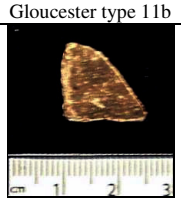
Appendix 1: The pottery

1. The Roman pottery. Paul Booth and Bob Smith.

I am most grateful to Paul Booth of Oxford Archaeology and Bob Smith of the Sherwood Archaeological Society for their assistance with the Roman pottery.

The Roman pottery from the St John's Street examinations is not as common as the mediaeval material, and that which has been found is predominantly from the north end of the area closer to St Mary's Church.

Site Code	Sherd No	Type	No	Wt	Part	Form	Decoration	Date range	Notes	Reference
WSM00	01	 Derbyshireware	1	35	Base	Jar	U/Dec	C2nd – C3rd	Fabric almost white with dark grey exterior	Leary, 2013
WSJS14/42	128	 Parchment ware	1	1	BS/Flake	Hollow ware	Patch of red slip ext	Cmid3rd -C4th	Fine buff fabric w/ fine round ferrous black grains & red grit; Possible local copy of painted Oxford ware (e.g. Pase WILT-AF4C22). Not Oxford fabric.	Young, 1977
WGH08	401	 Severn Valley ware Gloucester type 11b	1	2	BS	Hollow ware	U/Dec	Late C1st early C2nd	Very fine soft buff fabric	Timby, 1990
WGH08	402	 Nene Valley ware	1	1	BS/Flake	Hollow ware	Black colour coat	C2nd – C3rd	Nene Valley colour coated ware	Tyers, 1996
WGH08	403	 Roman Oxidised ware	1	3	Rim	Hollow ware	U/Dec	C2nd	Roman oxidised ware rim shard,	Tyers, 1996
WOH12	01	 Grass tempered ware	1	5	BS	Hollow ware	U/Dec	C5th-C7th	Soft cream fabric with chaff (grass) tempering. late Roman or possibly Saxon handmade. "An oulier".	Laing, 2006

2. The Mediaeval pottery. Chris Cumberpatch BA PhD

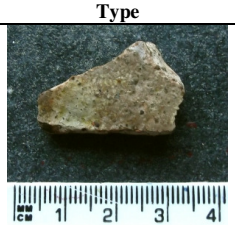
The first datable mediaeval pottery is a shard of Doncaster Frenchgate Ware of which the earliest possible date would be immediately after the Norman Conquest and is described below by Chris Cumberpatch, to whom I am extremely grateful.

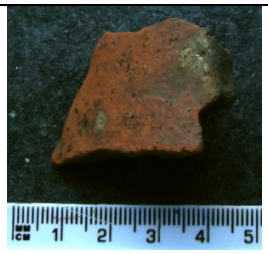
Assemblage 1:

Pottery sherds from excavations in Wirksworth were examined on 5th and 6th June 2014 with a view to providing identifications and dates to assist in future work on the site.

The problems of dating local medieval wares in Derbyshire were summarised by the author in 2004 (Cumberpatch 2004a) and in the subsequent ten years little has changed to alter the picture. Locally made wares, even those which achieved a regional distribution (Brackenfield and Burley Hill), remain poorly dated and in some cases poorly defined. The lack of publication of significant assemblages from Derby, Nottingham and Chesterfield is largely responsible for this state of affairs. In the case of Burley Hill and Brackenfield, two of the sites that have been published, dating evidence was limited and only broad date ranges have been assigned to the wares; these are quoted in the data tables and fill discussions can be found in the articles listed below.

One unexpected observation was the presence of a sherd, apparently of Doncaster Frenchgate type (sherd H). This type of pottery, hand-made and relatively crude compared with later Doncaster products, seems to have been associated with the construction and use of the post-Conquest timber castle on the site of the Roman fort and is believed to date to the late 11th or early 12th century. Its presence in Wirksworth is unexpected to say the least, given its rarity even within Doncaster itself.

Assemblage 1										
Site Code	**Sherd No**	**Type**	**No**	**Wt**	**Part**	**Form**	**Decoration**	**Date range**	**Notes**	**Reference**
WSJS14/42	A	 Brackenfield type 19	1	3	BS	Hollow ware	Pale green gaze ext	C14th - EC15th		Unpublished
WSJS14/42	B	 Buff Sandy ware	1	3	BS	Hollow ware	U/Dec	Medieval	Abraded fragment in a soft buff sandy fabric	Undocumented
WSJS14/42	C	 Reduced Sandy ware	1	11	Rim	Jug	Thin green glaze ext	Medieval	Unidentified fabric	Undocumented
WSJS14/42	D&E	 Buff Sandy ware	2	5	BS	Hollow ware	U/Dec	Medieval	Abraded pale grey fragment w/ abundant fine quartz	Undocumented

WSJS14/42	G	 Splash Glazed Sandy ware	1	8	BS	Hollow ware	Patchy splashed glaze ext	LC11th – E/MC13th	Pale grey core w/ oxidised margins; reduced sandy fabric	Unpublished
WSJS14/42	H	 Doncaster Frenchgate type	1	10	BS	Hollow ware	U/Dec	LC11th – C12th		Cumberpatch and Sydes 2004
WSJS14/42	I	 Burley Hill 1	1	13	BS	Hollow ware	Thin green glaze ext	MC13th – LC14th		Cumberpatch 2002-3
WSJS14/42	J	 Brackenfield type	1	23	BS	Hollow ware	Spots of clear glaze ext; decayed brown glaze int	C14th - EC15th		Cumberpatch 2004b
WSJS14/42	K	 Derbyshire Soft Orange Sandy ware type	1	4	BS	Hollow ware	U/Dec	Medieval		Cumberpatch 2004
WSJS14/42	L	 Burley Hill type	1	2	BS	Hollow ware	U/Dec	MC13th – LC14th	Softer than typical but resembles BH	Unpublished

WSJS14/42	M	 Derbyshire Soft Orange Sandy ware type	1	2	BS	Hollow ware	U/Dec	Medieval		Cumberpatch 2004
WSJS14/42	O	 Derbyshire Medieval Sandy ware type	1	5	BS	Hollow ware	U/Dec	Medieval		Cumberpatch 2004
WSJS14/42	P	 Derbyshire Soft Orange Sandy ware type	1	2	BS	Hollow ware	U/Dec	Medieval		Cumberpatch 2004

Assemblage 2:

An assemblage of thirty-two sherds of medieval pottery from excavations in Wirksworth was examined on 6th and 7th September 2015. The details are summarised in the accompanying data table.

The medieval pottery falls in to three categories.

The first includes the wares that have been identified to specific types from known potteries. These include Brakenfield near Chesterfield, Burley Hill near Derby and Hartshorne near Ticknall. Details of the first two sites have been published (Cumberpatch 2002-2003, 2004a) but the second is known only from informal fieldwalking which identified an area with abundant sherds and kiln wasters in buff to pale grey sandy fabrics. The character of the pottery suggested a late 13th to late 14th or early 15th century date but no definite dating evidence is available at the time of writing.

The second group includes those wares described elsewhere (Cumberpatch 2004b) but for which no production sites have yet been identified. It is possible that these were manufactured in small scale rural potteries but further research is needed to identify and locate such sites. The difficulties of dating such sherds have been discussed in greater detail in the publication cited above.

Unidentified wares have been assigned generic names and brief descriptions of the fabrics have been included in the data table ('Notes' column). It is highly probable that these are products from potteries in or close to the medieval towns of Nottingham and Derby. Several possible potteries have been identified in Nottingham but the details have yet to be published and the pottery industry, which was undoubtedly a significant element in the economy of the town and the surrounding area, remains virtually unknown.

With the exception of a single sherd, the latest pottery falls into the broad Midlands Purple type ware category and may originate from the Ticknall area, known to be a major centre for the manufacture of pottery throughout the post-medieval and early modern periods. The term Midlands Purple ware is a wholly unsatisfactory one as a wide range of late medieval and post-medieval wares are subsumed

within it. It is probable that the examples in this collection came from Ticknall or the Ticknall area but other sources cannot be ruled out as the range of fabrics from Ticknall has yet to be defined and individual variants characterised.

Note: It is possible that some of the shards may be a local product. It is known that a potter held 5 acres of land at Wigwell in 1247 (lePatourel, 1968), but the exact place is unlocated at the moment.

Assemblage 2										
WSJS15/40	101	 Hartshorne type ware	1	30	BS	Hollow ware	Thin dark red slip ext	Medieval	Hard buff sandy fabric w/ common, well-sorted quartz up to 1mm, occ larger	Unpublished
WSJS15/40	102	 Late Medieval Sandy ware	1	38	BS	Hollow ware	Spots of dark glaze ext	C14th – C15th	Hard, fine pale orange sandy fabric w/ moderate well-sorted quartz up to 0.2mm occ larger	Unpublished
WSJS15/40	103	 Late Medieval Sandy ware	1	10	BS	Hollow ware	U/Dec	C14th – C15th	Hard, dense, semi-vitrified buff fabric w/ quartz up to 0.5mm & finer	Unpublished
WSJS15/40	104	 Midlands Purple type ware	1	18	Base	Hollow ware	Spots of purple glaze on underside	LC15th – C16th	Hard dense, semi-vitrified reduced fabric w/ moderate quartz w/ sparse rock frags	Cumberpatch 2003, Spavold and Brown 2005
WSJS15/40	105	 Brackenfield 001	1	3	BS	Hollow ware	Small spots of yellow glaze ext	C13th – C14th	Bright white fabric w/ moderate quartz & red grit	Cumberpatch 2004a

WSJS15/32	106	 Hartshorne type ware	1	8	BS	Hollow ware	Thin red slip ext w/ patchy clear splashed glaze int & ext	C12th – C13th	Hard white fabric w/ abundant ang8ular quartz up to 1mm, occ larger & fine muscovite	Unpublished
WSJS15/32	107	 Midlands Purple type ware	1	6	BS	Hollow ware	U/Dec	LC15th – C16th	Hard, fine dull red sandy fabric	Cumberpatch 2003, Spavold and Brown 2005
WSJS15/32	108	 Burley Hill type ware	1	5	BS	Hollow ware	Dark green glaze ext	C13th – C14th?	Slightly finer with sparser inclusions than is typical for Burley Hill	Cumberpatch 2002-2003
WSJS15/32	109	 Midlands Purple type ware	1	5	BS	Hollow ware	Thin glaze fuming int & ext	LC15th – C16th	Hard, fine red fabric w/ abundant fine quartz sand	Cumberpatch 2003, Spavold and Brown 2005
WSJS15/32	111	 Hartshorne type ware	1	5	BS	Hollow ware	Crazed pale green glaze ext, slightly friable	C13th?	White fabric w/ abundant quartz up to 1mm, cf 106. Note rouletting.	Spavold and Brown 2005
WSM13	112	 Burley Hill type ware	1	4	BS	Hollow ware	Thin patchy green glaze ext	C13th – C14th	Hard, fine, dense grey fabric w/ moderate quartz up to 0.4mm	Cumberpatch 2002-2003

WSM13	113	 Midlands Purple type ware	1	25	Rim	Jar	Purple glaze fuming ext	LC15th – C17th	Hard, dense red fabric w/ abundant fine quartz & sparse rock frags	Cumberpatch 2003, Spavold and Brown 2005
WSM13	114	 Midlands Purple type ware	1	10	Lid-seated rim	Jar	Purple glaze fuming ext	LC15th – C17th	Hard, dense semi-vitrified fabric w/ sparse quartz	Cumberpatch 2003, Spavold and Brown 2005
WSM13	115	 Reduced Sandy ware	1	12	BS	Hollow ware	Sparse, patchy thin pale green glaze ext	Medieval	Buff to pale grey fabric w/ quartz & round red rock frags	Undocumented
WSM13	116	 Buff Sandy ware	1	7	Rim	Jug?	U/Dec	Medieval	Fine buff sandy fabric w/ sparse quartz & red rock frags up to 0.5mm, occ larger	Undocumented
WSM13	117	 Hartshorne type ware	1	9	Rim	Dish/pancheon	Traces of green glaze ext	Medieval	Wide everted rim, cf Hartshorne; buff to grey sandy fabric w/ quartz & red grit up to 1.5mm	Unpublished
WSM13	118	 Burley Hill 01 type	1	10	Base	Hollow ware	Patchy green glaze ext	C13th – C14th?	Hard, dense dark grey fabric w/ abundant quartz up to 0.4mm; denser than Burley Hill	Cumberpatch 2002-2003

WSM13	119	 Burley Hill 01 type ware	1	3	BS	Hollow ware	Dark green glaze ext	C13th – C14th	Abundant fine quartz up to 0.4mm in a pale grey to buff fabric	Cumberpatch 2002-2003
WSM13	120	 Burley Hill 02	1	2	BS	Hollow ware	Green glaze w/ small pimples of metallic lead	C12th – C13th	Fine reduced fabric w/ dull orange int margin & abundant fine quartz sand	Cumberpatch 2002-2003
WLC12	121	 Derbyshire Coarse Soft Orange Sandy ware	1	6	BS	Hollow ware	Thin green glaze ext	C12th – EC14th?	Pale orange sandy ware w/ abundant quartz & red grit up to 1mm; heavily abraded	Cumberpatch 2004b
WLC12	122	 Derbyshire Soft White Sandy ware	1	5	BS	Hollow ware	U/Dec	C12th – EC14th?	A buff to pale grey fine sandy fabric w/ moderate, well-sorted quartz up to 0.4mm	Cumberpatch 2004b
WSJS14/42	124	 Derbyshire Coarse Soft Orange Sandy ware	1	5	BS	Hollow ware	U/Dec	C12th – EC14th?	A soft bright orange sandy fabric w/ abundant, well-sorted angular rock & quartz grit up to 1mm, occ larger	Cumberpatch 2004b
WSJS14/42	125	 Late Medieval Sandy ware	1	8	Base	Hollow ware	U/Dec	Late Medieval	Hard red fabric w/ prominent white streaks & round red grit up to 2mm. Coal measures clay type.	Undocumented

WCS11	126	 Derbyshire Soft Orange Sandy ware	1	11	BS	Hollow ware	Rilled ext	C12th – EC14th?	A soft buff to pale orange sandy fabric w/ abundant round quartz & red grit up to 1.5mm	Cumberpatch 2004b
WSJS14/42	127	 Reduced Sandy ware	1	16	Base	Hollow ware	Smoothed int & ext	C12th – LC13th	Hard, pale grey reduced fabric w/ abundant quartz & round rock frags up to 1mm, occ larger	Undocumented
WLC12	129	 Derbyshire Coarse Soft Orange Sandy ware	1	11	Rim	Hollow ware	U/Dec	C12th – EC14th?	Soft orange fabric w/ abundant quartz & soft red inclusions ; See Cumberpatch 2004	Cumberpatch 2004b
WSM13	131	 Hartshorne type ware	4	13	BS	Hollow ware	U/Dec	Medieval	Very similar to sherds collected during fieldwalking in the Hartshorne area	Unpublished
WSJS15/32	110 A	 Oxidised Sandy ware	1	4	BS	Hollow ware	Thin dull red slip int & ext	Medieval	Hard, dense pale orange fabric w/ abundant quartz grit up to 0.7mm	Unpublished
WSJS15/32	110 B	 Oxidised Sandy ware	1	3	BS	Hollow ware	Crazed flaky green glaze ext	Medieval	A hard pale orange fabric w/ abundant quartz up to 0.4mm; cf Hartshorne but more orange	Unpublished

During the mediaeval age pottery is in common use for day to day activities, and the range of pottery found from St John's Street reflects activities and people of middling levels, for aristocratic people would, for example, be eating and drinking using metalware and glassware.

The Post-mediaeval and modern pottery. Anton Shone.

The post mediaeval pottery takes us from about 1500 to 1750 and then modern to the present day. By the middle years of the sixteenth century (1550 onwards), the traditions of local mediaeval pottery making were coming to an end and we see the emergence of pottery making on an industrial scale. For example Cistercian wares were being produced at Ticknell, although these in origin date from the years before 1500. They are characterised by an almost black treacle coloured glaze on a fine red fabric. At the same time, a white or buff fabric ware is being produced with a clear glaze giving what is known as a yellow ware.

From the early 1500s (the early sixteenth century) the other pottery being mass produced tends to be red earthenware, with an orange or green glaze. This is followed in the late sixteenth century (1590s) and early years of the seventeenth century (1600s onwards) by the introduction of white tin glazed earthenware, a technique brought in originally from the Netherlands. By the later middle years of the seventeenth century (1660 onwards) potteries such as Ticknell and Staffordshire are producing feather trailed and other slipwares and these are typically yellow and brown.

By the 1690s and early 1700s the glaze on earthenware becomes a much darker brown or purple brown and perhaps a little streaky as manganese was being added to the glaze, with the Staffordshire products the fabric of these tends to be buff and quite heavy, although drinking cups were also being produced which were not as heavily made. Yellow wares are present about the same date, but by this time the yellow effect is from a layer of white slip over a red or orange fabric, then glazed which results in a yellow ware.

About 1720, potteries around Stafford were producing Blackwares (a follow-on to Cistercian ware). Also white salt glazed stoneware starts to be produced, it looks rather like white china, but in a good light the surface will appear very finely pitted. By the middle of the eighteenth century (1750) this type of pottery is followed by cream ware, a lead glazed fine white earthenware with a slight yellow tinge. By the end of the eighteenth century from about 1790 and into the early years of the nineteenth century, 1810 etc, then proper white china is developed especially items with blue transfer printed decoration.

For an interesting and detailed summary of post mediaeval pottery, see the website of Bingham Heritage. Bingham is a market town the size of Wirksworth, and lies some 9 miles east of Nottingham on the A52.

www.binghamheritage.org.uk/history_of_settlement/field_walking/description_of_finds/post_medieval/

We cannot list all the post mediaeval and modern pottery found in the St John's Street examinations, the amount is simply too large for our resources to cope with. Here we merely discuss some types and some exceptional issues. In general the amounts of post mediaeval wares are significant and the amounts of modern wares vast and everywhere. In the principal trenches of the garden of number 42, modern wares occur in the successive upper contexts of the lower garden which have been built up in sequential gardening activity. However, this sequential gardening activity at number 42 and the wares within it might not represent large gaps in time between depositions: indeed we might simply be seeing the sequential deposition of these layers as part of one single (planned) activity to raise the height of the garden within a short time frame.

Blackware

An assemblage of Blackware (stoneware) sherds posed something of a problem given their context (invariably directly on top of the natural substrate N1) and their association with pottery of medieval type in the same context. In terms of their identification, they represent a group of fine stonewares and the forms are of 18th century type (notably the handle terminal on sherd X and shouldered vessel, sherd W). Their sharp condition, when compared with the worn medieval sherds, suggests that they had seen little post-deposition disturbance and were probably not redeposited. In contrast, the medieval sherds show all the signs of having been subject to considerable abrasion and it may well be that they are residual in a redeposit and that this deposit dates to the early 18th century as well.

This gives us a problem of interpretation of the very bottom contexts of the garden of number 42, contexts including 108 and 109 and higher numbered contexts overlaying the apparently natural. The Blackware dates fairly closely to between 1720 and 1740, and samples were taken to Stoke Museum for their view on this. I am very grateful to Miranda Goodby, the Curator of Ceramics for her immediate and

lively interest in them. That the Blackwares are in an unfinished state is also unusual, highly unusual in fact.

We do know that unfinished and broken pottery from manufacturers was used for road repairs and drainage projects, and therefore the easiest interpretation to lay on these finds is that we are seeing efforts to improve the drainage of the garden by digging pottery into the heavy clay, and this also may explain the movement of the medieval material. The gardeners have turned over the historic soil and clay, dug in the waste pottery to improve the drainage and then turned over the next shovel load on top of it and so on working gradually up the slope in spits.

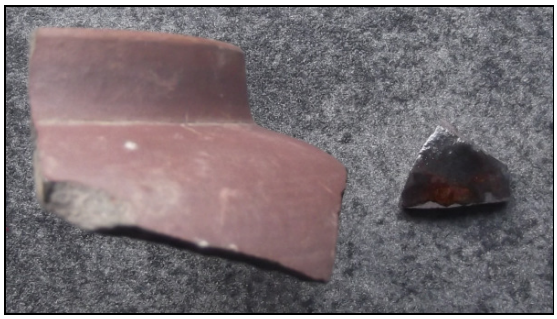
It has to be admitted that the presence of this unfinished blackware so far from Stoke is exceptional but given that Wirksworth is transporting lead to Stoke by packhorse train for use in the potteries, then return loads of both finished and unfinished pottery would be needed to make the operation pay. An alternative is that these unfinished wares might be evidence of another unrecorded attempt at founding a pottery in Wirksworth before that of the Wirksworth China Factory of the 1770s. Thomas Tudor's rather rambling and slightly confused article about the latter (Tudor, 1918) does mention two periods of alleged modern pottery manufacture in Wirksworth, but the dates do not (on the face of it) match this evidence.

Shards of Blackware (1720-1740) (sherd X on the left).
(Sherd Y on the right showing unfired glaze residue)

Shards of Blackware (1720-1740) (sherds left to right W, X and V)

In so far as we had quite a large number of various Blackware shards but didn't at first know what the residue on them was (we thought it was either organic or paint), on deciding it was unfired glazed, we took a small shard with the residue and fired it. This resulted in test fired sherd Z1, which shows the colour of the finished product, a very treacle dark brown, nearly black colour. Given the length of time which the sherd has been in the ground this was a remarkably successful result, with particular thanks to John Wheeldon for this experimental archaeology.

Shards of Blackware (1720-1740)
Shard V bottom and M top



Shards of Blackware (1720-1740)
Shouldered vessel shard W (left) and test fired shard Z1 (right)

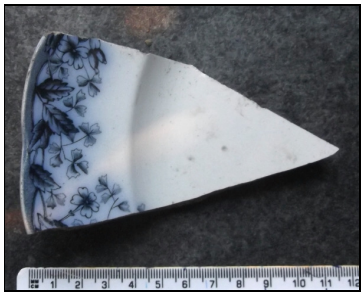
Other ware examples found in the examinations

Important note: Pottery "hangs around" after the date of its manufacture. Therefore it is most useful in the dating of features "not before", rather than end dates. It might be entirely possible for a stoneware jar made in the Georgian age to be knocking around your grandad's garage even now.

Brown glazed wares and slipwares No 40 TP3
Brown glazed earthenware top left 1690 to Victorian and recent
Brown mottled ware top right 1690-1750
Ticknell slipware bottom left 1650-1800
Ticknell Feather trailed slipware bottom right 1660-1750

Assemblage from no 42, trench 2:
1. Oyster Shell; 2. Mottled brown ware 1690-1750. 3. Salt glazed stoneware
4. Clay pipe bowl shard 1730-17905. Nottingham brown salt glazed earthenware 1690-1790
6. Mottled brown ware 1690-1750 7. Brown glazed earthenware top left 1690 to Victorian and recent

Nottingham brown salt glazed earthenware 1690-1790
Possible tobacco jar. No 40 TP3



White china with blue transfer printed decoration, 1810 onwards No 40 TP3

Wedgewood white china “Willow pattern” Victorian to recent. No 40 TP3

Appendix 2: Context Registers

Context register of TP 1 and Trench 1, garden of number 42.

Context	Description	Max Dimensions	Max Depth	Colour	Texture	Small Finds
101	Modern topsoil	Over all examined area	25 cm	Dark grey/ black	Friable	Modern items inc plastic wrappers
101A	Thin layer of modern brick rubble	TP 1 only	10cm	Red brown	Loose	Nil
101B	Modern loamy soil in cut trench in front of current terrace wall	TP 1 only	145cm	Dark grey/ black	Friable	Modern items, china, brown glazed wares 4 shards coarsewares
101C	Odd thin patches of broken red tile	At intervals 1 m to 7 m from terrace wall	5cm	Red brown	Compacted	Nil
102	Heavy fawn clay with no apparent inclusions and no finds of any kind	Underlies terrace wall, then 1 m break then continuous up to context 104	80cm	Fawn/beige	Solid	Nil
103	Very large amount of tipped possibly Georgian handmade brick and tile rubble and mortar. This pile of rubble has a very long mortar tail which thins and spreads down the hill under other contexts such as 107 and still shows as a very thin layer between 107 and 109 in the west end of the trench	2 m at maximum depth but continues with a thinning spread down to a tail of mortar the full length of the trench	160cm	Red brown and white	Rubble	Very rare shards of brown glazed ware
104	Unmortared dry stone wall butted up to and under context 102, with a continuation of large stones (both gritstone and limestone), some on edge in a strange diagonal pattern across approx 2.9 metres of trench, mostly	Width 50 cm of standing wall	80cm	Pale brown grey	Can be loosened	Nil. Thin exceptional pale red pink brick up against east side.

	lying on natural streaky light brown clay substrate N1, which overlays natural shale substrate N2.					
105	Thin layer of redeposited fawn clay	Along trench 4 metres	15cm	Fawn beige	Heavy patchy	Occasional modern pottery
106	Layer of heavy, lumpy black clay	Along trench 4.5 metres	40cm	Dark grey/ black	Lumpy	Victorian pottery shards
107	Grey clay with grey shale patches	Along trench 4.4 metres	35cm	Mid/dark grey	Mixed heavy and friable	Nil
108	Layer of streaky light brown clay similar and slightly diffuse with N1 but containing mediaeval shards	3.2 metres diffuse with 109	30cm	Fawn beige brown	Medium heavy sticky	Mediaeval Pottery of various kinds
109	Layer of dark grey clay with roots and a considerable amount of big pebble butted up to 108 and containing mediaeval shards	1.5 metres at west end of trench	30cm	Dark grey/ black	Medium heavy	Mediaeval Pottery of various kinds and Staffordshire blackware
N1	Streaky predominantly fawn clay becoming diffuse with N2	Throughout except where cut adjacent to terrace wall	30cm	Fawn beige mid grey streaks	Heavy	Very occasional shard of mediaeval pottery
N2	Shale.	Throughout	Undetermined depth	Grey/black/ rust red	Solid friable when scraped	Nil

Context register of Trench 2, garden of number 42

Context	Description	Max Dimensions	Max Depth	Colour	Texture	Small Finds
101	Modern topsoil	Over all examined area	25 cm	Dark grey/ black	Friable	Modern items inc plastic wrappers
101D	Modern redeposited topsoil as levelling build up	5 metres up to boundary wall	Diffuse with above to 60 cm	Grey black	Friable	Modern items inc plastic wrappers
103	Mortar tail of 103 demolition layer in Trench 1.	More pronounced at E end but gradually fades out	2cm	White	Patchy and friable	Nil
106	Layer of heavy, lumpy black clay	Along trench 4.5 metres	40cm	Dark grey/ black	Lumpy	Victorian pottery shards
106A	Fine friable grey soil	Throughout	80cm	Mid to dark grey	Friable	Georgian and Victorian pottery
107B	Redeposited grey clay mixed with small random stone as packing to wall foundation 210	Adjacent to and then up to 30 cm from boundary wall	70cm	Mid to dark grey	Lumpy and stony	Nil
107C	As 107B with rammed stone underlying wall foundation 210	80cm	20cm	Mid to dark grey	Stony	Nil
109	Layer of dark lumpy grey clay	Throughout except 30 cm adjacent to boundary wall	30cm	Dark grey/ black	Medium heavy	Roots and big pebble containing mediaeval pottery (gritty orange and splash glazed wares), clay pipe shards and bits of white china.
110	Thin fading layer of red patchy sand	Intermittent but throughout under 109	2cm	Dark red	Fine sandy	Containing some unfinished Staffordshire Blackwares
110A	Soft organic earth with a little mixed clay soil and stone	30cm from wall up to 120cm from wall	120cm to maximum depth of probe	Dark grey	Soft	Nil
111	Thick heavy streaky dirty	180cm	35cm	Dark grey /	Heavy	1 shard of brown

	clay diffuse with N1 at edge			Black		glazed ware 1 clay pipe shard 1630-1665
111A	Thick heavy black clay diffuse with N1.	30cm wide strip goes down at an angle	Determination of depth not possible beyond probe 1 m	Very Black	Heavy and sticky	
112	Tipped large stone rubble in a dark organic soil matrix	Starts 120cm from wall up and then to 310cm from wall	Beyond 40cm deeper examination not safely possible	Black	Wet	Animal bone
N1	Streaky fawn clay turning to very dark grey and then overlapping feature 112, implying it had been extended or collapsed at least over the edge of 112	From E end of trench to 310cm from wall where it becomes diffuse with 111 and then disappears	30cm	Fawn beige mid grey streaks	Heavy	Very occasional shard of mediaeval pottery
N2	Shale.	Throughout	Undetermined depth	Grey/ black/ rust red	Solid friable when scraped	Nil
210	Wall foundation plinth of undressed stone	Crosses trench	105cm	Grey light brown	Undressed stone	Nil
210A	"Presentation" wall of neat stone	As above	190cm	Grey light brown	Partly dressed stone	Nil

Context Register of TP 1 St Mary's Gate (31 St John's Street)

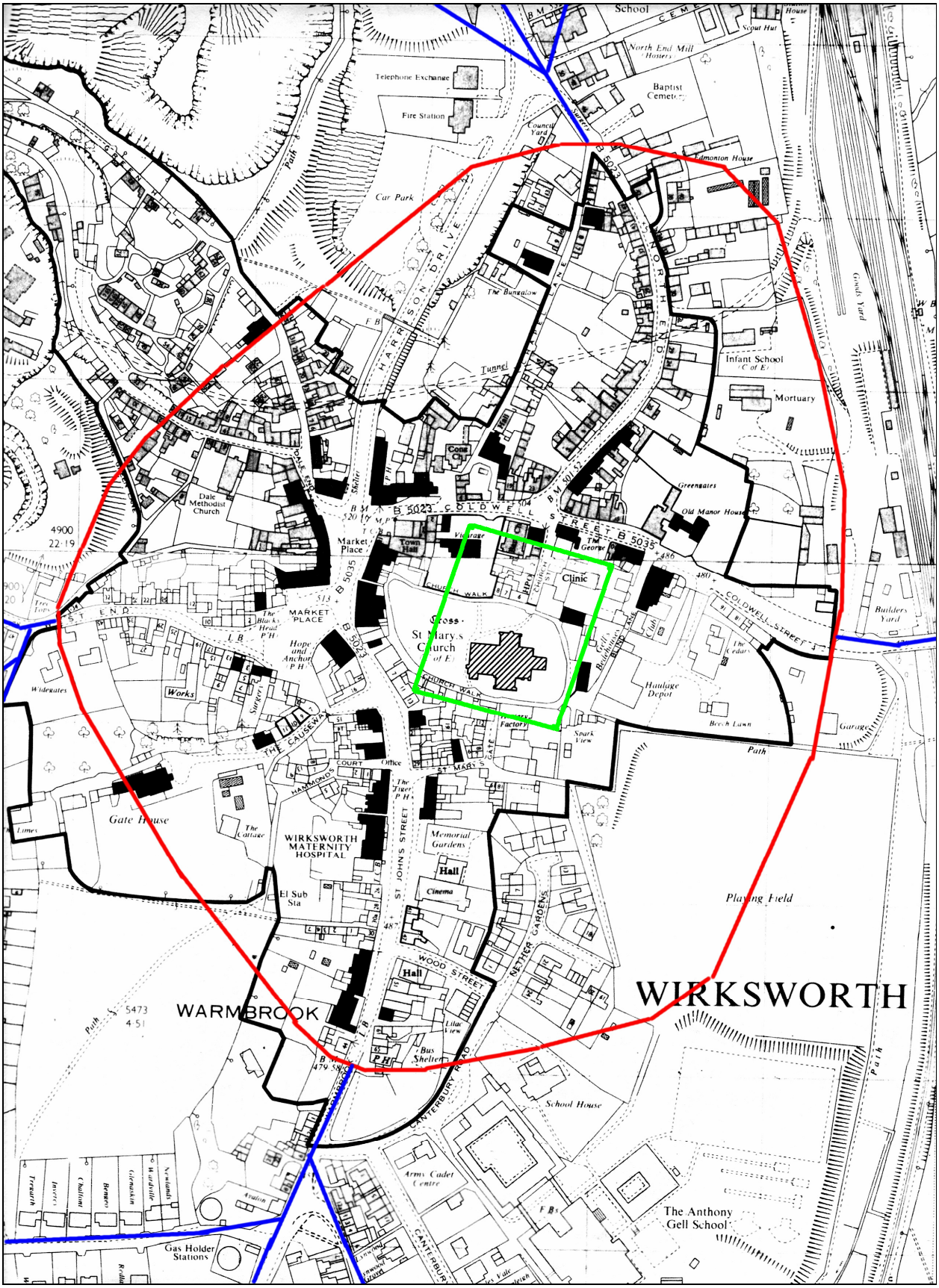
Context	Description	Max Dimensions	Max Depth	Colour	Texture	Small Finds
101	Top dressing of beach pebbles. Pea size at bottom.	Across TP1	12cm	Grey/Brown	Pebbly	Dandelions
102	Geotext fabric	Across TP1	0.5 cm	Light Grey	Cloth	
103	Limestone chatter	Across TP1	10cm	Fawn Brown	Coarse	Choc bar wrappers
104	Limestone chatter and dust	Across TP1	5cm	Mid Grey	Coarse	Plastic film
201	Demolition layer, mixed soil, stone, brick, tiles	Across TP1	20cm	Dark Grey	Mixed	Mainly post mediaeval and modern pottery and artefacts, bone, ceramic building materials (CBM)
301	Stone / Brick Culvert	1500mm x 300mm x 3000mm				Mixed pottery of various periods around culvert cut
302	Culvert Fill Blocking whole culvert	Within culvert		Dark Brown	Fine	Post 1800 small pottery fragments and some very modern items at the very top of the fill e.g. 1980s ringpulls
303	Backfill and spread of culvert cut	50cm either side	15cm	Dark Grey	Mixed	Mixed pottery of various periods, bone, charcoal bits etc.
304	Gritty small gravelly culvert bottom	30cm	3cm	Mixed grey grit	Gritty	Tiny post mediaeval pottery fragments
401	Mortared hard limestone surface	Across TP1 cut by culvert	12cm	Light Grey	Stony 5-10cm	A little slag and bone Otherwise none
501	Sticky clay	Across TP 1	15cm	Almost black	Heavy	Small bits of charcoal, very tiny flecks of CBM Otherwise none
601	Natural Bedrock	Across TP1	Beyond 50 cm	Grey/Brown	Solid Rubbly with pale Grey thin clay surface	None

Context Register of TP 2 St Mary's Gate (31 St John's Street)

Context	Description	Max Dimensions	Max Depth	Colour	Texture	Small Finds
101	Top dressing of beach pebbles.	Across TP2	11cm	Grey/Brown	Pebbly	Dandelions
101A	Thin layer of small pea gravel	Across TP2	1 cm	Dark brown/black	Pea	Nil
102	Geotext fabric	Across TP2	0.5 cm	Light Grey	Cloth	
103	Limestone chatter	Across TP2	10cm	Fawn Brown	Coarse	Modern drinks can
104	Limestone chatter and dust	Across TP2	2-4cm	Mid Grey	Coarse	Plastic film
105	Beaten dark ash	Across TP2	5cm	Black	Fine	Metal washers, bits of plastic
106	Large stones with small stone packed in gaps and a doorstep foundation. Floor.	Across TP2	10-12cm	Grey	Large Stone	Resting on pieces of slip trailed ware (1660-1690)
201	Demolition layer, mixed soil, stone, brick, tiles	W edge of pit only	20cm	Dark Grey	Mixed	Mainly post mediaeval and modern pottery and artefacts, bone, ceramic building materials (CBM)
202	Dark grey ashy soil, diffuse with and on top of 202A	Up to W cut	5-10 cm	Dark Grey Black	Ashy	Considerable amount of slip trailed wares (1660-1690)
202A	Small mixed stone	Up to W cut	2-4cm	Various	Limestone and gritstone	As above
203	Layer of loose flat limestones	Up to W cut	2cm deep, 10 cm broad	Light grey	Limestone	A great deal of green glazed pottery. Residual roots of grass type.
204	Burnt limestone layer also containing brown gritstone	Up to W cut	5-7cm	Red brown tinge denoting burning	Limestone and rough gritstone	Nil
303	Backfill and spread of culvert cut containing very large stones	Cut on W side	45cm	Dark Grey	Mixed	Mixed pottery of various periods, bone, charcoal bits etc.
601A	Thin layer of grey clay See Note 1	Up to W cut and up to an edge 20cm parallel to north edge of Pit	20cm	Light to mid grey	Smooth but with small stone inclusions	1 shard green glazed jug handle and 4 shards of same piece of oxidised ware having appearance of being trodden

						into it
601B	Natural Bedrock	Across TP1 up to and under culvert cut	Beyond 50 cm	Grey/Brown	Solid Rubbly with gritty inclusions and occasional random small stone	None
601C	Fawn clay with gritty hard small stone inclusions	At north end of pit and under the grey clay layer	Merges into bedrock	Fawn Brown	Very gritty	None
701	Two stake holes adjacent the line of the colour change between 601A and 601C Sealed by 601A	4 cm wide and 40 cm apart	10cm	Dark brown	Woody residue	None

Appendix 3: The fortification question



Red: Defensible contour; Green: Area required for a Roman fort; Blue: Road and paths on 1709 map

Problems in the consideration of fortifications for Wirksworth

Wirksworth is a recorded pre-Viking town. It is inconceivable that it was undefended. However, no serious efforts have been made before this present time to consider the issue and until recently even we had not begun to give the matter detailed thought. There have been many reasons why this has been the case, but an overlying reason originates in the dismissal by Professor Cameron that the Weorcs element of the Wirksworth place name meant fortification. Professor Cameron's dismissal, then, has acted like a dead hand on both scholarly and archaeological consideration of the issue. Yet modern scholarship regards Cameron's 1959 place-name derivation for Wirksworth - as "weorc" representing a personal name, as being unsound (Stafford, 1985; Gelling, 2000). Even in Cameron's own time, AH Smith (1956) only gave "fortifications" as the correct interpretation of "weorcs".

In addition to the naming issue, the evidence for Wirksworth having both a major Roman role and a major Mercian role was considered in detail in our previous report "Origins and History of Wirksworth. The Search for Lutudarum: Evidence and Assessment". Finally, the recent work on the Roman road network supports a view of Wirksworth being an important route centre of that network in the Peak District. For these reasons we feel it is at last salient to look at the fortification question.

Certainly in Mercian terms, the extent of warfare in Mercia in and around the Peak District begs the question of the weakness of known fortifications of the time, to deal with any invading force. In fact so little is known and so much clarity lacking that if no further evidence came to light one would have to take the view that the Peak District was so weakly defended by the Mercians that it could have been invaded and laid waste by a bloke carrying a small pointy stick. In short there has to be a substantial defensive position in the central Peak District, with a large enough population to man it. If this substantial defensive position is not Wirksworth, then where is it? For we know from later place-name evidence that while the Vikings successfully took and held the area east of Wirksworth and the Derwent, they did not hold the lead field or the area west of Wirksworth, a major strategic failure, for which there must be a reason.

Choice of location

Johnson notes the recommendations of Roman engineers themselves on locating forts: the site should best be "upon a slight prominence on gently sloping land". Johnson notes that the favourite location was "undoubtedly at the end of a spur or on a small plateau with falling ground on three or four sides, at the confluence of two streams or a river with a tributary." In Wirksworth, such a gently sloping plateau at the confluence of two streams occurs in the Hannage peninsula. In almost all cases such choices also commanded routes or route centres.

Space required

This varies according to the type of fortification, for example legionary fortresses are extremely large. However, most of the forts which occur in the Peak District date from the late Neronian or Flavian periods (AD60-80), of which the remains are typically of the Flavian, and these forts, auxilliary forts, are typically no more than 130 metres by 120 metres and are fairly square (unlike their counterparts of other periods, which are more rectangular). For example, the dimensions within the ramparts at Melandra are 114 metres x 102 metres and at Brough are about 100 metres x 80 metres. The only completely excavated Flavian period fort in Britain is at Pen Llystyn in Wales and this is 120 metres x 100 metres within the ramparts. Variations in reported fort sizes are often due to the failure to report which parts of the fort are being measured, or that the fort is being measured from the outer edge of a defensive ditch or ditches. For example, Chesterfield, which cannot be wholly excavated, is variously reported as being 130 metres x 115 metres (Turbutt, 1999) or 150 metres x 150 metres (Bates, 2007). It is entirely possible to fit a fort of this size in the area of the church precinct bounded by Coldwell Street, Old Market Place, St Mary's Gate and Blind Lane in Wirksworth, and there would be some logic to looking at the church precinct in more detail if the resources ever became available. The Mercian fortifications of Tamworth, Hereford and Winchcombe are much larger than a Roman fort, and to assess these in terms of the topographic layout of Wirksworth, the map above is provided. This map summarises two main issues:

1. The topography in terms of a defensible contour, in this case that area beyond which (note this) fortifications could not realistically be. On the south side they cannot realistically be much further south than the site of the Wheatsheaf pub, because the land drops steeply. On the east side they can only be on the west bank of the Ecclesbourne (a greater river in the past than it now is). On

the north side they cannot realistically be further north than the junction of North End and Cemetary Lane, and on the west side any defence has to overcome the height of the hill at the Leas to overcome, the site now of the Almark Garage, but which, we must bear in mind, is not its original topography. The garage site appears to have been built up from quarrying and tipping and the land to the north of it has been badly quarried away down to Dale Lane.

2. If Beresford (1967) is correct, then the gates of such a fortification would show, still, where roads and footpaths fan out beyond the historic centre of the town. This fanning is again most obvious south of the Wheatsheaf, where Derby Road, Summer Lane and Water Lane meet and come up into the town. There would have to be a gate more or less outside of and a little downhill of the Wheatsheaf, the South Gate. On the east side the gate would have to be on the town side of the Ecclesbourne and sufficiently up what is a gently sloping contour that it wouldn't flood, so the east gate would have to be on the line of the current lorry repair yard, opposite and a little above Station Road. On the north side, the roads and footpaths fan out at the very end of North End (on the 1709 map), so any gate would have to be fairly close to the Old Lock Up and inside Baileycroft Steele, that is the site of a medieval smithy (historically smithies and forges would be outside of towns because of the risk of fire). On the west side, the roads fan out immediately west of a house called Widegates, where Hopton Lane, Yokecliffe Lane and another minor lane diverge.

Communications and timber

Ease of communication is an essential feature of fort location and often forts are located where they can command roads and/or river crossings. We now know that Wirksworth is at the route centre of a series of Roman and medieval roads which radiate in several directions to Buxton (The Street), Chesterfield, Little Chester, Rocester and Brough (The Portway). The timber issue is also quite easy to deal with, Wirksworth even now is well equipped with woods all around, timber being essential for both building and for the provision of fires.

Water supply

In terms of water supply, forts are often located near rivers, but are also generally found to have wells, and invariably such wells are within the courtyard of the principia or headquarters building, sometimes called the basilica. There is no longer any known well located in the churchyard of St Mary's, except that found by Hilary Dennis on her dig in Church Street, but the churchwardens accounts (Palmer, 2008) record a payment to Adam Wilde in 1697 for the repair of the church "well hole". The de-facto conclusion from this is that the church must have had a well regardless of whether the warm water spring in the churchyard mentioned earlier in this report fed it. Of course it might be inferred that the church was paying Adam Wilde to repair a well hole which the church used on his property nearby, but Adam Wilde occurs three times in the accounts from 1692 undertaking various work including gutter repairs so the logical conclusion is that he is one of the church's regular labourers rather than a neighbour with a well, therefore we conclude the well is correctly somewhere in the churchyard.

From none of these accounts or any others have we been able to identify the location of the church well precisely or of the "warm spring" in the churchyard apparently destroyed by the Lees Vein branch of the Hannage sough. However, it should be observed that both the church font and the chancel piscena (the priests wash-basin) are on the south side of the church chancel and it has to be supposed that water would be carried from a nearby location rather have to traipse across the church or churchyard with it. It is therefore not unreasonable to suppose the well must have been on the south side or nearby and that it is equally not unreasonable, given the co-incidence of the date of the sough building in 1696 and the repair to the well hole in 1697, to suppose that perhaps the two are related. If this is so then it is entirely possible that the warm spring and the church well water supply were one and the same.

The difficulty of addressing the issue must not be underestimated. At Chesterfield, a similar urban situation, historians had felt that a fort existed in Chesterfield because of the place name alone, there being no archaeological evidence whatsoever. Indeed, Turbutt (1999) observed that there were so few finds and no excavations that its existence had long been doubted and these uncertainties remained until work was eventually done in 1973.

It could be argued that the position for Wirksworth today is much the same as for Chesterfield in 1973, perhaps worse in fact, in so far as there has been no "chester" place name for historians to play with, and the "weorc" place name being so wretchedly misunderstood. In looking for the most appropriate site for fortification it is necessary to consider the issues which the Romans and Mercians considered. In

discussing the issues, Johnson's seminal (1983) work on Roman forts in Britain and Germany provides a thorough and detailed approach and the work of Bassett (2007) in discussing the Mercian fortifications of Tamworth, Hereford and Winchcombe does much the same for the eighth and ninth centuries. Indeed if the potential area which is mapped above for any conceptual fortification of Mercian Wirksworth were proved to be correct, then the area encompassed would be no less than the Aethelflaedian fortress at Tamworth.

Reference List

Anon, 1712, Feoffment from Sir Phillip Gell to John Holloby of a house in St John's Street, Wirksworth, Derbyshire Record Office, D258/31/2/10

Anon, 1795, Lease by Phillip Gell of Hopton to John Toplis of a cottage in Wirksworth near Nether Street (formerly St John's Street), Derbyshire Record Office, D258/31/1/26

Arkwright Rev, 1912, A survey of the Soake and Manor of Wirksworth 1649, Derbyshire Archaeological Journal, 34, p13-28

Bain K, Greig J and Ratkai S, 2006, Late Saxon and Medieval Derby; Excavations at King Street, Derbyshire Archaeological Journal, p48-81

Bassett S, 2007, Divide and Rule: The military infrastructure of eighth and ninth century Mercia, Early Medieval Europe, Vol 15/1 p53-85

Beresford MW, 1967, New Towns of the Middle Ages: Town Plantation in England, Wales and Gascony. London: Lutterworth Press, p161

Brown R and Cox A, 1984, Trial Excavations at Wirksworth, Northern Ceramic Society Journal, Vol 5, p 37-51

Cameron K, 1959, Place names of Derbyshire, University Press, Cambridge, p418, p421, p733

Catling C, 2013, Peasant Houses in Midland England, Current Archaeology, Vol 279. Accessed on 11/12/15 at www.archaeology.co.uk/articles/peasant-houses-in-midland-england.htm

Cumberpatch, C.G. 2002 - 2003 Medieval pottery from manufacturing sites at King Street, Duffield and Burley Hill Duffield, Derbyshire: a summary report, Medieval Ceramics 26/7; p85-100

Cumberpatch, C.G. 2003 The transformation of tradition; the origins of the post-medieval ceramic tradition in Yorkshire. Assemblage http://www.shef.ac.uk/assem/issue7/cumberpatch.html

Cumberpatch, C.G. 2004a Medieval pottery production in Derbyshire: a review Derbyshire Archaeological Journal, 124; p86 – 112.

Cumberpatch, C.G. 2004a Medieval pottery from Brackenfield, Derbyshire http://ads.ahds.ac.uk/catalogue/specColl/ceramics_eh_2003/

Cumberpatch, C.G. 2004b Medieval pottery from Brackenfield, Derbyshire, accessed on 12th August 2015 at http://archaeologydataservice.ac.uk/archives/view/ceramics_eh_2003/

Cumberpatch, C.G. & Sydes, R.E. 2004 A pottery assemblage from an early medieval kiln at Frenchgate, Doncaster, accessed on 12th August 2015 at http://archaeologydataservice.ac.uk/archives/view/ceramics_eh_2003/downloads.cfm?archive=Frenchgate

Duchy of Lancaster, 1821, Map of Wirksworth, in the collection of the County Archaeologist.

Ellis P, 1989, Roman Chesterfield: Excavations by T Courtney 1974-1978, Derbyshire Archaeological Journal, p51-127

Farey J, 1811, General view of the agriculture and minerals of Derbyshire, Mc Millan, London, p502-506

Flindall, R, 2005, Mines, quarries and murder in the Peak District, Bulletin of the Peak District Mines Historical Society , 16(1), p25

Ford, TD, 2005, The Geology of the Wirksworth Mines, Bulletin of the Peak District Mines Historical Society, 16(2), p24

Gelling M in Brooks, N, 2000, Anglo-Saxon Myths: State and Church 400-1066, p 202-216

Hadley DM, 1996, Conquest, colonisation and the church. Ecclesiastical organisation in the Danelaw, Historic Research, Vol LXIX, No 169 p 113.

Hawkes, J, 1994, The Wirksworth Slab: An iconography of humilitas, Peritia, 9, p246-277

Hume, IN, 2015, The evolution of the English Clay Tobacco Pipe 1580-1860, accessed on 12th August 2015 at nautarch.tamu.edu/class/313/pipes.jpg

Hutchinson S, 1709, The Wirksworth Township Map of the Gell Estate, Derbyshire Record Office, D258 M/18/6

Hutchinson S, 1710, A survey of houses, barns, gardens etc within and near ye town of Wirksworth in the county of Derby, the estate of the Hon Sir Phillip Gell Bart, Wirksworth Parish Magazine, 1897.

Johnson A, 1983, Roman Forts of the 1st and 2nd centuries AD in Britain and the German Provinces, Adam and Charles Black, London, p36-44

Laing LR, 2006, The archaeology of Celtic Britain and Ireland 400-1200, Cambridge, Cambridge University Press, p86

lePatourel HE, 1968, Documentary evidence and the Mediaeval Pottery Industry, Medieval Archaeology, Vol 12, p123 et seq., Appendix 3.

Leary RS, 2013, Romano-British Pottery in Excavations at Lodge House, Smalley, Derbyshire, Derbyshire Archaeological Journal, p126-131

Murphy K, 1994, Excavations in three Burgage plots in the medieval town of Newport, Dyfed, 1991, Medieval Archaeology 38, pp55-82

Ottery, FS, 1966, Geographical Aspects of the Development of Wirksworth from the Beginning of the Nineteenth Century to the Present (1800-1965), University of Nottingham, Derby Local Studies Library

Palmer, J, 2008, Wirksworth Parish Records 1600-1900, accessed on 12th August 2015 at http://www.wirksworth.org.uk/B66-CINE.htm#nether and http://www.wirksworth.org.uk/X001.htm

Rieuwerts JH, 1966, List of the soughs of the Derbyshire lead mines, Bulletin of the Peak District Mines Historical Society, 3(1), p1-39

Rieuwerts JH, 1969, Supplementary list of the soughs of the Derbyshire lead mines, Bulletin of the Peak District Mines Historical Society, 4(2), p119-135

Rieuwerts JH, 1980, The earliest lead mine soughs in Derbyshire, Bulletin of the Peak District Mines Historical Society, 7 (5), p284-302

Rollason L et al, 1996, Four Anglian Monuments in Derbyshire: Bakewell, Bradbourne, Eyam and Wirksworth, Workers Educational Association.

Shone A, 2006, Origins and History of Wirksworth. The Search for Lutudarum: Evidence and Assessment, Wirksworth Roman Project, Derby, p7, p13-16

Shone A, Smart, D, 2008, The Street: A re-evaluation of the Roman road from Wirksworth to Buxton Wirksworth Roman Project, Derby, p4

Shone A, 2009, Issues in the archaeology of Wirksworth, Wirksworth Roman Project, Derby, p9-20

Shopland N, 2005, Archaeological Finds: A guide to identification, Tempus, Stroud, p193

Short T, 1734, The natural, experimental and medicinal waters of Derbyshire, Lincolnshire and Yorkshire, London, p92-94, Derby City Local Studies Library

Slack R, 2000, Lead Miner's Heyday, the great days of mining in Wirksworth and the Low Peak of Derbyshire, Self Published, p VI, 52

Smith AH, 1956, English Place-Name Elements, Part I: The Elements Á-Īw Maps; Part II: The Elements Jafn-Ytri. English Place-Name Society, XXV-XXVI.

Spavold J and Brown S, 2005, Ticknall Pots and Potters, Landmark Publishing, Ashbourne, 90-94

Stafford P, 1985 The East Midlands in the Early Middle Ages, Leicester University Press, Leicester p34, p89, p109-121, p135-143, p154-155 and p171.

Stephens JV, 1929, Wells and Springs of Derbyshire, HMSO, London, p36

Stroud G, 2001, Derbyshire Extensive Urban Survey Archaeological Assessment Report: Wirksworth, Derbyshire County Council, Matlock, p 5, p1-27

Timby JR, 1990, Severn Valley wares. A reassessment, Britannia, 21, p243-51

Tithe Commissioners , 1837, Tithe Map of Wirksworth, Derbyshire Record Office, D2360 3/129

Tudor T, 1934, Wirksworth in the Dawn, Derbyshire Countryside Magazine, July 1934, pp67-68

Tudor T, 1918, The China Factory at Wirksworth, in Derbyshire, The Connoisseur Magazine, May-August 1918, p25-30.

Turbutt G, 1999, A History of Derbyshire, Merton Priory Press, Cardiff, Vol 1, p195 and Figure 9

Tyers P, 1996, Roman Pottery in Britain, Batsford Ltd, London.

Young CJ, 1977, The Roman pottery industry of the Oxford region, British Archaeological Reports, Oxford, No 43