

# **Archaeological Works at St. John's Church, Alkmonton, Derbyshire**



St. John's church

**ARS Ltd Report 2019/62  
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**ARS Ltd Report No. 2018/62**



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## **Executive Summary**

*Project Name:*

*Site Code: SJA'18*

*Planning Authority: Derbyshire Dales District Council*

*NGR: SK 18720 38550*

*Date of Attendance: 7th of November 2018 and 18<sup>th</sup>-19<sup>th</sup> March 2019*

*Date of Report: 22/03/2019*

*Archaeological Research Services Ltd was commissioned by Mr Paul Mendham Stonemasons Ltd to undertake a scheme of archaeological mitigation during development works on St. John's Church, Alkmonton, Derbyshire.*

*Archaeological supervision and monitoring in the form of an Archaeological Watching Brief was required during the underpinning of the church walls around the chancel and the excavation of trenches for a new drainage system.*

*Two floors inside the nave of the church, concrete underpinnings beneath the church foundations post-dating the foundation of the church, and a sequence of water pipes on east side of the church porch were discovered during the course of the Watching Brief.*

*The site was visited twice; the first time on the 7<sup>th</sup> of November 2018 and the second between 18<sup>th</sup> and 19<sup>th</sup> of March 2019. The work was undertaken by Alexis Thouki, Assistant Projects Officers at Archaeological Research Services Ltd and the project was managed by Adam Lodoen, Project Manager at Archaeological Research Services Ltd.*

## **1 Introduction**

### **1.1 Circumstances of the Project**

1.1.1 Archaeological Research Services Ltd (ARS Ltd) was engaged by Mr Paul Mendham Stonemasons (the client) to undertake archaeological supervision at St. John's Church, Alkington, Derbyshire, DE6 3DL (NGR SK 18720 38550). A Written Scheme of Investigation (WSI) was prepared which detailed a scheme of archaeological during the underpinning of church walls around the chancel and the excavation of trenches for the insertion of a new drainage system. The watching brief was undertaken as a requirement of the Heritage Lottery Fund's involvement in the development as advised by Historic England and as a requirement of the Diocesan Archaeological Advisor.

1.1.2 St. John's Church, Alkington, is a grade II listed building dating from 1843 - although the chancel is c.10 years later - which has suffered from structural movement, particularly to the chancel, related to the impact of an ancient beech tree and defective drainage. Following a number of investigations, including trial holes to reveal the extent of the foundations carried out between 2011-14, the Heritage Lottery Fund agreed to support the conservation and repair works which include underpinning of the shallow foundations around the chancel and works to install new external drainage.

1.1.3 The archaeological works were carried out in accordance with National Planning Policy Framework (NPPF) paragraph 199 (Ministry of Housing, Communities and Local Government 2018, 56) to record and enhance understanding of the significance of any heritage assets to be lost during the proposed development in a manner proportionate to their importance, and to make this evidence (and any archive generated) publically accessible.

### **1.2 Site Location and Geology**

1.2.1 The 'red line boundary' of the site is outlined in Figure 1 and encompasses the buildings and surrounding grounds of the church. The site comprises a level rectangular plot of land off the south side of Long Lane in the centre of the village, immediately east of the grade II listed School House on the corner of Long Lane and Leapley Lane. The perimeter of the site is heavily populated with trees. A court of garages is located to the south whilst to the south-east beyond the graveyard there is a large open field. The site is centred at NGR SK 18720 38550 (Figure 1).

1.2.2 The underlying solid geology of the site comprises Mercia Mudstone Group – Mudstone, Sedimentary Bedrock formed approximately 201 to 252 million years ago in the Triassic Period when the local environment was dominated by hot deserts. This is overlain by Till, Mid Pleistocene – Diamicton, formed up to 2 million years ago in the Quaternary Period when the local environment was dominated by ice age conditions (BGS 2018).

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**Figure 1: Site Location.**

## **1.3 Archaeological and Historical Background**

1.3.1 The church of St. John at Alkington was built in 1843 and, unusually for Derbyshire, is built in the Early English style of flint-pebble. The village of Alkington grew up between the deserted medieval villages of Hungry Bentley and Alkington (Diocese of Derby 2012).

1.3.2 The Historic England listing for the church provides further details, including that internally there is a rare, high quality, painted scheme; plaster ceilings are painted in imitation of timber, the chancel arch, window and door surrounds are painted in imitation of ashlar. The building has a long history of structural movement and a Heritage Lottery Fund grant was awarded for extensive development work in 2011. Structural monitoring, drainage surveys, paint and tree assessments were completed. A Heritage Lottery Fund Grant for Places of Worship was awarded in 2015 to develop a repair scheme (Historic England 2018).

## **2 Aims and Objectives**

### **2.1 Regional Research Aims and Objectives**

2.1.1 The principal aim of archaeological works was to recover and record any potential archaeological remains associated with the use of the church and its grounds. Any uncovered remains were recorded and analysed during the course of development as part of the archaeological watching brief.

2.1.2 The following objectives contributed towards accomplishing this aim:

- To record the character and date of any surviving archaeological remains associated with the church, burials and memorials on the site.
- To record the nature, extent and date of any surviving archaeological remains associated with past secular activities on the site.

### **2.2 Archaeological Works Aims and Objectives**

2.2.1 The aims and objectives of the watching brief were as follows:

- To identify the presence/absence of any archaeological features and deposits within the site.
- To record all archaeological features and deposits encountered.
- To establish relative sequence, likely dating and quality of preservation.
- To gather sufficient information to establish the character, extent, form, function and likely status of any surviving archaeological deposits with a view to evaluation their significance and potential to inform the aims and objectives.

## **3 Methodology**

### **3.1 Professional Standards**

3.1.1 The watching brief was undertaken in accordance with the methodology specified in the WSI produced by ARS Ltd (Dyson 2018) (Appendix II).

3.1.2 In all circumstances, the groundworks were undertaken in accordance with the Chartered Institute for Archaeologists (CIfA) *Code of Conduct* (2014a) and the *Standards and Guidance for Archaeological Watching Brief* (CIfA 2014b).



## **3.2 Coverage**

3.2.1 The groundworks on site were located by the church foundations (especially in the area around the chancel), at the north east corner of the nave (inside the church), and in the churchyard where the new drainage trench, running along the south and east side of the church, was excavated. The monitoring revealed concrete underpinnings below by the original brick foundation, two floors inside the central nave and a sequence of drain pipes. The watching brief took place in two phases; the first on the 7th of November 2018 and the second between 18th and 19th of March 2019.

## **3.3 The Watching Brief**

3.3.1 All relevant ground works were undertaken by hand or using a suitable mechanical excavator fitted with a toothless ditching bucket. Archaeological monitoring did not entail excavation beyond the total areas exposed by the proposed works (Figure 2).

3.3.2 ARS Ltd provided a suitably qualified archaeologist at all times during any ground works on the site to undertake the archaeological monitoring. The on-site archaeologist was given the opportunity to stop site work in order to investigate potential archaeological features and adequate time was allowed for recording any such features.

3.3.3 A written, drawn and photographic record was maintained during the watching brief plus all significant archaeological remains will be recorded and/or retrieved. All excavations were recorded in accordance with normal principles of archaeological excavation upon pro forma context sheets. All significant architectural features were photographed (with scale) in situ and their location recorded on a plan of the site.

3.3.4 All features thus investigated were recorded in plan and section. The archaeological features identified were photographed and drawn in plan and section at appropriate scales as well as the relevant stratigraphy. The records follow standard conventions set by the Museum of London Archaeological Services (MoLAS) (2002).

3.3.5 A full and proper record (written, graphic and photographic as appropriate) was made for all work, using pro-forma record sheets and text descriptions appropriate to the work. Accurate scale plans and section drawings were drawn where required at 1:50, 1:20 and 1:10 scales, as appropriate. In addition to relevant illustrations, provisions for rectified photographic recording were made.

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**Figure 2: Location of works**

**Figure 3 Location of figures and sections**

## **4 Results**

### **4.1 Introduction**

### **4.2 North underpinning trench**

4.2.1 The underpinning trench in the north part of the Church was located in the north-east part of the nave (Figure 2). The trench runs beneath the existing foundations and it is linked to the underpinning trench located inside the church (north-east corner of the nave) (Figure 10).



**Figure 4 Brick foundation (006) and concrete underpinning (005) of north wall of nave**

4.2.2 The foundation substructure of the outer north wall of the nave consists of three distinct construction layers (Figure 4). The first comprises a thick block of plain concrete (005) measuring 800mm deep and 5m thick, overlaid by five courses of handmade orangey bricks (006) laid on bed facing north, bonded with a whitish grey mortar. The brick work forms an English Bond and is overlain by two courses of finely dressed limestone (007) forming an ashlar bond with carefully chamfered dressed masonry. For measurements see Appendix 1.

4.2.3 The north church churchyard, as shown in Figure 5, comprises a sequence deposits above the subsoil. The natural clay geology (004) is overlaid by a yellowish brown stony sandy silt layer, identified as subsoil (003). On top of that a mixed layer (002) (composed of



loose spread of material including cobbles and bricks mixed with redeposited topsoil was encountered. The last layer is represented by an asphalt layer flooring (001).

4.2.4 At the east site of the underpinning (close to the boiler wall) a ceramic drain (009) was detected running north-east away from the church wall. The trench was cut through made ground (002), backfilled with redeposited topsoil (010) and overlaid by asphalt layer (001).



Figure 5 South facing section of trench [011] and drain [008]

### 4.3 East Underpinning trench / East wall

4.3.1 The east underpinning trench was located by the east wall of the chancel (Figure 2). The trench had already been excavated and refilled with concrete by the time ARS archaeologist arrived on site. A photographic record collected by the construction team revealed that the foundation comprises concrete overlain by four courses of stepped brickwork in a stretcher bond underneath three courses of chamfered limestone ashlar blocks.

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**Figure 6 Stepped brickwork and concrete underpinning foundation underneath the east wall © Paul Mendham Stonemasons Ltd**



**Figure 7 South wall brick foundation**

**Figure 8 Plan 2 and Section 3**



4.3.2 Unlike the four courses stepped brickwork identified on the east wall of the chancel, the south wall comprises a seven-course foundation of hand-made bricks laid on bed facing south (014). The brickwork is bonded with a light grey mortar forming an English Bond and is superimposed by two courses of finely finished ashlar limestone blocks (015) (Figure 7 and section 1 in Figure 14).

4.3.3 Immediately to the right of the church porch (south wall of nave), a concrete layer (037) overlaid by two courses of bricks (029) was revealed during the laying of the new storm drain (Figure 9 and Figure 8 plan 2). The lower course forms a header bond with bricks laid on edge while the upper forms a stretcher bond (Section 3 in Figure 8).



**Figure 9 Brick foundation (029) concrete underpinning (037) and water pipes (030) – (032)**



#### **4.4 Underpinnings inside church**

4.4.1 A small trench was excavated in the north-east corner of the nave (inside the church), in the area reserved for the pulpit (Plan 1 in Figure 8). The trench comprises a roughly rectangular shape measuring 1m x 900 mm and is linked to the underpinnings trench underneath the outer north wall of the nave.

4.4.2 The east facing section of the underpinnings revealed floors in two different levels. The lower floor {023}, comprising alternate blue and red rectangular floor tiles, was situated on top of a thick layer of concrete {022}. The higher-level floor {025} consisted of red rectangular tiles forming a simple straight lay pattern (Figure 10). Both floor levels were placed on thin (20mm) foundations, (026) and (024), consisting of concrete compound.

4.4.3 The north facing section revealed a heating system housed within a brick sited channel [020] covered with a metal grate (Figure 10 and plan 1 in Figure 14). The channel comprises three courses of bricks laid in stretcher bond and runs along the north-south axis of the church between the nave and the chancel. The heating system cuts through the primary floor of the nave (026) and it is overlaid by a thick concrete block forming the floor of the chancel.



**Figure 10 Floors {023} and {025}**

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**Figure 11 Heating duct [020] system overlaid by the concrete floor of the chancel**



**Figure 12 Trench for new storm drain, looking east**



**Figure 13 Soil sequence in the east part of the churchyard**

**Figure 14 Section 1 and 2 and Plan 1**



## 4.5 Drainage

4.5.1 The trench for the new storm drain starts directly to the east of the church porch and it runs approximately 1 meter off the church wall along the south and east side (Figure 2). The excavation revealed multiple phases of drainage.

4.5.2 Two drain pipes were revealed between the buttress (east of porch) and the south nave wall (Figure 8 and Plan 2 in Figure 7). The first (030) (earliest) is represented by a yellow ceramic pipe. Although the cut for the pipe trench [038] was not visible at the depth of the development, it appears that it must have truncated the concrete foundation (037), and backfilled with redeposited subsoil (036). The second pipe (032) is represented by a red ceramic pipe and it is a later replacement. The pipe trench [031] appears to follow a south-east alignment, away from the walls of the church.

4.5.3 A third drain (034) was identified in the new trench on an east to west alignment. This poorly preserved drain was observed for a distance of 1.5m.



Figure 15 Drain (034) visible in the trench for the new storm drain, looking east

## **5 Discussion and Interpretation**

5.1 The monitoring revealed substantial structural strengthening works of the original brick foundations as well as refurbishment works in the interior of the church.

5.2 The concrete underpinnings found beneath the foundations appears to be later additions, representing an attempt to enhance either the stability of the walls (necessary, presumably, because of ground subsidence) or their capacity to resist loading or both. The concrete underpinnings under the nave can be securely classified as a later addition, as Portland cement concrete was first used in Britain in the 1850s, postdating the initial construction of the church by a few years.

5.3 The original foundation of the Church consists of two different types of masonry. The lowest consists of various brick bond patterns while the upper fairly consistently consists of two courses of ashlar limestone blocks, with the exception of east wall of the chancel comprising three courses. The foundation brickworks around the church consists of two distinct types of brick bond, English Bond (up to seven courses deep) located beneath the southern walls of the church and a simpler bond {029} two courses deep comprising one row of stretchers and one of headers (Figure 8).

5.4 Brick foundation {029} represents an unusual bond for a load bearing wall. The 'on edge' construction opposed to the conventional 'on bed', identified on the north wall was possibly considered as a more appropriate construction technique for levelling the church due to the natural inclination of the land to the east.

5.5 Two floors, {023} and {025} were encountered inside the church nave, indicating refurbishment works. The new floor shares stylistic similarities with the old (shape and the size of tiles). The new surface has a dissimilar design, consisting of squared red tiles, as opposed to the previous design of alternate dark blue and red tiles. (Figure 9).

5.6 Heating duct [020], running across the north-south axis of the church (between the nave and the chancel), post-dates the initial construction of the church since it is a later insertion (Figure 10). The system is sealed by the concrete floor of the chancel, which overlays the metal grate of the duct, suggesting that at a later stage the heating system was deactivated or decommissioned.

5.7 Drain pipes (030) and (032) represent two distinct phases of development works on the outer fabric of the church following disuse and replacement of damaged/clogged drains (Figure 8). Additionally, pipe (009) on the north site appears to be contemporary with the construction of the asphalt pathway (001). Lastly, could represent either another buried drain (sparking out of the south wall) or a land drain predating the construction of the church.

5.8 The chancel, being a later addition, is structurally different to the nave in several respects. The concrete floor of the nave overlaying the heating system, the stepped brickwork foundation of the east wall, and the three limestone ashlar courses on top are all in contrast to the construction methods used for the nave.

## **6 Archive Statement**

6.1 As the project has not produced any archaeologically significant artefacts, a primary archive will not be deposited with the repository museum, which in this case is the Derby Museum and Art Gallery. This is in line with the Museums of Derbyshire (2003) Procedures for the Transfer of Archaeological Archives and its 2014 addendum.

6.2 The digital archive comprises a PDF version of all primary site records from this project, including documents, plans, sections, photographs and electronic data and an accompanying metadata statement. The digital archive will be prepared in line with current best practice outlined in *Archaeology Data Service/Digital Antiquity Guides to Good Practice* (ADS/Digital Antiquity 2011).

## **7 Publicity, Confidentiality, and Copyright**

7.1 Any publicity will be handled by the client. Archaeological Research Services Ltd will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

## **8 Statement of Indemnity**

8.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.

## **9 Acknowledgements**

9.1 Archaeological Research Services Ltd would like to thank everyone who contributed to the outcome of this project. In particular we would like to thank Paul Mendham Stonemasons Ltd for commissioning the work and facilitating photographic material of the groundworks.

## References

- British Geological Survey. 2018. Geology of Britain viewer. Available online at: <http://mapapps.bgs.ac.uk/geologyofbritain/home/html> [Accessed 26th October 2018].
- Chartered Institute for Archaeologists (CIfA) 2014a. *Code of Conduct*. Reading, Institute for Archaeologists
- Chartered Institute for Archaeologists (CIfA). 2014b. *Standard and Guidance for Archaeological Watching Briefs*. Reading, Chartered Institute for Archaeologists.
- Chartered Institute for Archaeologists. 2014c. *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials*. Reading, Chartered Institute for Archaeologists.
- Chartered Institute for Archaeologists. 2014d. *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*. Reading, Chartered Institute for Archaeologists.
- Chris Pike Associates. 2013. 'Structural Assessment of Movement and Cracking to Chancel Walls – Supplementary: External Trial Hole Investigation & Soils Report.' Historic Environment Engineers.
- Department of Culture, Media and Sport (DCMS). 2008. The Treasure Act 1996 Code of Practice (England and Wales). London, The Stationery Office.
- Diocese of Derby. 2012. Alkington, St. John. [Accessed online 26th October 2018. Available URL: <https://derbyshirechurches.org/church/alkington-st-john>]
- Dyson (2018), An Archaeological Watching Brief at St. John's Church, Alkington, Derbyshire (WSI)
- Historic England. 2004. Human Bones from Archaeological Sites: Guidelines for Producing Assessment Documents and Analytical Reports. London, Historic England.
- Museums in Derbyshire 2016. *Procedures for the Transfer of Archaeological Archives*. Matlock, Derbyshire County Archaeological Services.
- Museums in Derbyshire 2014. *Addendum to the 2003 Procedures for the Transfer of Archaeological Archives*. Matlock, Derbyshire County Archaeological Services.
- Museum of London Archaeological Services (MoLAS). 2002. Site Manual. London, Museum of London.
- Society of Museum Archaeologists 1993. *Selection, Retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland*. London: Society of Museum Archaeologists.
- United Kingdom Institute for Conservation. 1990. Guidelines for the Preparation of Archives for Long-Term Storage.

## **Appendix I: Context Register**



**Archaeological Works at Hey Farm, Wardlow, Derbyshire**

Context No.	Type/interpretation	Description/ Processual Interpretation	Height aOD (to top of context) (m)	Max depth (m) BGL
001	Deposit/Layer	<b>Asphalt Pathway</b>	145.38	4mm
002	Deposit/Layer	Mixed layer comprising friable mid-greyish brown clayey silt with darker patches of silty clay. The layer presents high concentration of rubble material (pebbles, rocks and brick fragments) at its lower part. The layer covers the north churchyard/ <b>Made ground</b>	145.34	28mm
003	Deposit/Layer	Firm, mid yellowish-brown sandy silt with occasional, sub-angular fleck/ <b>Disturbed subsoil</b>	145.02	26mm
004	Deposit/Geological natural	Firm, mid yellowish-brown silty clay free of inclusions/ <b>The geological past</b>	144.45	-
005	Deposit/Concrete	Unreinforced plain ordinary concrete laid below the original brick foundation. The constituents comprise cement, sand and aggregates. The concrete was poured beneath the original foundation forming a solid thick block between the north buttresses. The concrete block was offset at right angle 300mm from the brick foundation. It measures 800mm deep and 5m length/ <b>Concrete underpinning</b>	144.91	400m
006	Structure/Brick foundation	Red brick wall, 5 courses thick laid on bed facing north. The arrangement of bricks is classified as English Bond. This is a pattern formed by laying alternate courses of stretches and headers. The joints between the stretches are centred on the headers in the course below. The bricks measure 22mm x 11mm x 0.09. Both the bend and the perpend joints are neatly pointed measuring 10mm/ <b>Original brick foundation</b>	145.33	800mm
007	Structure/ Wall	These two ashlar-shaped courses of limestone form the basis of the north wall of the church. They comprise finely dressed rectangular blocks, offset from the wall above, laid on bed forming thin joints between them. The blocks are placed so that the vertical joints are centred on the middle of the course below. The blocks on the low course measure 680mm length and 270mm height while in the upper course measure 700mm length and 200mm height. The upper part of the upper course is curved at 45 degrees adding an aesthetic	145.79	460mm

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		finishing to the masonry/ <b>Church wall</b>		
008	Cut/Drain	Linear steep sided trench, north-south aligned, measuring 400mm wide and 280mm deep/ <b>Rainwater drainage system</b>	145.34	280mm
009	Clay drainage pipe	Reddish brown ceramic pipe. <b>Pipe / Buried drain</b>	145.23	-
010	Deposit/Fill	Friable fill of dark greyish brown silty clay with moderate frequency of small and medium pebbles. The fill measures 400mm wide and 280mm deep/ <b>Backfill of drain [008]</b>	145.34	280mm
011	Trench	North site underpinning trench measuring 6.40m length, <750mm width and 1.9m depth. The trench was excavated between the buttresses of the north wall and is connected beneath the north wall of the church with the trench 017/ <b>Underpinning s</b>	145.38	1.9m
012	Trench	East underpinning trench. The trench runs along the exterior face of the chancel and the apse of the church. It was already backfilled when ARS archaeologist was arrived on site/ <b>Underpinnings</b>	145.10	560mm
013	Trench	South underpinning trench. The trench measures 870mm wide, 900mm depth and 900mm length. The trench runs beneath the brick foundation of the church and forms the continuation of the trench 012/ <b>Underpinning s</b>	145.29	900mm
014	Structure/Brick foundation	7 courses deep foundation. The bricks are laid on bed facing south forming an English bond. See 006/ <b>Original brick foundation</b>	145.31	610mm
015	Structure/Wall	Two ashlar-shaped courses of limestone forming the basis of the south wall of the church. The plinths had been laid randomly as stretchers and headers. See 007/ <b>Church wall</b>	145.78	470mm
016	Deposit/Layer	Fine, friable dark grey silty clay with occasional small inclusions. This layer forms the topsoil of the south churchyard and it has been disturbed by activities in the nearby graveyard. <b>Topsoil</b>	145.29	210mm
017	Trench	Underpinning inside the church measuring 1m by 900mm. This trench is located on the north east corner of the nave and it is connected, beneath the north wall of the church, with the trench 011/ <b>Underpinnings</b>	Nave Floor	1.5m

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018	Deposit/New concrete	This context represents the new concrete which was poured in the trench 012/ <b>New concrete</b>	144.91	-
019	Void			
020	Cut/Drain	Vertically sited trench between the nave and the chancel. It runs along the width of the church between the nave and the chancel. It measures 520mm wide and 420mm deep. <b>Chanel/Heating system</b>	Nave floor	420mm
021	Deposit/Fill	Friable light orangish brown silty sand. It measures 6mm wide and 420mm deep./ <b>Backfill of drain cut 020</b>	Nave floor	420mm
022	Deposit/Layer	Layer of concrete beneath the original flooring of the church, measuring 26mm depth and bounded by the brick foundations of the outer wall (006)/ <b>Solid floor base</b>	-	260mm
023	Floor tiles	Primary tile floor inside the church, comprising alternate dark blue and red tiles measuring 145mm wide and 43mm thick/ <b>Tile flooring</b>	-	33mm
024	Deposit/Layer	Compact greyish white concrete compound <b>Layer / floor bedding</b>	-	25mm
025	Floor tiles	New tile floor inside the church, comprising square red tiles measuring 15.5 x 15.5.	Nave floor	43mm
026	Deposit/Layer	Compact creamy white concrete compound. <b>Layer / floor bedding</b>	-	20mm
027	Structure/Wall	Red brick wall three courses height forming a stretcher bond/ <b>Heating channel</b>	Nave floor	210mm
028	Cut/Trench	The trench starts immediately to the east of the church porch (between the buttresses and the south nave wall) and runs across the south and east walls of the nave and the chancel respectively. The trench is located approximately 1 meter off the south wall and 600mm off	145.29	1.17

**Archaeological Works at Hey Farm, Wardlow, Derbyshire**

		the north-east buttresses of the chancel/ <b>New drainage trench.</b>		
029	Structure/Brick foundation	Two courses deep foundation. The lower course (nave wall) comprises a header bond with bricks laid on edge while the upper forms a stretcher bond with bricks laid on bed. The mortar is weathered from the joints. / <b>Original brick foundation</b>	145.31	220mm
030	Pipe	Primary drain pipe inserted through the concrete underpinning (037). It presents a creamy yellowish colour. <b>Pipe/ Buried water drain</b>	145.02	-
031	Cut/Drainage	The cut presents a north-west-north – south-east-south orientation and it extends beyond the new trench [028]. The feature was spotted on plan, although it appears to present steep sites. The cut postdate the primary pipe (030). <b>Trench / Drainage for pipe (032).</b>		
032	Pipe	Secondary drain pipe. It presents a mid-reddish brown colour. <b>Pipe / Buried water drain</b>	144.99	-
033	Deposit/Fill	Fine, firm in texture black clay silt with frequent brick and stone fragments, charcoal and pebbles. <b>Fill / Redeposited topsoil</b>	145.17	-
034	Pipe/Drain	Light reddish brown in colour drain running approximately 1 meter off the south wall of the nave. The pipe is distinctively different from the pipes (030) and (032). <b>It could represent another buried water drain or a land drain.</b>	144.65	-
035	Layer/Subsoil	The fill is generally undisturbed, although few elements of degraded bones have been spotted. The soils is concentrated on the south and east churchard of the church, currently occupied by the cemetery. Mid yellowish brown soil medium in texture sterile of inclusions. <b>Layer / Subsoil</b>	142.17	300
036	Deposit/Fill	Yellowish bright brown silty clay free of inclusions. The fill was truncated by the cut [031]. <b>Fill of [038].</b>	145.22	5mm

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037	Layer/Underpinning	Concrete underpinning rich in aggregates (pebbles) laid beneath the foundation of the church (later addition). The concrete block was offset at right angle 400mm from the brick foundation <b>Concrete underpinning</b>	145.09	200mm+
038	Cut/Drainage	Not visible on plan. The cut is buried beneath the later pipe (032). The cut appears to have truncated the concrete underpinning (037).	145.11	-

## **Appendix II: Written Scheme of Investigation**



## **Appendix III: Oasis Form**