried out archaeological recording of the walled garden at the former Highfield House, Highfield, Leek, in advance of the erection of houses in the area. The project, which found that the walled garden had been in existence since at least 1827, and originally had a 'four-square' layout, recorded the surviving walls, some of which were found to be heated or flued, and used documentary evidence to build a picture of the historical development and function of the space. An archaeological watching brief and historic building recording carried out by Cambrian Archaeological Projects during ground preparation works for the installation of a new statue of St Chad to the south side of Lichfield cathedral has revealed a sandstone boundary wall (to the graveyard) dated to the first half of the 14th century. This has been interpreted as forming part of the significant rebuilding and expansion of the east of the cathedral by Bishop Langton. It was found that much of this wall was later robbed out and incorporated in a later boundary wall which was capped with what appeared to be 1660s masonry (with diagnostic tooling), suggesting that the wall was rebuilt soon after the Civil War at the time of Dean William Paul. The discovery of this wall is particularly interesting and significant as before this work was carried out it was assumed that the boundary wall was of 19th-century build.

Separate from the standard development control sphere is the archaeological work carried out in advance of the construction of the High Speed 2 (HS2) railway line. All three phases (1, 2a, and 2b) will run through Staffordshire, and a great deal of planning, research, and non-intrusive archaeological work, such as LiDAR analysis and geophysical survey, has been carried out to date by HS2 and their historic environment contractors. Preliminary/early construction activity, such as ecological mitigation works and 'on route' works, has necessitated a number of archaeological interventions, and this year these have yielded some interesting and significant results, including the investigation of a possible barrow and the discovery of the edge of a Romano-British settlement west of Fradley, in addition to the recording of a number of historic buildings on or close to the route of the railway line. It is anticipated that a great deal more archaeological intervention will be required as part of the development of the route, particularly with regards to Phase 2a, over the coming years. All

archaeological work carried out on behalf of HS2 will be appropriately reported upon and archived, and significant discoveries will be published in relevant publications such as *Transactions*.

Away from development control and major infrastructure projects, Staffordshire County Council's Historic Environment Team (SCCHET) has developed and run/supported some interesting historic environment-related projects over the past year. The most significant of these formed part of the legacy to the *Chase Through Time Project* (reported on in last year's summary). Thanks to funding from the Cannock Chase AONB, SCCHET commissioned Allen Archaeology to examine the results of the *Chase Through Time Project* and other relevant datasets/data sources, with a view to assessing the significance of known heritage assets across Cannock Chase, and using this to identify priority sites for conservation, management, interpretation, and access. This work will be used to inform the development of a strategy for the sustainable management of, and enhanced access to, the Chase's varied and significant historic environment.

More detailed summaries of the sites mentioned here, and more, will be included in *West Midlands Archaeology*, published annually by the Council for British Archaeology, West Midlands, and full reports on some of them will be published in the Society's *Transactions* in due course.

ARCHAEOLOGY AND HERITAGE IN STOKE-ON-TRENT 2020

JON GOODWIN

Despite the various restrictions imposed as a result of the COVID-19 pandemic, 2020 has not been characterised by a decline in the quantity of development-management archaeological projects undertaken in Stoke-on-Trent. The introduction of the nationwide lockdown in March brought about a brief hiatus to schemes across the city, but most had re-commenced by early April. The number of live projects held steady at a pre-COVID level throughout the summer and into the early autumn, but given the economic challenges generated by the pandemic, it is extremely difficult to predict whether this trend will continue. At the very least, it seems likely that a sharp increase in the number of applications for small to moderately sized developments over the past six months, coupled with a comparable reduction in larger schemes of the same period, will define the nature and scale of archaeological projects in the city for the foreseeable future.

Former pottery sites have been the subject of the majority of archaeological investigations this year, as a number of brown-field sites within Stoke-on-Trent were targeted for residential and commercial redevelopment. Following on from an evaluation in late 2019, Thames Valley Archaeological Services (North Midlands) (working in conjunction with Avalon Heritage) carried out the excavation of four well-preserved circular pottery ovens and a rectangular 'muffle' or decorating kiln at a site in Hanley, occupied historically by the Vulcan, Britannia, and Robson Street pottery manufactories. The ovens were all coal-fired, up-draught types, three of which were initially constructed in the second half of the 19th century. One of the examples demonstrated clear evidence of two subsequent phases of rebuilding, which had raised the basal level of the structure significantly. The muffle kiln appears to have been built between 1937 and 1950, and comprised two adjoining rectangular firing chambers, each served by a bank of firemouths.

Throughout October, Stoke-on-Trent Archaeology Service excavated the site of a potworks once operated by William Greatbatch in the town of Fenton, approximately 2.5km to the south-east of the city centre. Greatbatch was a significant figure in the history of the North Staffordshire ceramics industry, partly as a result of his well-documented business relationship with Josiah Wedgwood. He tenanted the Fenton factory from c.1762 to 1782, when he was declared bankrupt. The factory was subsequently taken in hand by its owners, the Baker family, who held the works until the 1930s. The excavation uncovered three pottery ovens, one of which had been built in the second quarter of the 19th century, but incorporated structures belonging to the 18th-century works within its foundations. Otherwise, diagnostic evidence of Greatbatch or indeed any pre-19th-century activity on site was sparse.

A short distance to the east of the Greatbatch site, Allen Archaeology carried out a watching brief during ground-works within the footprint of the former Gimson kiln furniture works. From 1862 until 1999, the factory produced stilts, spurs, and other items of kiln furniture for the pottery industry. The site was evaluated in 2005, following the demolition of buildings on site, revealing the well-preserved, but somewhat ambiguous remains of three pottery ovens and a rectangular slip

kiln. The latter structure was of conventional form, comprising a series of long, linear brick flues, fed by a firemouth at one end and drawn by a chimney at the other, which passed beneath a brick slip tank. Heat from the flues would have gradually caused water to evaporate from slip contained within the tank, leaving behind a plastic clay that could then be further processed before its use in production. The watching brief undertaken during July and August 2020 observed ground-works on the western edge of the 2005 evaluation area and recorded further evidence of a network of flues associated with the previously excavated slip kiln and, potentially, a second example to the west.

Archaeological Research Services completed the excavation of the Minton Hollins Tile Factory, Stoke, shortly before the COVID lockdown in March. Two circular, coal-fired, up-draught tile kilns were recorded, both of which probably fell out of use in the early 20th century with the introduction of gas-fired tunnel kilns to the site. The project also examined the factory's former slip house and recorded the remains of two rectangular slip kilns of comparable design to the example identified at the Gimson site in Fenton.

Away from the pottery industry, a parcel of former agricultural land adjacent to the site of a late medieval chapel-of-ease in Bucknall was evaluated by Stoke-on-Trent Archaeology Service during the summer. The work was undertaken to inform proposals to develop the site for residential use. Evidence of an 18th- / 19th-century farmstead was found on the very edge of the evaluation area and a large pit containing a significant quantity of animal bones, thought to be early to mid 20th-century commercial butchery waste, was also encountered. Nothing of earlier date was found during the project.

A programme of historic building recording was recently completed, again by Stoke-on-Trent Archaeology Service, at the North Staffordshire Royal Infirmary, Hartshill. The infirmary relocated to the site from Etruria in 1869 and remained a key local and regional health-care facility until its closure in 2012. Consent was granted in 2014 to redevelop the site for housing, with the retention of just one historic hospital building. The recording programme consequently encompassed every structure on site, ensuring that all surviving physical evidence of the infirmary's 150-year development was captured.

The Stoke-on-Trent Ceramic Heritage Action Zone (HAZ) project continued throughout 2020, but has been more severely affected by the COVID pandemic. Surveys of extant bottle ovens in the city were halted in March as sites became inaccessible, volunteers unable or unwilling to assist in the project, and the practical support of local universities suspended with campus closures. With the assistance of Historic England, further surveys, however, have now been scheduled to take place over the winter and into spring 2021, although a HAZ community excavation project has been delayed until summer 2021 at the earliest.

ARCHAEOLOGY AND HERITAGE IN WOLVERHAMPTON AND WALSALL 2019–20

ELEANOR RAMSEY

Despite the challenges of COVID, archaeology in the region this year has not stopped. Following on from the evaluation beneath the Civic and Wulfrun Halls in Wolverhampton in 2018–19, a larger excavation was undertaken that identified cobbled surfaces and metalled surfaces dating to the early post-medieval period, beneath multi-phase buildings and structures that made up the later post-medieval street. Evaluation and excavations have been undertaken in two areas at Old Hall Street, looking for the moat, moat platform, and curtain wall and investigating the remains of the former japanning factory. Analysis of the results of both these excavations is on-going. Historic building recording has been undertaken at a number of sites, including at Compton Hall which investigated the history of the building and its William Morris connections, and at the IMEX industrial complex at Upper Villiers Street.

Within Walsall, work included a watching brief at Delves Infant and Nursery School which looked for remains of the former 16th-century Walstead School, and evaluation at Darlaston which looked for the remains of the Eagle Nut and Bolt works, although unfortunately the results for both these projects were negative. Evaluation at Raleigh Street found the remains of terraced housing and back-yard activity outside the area of the former locks and cart gear works there, with keys and leather

items and other general industrial and domestic artefacts recovered. Structures associated with the works survived in places, but later buildings (and their subsequent demolition) had truncated areas.

We were delighted when The Black Country became a UNESCO Global Geopark on Friday 10 July 2020, in recognition of the international importance of its natural and cultural heritage. A number of amazing Geosites are within Wolverhampton and Walsall, including West Park, Wightwick Wedge, Park Lime Pits, and Walsall Arboretum.

BOOK REVIEWS

Phil Sidebottom, *Pecsaetna: People of the Anglo-Saxon Peak District* (Windgather Press, Oxford, 2020), pp. xv + 129. £29.99. ISBN 978-1-91118-868-1

With a PhD (University of Sheffield) on Anglo-Saxon stone monuments, and later specialising in landscape archaeology, Dr Phil Sidebottom has produced a slim volume on the *Pecsaetna*, literally the ‘sitters in the Peak’, a group of people based in the Peak District, principally Derbyshire but also north-eastern Staffordshire, and perhaps best-known in archaeological terms for their distinctive barrows and the Benty Grange helmet. Arguing that the *Pecsaetna* occupied the area of Derbyshire and Staffordshire now known as the White Peak, their ‘core’ settlements being on the limestone that characterises much of the area and gives them an association with a distinct ecological zone, Sidebottom follows Roffe in identifying the Domesday hundred of *Hamenstan* in Derbyshire as this core territory, but primarily on geological grounds rejects Higham’s view that the Staffordshire hundred of Totmonslow and the Cheshire hundred of *Hamenstan* should also be considered as part of the original *Pecsaetna* grouping.

The *Pecsaetna* make few appearances in history, and may be known to most non-archaeological readers through the obscure document known as the Tribal Hidage, which following established views the author allocates to the period of Mercian hegemony in what was to become England c.655–700, whilst acknowledging Higham’s opinion that it may have been composed to reflect a period of Northumbrian dominance in the early 7th century. Sidebottom contends that the *Pecsaetna* existed as a separate grouping between the major powers of Mercia and Northumbria from the 7th to at least the 10th century, arguing that they should be seen as a buffer zone, independent of, but owing allegiance to, the dominant power of the time, in a similar fashion to groups such as Lindsey and the less well-known Elmet. In this way, the *Pecsaetna* were able to achieve some protection from the negative impact of Viking raids and later settlement following the expulsion of King Burgred of Mercia in 874. Sidebottom further uses the evidence of the few later charters to show the continuing existence of the group in the 10th century. Notably, he proposes that Uhtred, a Bernician ‘noble’ from the house of Bamburgh, was ‘imposed’ as overlord with the agreement of the by-now dominant West Saxon kings (Edward the Elder and his successors), resulting in a distinct style of carved stone monument. The *Pecsaetna* disappeared as an identifiably separate group following the creation of Staffordshire and Derbyshire in the later 10th or early 11th century.

In his chapter on the archaeology of the area (at nearly 40 pages the longest, and occupying a third of the book), Sidebottom uses his experience with stone sculptures to argue that although the *Pecsaetna* escaped large-scale Viking settlement, some settlement did occur, being led by Hiberno-Norse from what is now Lancashire. He identifies distinct sculptural sub-groups in the area and uses these categories to buttress views on the development of the *Pecsaetna* ‘polity’ through time, including the loss to Mercia (as he sees it) of the Alstonefield and Ilam areas (Staffs.) in the 9th century and the area around Hope (Derbs.) in the 10th century. These areas are seen as two of the five estates (following Roffe’s analysis) which had made up the maximum extent of the *Pecsaetna*. Sidebottom proposes that the Peak may have originally been two large estates based on Bakewell and Wirksworth, perhaps as early as the Roman period. He then argues that both Bakewell and Wirksworth had split into two parts to create the four estates identified by Roffe at Bradbourne and Hope as well as Wirksworth and Bakewell by the late Anglo-Saxon period. He is less clear as to the development of the Ilam and Alstonefield area and how this became part of the *Pecsaetna*, other than noting that it is part of the limestone ecological zone he uses as his guide to the extent of the ‘folk territory’. Further subdivision created the pattern of medieval parishes. Sidebottom also argues for a new interpretation of the location of Edward the Elder’s *burh* ‘near Bakewell’, and goes on to convincingly demonstrate why the small village of Dore on the boundary between the *Pecsaetna*, Mercia and Northumbria played a significant part in Anglo-Saxon history.

Sidebottom also devotes some space to a discussion of the religious affiliations of the area, especially as experienced during ‘conversion period’. He suggests that barrow burials, far from being examples of pagan funerary practice, contain examples of Christian iconography, and should be seen as part of a continuum of practices that recognised the mingling of Christian beliefs with early pagan practices, still evident today in well-dressing, the ‘worship’ of water sources – an important commodity in a limestone district. It is further argued that the wealth of the *Pecsaetna* elite implied

by barrow burials was derived from the export of lead (to places including Francia) for church purposes from the 7th century onwards, and that the elite was prepared to concede the loss of territory such as that around Alstonefield as long as it could retain the extremely valuable lead-mining areas.

In summary, Sidebottom's work is a valuable synthesis of relatively unknown papers ranging from Ozanne's 1960s work on Peak district monuments to Roffe's 1980s work on Derbyshire effectively combined with his own knowledge to shed light on the landscape development of an interesting area overlooked by recent histories. For what seems to be a work oriented to an academic audience it is disappointing that there is no index; there are some minor quibbles with maps lacking effective legends, and a particularly irritating misprint of 'populous' when populace appears to be meant. Nevertheless, the gazetteer and bibliography add valuable information to what is a thought-provoking addition to the bookshelf.

STEVE LEWITT

Andrew Sargent, *Lichfield and the Lands of St Chad: Creating Community in Early Medieval Mercia* (Hatfield, University of Hertfordshire Press, 2020), pp. xii + 290 (171 x 14 x 248mm) ISBN 978-1-91226-024-9 (hardback), 978-1-91226-025-6 (paperback). Price: £35.00 (hardback and Kindle edition), £18.99 (paperback).

This book, which has its origins in the author's Keele University PhD thesis, is among the more important of regional studies to have appeared in recent years, particularly for those with an interest in the early medieval history of Staffordshire and its neighbours. Focused on the diocese of Lichfield in the north-west midlands, where the paucity of archaeological and textual evidence leaves what the author describes as a 'Mercian hole', the book not only considers religious culture and the role of Lichfield's bishops from the 7th to the 11th century, but also engages with fundamental issues and historical debates relating to regional society and landscape in this period. Indeed, one of the most valuable aspects of this book is its summation and critical review of many of the key historiographical debates relating to the period, a feature which will recommend it to readers beyond those with primarily a regional interest in the western midlands.

Dr Sargent places concepts of community, and the interplay between closely defined and specific communities, at the heart of his study; the outcome, he claims, is an outline of 'an early medieval history framed around community that might apply to much of England' (p. 259). The approach is not as innovatory as the author seems to suggest, but that does not lessen its value here. 'Community', and the relationship between communities, is a concept that is much used by medieval historians, including this reviewer who has often borrowed the model of Venn diagrams to express them, but less frequently expressed are the explicit definitions offered here. Sargent proposes that 'community' is best defined by shared ritualising activities, drawing on Susan Reynold's consideration of communal activity and shared values in her study of lay communities, in which she was concerned with the kind of community that defined itself by engaging in collective activities; whilst from Gervase Rosser's work on late medieval guilds, emphasis is placed on the role of constant re-creation and renewal. Some of this feels unnecessarily laboured, particularly in discussions of 'domainal' communities (landholders and lords) and parochial communities (focussed on formalised relationships with parish churches and their priests), both defined around assemblies and their respective renders of dues and services, but it is a theme that informs the author's conclusions throughout.

Sargent's narrative commences with the establishment of an English ecclesiastical community in the later 7th century under Archbishop Theodore of Canterbury, and particularly the communities around which the diocese of Lichfield took shape, by examining the role of St Chad and the notion of a Church of the Mercians. Making effective use of an episcopal list of the early 14th century that preserves two earlier lists, he also highlights the formative role played by assemblies of bishops, and the reinforcement of episcopal communities through such assemblies, shared texts (particularly on canonical authority) and discourse. Episcopal lists point to a heightened sense of self-identity, and, one might add, also of institutional continuity. Furthermore, the church councils helped to stabilise the emergent kingdoms and define the geography of royal power, and here the author privileges the role of the ecclesiastical community, as a distinct power, in framing the geography and power of English kingdoms, but surely this was a reciprocal process? Kent and Northumbria are seen as kingdoms where influence lay in the emergence of the nascent English ecclesiastical community, but with no particularly comparable role envisaged for Mercia. There is, however, very little consideration given

here, or elsewhere in the book, to what part might have been played by communities of Christians, with their bishops, that originated in late Roman Britain, nor of the 'intersections' that they were either drawn into or avoided.

In the historiography of Anglo-Saxon England one of the most influential and pervasive of models is that developed and advocated by John Blair, relating to the role played by minster churches in the English landscape in shaping the character of the pre-Conquest English church, and in making provision for the cure of souls. However, Sargent rejects the 'minster narrative', characterised by Blair as enjoying a 'golden age' in the 7th and 8th centuries before decline, 'secularisation', and fragmentation, phases in the narrative that he challenges. The author argues that advocates of the minster narrative (i.e., the 'minster system') have tended to see all Anglo-Saxon religious establishments as 'minsters' whatever their size and purpose, whereas contemporaries made a distinction between those foundations which hosted a community living under a 'Rule', and others, often established on royal and other lay estates, which did not. These latter foundations are characterised by Sargent as part of a diocesan community centred on the bishop and the minster at Lichfield, a community that expanded with the acquisition of some formerly independent 'minster' communities, while others remained independent. Diocesan communities became increasingly important from the late 7th century onwards.

Lichfield is poor in textual evidence before Domesday Book in the 11th century; even the detailed bounds of the diocese are lacking before the *Taxatio* of 1291. However, Dr Sargent draws upon Domesday Book entries to identify those estates associated with the cathedral church, as distinct from others that were focused on episcopal churches on the diocese's western edge, namely Shrewsbury, Farndon, and Chester. The former, acquired between the 7th and 9th centuries, are termed 'integrated' estates, although they are in fact more generally better known as 'composite' or 'multiple' estates, terms already familiar to many scholars – indeed, it is not clear why the author thought new terms were required for such well-established phenomena and contexts, and they are not helpful to the reader. Sargent suggests that the 'less-integrated' estates were acquired subsequently to support churches founded more recently, in the 10th and 11th centuries. He also challenges the familiar model that interprets scattered lands and multi-part parishes as reflecting the fragmentation of earlier, larger, territories, suggesting instead that a process of 'assemblage' that accrued estates is more probable. While the hypothesis is credible, it cannot be taken as proven or conclusive.

In the western midlands, historians invariably turn to the diocese of Worcester and its episcopal estate to inform their thinking, given its relatively rich documentation and historiography. There, a unitary block of land supported the establishment of the see and its cathedral, to which formerly independent minsters were gradually appropriated. Sargent notes that the same may be true of Lichfield, but he also suggests that the churches of Shrewsbury, Farndon, and Chester (possibly established in association with the renovation of burhs and trading communities) were creations of the 10th-century which were supported by the grants of scattered estates.

Without the survival of documentary evidence, how might early minsters be identified? Sceptical of approaching this question through later parochial geography, Sargent argues that this problem may be addressed in two ways, which he uses to identify and discuss thirty-eight probable minster sites of pre-10th century date. Firstly, by a consideration of hagiography (that is, the location of saint's cults), an approach also adopted by Blair, although this reviewer has argued in a recent study of Berkswell church (Warws.), one of the sites listed by Blair and Sargent, that such associations cannot be simply assumed and has proposed a different interpretation. Secondly, through a focus on stone sculpture as representing the only contemporary evidence to survive in quantity. The volumes of the *Corpus of Anglo-Saxon stone sculpture* have made this material much more accessible to scholars and Sargent draws on it to identify regional groups of sculptures within the diocese, three dated c.750-850, and three within the late 9th- to 11th-century range. However, he disputes the dating proposed in the *Corpus* for sculptures in the Trent valley, arguing instead that they were earlier than suggested, being created for minsters between the mid 9th and early 10th centuries. He further suggests that sculptural affinities and similarities may indicate a dispersed but interconnected group of sculptors in which connections between minsters may be part of the pattern. This approach, Sargent argues, 'is far removed from that implied by the ethno-cultural straitjacket imposed by the format of the *Corpus* volumes' (p. 109). Some will feel that the criticism is harsh as Sargent's methodology is itself not entirely new, but the identification of workshops does offer a promising additional approach to recognising minster communities.

Although the archaeology and development of Lichfield cathedral has been explored in recent years, notably by Warwick Rodwell, a full synthesis and discussion of the results has yet to be published. Sargent's discussion of the early phases of the building is therefore a helpful addition to the existing literature on the subject, particularly as our understanding of early medieval Lichfield itself grows. Although the discussion is inevitably largely speculative, a principal outcome is the suggestion that while a structure in the area of the present choir may be associated with St Mary's church, he refutes Rodwell's conclusion that the sepulchral chapel (beneath the present nave) associated with the shrine of St Chad represented St Peter's church; the latter, he argues, still awaits discovery. These two churches were referred to in Bede's account, written in the early 8th century, of Chad's burial.

Prominent in a discussion of the relationship between bishops and the churches of their diocese is the payment of ecclesiastical tribute, and also royal free chapels, which form a significant group within the diocese. In the former's case, Sargent disputes Blair's thesis associating such payments as being part of an early parochial system centred on minsters. He doubts the presence of early minster *parochiae* (literally 'parishes', but territorially larger than those associated with late medieval parish churches) as envisaged by Blair, but focuses instead on the 'episcopal *parochia*', that is, the diocese as a whole. In this context, he sees ecclesiastical tributes, later reflected in payments such as 'church scot' and 'church amber', as originating in an acknowledgment of bishops' spiritual authority and the obligatory hospitality owed to them as they travelled around their diocese; an episcopal variant on the renders owed to kings. By the mid 10th century the system had been reorganised as king and bishops collaborated in management of the English Church, signalled not least by the introduction of tithe payments. Furthermore, Sargent postulates that the reorganisation of 'church scot' in the later 10th century may have reflected an attempt by the bishops to renew their spiritual lordship across the diocese.

In considering the general populace of the diocese, namely the agricultural communities which formed it, and their associations with the historic landscape, the author turns particularly to toponymic analysis, looking especially at communities of landholders, and in doing so he challenges some fundamental models, notably those advocated by the work of Rosamund Faith, in light of David Pratt's rethinking of 'inland' exemptions from geld payments. Although Sargent applies his own terminology (e.g. 'domainal' communities), this is essentially a discussion of lordship, community and landscape, and of the inter-relationships between them, in which he is much influenced by the work of Tom Williamson and Mark McKerracher. Like others, the author also examines the environmental character of his study area as revealed through the *Soil Survey of England and Wales*, together with landholding practices and the testimony offered by place-name studies, noting for instance that minster sites are often situated at intersections of soil types associated with the most favoured settlement locations. The author also takes particular account of the 'stabilisation' of place names as he seeks to associate certain place-name elements with different periods of estate-formation, arguing that earlier place names might be associated with the upper elite of landholders, and later ones with those at a lower level. The large estates in the hands of the social elite formed significant focal points within the landscape, and being maintained across generations their place names were relatively stable. There is not much exploration, however, of the potential implications of possible dependent relationships between these elite landowners and the lords of small estates, and for this reviewer at least, criticism of the models that espouse the fragmentation and privatisation of formerly extensive territories and multiple estates to create smaller estates in the landscape is rather overstated.

Finally, Sargent turns to consider the formation of parishes, by which he means the *parochiae* associated with the establishment of 'mother churches' during the course of the 10th and 11th centuries; churches which he associates particularly with the lay elite of kings, ealdormen and greater thegns, all of whom were laying claims to a degree of spiritual lordship. This was a transformative process for society and landscape in the diocese that created parochial communities, integrating a spiritually subordinate laity into various but coherent new territories.

Dr Sargent again turns to Domesday Book, this time to identify the 'superior churches' of the diocese, as defined by the presence of more than one priest. An important observation arising from this discussion is that there was very little demonstrable overlap between these churches and the *corpus* of earlier minster churches, suggesting that the sometimes presumed antiquity of these 'superior churches' is overstated. More important than the antiquity of their liturgical communities was the status of their lords (generally royal, comital and episcopal), while the introduction of mandatory tithes in the early 10th century is associated with the formation of parochial territories.

Thus, Sargent presents the 10th century as something of a watershed, different to what had gone before, and essentially the point at which the system of ‘mother churches’ in their parishes was established within the diocese, accompanied by an increase in the numbers of such churches. In the associated reorganisation of the ecclesiastical landscape, it is contended that the collection of tithe from the landholding population was assigned on the basis of pre-existing territories centred on royal or comital estates.

John Blair’s view that lay involvement in the affairs of minsters represented a phase of ‘secularisation’ from the mid 9th century onwards is convincingly questioned. It is not difficult to demonstrate long-standing lay involvement in minsters and their communities. Minster communities were diverse and, as a part of the background ambience, there were also growing numbers of estate churches associated with lesser thegns, but which lacked a formal tithe allocation. Identifying these estate churches, however, remains a challenge and one recent contributor to the debate (Steven Bassett) has doubted their presence at all in some parts of the west midlands.

This fairly lengthy review of the arguments and conclusions presented by Andrew Sargent is itself a reflection of the importance of the contribution that his book makes. This is a book that deserves to be read by all those interested in the early medieval period, particularly if their interests touch upon the religious culture of the period, although it clearly has a relevance beyond that. It is also a significant addition to the *corpus* of regional studies in this period. A stimulating book that challenges many familiar notions, in the best traditions of good scholarship, it will undoubtedly prompt continued debate and evaluation of its conclusions. No author could ask for more.

As a final, tongue-in-cheek aside, an observation on geographical perspective. For the author, visualised from Keele, the medieval diocese of Lichfield was a feature of the north-west midlands. For this reviewer, an affiliate of Birmingham, a western midlands association feels more persuasive. Of course, both perceptions are valid, but no wonder that many regional histories begin by defining what they consider their region to be.

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Simon Swynfen Jervis, *Swynfen Jervis MP, 1797–1867* (Staffordshire Record Society, Occasional Paper no. 5, 2020), pp. xii +104 + fold-out genealogical table. £12 for non-members. ISBN 978-0-90171-916-4. (Further details from Dr M. Blake, Hon. Secretary, c/o The William Salt Library, Eastgate St., Stafford, ST16 2LZ; or email: matthew.blake@btinternet.com)

Swynfen Jervis, the subject of this thoroughly researched, well illustrated, and sensitively written biography by a family member, was a substantial landowner in mid Staffordshire with wide literary, aesthetic, and latterly botanical interests. A kinsman of Admiral John Jervis, 1st Earl of St Vincent (1734–1823), he was a Liberal in politics with radical opinions and a founder member of the Reform Club in 1836, but his contribution to national parliamentary life was brief (one session as MP for Bridport in Dorset from 1836) and frequently marked by abstentions and objections. Earlier, from late 1825 for six or seven years, he had lived in France, and Dunkirk was the birthplace of four children from the first of his three marriages. During this time, his family home, Darlaston Hall to the north of Stone, was let to tenants who occupied it until 1841. Soon afterwards it was demolished and re-built by Jervis in a more contemporary style, extended further in the 1860s, and became his main residence until his death in 1867. Sold to the Meakin pottery family in 1880, Darlaston Hall remained in their ownership until 1951 before demolition two years later.

This excellent study is especially valuable for what it adds to the county’s topographical and social history. Darlaston Hall looked north to the Trentham estate of the aristocratic Leveson-Gowers (dukes of Sutherland); west to Swynnerton, home of the FitzHerberts, Barons Stafford; and east towards Meaford, associated with another branch of the Jervises, as well as to Barlaston where the Adderleys lived at the eponymous Hall, and where Upper House was occupied by Clement Francis Wedgwood, a great-grandson of Josiah Wedgwood, the famous potter. An 1867 ‘Scrap Book’ with contributions by 75 individuals, almost all identifiable as Jervis relatives, friends, and acquaintances, exemplifies the cohesiveness of local life at this level of society in mid-Victorian Staffordshire.

Swynfen Jervis himself was a minor figure, but distinctive because of the ease with which he moved in many contemporary social, literary, and aesthetic circles. As noted by the author, he did not conform to the stereotype of the rural squire whose horizons were bounded by country pursuits and

traditional activities. His contact with European culture led to a superb portrait of his first wife by Paul Delaroche in about 1830, as well as a pen and ink sketch, possibly of Jervis himself, of similar date by another distinguished French artist, Eugene Delacroix. In 1852 the poet Christina Rossetti gave Italian lessons to Jervis's children while staying at Darlaston Hall and later encouraged his poetical compositions. She also joined in the family's fern hunting, an interest which earned respect for Jervis from leading pteridologists of his day, such as Edward Lowe who said of him that 'a more enthusiastic admirer of ferns was not to be found'. Christina's brother, Dante Gabriel Rossetti, recorded one of Jervis's other enthusiasms, Shakespearian studies, in a light-hearted drawing of him posing by a bust of the playwright while being sketched by Christina. In Rossetti's opinion Jervis was not only a 'a radical member [of Parliament]' but also 'a very cultivated scholar'. Interest in Shakespeare and in proposing textual emendations to his works led Jervis into a long correspondence with like-minded editors, notably Alexander Dyce (1798–1869), who after Jervis's death completed his *Dictionary of the Language of Shakspeare* [sic], published in 1868.

Although Swynfen Jervis was by report an idiosyncratic character, this is difficult to evaluate because few personal papers seem to survive. Late in life he certainly did some odd things such as disposing of family portraits and possessions. In some ways he resembled the fictional Mr Brooke in George Eliot's *Middlemarch* (1871): 'a man of ... miscellaneous opinions and uncertain vote. He had travelled in his younger years and was held in this part of the county to have contracted a too rambling habit of mind. [His] conclusions were as difficult to predict as the weather...'. Coincidentally, the long-term partner of George Eliot [Mary Anne Evans] was the writer George Henry Lewes who was Jervis's son-in-law through his marriage in 1841 to his eldest daughter Agnes.

By illuminating the experiences of Swynfen Jervis, who might at first seem to have touched other lives only peripherally, the author of this book provides evidence of multiple perspectives and spheres of cultural influence together with stimulating (and often unexpected) food for thought about a personality active as a Staffordshire landowner, political radical, poet, pterodologist, and Shakespearian.

MARGARET O'SULLIVAN

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