



KDK ARCHAEOLOGY LTD

Archaeological Observation and Recording Report

Church of St Mary
Main Street
Mursley
Buckinghamshire



Quality Check

<i>Author</i>	Laura Dodd MSc ACIfA	<i>Version</i>	512/MSM/2.1	<i>Date</i>	08.06.2020
<i>Editor</i>	David Kaye BA ACIfA	<i>Version</i>	512/MSM/2.1	<i>Date</i>	26.06.2020
<i>Revision</i>	Derek Watson PhD	<i>Version</i>	512/MSM/2.2	<i>Date</i>	10.05.2021
<i>Editor</i>	Karin Kaye MA MCIFA	<i>Version</i>	512/MSM/2.2	<i>Date</i>	11.05.2021

© KDK Archaeology Ltd 2021 No part of this document is to be copied in any way without prior written consent.

Every effort has been made to provide as complete and as accurate a report as possible. However, KDK Archaeology Ltd cannot accept any liability in respect of, or resulting from, errors, inaccuracies, or omissions contained in this document.

© Ordnance Survey maps reproduced with the sanction of the Controller of Her Majesty's Stationery Office.
KDK Archaeology Licence No. 100053538

Unit 3 Leighton Road Leighton Buzzard Bedfordshire LU7 1LA

Tel: 01525 385443

Email: office@kdkarchaeology.co.uk

Website: www.kdkarchaeology.co.uk





CONTENTS

Summary	1
1. Introduction	1
2. Aims & Methods	6
3. Archaeological & Historical Background	7
4. Results.....	8
5. Conclusions.....	17
6. Acknowledgements.....	18
7. Archive.....	19
8. References.....	20

Appendices:

1. Photograph List	22
2. Excavation Summary Tables	24
3. Specialist Reports	25
4. OASIS and Site Data.....	27

Figures:

1. General location	3
2. Site location.....	4
3. Development plan.....	5
4. Representative site stratigraphy	9
5. Plan of groundworks	14
6. Foundation [003] and burial SK1	15
7. East facing section of service trench showing porch foundation [003]	16
8. South facing section of the internal south aisle excavation	16

Plates:

1. Service trench overall, view south-southeast.....	9
2. West-southwest facing stratigraphy of service trench	9
3. Representative sample of finds recovered during the excavation from cemetery soil (002).....	9
4. Foundation [003], view east-northeast	10
5. East-northeast facing section of foundation [003]	10
6. Foundation [003] in relation to existing entrance and roof 'scarring', view south-southeast	10
7. Foundation [005] abutting the northern church wall, view east-northeast.....	10
8. Example of large, roughly dressed stone removed from foundation [003].....	10
9. SK1, view west-southwest	10
10. North aisle excavation, view south	12
11. North section of excavation, north aisle.....	12
12. East column foundations, north aisle, view north	12
13. West column foundations, north aisle, view west	12
14. South section of excavation, south aisle.....	12
15. North section of excavation, south aisle.....	12
16. East column foundations, south aisle, view south	13
17. West column foundations, south aisle, view west	13



Summary

Between February 2020 and February 2021 KDK Archaeology undertook a programme of Observation and Recording at The Church of St Mary, Main Street, Mursley, Buckinghamshire to fulfil the conditions set out in a Faculty awarded by the Consistory Court of the Diocese of Oxford.

This investigation involved the monitoring of internal and external groundworks including the removal of the existing floor in the western parts of the north and south aisles and the installation of a toilet and servery. The church foundations were exposed during the internal works, as were the foundations of two of the nave arcade columns.

External works comprised the excavation of a service trench which cut through the churchyard to connect to pre-existing services. The trench was excavated to a depth of up to 1m where a single articulated burial was exposed as well as the remnants of the demolished northern porch.

1 Introduction

1.1 Between February 2020 and February 2021 KDK Archaeology Ltd undertook a programme of Observation and Recording at the Church of St Mary, Main Street, Mursley, Buckinghamshire. The project was commissioned by Arnold Bartosch, and was carried out according to a Written Scheme of Investigation prepared by KDK (Kaye 2020), and approved by the Diocese of Oxford.

1.2 *Planning Background*

This project has been required to fulfil the conditions of Faculty 2017 011388 granted by the Diocese of Oxford

1.3 *The Site*

Location

The Church of St Mary is located in the centre of the village and civil parish of Mursley and the administrative district of Aylesbury Vale. It is centred on National Grid Reference (NGR) SP 81711 28554 (Fig. 1).

Description

The church is situated between Church Lane to the south, Main Street to the east, The Beechams to the north. To the west are private dwellings (Fig. 2).

The building is Grade II* listed (NHLE 1288706) and is described as follows:

Parish church. C14, C15 tower, all very much restored and partly rebuilt 1867. Coursed rubble stone, part roughly dressed. Nave and chancel have tiled roofs, aisles have lead roofs. W. tower of 3 stages has diagonal buttresses, battlemented parapet and 2-light openings to bell-chamber. W. side has 4-light traceried window and single light above. Small blocked lancets to N. and S. Nave has clerestory of 4 quatrefoil windows. Aisles have 3 bays of 2-light C19 Decorated windows with varied tracery, and similar windows to E. N. and S. doors have moulded 2-centred arches, that to S. with C19 hood and carved head stops. C19 S. porch. Chancel has 2 bays of similar windows and 3-light to E., similar doorway to S. Interior: triple hollow-chamfered tower arch. Nave arcade of 4 bays has moulded arches on octagonal piers with moulded caps and bases. Similar chancel arch on semi-octagonal piers, Aisles have cusped ogee piscinae and corbels with ballflower bases flanking E. windows. Chancel has C14 cusped ogee piscina with stop-chamfered sides, and C19 double sedilia with shaped stone armrest. N. wall has blind recess with C19 moulded arch on triple shafts with carved foliage



caps. C19 roofs, that to chancel on carved foliage corbels. Fittings: C17 pulpit with carved arcaded panels. Other fittings C19, including elaborately arcaded carved marble reredos. 1862 glass in E. window. Monuments: in chancel: brass to Cecilia Fortescue 1570 on stone altar tomb with blind tracery and blank heraldic panels, monument with painted kneeling figures of Sir John Fortescue and wife, 1607 above; undated stone and marble monument to Sir Francis Fortescue (son of Sir John) and wife with painted kneeling figures in niches and mourning children. RCHM II p 203-4

Geology and Topography

The superficial deposits within the area consist of sand and gravel which overly mudstone of the West Walton Formation. (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>).

Proposed Development

The development comprises the reordering of the church to provide a toilet and servery to the north aisle, and the removal of existing vestry enclosure and pews from the west end. As part of these works, a drainage trench will be excavated to the north of the church (Fig. 3).



Figure 1: General location (scale 1:25,000)

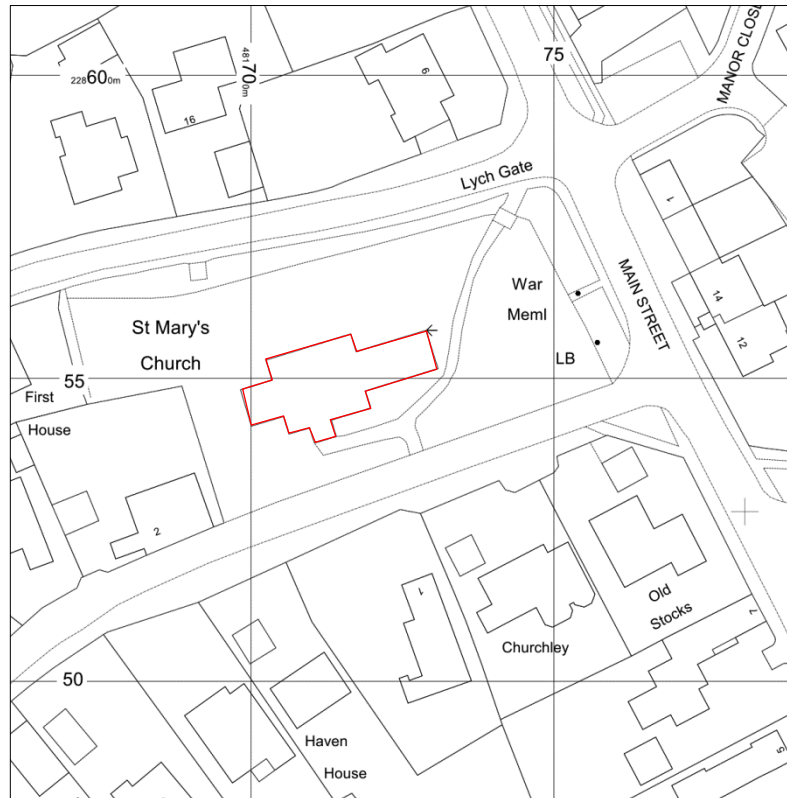


Figure 2: Site location (scale 1:1250)

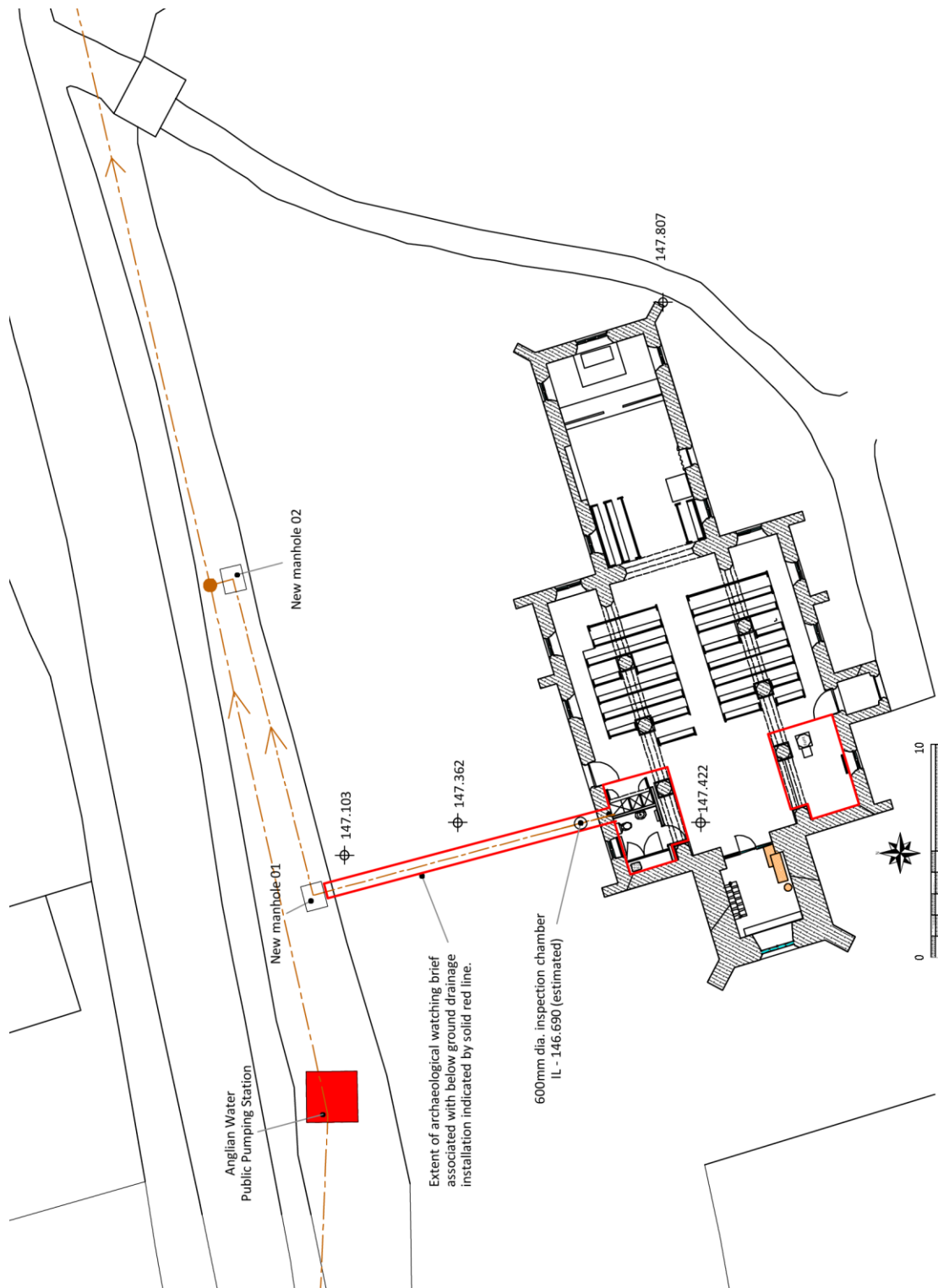


Figure 3: Development plan (scale 1:300)



2 Aims & Methods

2.1 Aims

The aims of this project as defined in the approved WSI (Kaye 2020) were:

- To monitor all groundworks to ensure any archaeological remains uncovered are appropriately and fully recorded

2.2 Methods

The methods used were as follows:

- All external groundworks that were likely to have had an impact on archaeological deposits were done under continuous and constant archaeological supervision.
- The internal floor area impacted by the development was cleaned and recorded prior to any construction works taking place within that area

2.3 Standards

The work conformed to the following requirements:

- The conditions set out in a Faculty awarded by the Consistory Court of the Diocese of Oxford
- The relevant sections of the Chartered Institute for Archaeologists' *Standard & Guidance Notes* (CIfA 2014)
- The Chartered Institute for Archaeologists' *Code of Conduct* (CIfA 2014)
- Current English Heritage guidelines (HE 2015, EH 2008)
- The Association of Local Government Archaeological Officers East of England Region *Standards for Field Archaeology in the East of England* (ALGAO 2003)



3 Archaeological & Historical Background

3.1 The archaeological record shows activity within Mursley from as early as the Mesolithic period. Roman pottery, fragments tile, quern stones and building stone have been found throughout the parish and possible Roman occupation sites were identified at Cowpasture Farm and another at Salden Wood (Unlocking Bucks Past).

Historical data indicates that Mursley was established by the late Saxon period as there are three entries in the Domesday Survey of 1086. Edwin held a 1 hide estate of Azur, which was granted to the Count of Mortain after the Norman Conquest. (Williams & Martin 2002: 403). A 3 hide estate awarded to Walter Giffard had no named owner in the pre-Conquest period, although it is known that it was held by four thegns (*ibid*: 405; VCH online). In contrast, Leofwine of Nuneham retained his 4 hide estate after the Conquest (*ibid*: 420). This became the manor of Salden, that was later held by the FitzNeils (VCH online). The significance of pre-Conquest Mursley is that it gave the Hundred its name.

Mursley was granted a market and a three-day fair in the 13th century, with another fair being granted in the 15th century. Mursley remained a relatively important town until the 18th century when it had lost both market and fairs and the population had dwindled to fewer than 300 (VCH online).

3.2 It is recorded that a church in Mursley was granted to the Prioress of Nuneaton by Richard FitzNeil sometime before 1166. The advowson was held by the Priory until the Dissolution (VCH online). A chantry chapel was founded in 1251 by Warin Fitz Gerald, which was granted to the Priory of Luffield in 1329. The chapel fell into disuse and was in ruins by the 16th century (Unlocking Bucks Past).

The present church dates from the middle of the 14th century and the tower was added in the 15th century and the belfry windows altered c 1980 (Pevsner 1994:572). A clerestorey and a south porch were added in an extensive restoration project by Charles Buckeridge in 1865-7 (*ibid*; RCHME).



4 Results

4.1 Introduction

These works were undertaken in order to install below ground heating pipework and below ground drainage for the construction of new kitchen and toilet facilities within the north aisle and to replace the floor in the south aisle. Internal works and approximately the first 0.75m of the drainage run just outside the church were undertaken by hand, whereas the remaining outside excavations were undertaken using a 3 tonne machine fitted with a 0.40m toothless ditching bucket.

4.2 External Works

A service trench was excavated to the north of the church through the church yard and beyond the northern boundary. The trench measured 13.70m in length and between 0.45 and 0.60m in width. The depth reached a maximum of 1m below the current ground level (Figs. 4-5; Plates 1-3).

The stratigraphy encountered comprised:

- Topsoil (001). The topsoil was 0.10m deep and consisted of a dark brownish grey silty sand which was loose and friable. It contained occasional rounded and sub-angular stones which measured up to 5mm in length. A small amount of CBM (Ceramic Building Material) was observed within this layer, none of which was retained
- Cemetery soil (002). Found throughout the trench, this layer comprised a mid-brownish orange, friable clayey silty sand which contained occasional rounded and sub-angular stone. The depth of the layer extended beyond the base of the trench, over 0.90m. Disarticulated human remains were observed within this layer as well as iron nails and fittings, a glass marble, CBM, clay pipe stems and pottery (Appendix 3). A selection of these objects were photographed but not retained.
- The natural strata was not reached at any point during these works.

North porch foundations (Figs. 5-7; Plates 4-8)

The stone foundations of the western wall of the long demolished northern porch were observed. In its undisturbed state, the foundation would have measured c. 3.20m in length; however, due the installation of a number of services and an inspection chamber, the foundation survived in two parts. A large limestone block with a number of limestone and flint pieces, [005] were all that remained of the southernmost extent of the wall. Further north, a large 1.44m section remained undisturbed. This part of the foundation, [003] comprised a number of large, roughly dressed limestone and clunch blocks with smaller rubble pieces consisting of limestone, clunch, ironstone, flint and rounded stones. These were set in a yellowish orange, friable, sandy lime mortar. It is likely that this section was part of the western north-south orientated wall of the porch. The foundation was observed 0.10m below the current ground level and continued beyond the depth of the service trench, over 0.90m. The size of the material varied from 0.15m to 0.59m with the largest piece being placed on the northern end of the foundation. A small copper alloy shroud pin was found within the mortar.

Burial (Figs. 5-6; Plate 9)

A single articulated burial was exposed during this investigation. The individual was buried in a supine position and aligned east-west with their head to the west. Only the lower two thirds



of the femurs and the distal epiphyseal were exposed which meant that analysis for this particular individual was very limited. What could be determined is that the remains were that of a pre-pubescent individual in their late childhood (aged between 6 and puberty judging by the length of the visible bone). No grave cut was visible and no coffin remains were noted. The remains were exposed 1m below the modern ground level just below the required depth of the service pipe; therefore, it was deemed appropriate to leave the individual *in situ* without further disturbance. There were no obvious pathologies visible on the exposed bone, though the right leg had been broken post-mortem. The remains were re-covered with a thin layer of cemetery soil before the pipes were installed.



Plate 1: Service trench overall, view south-southeast



Plate 2: West-southwest facing stratigraphy of service trench, foundation [003] can be seen to the right.

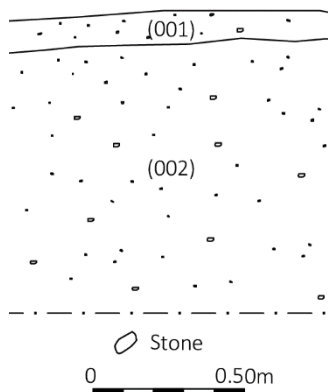


Figure 4: Representative site stratigraphy (scale 1:25)

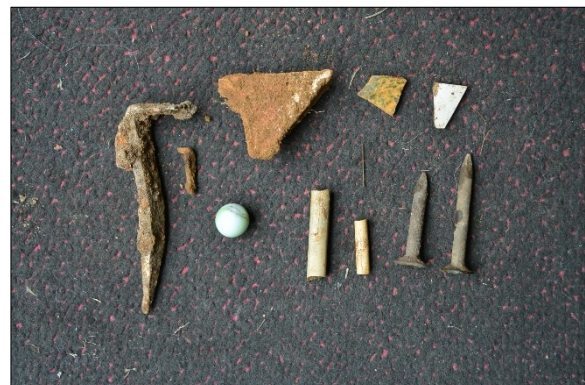


Plate 3: Representative sample of finds recovered during the excavation from cemetery soil (002)



Plate 4: Foundation [003], view east-northeast



Plate 5: East-northeast facing section of foundation [003]



Plate 6: Foundation [003] in relation to existing entrance and roof 'scarring', view south-southeast



Plate 7: Foundation [005] abutting the northern church wall, view east-northeast



Plate 8: Example of large, roughly dressed stone removed from foundation [003]



Plate 9: SK1, view west-southwest



4.3 *Internal Works* (Figs 5 & 8; Plates 10-17)

Within the church, two large sections of flooring measuring 4.25 x 3.75m (north aisle) and 5.98 x 4.17m (south aisle) were removed in the western ends of the north and south aisles. Beneath the tile and wooden floor, in the north aisle, was a large void 0.68m deep that contained loose stone and brick debris overlying a stone rubble and mortar floor. Part of the church's foundations were revealed as were the foundations for the two nave arcade columns located to the west and east of the excavation. The foundations on the northern wall extended 1m beyond the church wall and comprised two courses of brick measuring 22 x 7 cm with occasional poorly puddled bricks which measured 22 x 6 x 11cm. Below these bricks was limestone pieces set in lime mortar. The size of the limestone pieces varied with the largest being 35cm wide and 30cm high. No burials or further features were revealed in this area; the large amount of brick debris was from sleeper walls that were present to hold up the wooden floor joists, these were demolished during the works.

In the south aisle, again, beneath the tile and wooden floor was a similar void to that revealed in the north aisle, with a stone rubble and mortar floor at the base. This area was crossed by two north-south oriented sleeper walls, each three courses high with bricks measuring 23 x 11 x 7cm, which were used as piers to support the 19th century pew platforms and a suspended floor supported by wooden joists; the surviving wooden timbers had previously been removed in both areas investigated. The foundations of the southern wall also extended internally by c. 1m, and the stratigraphy exposed comprised a 0.11m deep layer of concrete and plastic damp proof coursing overlying a 0.41m deep deposit of rubble blocks predominantly consisting of clunch. The blocks measured between 0.02-0.07 and 0.28 - 0.5m in size. The foundations of the two nave arcade columns were identical to that documented to the north. No burials or other features were revealed in this area.



Plate 10: North aisle excavation, view south



Plate 11: North section of excavation, north aisle



Plate 12: East column foundations, north aisle, view north



Plate 13: West column foundations, north aisle, view west



Plate 14: South section of excavation, south aisle



Plate 15: North section of excavation, south aisle; note the two rows of brick



Plate 16: East column foundations, south aisle, view south



Plate 17: West column foundations, south aisle, view west

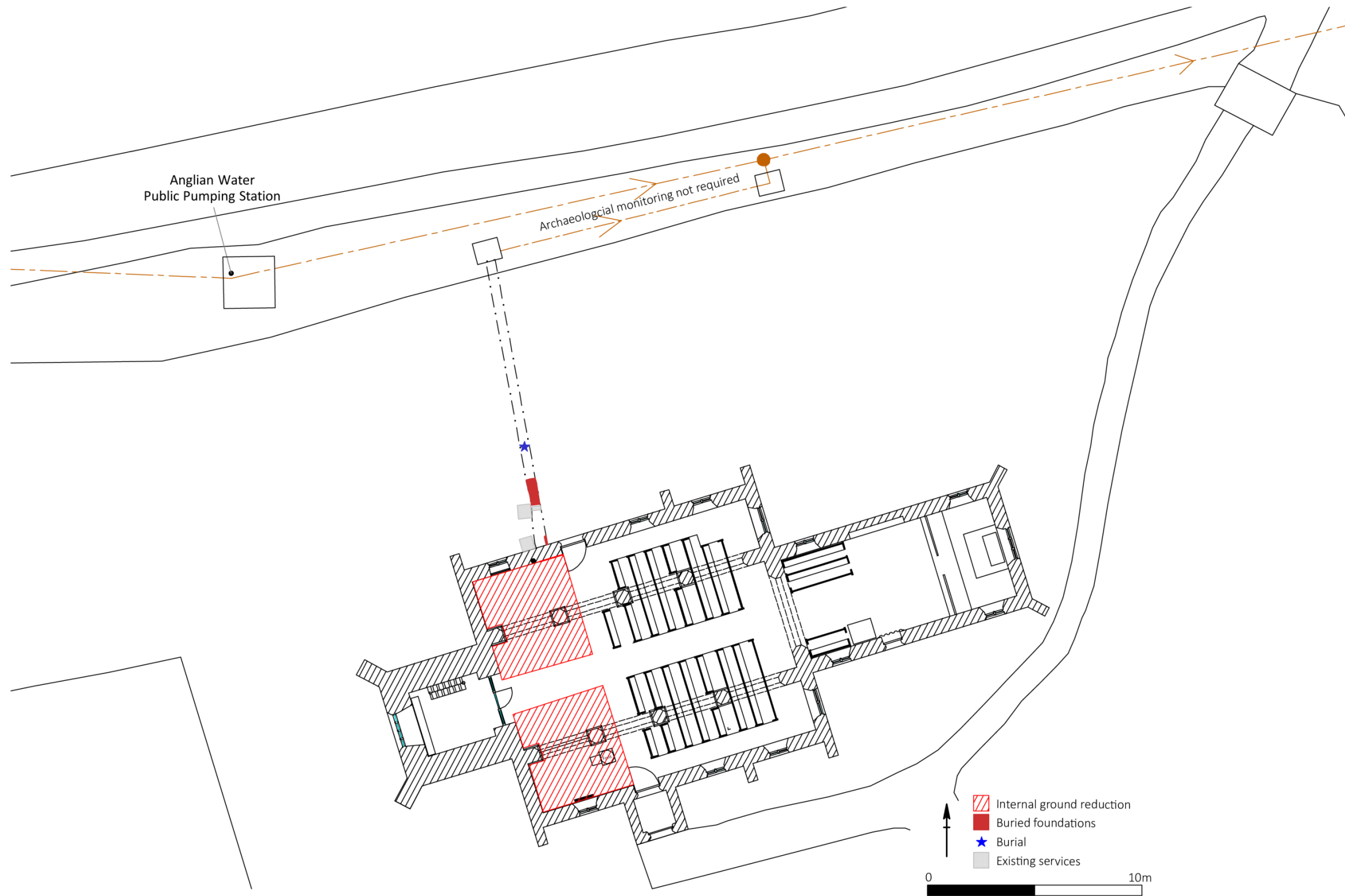


Figure 5: Plan of groundworks (scale 1:200)

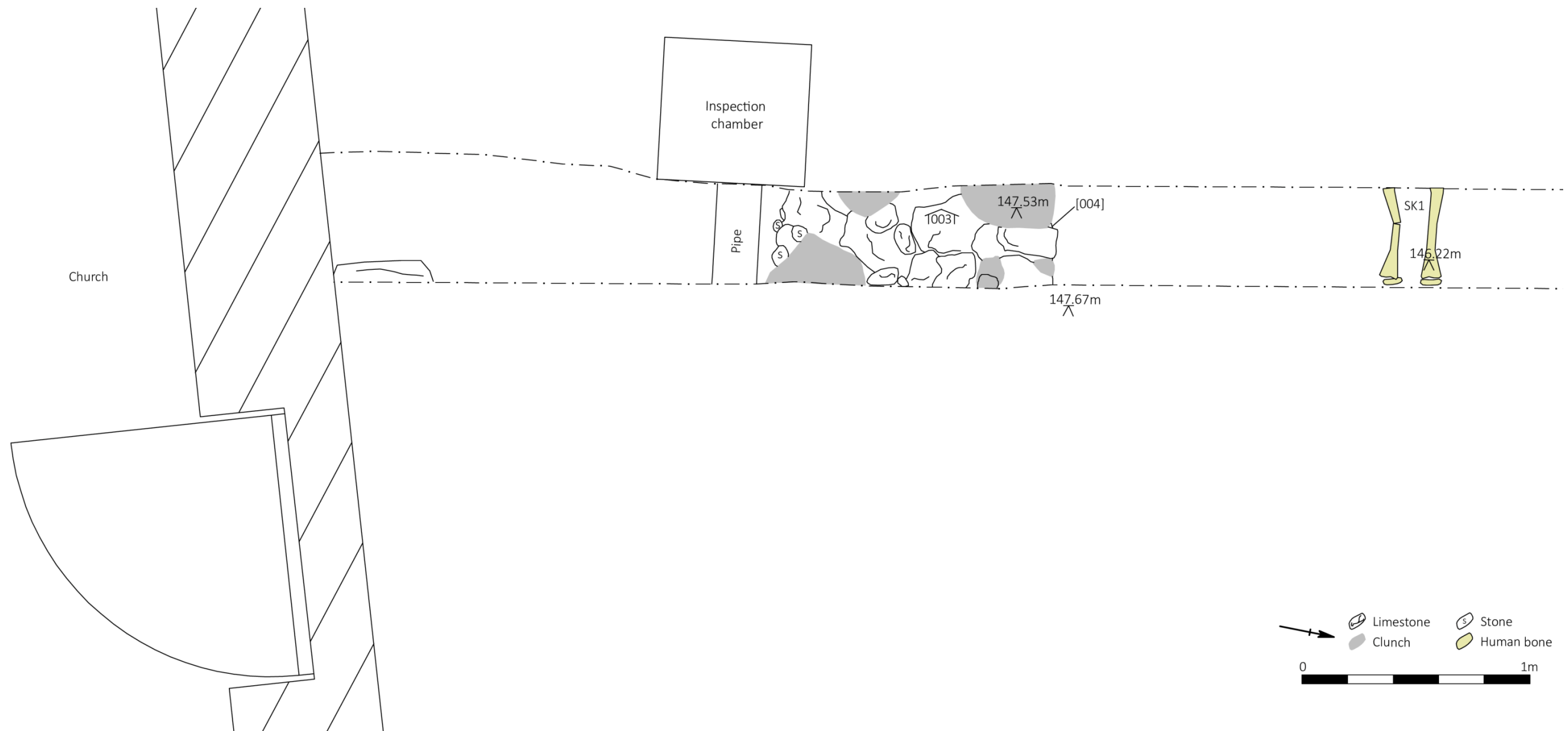


Figure 6: Foundation [003] and burial SK1 (scale 1:20)

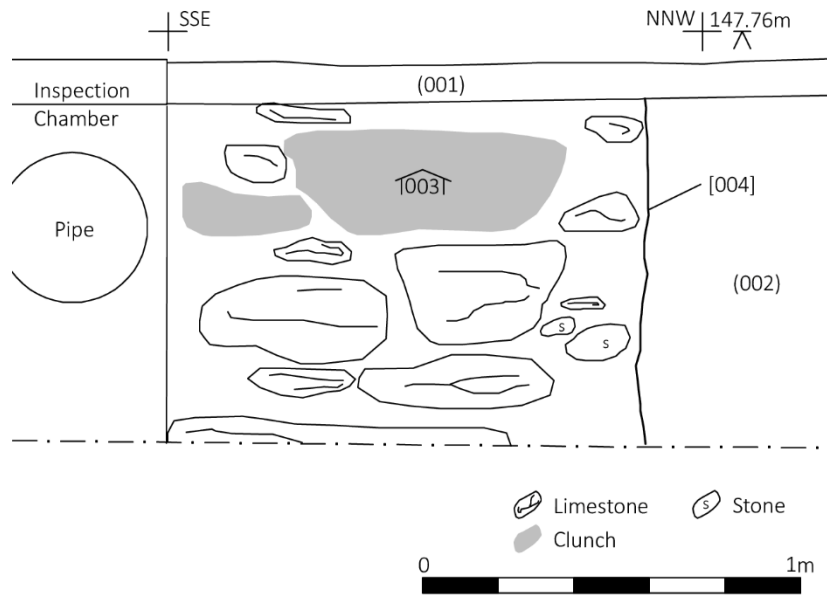


Figure 7: East facing section of service trench showing porch foundation [003] (scale 1:20)

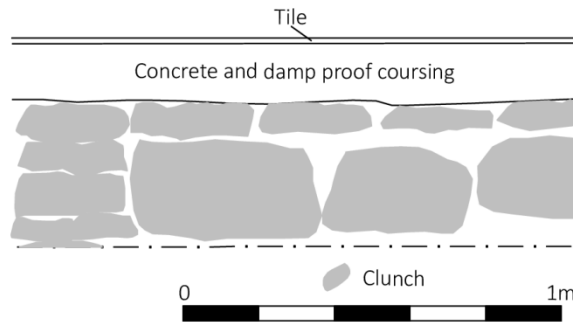


Figure 8: South facing section of the internal south aisle excavation (scale 1:20)



5 Conclusions

The features encountered during this investigation give insight into the construction of the church, albeit the possible later features. Evidence of a demolished roofed structure was visible on the northern exterior wall of the church and it has often been theorised that a northern porch had existed prior to the Victorian renovations undertaken on the building. This investigation has shown that a limestone and clunch built porch was present at some point in the church's history. This structure proved to have had substantial footings which extended beyond the depth and width of the excavated trench. The reasoning behind the size of these footings is unknown; perhaps, their construction was an attempt to address former difficulties encountered in the earlier building (i.e. sinking, cracking and crumbling of walls). It is unlikely, due to its size that these footings were anything other than a porch; however, information on its construction and subsequent demolition cannot be found. It is quite possible that the porch was demolished around 1867 when the church was partially rebuilt and restored.

The removal of the internal floor at the western end of the north and south aisles revealed a suspended floor with a rubble stone surface beneath. Further large footings were also noted along the northern and southern wall of the church which may be related to the 19th century restoration works.

A single articulated burial was exposed at 0.9m below the existing ground level. However, the narrowness and length of the trench meant only a small percentage of the cemetery as a whole was represented, and therefore no general conclusions can be drawn about either the density of burials or their depths. This interment appears to have been a primary, undisturbed burial of a non-adult individual. With only a single burial it is also impossible to infer demographic information regarding the lives and deaths of the village population.



6 Acknowledgements

KDK Archaeology is grateful to Arnold Bartosch Ltd for commissioning this report. Thanks are also due to Julian Munby, Diocesan Archaeological Advisor of Oxford Archaeology for monitoring the project. We would also like to thank the church wardens for their hospitality and assistance on site and to the staff of Tofield Ltd who undertook the groundworks.

The fieldwork was carried out by Laura Dodd MSc ACIfA and Chris Martin-Taylor BSc. The report was written by Laura Dodd MSc ACIfA, and edited by David Kaye BA ACIfA.



7 Archive

7.1 The project archive will comprise:

1. Written Scheme of Investigation
2. Initial report
3. Monitoring sheets
4. Site drawings
5. Client's site plans
6. List of photographs
7. B/W prints & negatives
8. Specialist reports
9. CDROM with copies of all digital files.

7.2 The archive will be deposited with the Centre for Buckinghamshire Studies (Accession number AYBCM 2020.22). The digital archive will be added to Archaeological Data Services (ADS).



8 References

Standards and Specifications

- Allen J. L. & Holt A. St J. 1986 (with later updates) *Health & Safety in Field Archaeology*. London: Federation of Archaeological Managers & Employers
- Brickley M. & McKinley J. I. 2004 *Guidelines to the Standards for Recording Human Remains*. Chartered Institute for Archaeologists Technical Paper
- CifA 2019 *Code of Conduct*. Reading: Chartered Institute for Archaeologists
- CifA 2014 *Standard and Guidance for an Archaeological Watching Brief*. Reading: Chartered Institute for Archaeologists
- CifA 2014 *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*. Reading: Chartered Institute for Archaeologists
- CifA 2014 *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*. Reading: Chartered Institute for Archaeologists
- EH 2008 *The Management of Research Projects in the Historic Environment. PPN3: Archaeological Excavation*. London: English Heritage
- EH 2011 *Environmental Archaeology: A Guide to the Theory and Practice of Methods from Sampling and Recovery to Post-Excavation*. London: English Heritage
- Ferguson L. M. & Murray D. M. 1997 *Archaeological Documentary Archives: Preparation, Curation and Storage*. Chartered Institute for Archaeologists' Paper 1
- Gurney D. 2003 *Manchester: Standards for Field Archaeology in the East of England*. East Anglian Archaeology Occasional Paper 14
- HE 2015 *The Management of Research Projects in the Historic Environment: the MoRPHE Project Managers' Guide*. London: Historic England
- Kaye K. 2020 *Written Scheme of Investigation for Archaeological Observation, Investigation and Recording: Church of St Mary, Main Street, Mursley, Buckinghamshire*. KDK Library Ref: 512/MSM/1.2
- McKinley J.I. & Roberts C. 1993 *Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains*. Chartered Institute for Archaeologists Technical Paper 13
- Paine C. (ed) 1992 *Standards in the Museum Care of Archaeological Collections*. London: Museums & Galleries Commission
- Walker K. 1990 *Guidelines for the Preparation of Excavation Archives for Long-Term Storage*. London: United Kingdom Institute for Conservation, Archaeology Section
- Watkinson D. & Neal V. 1998 *First Aid for Finds*. Hertford & London: Rescue

Secondary Sources

- British Geological Society (BGS) 2015: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>
- Pevsner N. Williamson E. & Brandwood G.K. 1994 Geoffrey K Brandwood *Buckinghamshire* London : Penguin



RCHME: 'Mursley', in *An Inventory of the Historical Monuments in Buckinghamshire, Volume 2, North* (London, 1913), pp. 203-206. British History Online <http://www.british-history.ac.uk/rchme/bucks/vol2/pp203-206> [accessed 14 February 2020].

Unlocking Bucks Past: <https://ubp.buckscc.gov.uk/SingleResult.aspx?uid=TBC313>

VCH Online: 'Parishes: Mursley', in *A History of the County of Buckingham: Volume 3*, ed. William Page (London, 1925), pp. 401-406. British History Online <http://www.british-history.ac.uk/vch/bucks/vol3/pp401-406> [accessed 14 February 2020].

Williams A. & Martin G.H. 2002 *Domesday Book: A Complete Translation*. London: Penguin



Appendix 1: Photograph List

Shot	B&W	Digital	View	Subject	Plate No.
1	X	X	ENE	Foundation [003]	4
2		X	ENE	Foundation [003], without board	-
3		X	WSW	North porch foundation	-
4		X	SSE	Foundation [003] in relation to existing entrance and roof 'scarring'	6
5		X	SSE	North-northwest facing section of foundation [003]	-
6		X	-	Example of large, roughly dressed stone removed from foundation [003]. without board	8
7	X	X	SSE	Service trench overall	1
8	X	X	WSW	SK1	9
9		X	WSW	SK1 without board	-
10		X	SSE	Foundation [003], stone removed	-
11		X	WSW	East-northeast facing section of foundation [003]	5
12		X	ENE	South-southwest facing stratigraphy of service trench	2
13		X	-	Representative sample of finds recovered during the excavation from cemetery soil (002), without board	3
14		X	SSE	Foundation [005] abutting the northern church wall	-
15		X	ENE	Foundation [005] abutting the northern church wall	7
16		X	E	Foundation [005] abutting the northern church wall, stone removed	-
17		X	E	Foundation [005] abutting the northern church wall, stone removed	-
18		X	W	Foundation [005] abutting the northern church wall, stone removed	-
19		X	W	North aisle excavation	-
20		X	E	North aisle excavation	-
21		X	S	North aisle excavation	10
22		X	W	North aisle excavation	-
23		X	E	North aisle excavation	-
24		X	N	North aisle excavation	-
25		X	E	East section of excavation, north aisle	-
26		X	S	East column foundations, north aisle	-
27		X	E	East column foundations, north aisle	-
28		X	N	East column foundations, north aisle	12
29		X	E	East section of excavation, north aisle	-
30		X	S	South section of excavation, north aisle	-
31		X	S	South section of excavation, north aisle	-
32		X	W	West section of excavation, north aisle	-
33		X	N	West column foundations, north aisle	-
34		X	W	West column foundations, north aisle	13
35		X	S	West column foundations, north aisle	-
36		X	W	West section of excavation, north aisle	-
37		X	NE	North section of excavation, north aisle	-
38		X	NW	North section of excavation, north aisle	-
39		X	N	North section of excavation, north aisle	11
40		X	N	North section of excavation, north aisle	-
41		X	N	North section of excavation, north aisle	-
42		X	S	South section of excavation, south aisle	-
43		X	S	East column foundations, south aisle	16
44		X	E	East section of excavation, south aisle	-
45		X	S	South section of excavation, south aisle	14
46		X	W	West section of excavation, south aisle	-
47		X	W	West column foundations, south aisle	17



Shot	B&W	Digital	View	Subject	Plate No.
48		X	N	North section of excavation, south aisle	15
49		X	N	North section of excavation, south aisle	-
50		X	N	North section of excavation, south aisle	-
51		X	E	East section of excavation, south aisle	-
52		X	SE	South aisle excavation	-
53		X	W	South aisle excavation	-
54		X	-	Timber joists removed from south aisle	-
55		X	-	Timber joists removed from south aisle	-
56		X	-	Timber joists removed from south aisle	-



Appendix 2: Excavation Summary Tables

Context Register

Context	Type	Measurements (m)			Description			Interpretation
		W	L	D	Colour/Shape	Texture/Sides	Consistency/Base	
001	Layer	>13.70	>0.60	0.10	Dark brownish grey	Very silty sand	Very loose	Topsoil covering the cemetery. A small amount of CBM was observed in this layer. This was not retained
002	Layer	>13.70	>0.65	>0.90	Mid brownish orange	Clayey silty sand	Fairly friable	Cemetery soil found throughout the trench. Contained disarticulated human remains, pottery, iron objects, CBM, a glass marble. All these items were left on site (photo taken for example)
003	Structure	>0.60	>1.44	>0.90	Various	Stone	Firm	Section of foundation which would have been part of the north porch. Likely the north-south wall to the west of the porch. The wall comprised different materials including large limestone and clunch pieces <0.59m in size and smaller rounded stones and flints <0.20m in size. Chunks of ironstone also present. This was set in a sandy friable lime mortar which varied in thickness. The depth of the foundation exceeded 0.90m and base of the foundation was not reached. The foundation was not visible to the east where a number of existing services and considerable disturbance was visible.
004	Cut	>0.60	>1.44	>0.90	Unknown	Sheer And irregular	Base not reached	Construction cut for foundation (003). Only partially visible. Irregular in section
005	Structure	>0.5	>0.65	>0.33	Various	Stone	Firm	Stone foundation butting the church wall, probably belonging to the demolished porch. Consisted of a single large limestone block, probably a local variant of Portland stone, abutted by a deposit of limestone rubble and lime mortar. Likely the same as [003]. Disturbed by services



Appendix 3: Specialist Reports

Skeletal Remains Found at The Church of St Mary, High Street, Mursley, Buckinghamshire

Laura Dodd MSc ACIfA

Introduction

A single individual was exposed during development works at the site of the Church of St Mary's, Main Street, Mursley. Due to the width of the service trench, only the femurs were exposed; therefore, full skeletal analysis could not be undertaken. What could be determined was that the individual was a non-adult, buried supine in an east-west configuration, with their head to the west.

Methods

The skeletal remains were analysed and recorded following the recommendations set out by Brickley & McKinley (2004).

The individual was recorded in situ. Photographs were taken, and a skeletal inventory was compiled using KDK Skeletal Recording spreadsheets produced in excel following the guidelines set out in Buikstra and Ubelaker 1994. The individual was inspected for pathological and developmental conditions.

Specifically the following areas were examined:

Preservation & Completeness

Due to the size of the trench, the overall completeness could not be determined and bone surface preservation, which was graded according to McKinley (Brickley and McKinley 2004, 16) could only be inferred. The method in which preservation is graded is listed below:

Grade	Description
0	Surface morphology clearly visible with fresh appearance to bone and no modifications
1	Slight and patchy surface erosion
2	More extensive surface erosion than Grade 1 with deeper surface penetration
3	Most of bone surface affected by some degree of erosion; general morphology maintained but detail of parts of surface masked by erosive action
4	All of bone surface affected by erosive action; general profile maintained and depth of modification not uniform across whole surface
5	Heavy erosion across whole surface, completely masking normal surface morphology, with some modification of profile
5+	As Grade 5 but with extensive penetrating erosion resulting in modification of profile

Bone fragmentation was categorised as follows:

Low	minimal fragmentation and able to record most osteological data
Medium	approximately 50% of skeleton with minimal bone fragmentation, distal and/or proximal ends of bones damaged or missing, able to record some osteological data but not all
High	highly fragmented, distal and/or proximal ends of long bones damaged or missing, unable to record majority of osteological data

Demography –Age, Sex, Metric and Non-Metric Variation

The assessment of the age of the individual was based on epiphyseal fusion of the long bones (Schwartz 1995, 185-222, Schaefer, Black and Scheuer 2009, Ubelaker 1989). Further analysis could not be undertaken. The age categories are as follows:

- Foetal (0-38 weeks)



- Infant (birth to 1 year)
- Young Child (1 to 5 years)
- Old Child (6 to 12 years)
- Adolescent (13 to 17 years)
- Young adult (18-25 years)
- Prime adult (26-35 years)
- Mature adult (36-45 years)
- Older adult (46+ years)

Sex estimation was not attempted on this individual as non-adults lack the sexual dimorphism required for analysis. In addition, no normal metric and non-metric traits were obtainable.

Heath and Disease

The human remains were analysed for any abnormal bone changes associated with either developmental or pathological conditions following standards set out by Buikstra and Ubelaker 1994 and Brickley and McKinley 2004.

Disarticulated Remains

The disarticulated human remains were examined by context and described under the following headings, after Buikstra and Ubelaker 1994:

- Bone
- Side
- Completeness
- Count
- Age
- Sex
- Pathology

The MNI (minimum number of individuals) was calculated by determining the most frequently represented skeletal element for each age/sex class.

Results

Completeness and bone surface preservation

As mentioned above, completeness of the individual could not be determined. Both femurs were observed within the trench and were laid out in the correct anatomical position within the grave. The surface preservation of the bone appeared to be in excellent (Grade 0). One of the femurs were broken at the mid shaft. This was a new break caused by impact with the mechanical excavator.

Demographic Attributes

The remains were deemed to be that of a non-adult individual in later childhood (ages 6 years-puberty). This was determined by the stage of epiphyseal fusion of the distal end of both femurs. The fusion of this particular bone occurs during puberty, approximately 14-18 years in females and 16-20 in males. On inspecting the skeletal element, it was clear that no fusion had yet taken place. In addition, the bone still appeared small, indicating that this individual was likely much younger than 14 years old; however, without being able to study specific skeletal markers, accurate aging of this individual was not possible.



Heath and Disease

No specific skeletal developmental or pathological conditions were noted on the remains of this individual.

Disarticulated Remains

A small amount of disarticulated human remains were recovered from the cemetery soil (002). The elements were mostly fragmented however, several finger bones were complete. The remains comprised a mixture of adult and non-adult skeletal elements and the amount of disarticulated material recovered would indicate an MNI of 2 individuals; an adult and a child.

A full catalogue of disarticulated remains is displayed below:

Area	Skeletal Element	Portion	Side	Completeness	Fragments	Age	Sex
Cranial	Frontal bone	Orbital ridge	L	F=<25%	1	?	undetermined
	Occipital bone	-	N/A	F=<25%	1	Adult	undetermined
	Mandible	Ramus	R	F=<25%	1	Non-Adult	undetermined
Axial	2nd rib	Head and partial shaft	L	P=25-75%	1	Non-Adult	undetermined
	Misc rib	Head and partial shaft	L	P=25-75%	1	Non-Adult	undetermined
	Misc rib	Shaft	L	F=<25%	1	Adult	undetermined
Appendicular	Femur	Prox 2/3rd	R	P=25-75%	1	Non-Adult	undetermined
	Tibia	Distal 2/3rd	L	C= >75%	1	Adult	undetermined
	Humerus	Prox 2/3rd	L	C= >75%	1	Non-adult	undetermined
	Radius	Distal 1/3rd	L	F=<25%	1	Adult	undetermined
	Misc Long bone frags	N/A	N/A	F=<25%	8	N/A	undetermined
Extremities	3rd metacarpal	Complete	R	C= >75%	1	Adult	undetermined
	5th metacarpal	Complete	L	C= >75%	1	Adult	undetermined
	Flange	Complete	L	C= >75%	1	Adult	undetermined

Conclusion

A single individual was encountered during this investigation, and as so little information could be attained from these remains, no questions could be answered in relation to the health and demography of the burial population within the church yard. The remains were that of a non-adult individual, likely older than 6 but probably younger than 14 years old due to the stage of epiphyseal fusion and the length of the visible bone. Nothing out of the ordinary was noted; The individual was buried east-west with their head to the west, appeared to be supine and displayed no signs of developmental or pathological conditions.

The disarticulated remains cannot give much information into the burial population, and is typical of charnel remains found within cemetery soils.



References

- Acsádi G and Nemeskéri J 1970 *History of Human Life Span and Mortality*. Akadémiai Kiadó, Budapest
- Baker R. K 1984 *The Relationship of Cranial Suture Closure and Age Analyzed in a Modern Multi-Racial Sample of Males and Females*. MA thesis, Dept. of Anthropology, California State University, Fullerton.
- Berry A. C and Berry R. J 1967 Epigenetic Variation in the Human Cranium. *Journal of Anatomy* 125: 23-37.
- Brickley M & McKinley M 2004 Guidelines to the standards for recording of human remains. *Institute for Archaeologists Paper 7*.
- Brooks S.T & Suchey J.M 1990 'Skeletal Age Determination Based on the *Os Pubis*: A Comparison of the Ascadi-Nemeskeri and Suchey-Brooks Methods' *Human Evolution* 5, 227-238.
- Brothwell D. R 1981 *Digging up Bones*. Cornell University Press, Ithaca, New York.
- Buikstra J. E and Mielke J. H 1985 Demography, Diet and Health. In Gilbert R. I, Jr and J. H Mielke (eds) *Analysis of Prehistoric Diets*. Academic Press, New York, pp359-422.
- Buikstra J.E & Ubelaker D.H 1994 *Standards for Data Collection from Human Skeletal Remains*. Arkansas 118/BCB99 Archaeological Survey Research Series 44.
- Dar, G. Masharawi, Y. Peleg, S. Steinberg, N. May, H. Medlej, B. Peled, N. & Hershkovitz, I. 2010. *Schmorl's nodes distribution in the human spine and its possible etiology*. *Eur Spine J* 19:670-675
- Jantz R.L Hunt D. R & Meadows L 1994 Maximum Length of Tibia: How did Trotter Measure It? *American Journal of Physical Anthropology* 93:525-528.
- Kingle, D (Dr) 2016 *pers comm*. (Osteoarchaeologist, Osteoarchaeology Initiatives, Cambridge).
- Finnegan M 1978 Non-Metric Variation of the Infracranial Skeleton. *Journal of Anatomy* 125, 23-37.
- Hillson S 1986 *Teeth*. Cambridge, Cambridge University Press.
- Hillson S 1996 *Dental Anthropology*. Cambridge University Press.
- Lovejoy C.O, Meindl R.S, Pryzbeck T.R & Mensforth R.P 1985 'Chronological metamorphosis of the auricular surface of the ilium: A new method for the determination of adult skeletal age at death'. *American Journal of Physical Anthropology* 68, 15-28.
- Lewis, M 2007. *The Bioarchaeology of Children: Perspectives from Biological and Forensic Anthropology*. Cambridge University Press. Cambridge.
- Mann R. W, Symes S. A & Bass W. M 1987 Maxillary Suture Obliteration: Aging the Human Skeleton Based on Intact or Fragmentary Maxilla. *Journal of Forensic Sciences* 32, 148-157.
- Meindl R. S & and Lovejoy C. O 1985 Ectocranial Suture Closure: A Revised Method for the Determination of Skeletal Age at Death Based on the Lateral-Anterior Sutures. *American Journal of Physical Anthropology* 68, 57-66.
- Milner G. R 1992 Determination of Skeletal Age and Sex: A Manual Prepared for the Dickson Mounds Reburial Team. Ms. On file, Dickson Mounds Museum, Lewiston, Illinois.
- Phenice T 1969 A Newly Developed Visual Method of Sexing in the *Os Pubis*. *American Journal of Physical Anthropology* 30, 297-301.
- Roberts C & Connell 2004 Guidance of recording paleopathology In Brickley M and McKinley J.I *Guidelines to the Standards for Recording Human Remains* IFA Paper No. 7, 34-39.
- Roberts C & Cox M 2003 *Health and Disease in Britain*. Sutton Publishing Ltd.



- Roberts C & Manchester K 2005 *The Archaeology of Disease*. Third Edition, Sutton Publishing Ltd.
- Rogers J & Waldron T 1995 *A Field Guide to Joint Disease in Archaeology*. Chichester, John Wiley & Sons, 32-45.
- Schaefer M, Black S and Scheuer L 2009 *Juvenile Osteology A Laboratory and Field Manual*. Elsevier Inc.
- Schwartz J. H 1995 *Skeleton Keys*. Oxford University Press (Oxford).
- Smith, B.H 1984 Patterns of molar wear in hunter-gatherers and agriculturalists. *American Journal of Physical Anthropology* **63**, 39-56.
- Stewart, T. D. 1979. *Essentials of Forensic Anthropology*. Charles C. Thomas. Springfield. Illinois.
- Stewart-Macadam P 1989a Porotic hyperostosis: relationship between orbital and vault lesions. *American Journal of Physical Anthropology* **80**: 187-93.
- Todd T.W 1921a Age Changes in the Pubic Bone. I: The Male White Pubis. *American Journal of Physical Anthropology* **3**, 285-334.
- Todd T. W 1921b Age Changes in the Pubic Bone. III: The Pubis of the White Female. IV: The Pubis of the female white-negro hybrid. *American Journal of Physical Anthropology* **4**, 1-70.
- Todd T. W & Lyon D. W. Jr 1924 Endocranial Suture Closure, Its Progress and Age Relationship. Part I. Adult Males of White Stock. *American Journal of Physical Anthropology* **7**, 325-384.
- Todd T. W & Lyon D. W. Jr 1925a Cranial Suture Closure, Its Progress and Age Relationship. Part II. Ectocranial Closure in Adult Males of White Stock. *American Journal of Physical Anthropology* **8**, 23-45.
- Todd T. W & Lyon D. W. Jr 1925b Cranial Suture Closure: Its Progress and Age Relationship. Part III. Endocranial Closure in Adult Males of Negro Stock. *American Journal of Physical Anthropology* **8**, 47-71.
- Todd T. W & Lyon D. W. Jr 1925c Cranial Suture Closure: Its Progress and Age Relationship. Part IV. Ectocranial Closure in Adult Males of Negro Stock. *American Journal of Physical Anthropology* **8**, 149-168.
- Trotter M and Gleser G. C 1952 Estimation of stature from long bones of American whites and negroes. *American Journal of Physical Anthropology* **10**:463-514.
- Trotter M and Gleser G. C 1958 A re-evaluation of stature based on measurements taken during life and of long bones after death. *American Journal of Physical Anthropology* **16**: 79-123.
- Trotter M 1970 Estimation of stature from intact limb bones; in TD Stewart (ed.) *Personal identification in mass disasters*. Washington Smithsonian Institute, 71-83.
- Turner C.G, Nichol C. R and Scott G. R 1991 Scoring Procedures for Key Morphological Traits of the Permanent Dentition: The Arizona State University Dental Anthropology System. In Kelly, M and Larsen, C. S (eds): *Advances in Dental Anthropology*. Chichester, Wiley-Liss, pp.13-21.
- Ubelaker D. H 1989 Estimation of age at death from immature human bone. In Işcan M. Y (ed): *Age markers in the human skeleton*. Springfield, IL, Charles C. Thomas, pp 55-70.
- White T. M and Folkens P. A 2005 *The Human Bone Manual*. Elsevier Academic Press.
- Waldron, T 2009. *Palaeopathology*. Cambridge University Press. Cambridge.



Appendix 4: OASIS and Site Data

PROJECT DETAILS			
Project Name & Address	St Mary's Church, Mursley, Buckinghamshire	Project Site Code	512/MSM
OASIS reference	kdkarcha1-384893	Event/Accession no	AYBCM 2020.22
OS reference	SP 81711 28554	Study area size	26.85sq m
Project Type	Watching Brief	Height (mAOD)	147
Short Description	<p>Between March and June 2020 KDK Archaeology undertook a programme of Observation and Recording at The Church of St Mary, Main Street, Mursley, Buckinghamshire to fulfil the conditions set out in a Faculty awarded by the Consistory Court of the Diocese of Oxford.</p> <p>This investigation involved the monitoring of internal and external groundworks including the removal of the existing floor in the western part of the north and south aisles. The church foundations were exposed during the internal works, as were the foundations of two of the Nave arcade columns.</p> <p>External works comprised the excavation of a service trench which cut through the churchyard to connect to pre-existing services. The trench was excavated to a depth of up to 1m where a single articulated burial was exposed as well as the remnants of the demolished northern porch.</p>		
Previous work	None	Site status	Grade II* listed church
Planning proposal	Reordering to provide a toilet and servery to north aisle, a new ringing platform to the tower, removal of existing vestry enclosure and pews from the west end	Current land use	Place of worship
Diocese	Oxford	Planning application ref.	2017-011388
Monument type	1x Burial, North porch footings	Monument period	Medieval-post-medieval
Significant finds	None	Future work	None
PROJECT CREATORS			
Organisation	KDK Archaeology Ltd		
Project Brief originator	-	Project Design originator	KDK Archaeology Ltd
Project Manager	Karin Kaye	Director/Supervisor	Laura Dodd & Chris Martin-Taylor
Sponsor/funding body	Arnold Bartosch Ltd		
PROJECT DATE			
Start date	24.02.2020	End date	02.02.2021
PROJECT ARCHIVES			
	Location	Content (e.g. pottery, animal bone, files/sheets)	
Physical	Buckinghamshire Archives	None	
Paper		WSI, Report, B&W Photos and negatives, Fieldwork sheets	
Digital		CD Rom containing all digital files. Digital archive to be uploaded to ADS	
BIBLIOGRAPHY (Journal/monograph, published or forthcoming, or unpublished client report)			
Title	Archaeological Observation and Recording Report: Church of St Mary, Main Street, Mursley, Buckinghamshire		
Serial title & volume	512/MSM/2.1		
Author(s)	Laura Dodd MSc ACIfA and Derek Watson PhD		
Page no's	33	Date	10.05.2021