University of Southampton

Faculty of Arts and Humanities

Archaeology

Dis/ability stories from Roman Dorset: an integrated osteobiography approach

APPENDICES

by

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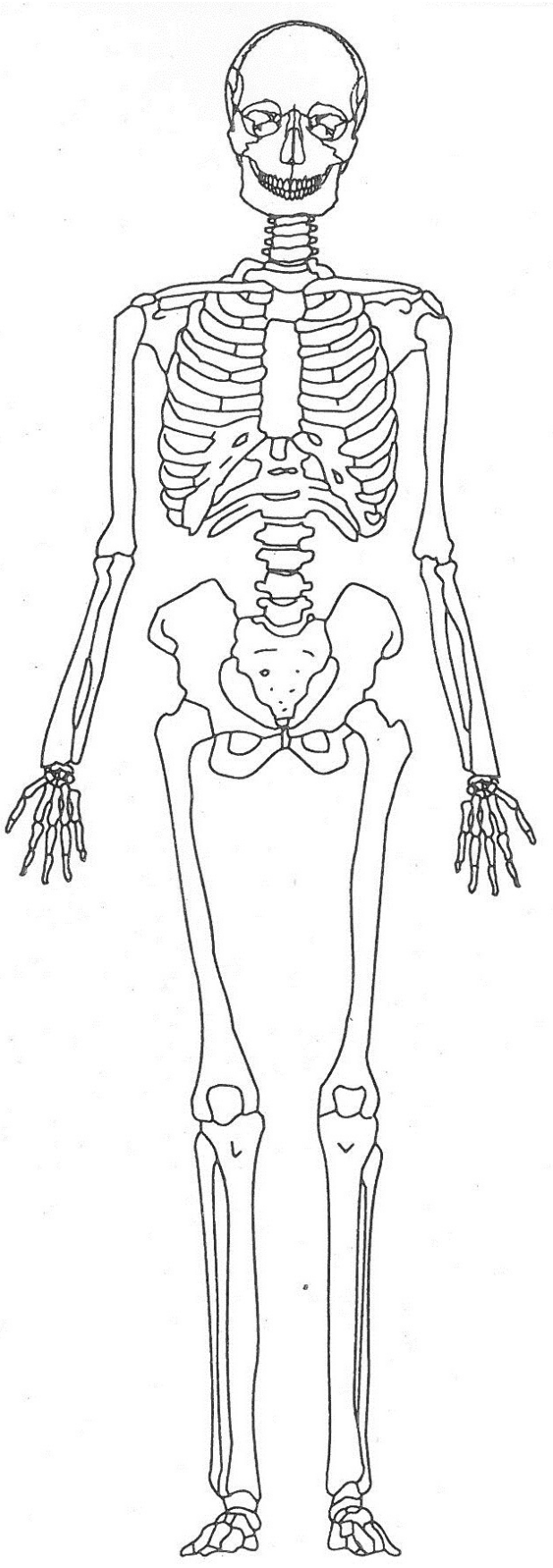
Contents

Appendix A – Recording Sheets

KEY:

= MISSING

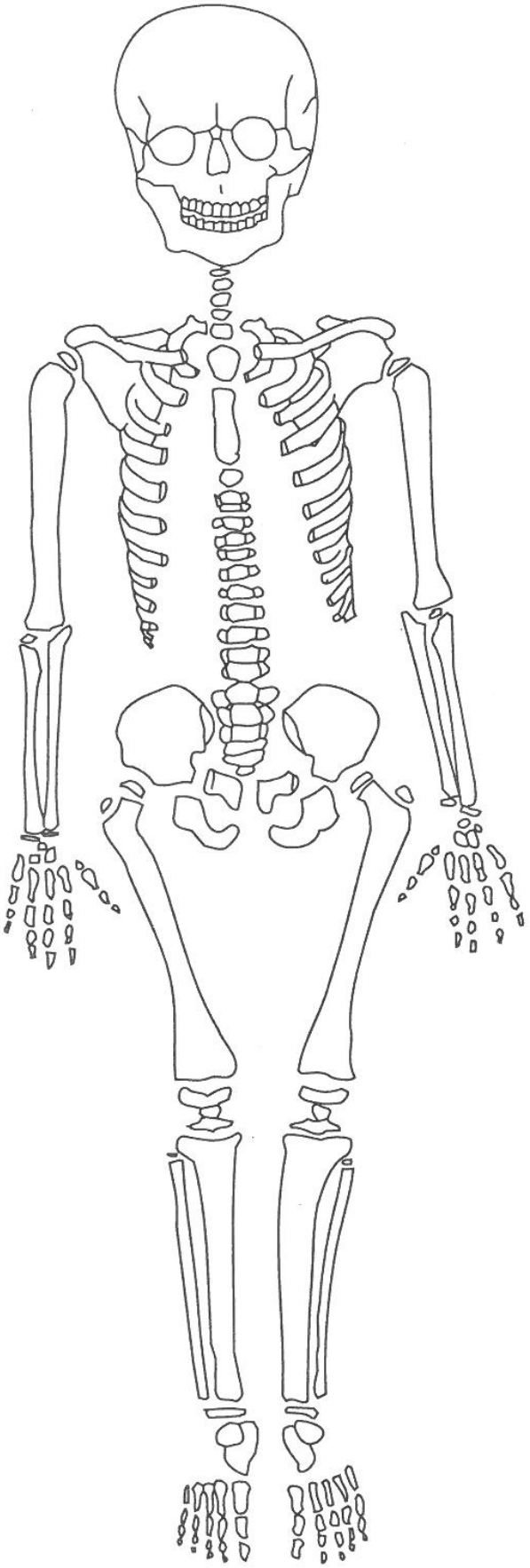
= BREAK



KEY:

= MISSING

= BREAK



INVENTORY OF SKELETAL ELEMENTS

KEY:	P = PROXIMAL	Mi = MIDSHAFT	D = DISTAL
U = UNFUSED	- = ABSENT	M = MEDIAL	L = LATERAL
1 = >75% PRESENT (COMPLETE)	2 = 25%-75% PRESENT (PARTIAL)	3 = <25% PRESENT (POOR)	

CRANIAL BONES:

	LEFT	RIGHT
FRONTAL		
PARIETAL		
OCCIPITAL		
TEMPORAL		
TMJ		
SPHENOID		
ZYGOMATIC		
MAXILLA		
PALATINE		
MANDIBLE		

POSTCRANIAL BONES AND JOINT SURFACES:

BONE	BONE FEATURE	LEFT	RIGHT
HYOID			
CLAVICLE			
SCAPULA	BODY		
	GLENOID F.		
STERNUM	MANUBRIUM		
	BODY		
PATELLA			
SACRUM			
OS COXAE	ILLIUM		
	ISCHIUM		
	PUBIS		
	ACETABULUM		
	AURIC. SURFACE		

RIBS:

	LEFT		RIGHT	
	NUMBER OF RIB HEADS PRESENT	% COMPLETE	NUMBER OF RIB HEADS PRESENT	% COMPLETE
1^{ST} RIB				
$2^{ND} – 12^{TH}$ RIB				

VERTEBRAE:

	VERTEBRAL BODY		NEURAL ARCHES	
	NUMBER PRESENT	% COMPLETE	NUMBER PRESENT	% COMPLETE
CERVICAL 1				
CERVICAL 2				
CERVICAL 3-7				
THORACIC 1-12				
LUMBAR 1-5				

LONG BONES:

		LEFT	RIGHT
HUMERUS	P EPIPHYSIS		
	SHAFT		
	D EPIPHYSIS		
RADIUS	P EPIPHYSIS		
	SHAFT		
	D EPIPHYSIS		
ULNA	P EPIPHYSIS		
	SHAFT		
	D EPIPHYSIS		
FEMUR	P EPIPHYSIS		
	SHAFT		
	D EPIPHYSIS		
TIBIA	P EPIPHYSIS		
	SHAFT		
	D EPIPHYSIS		
FIBULA	P EPIPHYSIS		
	SHAFT		
	D EPIPHYSIS		

HANDS & FEET:

	LEFT		RIGHT	
	NO PRESENT	% COMPLETE	NO PRESENT	% COMPLETE
CARPALS				
METACARPALS				
HAND PHALANGES				
TALUS				
CALCANEUS				
TARSALS				
METATARSALS				
FOOT PHALANGES				

DENTITION:

AGE ESTIMATION: _____

KEY:

✓ = PRESENT	X = LOSS POST-MORTEM	• = LOSS ANTE-MORTEM
- = PART OF JAW MISSING	T = PART OF JAW MISSING, BUT LOOSE TEETH PRESENT	
0 = CONGENITAL ABSENCE	U = UNERUPTED	E = ERUPTING
C = CARIES	A = ABSCESS AT ROOT	

PERMANENT

MAXILLA		**MANDIBLE**	
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
R	**L**	**L**	**R**

DECIDUOUS

MAXILLA		**MANDIBLE**	
a	a	a	a
b	b	b	b
c	c	c	c
d	d	d	d
e	e	e	e
R	**L**	**L**	**R**

AGE AT DEATH DETERMINATION

DENTAL ATTRITION:

KEY: POTENTIAL SCORES 1-7 (1 = NO WEAR, 7 = ROOTS ONLY) AGE ESTIMATION: _____

	LEFT			RIGHT		
	M3	M2	M1	M1	M2	M3
UPPER						
LOWER						

TRANSITION AGEING:

AGE ESTIMATION: _____

CRANIAL SUTURES	LEFT	RIGHT
CORONAL PTERICA	1 2 3 4 5	1 2 3 4 5
SAGITTAL OBELICA (MIDLINE)	1 2 3 4 5	
LAMBDOIDAL ASTERICA	1 2 3 4 5	1 2 3 4 5
INTERPALATINE (MIDLINE)	1 2 3 4 5	
ZYGOMATICOMAXILLARY	1 2 3 4 5	1 2 3 4 5

PUBIC SYMPHYSIS	LEFT	RIGHT
SYMPHYSEAL RELIEF	1 2 3 4 5 6	1 2 3 4 5 6
SYMPHYSEAL TEXTURE	1 2 3 4	1 2 3 4
SUPERIOR APEX	1 2 3 4	1 2 3 4
VENTRAL SYMPHYSEAL MARGIN	1 2 3 4 5 6 7	1 2 3 4 5 6 7
DORSAL SYMPHYSEAL MARGIN	1 2 3 4 5	1 2 3 4 5

ILIAC AURICULAR SURFACE	LEFT	RIGHT
SUPERIOR DEMIFACE TOPOGRAPHY	1 2 3	1 2 3
INFERIOR DEMIFACE TOPOGRAPHY	1 2 3	1 2 3
SUPERIOR SURFACE MORPHOLOGY	1 2 3 4 5	1 2 3 4 5
MIDDLE SURFACE MORPHOLOGY	1 2 3 4 5	1 2 3 4 5
INFERIOR SURFACE MORPHOLOGY	1 2 3 4 5	1 2 3 4 5
INTERIOR SURFACE TEXTURE	1 2 3	1 2 3
SUPERIOR POSTERIOR ILIAC EXOSTOSES	1 2 3 4 5 6	1 2 3 4 5 6
INFERIOR POSTERIOR ILIAC EXOSTOSES	1 2 3 4 5 6	1 2 3 4 5 6
POSTERIOR EXOSTOSES	1 2 3	1 2 3

AURICULAR SURFACE:

AGE ESTIMATION: _____

CHARACTER TRAIT	SCORING	LEFT	RIGHT
TRANSVERSE ORGANISATION	1-5		
SURFACE TEXTURE	1-5		
MICROPOROSITY	1-3		
MACROPOROSITY	1-3		
APICAL CHANGES	1-3		

SEX DETERMINATION ANALYSIS

SKULL AND MANDIBLE:

SEX ESTIMATION: _____

CHARACTER TRAIT	SCORING (♀ to ♂)	LEFT	MIDLINE	RIGHT
NUCHAL CREST	1-5			
MASTOID PROCESS	1-5			
SUPRAORBITAL MARGIN	1-5			
GLABELLA	1-5			
FRONTAL	HIGH 1 – SLOPING 2			
MENTAL EMINENCE	1-5			
GONIAL FLARING	1-3			

PELVIC GIRDLE:

SEX ESTIMATION: _____

CHARACTER TRAIT	**SCORING (♀ to ♂)**	**LEFT**	**MIDLINE**	**RIGHT**
VENTRAL ARC	1-3			
SUBPUBIC ANGLE	~90° - 45-60°			
ISCHIOPUBIC RAMUS RIDGE	1-3			
SUBPUBIC CONCAVITY	1-3			
PREAURICULAR SULCUS	1-4			
GREATER SCIATIC NOTCH	1-5			
OBTURATOR FORAMEN	TRIANGLE – OVAL			
SACRUM CURVATURE	1-3			

PATHOLOGY

OSTEOARTHRITIS:

CERVICAL

THORACIC

LUMBAR

OTHER JOINTS:

DENTAL PATHOLOGY:

CRIBRA ORBITALIA:

PATHOLOGY:

METRIC MEASUREMENTS

CRANIAL MEASUREMENTS:

	(mm)		(mm)
BIZYGOMATIC BREADTH		BICONDYLAR WIDTH	
BIFRONTAL BREADTH		BIGONIAL BREADTH	
BREGMA-LAMBDA CHORD		FORAMEN MENTALIA BREADTH	
LAMBDA-OPISTHION CHORD		MINIMUM RAMUS BREADTH	
NASION-BREGMA CHORD		GNATION-INFRADENTALE HEIGHT	
BIASTERIONIC BREADTH		MAXIMUM MANDIBULAR LENGTH	
BASION-OPISTHION CHORD		CORONOID HEIGHT	
FORAMINAL BREADTH		PROJECTIVE CORPUS LENGTH	
SIMOTIC CHORD		MANDIBULAR ANGLE	
ORBITAL BREADTH			
ORBITAL HEIGHT			
BASION-ALVEOLARE CHORD			
NASION-ALVEOLARE CHORD			
NASION-NASOSPINALE CHORD			
NASAL BREADTH			
PALATINE LENGTH			
PALATINE BREADTH			
BI-DACRYONIC CHORD			
NASION-LEFT NARIALE HEIGHT			

POST-CRANIAL MEASUREMENTS:

	LEFT (mm)	RIGHT (mm)		LEFT (mm)	RIGHT (mm)
FEMUR			HUMHD		
TIBIA			HUMMIDMAX		
TIBIA OBLIQUE			HUMMIDMIN		
FIBULA			HUMEPW		
HUMERUS			FEMHD		
RADIUS			FEMAP		
ULNA			FEMTV		
CLAVICLE			FEMMIDAP		
			FEMMIDTV		
			FEMBCW		
			TIBAP		
			TIBTV		

Appendix B – Data

Skele no	Grave no	Sex	Age Group	Stature (cm)	δ15N	δ13C	Atomic C/N	Back Pathology	Joint pathology	Infection pathology	Metabolic pathology	Trauma pathology	Congenital pathology	Dental path	AMTL?	No of AMTL
210	578	M	much older adult	170	8.8	-19.1	3.2	1	1			1		1	1	10
242	1245	M	mature adult	171				1						1	1	2
244	751	F	older adult					1	1					1	1	13
268	767	M	mature adult	171	10.8	-19	3.1				1			1	1	1
277	778	M	prime adult	168										1	0	0
278	2135	F	prime adult	158										1	0	0
320	771	M	prime adult	179										1	1	2
328	2621	F	prime adult	165					1		1			0	0	0
338	1144	M	much older adult	164				1	1							
617	2635	M	prime adult	166	8.9	-19.9	3.2	1						1	1	9
710	2639	F	older adult	160	11.4	-19	3.2			1				1	1	2
766	2663	F	young adult	123	9.5	-19.4	3.2	1			1		1	1	0	0
770	2666	F	much older adult	155				1						1	0	0
789	2659	M	prime adult	164				1						1	0	0
791	2667	M	prime adult	172							1			1	0	0
794	3231	M	prime adult	180	11	-17.7	3.3				1			1	0	0
806	1142	M	much older adult	168					1			1		1	1	5
821	3616	M	much older adult	161				1						1	1	3
827	3620	M	young adult	161	9.1	-19.6	3.2				1	1		1	0	0
835	1941	M	mature adult	166				1						1	1	3
848	2676	M	prime adult	164										1	0	0
852	3661	M	much older adult	175	10	-18.8	3.2		1			1		1	0	0
868	2696	F	young adult	160										1	0	0
893	3240	M	young adult	172				1						1	0	0
960	3281	F	much older adult	166				1								
962	2020	M	prime adult	164	9.1	-19.8	3.3	1						1	0	0
1009	3440	F	prime adult	167										1	0	0
1032	4035	M	much older adult	174				1				1		1	1	3
1062	4322	M	prime adult	173				1						1	1	1
1066	4324	J	juvenile								1			1	0	0
1088	4341	F	prime adult	168				1						1	0	0
1089	3872	J	juvenile							1	1			1	0	0
1114	4360	F	much older adult	152				1	1					1	1	7
1137	4350	M	much older adult	153				1						1	1	2
1161	4397	M	mature adult	167					1					1	1	3
1169	4378	J	juvenile											0	0	0
1178	4380	F	prime adult	166	7.9	-19.5	3.2				1			1	1	1

Skele no	Grave good provision?	Footwear	Personal	Votive	Household	Feasting	Building	Canine	Query	Photo?	Primary or Secondary	Coffin?	Coffin material	Wrapped
210	1	1								1	primary	1	wood	1
242	1	1		1						1	primary	1	wood	1
244	1	1								0		1	wood	
268	1	1		1	1	1				0		1	wood	1
277	1	1								1	primary	1	wood	1
278	1		1							0		1	wood	
320	1	1								0		1	wood	
328	1	1				1				1	primary	1	wood	1
338										1	secondary	1	wood	0
617										1	primary	1	wood	1
710										1	primary	1	wood	0
766	1	1								1	primary	1	wood	1
770	1	1								1	secondary	1	wood	0
789										1	primary	1	wood	0
791										1	primary	1	wood	0
794										1	primary	0	0	0
806	1	1				1				1	primary	1	wood	1
821	1	1								1	secondary	1	wood	1
827										0		1	wood	
835	1	1							1	0		1	wood	
848										0		1	wood	
852	1	1						1		1	primary	1	wood	1
868	1	1								1	primary	1	wood	1
893	1	1								1	primary	1	wood	1
960	1	1								1	primary	1	wood	1
962	1	1								1	primary	1	wood	1
1009	1	1		1						1	primary	1	wood	1
1032										1	primary	1	wood	0
1062										1	primary	1	wood	0
1066										1	unknown	0	0	0
1088	1				1					1	primary	0	0	0
1089	1	1								1	unknown	1	wood	0
1114	1	1								1	secondary	1	wood	0
1137										1	primary	0	0	0
1161	1	1								1	primary	1	wood	0
1169			1	1	1				1	1	primary	1	lead	1
1178	1	1						1		1	primary	1	wood	1

Skele no	Position	Left Hand	Right Hand	Left Hand	Right Hand	Orientation	Grave Length	Grave Width	Grave Depth
210	supine	at side	across waist	Together	Together	NE	2.4	1.1	0.9
242	supine	on groin	on groin	Together	Together	SE	2.1	0.8	0.45
244	supine	across waist	on groin			NE	2.6	1.3	0.86
268	supine	at side	across waist			SE	2.5	1.02	0.4
277	supine	on right hip	on right hip	Together	Together	NE	2.8	1.25	1.3
278	supine	at side	on groin			NW	1.7	0.5	2.3
320	supine	on right hip	at side			W	2.63	1.05	0.84
328	supine	on left hip	flexed on chest	Straight	Flexed to right	NE	2.2	0.9	0.7
338	supine	on groin	at side	Together	Together	NE	2.18	0.98	0.77
617	supine	on right shoulder	on groin	Slight flex left	Slight flex left	SW	2.8	1	1.1
710	Upper body flexed left	at side	flexed on chest	Slight flex left	Slight flex left	NE	2	0.8	0.6
766	supine	on left hip	on right hip	Together	Together	SW	1.6	0.7	0.3
770	Prone, decap?	at side	across waist	Flexed right	Flexed to right	NW	2	0.9	0.2
789	supine	crossed right hip	crossed right hip	Together	Together	ESE	2.2	0.7	0.4
791	supine	on groin	on groin	Together	Together	SW	2.25	0.65	0.9
794	supine	across waist	across waist	Together	Together	NE	2.19	1.1	0.45
806	supine	on groin	across waist	Together	Together	NE	2.53	1.25	0.82
821	supine	at side	on groin	Together	Together	E	2	0.75	0.3
827	supine	across waist	at side			SW	2.25	0.62	0.25
835	supine	on right hip	on right hip			W	2.25	1	0.9
848	supine	across waist	across waist			NE	2.3	0.57	0.9
852	prone	at side	flexed away	Slight flex left	Slight flex left	SE	2.1	0.95	0.3
868	supine	across chest	across waist	Together	Together	NE	2.4	1	0.95
893	supine	on groin	on groin	Together	Together	NE	1.8	1	0.83
960	supine	on groin	on groin	Together	Together	SE	2.4	0.8	0.7
962	supine	on left hip	across waist	Together	Together	NW	2.3	0.65	0.5
1009	supine	on groin	on groin	Together	Together	E	2.1	0.54	1.8
1032	supine	across waist	across waist	Together	Together	N	1.8	0.3	0.3
1062	sat	on groin	on groin	Together	Together	SW	2.2	1	1
1066	crouched	flexed away	across waist	to right	to right	W	1.5	0.8	0.3
1088	sat	on groin	Flexed away	Together	Together	S	1.45	0.75	0.35
1089	supine	at side	at side	Together	Together	NE	2.15	0.9	0.35
1114	supine	flexed away	across waist			N	3.3	1.4	1.8
1137	Side LHS	on groin	Flexed to right	Together	Together	E	1.4	0.5	0.3
1161	supine	at side	at side	Together	Together	NW	2.3	0.9	0.7
1169	supine	at side	at side	Together	Together	SE	1.86	1.38	0.81
1178	supine	on groin	on groin	Together	Together	N	2.72	1.15	1.2

Appendix C – Metric measurements and stature estimates

The below lists the measurements recorded where possible during the direct osteological analysis. Alongside the description is the citation of the procedure followed for each measure.

Cranial measurements (mm)

- Bizygomatic breadth (3) Buikstra and Ubelaker 1994: 74
- Bifrontal breadth (11) Buikstra and Ubelaker 1994: 75
- Bregma-lambda chord (20) Buikstra and Ubelaker 1994: 76
- Lambda-opisthion chord (21) Buikstra and Ubelaker 1994: 76
- Nasion-bregma chord (19) Buikstra and Ubelaker 1994: 76
- Biasterionic breadth (XIII') Brothwell 1981: 83
- Basion-opisthion chord (22) Buikstra and Ubelaker 1994: 77
- Foraminal breadth (23) Buikstra and Ubelaker 1994: 77
- Simotic chord (X') Brothwell 1981: 83
- Orbital breath (15) Buikstra and Ubelaker 1994: 76
- Orbital height (16) Buikstra and Ubelaker 1994: 76
- Basion-alveolare chord (6) Buikstra and Ubelaker 1994: 74
- Nasion-alveolare chord (10) Buikstra and Ubelaker 1994: 75
- Nasion-nasospinale chord (13) Buikstra and Ubelaker 1994: 75
- Nasal breadth (14) Buikstra and Ubelaker 1994: 75
- Palatine length (8) Buikstra and Ubelaker 1994: 75
- Palatine breadth (7) Buikstra and Ubelaker 1994: 75
- Bi-dacryonic chord (18) Buikstra and Ubelaker 1994: 76
- Nasion-left nariale height (XVI') Brothwell 1981: 83

Mandibular measurements (mm)

- Bicondylar width (29) Buikstra and Ubelaker 1994: 78
- Bigonial breath (28) Buikstra and Ubelaker 1994: 78
- Foramen mentalia breadth (XIX') Brothwell 1981: 83
- Minimum ramus breadth (30) Buikstra and Ubelaker 1994: 78
- Gnation-infradentale height (25) Buikstra and Ubelaker 1994: 78
- Maximum mandibular length (33) Buikstra and Ubelaker 1994: 78
- Coronoid height (XXIII') Brothwell 1981: 83
- Projective corpus length (XXII') Brothwell 1981: 83
- Mandibular angle (34) Buikstra and Ubelaker 1994: 78

Post-cranial measurements (mm)

- Femur length (60) Buikstra and Ubelaker 1994: 82
- Tibia length (69) Buikstra and Ubelaker 1994: 83
- Tibia length oblique Brothwell 1981: 86
- Fibula length (75) Buikstra and Ubelaker 1994: 84
- Humerus length (40) Buikstra and Ubelaker 1994: 80
- Radius length (45) Buikstra and Ubelaker 1994: 80
- Ulna length (48) Buikstra and Ubelaker 1994: 81
- Clavicle length (35) Buikstra and Ubelaker 1994: 79
- Humeral head diameter (42) Buikstra and Ubelaker 1994: 80
- Humerus midshaft maximum diameter (43) Buikstra and Ubelaker 1994: 80
- Humerus midshaft minimum diameter (44) Buikstra and Ubelaker 1994: 80
- Humeral epicondyle width (41) Buikstra and Ubelaker 1994: 80
- Femural head diameter (63) Buikstra and Ubelaker 1994: 82
- Femur sagittal width (64) Buikstra and Ubelaker 1994: 82
- Femur tranverse diameter (65) Buikstra and Ubelaker 1994: 82
- Femural midshaft sagittal width (66) Buikstra and Ubelaker 1994: 83
- Femural midshaft transverse diameter (67) Buikstra and Ubelaker 1994: 83
- Femural bicondylar width (62) Buikstra and Ubelaker 1994: 82
- Tibia sagittal width (72) Buikstra and Ubelaker 1994: 83
- Tibia transverse width (73) Buikstra and Ubelaker 1994: 83

Long bone measurements (cm)

Skele no	Sex	Fem		Tib		Fib		Hum		Rad		Ulna	
		L	R	L	R	L	R	L	R	L	R	L	R
278	F	42.2	42.6	33.4	33	0	0	0	0	0	0	0	0
328	F	44.2	0	36.5	35.8	0	0	0	0	0	0	0	0
710	F	43.8	0	33.6	33	0	0	29	30	21	21.7	22.5	0
761	F	40.1	0	0	0	0	32.5	28.6	29.5	0	22	0	23.9
766	F	31.9	32.6	18.8	18.6	20.4	0	20.1	20.7	0	0	12.1	12.5
770	F	40.5	40.7	33.1	33.1	32.5	0	28	0	0	0	0	0
868	F	0	0	33.9	0	0	0	30	30.7	0	0	0	0
960	F	0	0	36.2	36.1	0	0	31.2	0	23	0	0	0
1009	F	0	44.9	37.2	37.1	0	0	0	0	0	0	0	0
1088	F	0	0	0	0	0	0	0	0	0	0	25.9	0
1114	F	0	0	0	0	0	0	0	27.8	20.5	0	0	21.9
1178	F	0	0	0	0	0	0	0	32.2	0	0	0	0
210	M	45.5	45.6	37.1	36.1	0	0	33	33.5	24.05	23.9	0	0
242	M	0	0	37.1	36.7	0	0	0	0	0	0	0	0
268	M	0	45.4	37.05	36.55	0	0	31.85	0	0	0	26.1	0
277	M	0	0	36.1	35.8	35.8	35.4	0	0	0	0	0	0
320	M	0	0	0	0	0	0	0	0	0	24.6	0	0
338	M	0	0	34.1	0	0	0	0	0	0	24.2	0	0
617	M	0	0	0	34.6	0	0	31.1	31.1	23.7	0	25.4	25.8
789	M	42.7	42.9	34.1	34.6	0	0	30.8	31.9	0	24.2	0	26.3
791	M	0	0	37.4	0	0	0	0	0	0	0	0	0
794	M	0	0	0	0	0	0	0	0	0	24.9	0	26.7
806	M	44.4	44.5	0	0	0	0	0	31.7	0	0	0	0
821	M	0	0	33.9	34	0	32.8	31.8	32.6	0	22.6	0	24.5
827	M	40.8	40.3	0	0	31.6	0	29.7	30.9	0	0	0	0
835	M	0	0	34.7	34.6	0	0	0	0	0	0	0	0
848	M	0	0	33.8	33.6	0	0	30.5	0	0	0	0	0
852	M	0	0	38.3	0	0	0	0	0	0	0	0	0
893	M	45.6	0	37.4	37.7	0	0	0	0	24.9	0	0	0
962	M	43	42.7	33.6	33.5	0	0	30.3	31	23	22.8	24.6	24.6
1032	M	46.2	46.6	0	0	0	0	0	0	24.1	0	0	0
1062	M	0	0	0	0	0	0	30.6	30.9	0	22.2	24	24.3
1137	M	37.9	0	30.2	30.5	0	0	28.1	0	21.8	21.9	24.1	0
1161	M	0	44.8	34.5	34.5	0	34.2	0	0	0	0	0	0

Stature estimates (females)

Skele no	0.68 Hum + 1.17 Fem + 1.15 Tib		1.39 (Fem + Tib) + 53.20		2.93 Fib + 59.61		2.90 Tib + 61.53		2.47 Fem + 54.10		4.74 Rad + 54.93		3.36 Hum + 57.97		Estimate
	L	R	L	R	L	R	L	R	L	R	L	R	L	R	
278			158.28	158.28			158.39	157.23	158.33	159.32					158.28
328			165.37				167.38	165.35	163.27						165.37
710	159.73		160.79				158.97	157.23	162.29		154.47	157.79	155.41	158.77	157.73
761						154.84			153.15			159.21	154.07	157.09	154.84
766	122.73	123.73	123.67	124.37	119.38		116.05	115.47	132.89	134.62			125.51	127.52	123.23
770	154.61		155.50	155.78	154.84		157.52	157.52	154.14	154.63			152.05		154.61
868							159.84						158.77	161.12	159.84
960							166.51	166.22			163.95		162.80		166.37
1009				167.2			169.41	169.12		165.00					167.18
1088															168.35
1114											152.1			151.38	152.10
1178														166.16	166.16

Average 157.84 (Average without AA766 160.45)

Stature estimates (male)

Skele no	1.31(Fem+Fib)+63.05		1.26(Fem+Tib)+67.09		2.60Fib+75.50		2.32Fem+65.53		2.42Tib+81.93		1.82(Hum+Rad)+67.97		1.78(Hum+Ulna)+66.98		2.89Hum+78.10		3.79Rad+79.42		3.76Ulna+75.55		Estimate
	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	
210			171.17	170.03			171.09	171.32		169.29	171.80	172.44			170.85	172.30	176.58	176.01			170.60
242										170.74											85.37
268				170.35				170.86		170.38			170.13		167.53				173.69		170.35
277					168.58	167.54			169.29	168.57											168.06
320																		178.66			178.66
338									164.45									177.15			164.50
617										165.66	167.71		167.55	168.26	165.36	165.36	175.25		171.05	172.56	165.66
789			163.86	164.74			164.59	165.06	164.45	165.66		170.07		170.58	164.49	167.67		177.15		174.44	164.30
791									172.44												172.44
794																		179.80		175.94	179.80
806							168.54	168.77								167.09					168.65
821						160.78			163.97	164.21		168.43		168.62	167.38	169.69		171.08		167.67	160.78
827	157.89				157.66		160.19	159.03							161.31	164.78					157.89
835									165.90	165.66											165.78
848									163.73	163.24					163.63						163.48
852									174.62												174.62
893			171.67				171.32		172.44	173.16							179.80				171.67
962			163.61	163.10			165.29	164.59	163.24	163.00	164.98	165.89	164.70	165.95	163.05	165.07	172.60	171.84	168.05	168.05	163.35
1032							172.71	173.64									176.77				173.18
1062												164.61	164.17	165.24	163.91	164.78		169.57	165.79	166.92	164.61
1137			152.90				153.46		155.01	155.74	158.79	N/A	159.90		156.69		168.05	168.43	166.17		152.90
1161		166.54		167.01		164.42		169.47	165.42	165.42											166.54

Average 163.78

Appendix D – Interview with Joan Lyons – 7th December 2018

J = Joan Lyons
S = Author (interviewer)

J: Hello

S: Hey is that Joan? J: Yes Steph Hello.

S: Hello how are you?

J: Yeah, I'm alright thank you, how are you doing? S: I'm not too bad, is now a bad time?

J: No no, absolutely fine actually, I've just had a bowl of soup so I am just about ready for you

S: Oh brilliant, cool, it's been a very long time since I've spoken to you, how are you getting on?

J: Yeah, yeah not so bad, been to bluewater today, had a walk round there, so that's quite nice my brother's down, yeah we went all the way round so it's quite good to have a wonder there.

S: OK that's good, is it busy there yet?

J: It was quite busy, but not too bad, lots of cars there but not kinda manic you know, lots of people but not too manic or frenzied. It was quite pleasant actually, I enjoyed it, It was nice.

S: We made the mistake of doing town at the weekend. Man!

J: Oo that is bad, it's probably quite hard, because you're working aren't you? I don't quite know if

you are working proper hours or if you are doing it as and when I don't quite know. S: I've got about 4 different jobs on the go at the moment. So it's a bit crazy.

J: Oh good for you, that's brilliant though that you can get the jobs and stuff. That will keep you out of trouble. I've been hearing a lot about your work anyway.

S: Yeah I am having quite a lot of fun with it at the moment. I've got to quite a nice bit. I'm doing something a wee bit different, which is one of the reasons I wanted to chat to you, because I have been looking at the remains of an individual, a really unusual skeleton we had, of someone who had dwarfism, mesomelia, it's a very rare case and its always looked at very biologically , because from a clinical point of view she is very interesting too. But what I am trying to do is to try and remind people that she was a human once, once upon a time.

J: That's true when you are dealing with bones and skeletons and things yeah.

S: You do become a wee bit desensitised to it, which isn't a great thing and also the things that osteologists write, can be horrendously dry, so I am trying to write something in the form of a, sort of, fictive narrative

J: I find it fascinating, that you can pick out bone, I've always find it fascinating that archaeologists can look at a bone and say that's a thigh bone or that's a jaw bone from here, I think it's fascinating what you can tell from it.

S: Yeah, yeah, it's really cool, I still love me skeles!

J: I'm glad to hear it!

S: But I am trying to think about the impairment, in a more how would someone have experienced that kind of way and I am trying to write in a form of basically a bit of fiction, a small scene fromtheir point of view. It's supposed to be a wee bit more interesting, is the plan and it's going to have footnotes or a historical note explaining where I got my information from, where I think about it. But one of the things I would struggle with, is that I can only imagine, what it's like to be someone of shorter stature.

J: yeah because your rather tall aren't you. You're the opposite

S: Yeah and I'm worried in terms of when writing this thing about sort of balancing the line between I don't want to be or come across as patronizing. I don't want to make it too sad or almost

patronizingly positive, if it's a sad story, that's not a bad thing, but I don't want to be something that makes people uncomfortable necessarily it's supposed to be a helpful thing. Does that make sense?

J: Yeah it does, it makes perfect sense. It's really interesting how you're doing it actually. I don't see much of your mum these days, we meet up now and again and she tells me sometimes, we have conversations about certain things about work and have a chat about what you're doing. It always sounds really fascinating.

S: Thank you

J: Yeah I think it does.

S: Well are you happy to chat with me about what it's like for you to be a wee bit shorter J: Yeah. This lady, was she from Roman times. When was she from?

S: Roman. Roman Dorset

J: Oh right OK. Well, what would you like me to talk about?

S: Well for a start, I hope it's OK, I've actually got this app on my phone, which has enabled me to record this is that OK? It's just so I can transcribe it later on. I will obviously let you know if I do this, but I were to quote you, but then that would be something I would be able to do.

J: Sure, that's fine. And don't worry about being insensitive or anything because you're not, if you said something, that wouldn't offend me because I know that's not what you're intending.

S: Thank you, thank you, thank you!

J: I know you've got to be careful of when you talk to people don't you, but don't worry. Just ask what your interested in and I will try to give you a response to it.

S: Thank you. So firstly I have some hopefully easy questions. How tall are you? J: Me? I am now 4ft or within an inch of it. I'll say 4ft.

S: 4ft OK.

J: Because I gained a couple of inches on my hips. So that was quite good. S: Did you suddenly get like dizzy?

J: Absolutely! It was very exciting

S: Honestly, was it something weird?

J: I did notice it, it wasn't dramatic but it was good. It was noticeable. If you knew me well enough you know, yeah it was good. I enjoyed that.

S: Well that is really cool from a selfish point of view in that the individual I am particularly thinking about, you're about the same height as her.

J: Oh that's really interesting. Do you know anything about her at all?

S: So she actually died very young, she died at about aged 18, she had a form of dwarfism called mesomelia and it's a disproportionate dwarfism, so she has everything is shorter than we would

expect but her lower arms and her shin bones, her forearm even, forearm and shin bones are a lot more affected than her upper arm and her thigh bones.

J: Oh! OK yeah!

S: And there was a few other bits going on, she had several periods in her life, where she wasn't very well, she had some health stress, at least two I think, because one of them was when she was young, when she was growing her adult teeth, because there are lines on them which indicates that at that particular time there was, it's one of the few times we can definitely go, that was when she was about 6.

J: How fascinating

S: And she also had sometimes of anaemia. That was more recent, because you get some skeletal changes in your orbit and that would have been more recent otherwise that would have healed. And she also had quite a pronounced, the technical word for it is lumbar hyperlordosis.

J: Ooo very well pronounced! S: In one!

J: Congratulations! Never heard of that.

S: Thank you. Basically she had a very curved, especially lower spine, so she would have had quite a pronounced booty!

J: So I don't know quite what you know, but I've got a curved spine and I had an operation to straighten it a bit when I was younger. I think rather more successful now, it's quite a pronounced curve really so they improved it as much as they could, you know then.

S: Yeah yeah, it definitely would have impacted her, considering she was so young, because she started to getting lesions on her spine which we expect in usually someone that was older so things like there's things called Schmorl's nodes which is usually a sign of slipped disc, that kind of thing.

J: Do you know anything about who she was at all, are they any clues as to whether she was well off or poor or anything?

S: So, for a start we don't have a name, we don't have anything like that, she was buried in a quite a small community just outside Dorset and her burial is completely normal for that site, there is nothing particularly fancy about it, there's nothing missing either.

J: Ooo OK, I'm sorry I'm asking you all the questions! S: No no that's cool.

J: OK carry on then and I will try and be helpful.

S: So if it is OK to ask, what condition do you have?

J: Well the spine is scoliosis, curvature of the spine, you have probably come across that I suppose. And I have got a kind of unspecified problem of joints which is some kind of dysplasia. So I didn't have hip sockets for instance, I didn't really know that until later on, they weren't hips, I had a hipbone but not the joint, no socket for the ball and socket, so I just had a couple of bones which were pressing on each other. They weren't properly formed. So that is why they had great difficulty in doing the hip replacement, because they had to insert a socket and make a socket that would work as well. It was really difficult. And actually one of them is, finally after 16 years, one of them is wearing out and I am going to have to have that replaced a second time.

S: So you are going to have the replacement replaced

J: Yeah I am going to have the socket replaced somehow, it sounds rather complicated to me but the surgeon thinks he can do it so we hope he is right. And then I also have rheumatoid arthritis as

well which obviously damages the joints and stuff and you probably come across all that kind of stuff before. Yes so they're the 3 conditions, the scoliosis, dysplasia and the rheumatoid arthritis. They are quite damaging to the joints and things. I think, I was going to say that the scoliosis is what has made me short because the spine is curved so obviously you would be shorter than you would have been, but then the rest of me is short as well, so that's not the entirely the story. It's a bit of a miss mash.

S: It's interesting because when we, from an osteological point of view, when we measure someone's stature we do it purely through their long bones so actually if someone did have a curvature of the spine, that wouldn't feature. We would get their height unravelled as it were.

J: Yeah that's interesting isn't it. Yes that probably wasn't a causing factor but anyway. A complicating factor possibly.

S: So one of the things I was really hoping to get from you, is an idea what it's like to experience, sort of day to day life, in your opinion. One of the insights, I was talking to Mum about asking about talking to you about the idea and one of the insights she gave me for example was that she noticed that sometimes you get hit by handbags.

J: All the time! Now your Mum, she was interesting because she said to me she noticed when we were walking around Bluewater and I think I batted someone's handbag away and sometimes I bat it away quite hard and she said it's really strange because people they see children and they move to avoid them but they just walk straight into you, like you're not there. Now she said that, before I had ever thought about it really, yeah so that's kind of interesting that she made that distinction, it's not a height thing somehow. Because she's right, they do kind of walk around children without taking much notice but they walk into me.

S: I wonder if it's a noise thing because kids are generally sort of humming

J: Yeah and also for me of course people swing their handbags over their shoulders and they swing them back and so I get those wacked into me and umbrellas, men especially, they will walk along swinging their arm and they have a rolled up umbrella, you know the long umbrellas and I get the spike heading towards my chest or my face or something and I tend to wack those back quite hard as well

S: Yeah yeah, you are going to spear me!

J: Exactly, yeah, so that's a very practical, for me, problem which as you say your Mum has noticed. Yeah it's funny that she said that to you because she pointed that out to me as well.

S: That's really bizarre, that's not something I would have thought of because as you say people are usually fairly aware of people of smaller heights just because they have kids

J: Yeah that's right and it can get very irritating to be honest and that's why I tend to wack them quite hard sometimes, or people will just walk across me and get their elbow in my shoulder of something and I will elbow them in the stomach if I can, put my elbow back and they look quite aggrieved and occasionally they will say 'oh sorry', ok then yeah look where you're going. That's not so difficult, but you know it's a never ending battle because there is always the next person who does the same thing so it's not like you can achieve anything but when it gets irritating …

S: Yeah I think after a while, it would test the patience of anyone I think!

J: That's right very definitely.

S: Is there any issue with having a shorter pace?

J: Yeah, that is a social issue which is very important actually Steph, because everyone walks faster than me and I know that when I'm with my brothers, one of them in particular finds it hard, one

doesn't really walk far we go in the car, the other will outpace me and I asked him 'Can't you justslow down' and he says it's really hard to walk slowly, it gets painful, it makes you ache. That is what he said, that I have never thought about, to tell you the truth but that is perhaps one reason why people tend not to slow down they just keep going and so for me I get out of breath and I can't really explain exactly why that is, I think it might be because of the curvature of the spine, that might affect the lungs slightly, it might be because I am making more effort, because things ache, my hips ache, the spine maybe, so I am trying to catch my breath all the time so I can't really talk while I am walking along, if that makes sense? I find that really difficult, I can't have a conversation, because I'm catch my breath all the time, trying to keep up with people.

S: Yeah I guess also if it in anyway stressful that sometimes go to breathing irregularities sometimes

J: That's right, that's true and the other thing, that I am sure your Mum, has noticed is that people sometime talk over your head and act as if you are not there. I've been in the queue for the doctors, for instance and the receptionist will go to the person behind me. Yes that will happen to me not infrequently. It happened to me in the chemist a little while ago actually, and there was queue of about 4 people and there's a lady behind me and I know people say they haven't seen me so I had my prescription in my hand and I was holding it quite high and sure enough she called the woman behind me and the lady actually walked past me and went to the top, the front. And I said 'excuse me, what do you think I'm waiting for?' and they say 'Oh sorry, oh I didn't see you', 'yeah right' and one of the pharmacist assistants 'Oh sorry I didn't see you there', 'yeah right OK', I walked to the front, the other woman backed off and she gave me the prescription, well I gave it in. And while I was waiting for it, I was just browsing in the shop, the woman came over to me and said 'I am so sorry about that, it's just that I am parked on a yellow line.' She had seen me, well clearly I was right in front of her…

S: She just took advantage of the situation

J: Yeah and I just said 'yeah alright', but where do you think I'm parked, do you care? What's it got to do with where your parked, that's your problem, you wouldn't have done to someone else, that's what I should have said to have, you wouldn't have done it to someone else.

S: No no, probably not

J: And Mum finds it entertaining, because we were in Marks and Spencers one day and I was talking something to the returns desk in Bexleyheath, I don't know if you are familiar with it there? There was a seat the other side of the orders desk and she was just sitting there and she could see me a few yards away and there were a few people in the queue and as I got to the front of the queue, the lady behind me, she suddenly walked past me and stood in front of me.

S: What!?

J: Yes, blatantly, so I said to her 'Excuse me'. I've got a very good line in excuse mes. She looked at me and she said 'Oh sorry' and went stood behind me again and then she said 'I wasn't pushing in', I said 'Yeah right!'. She said 'I wasn't pushing in, I was just standing there'. I said 'Just like you do, I've seen it all before' and she turned to the woman behind her and said 'I weren't pushing in'

S: Uh huh!

J: I've heard it all before and the woman behind her was like I am not getting involved in this and Mum was, I could see, Mum was killing herself laughing, she said 'I saw her do that and I knew that you weren't going to let her get away with it', which is true so I do find that that happens. Today we were in John Lewis and I was with my brother was holding the tray and she told him how much it came to, young girl, she wasn't the brightest!, and she told him what it came to and I am standing holding my card and she is standing smiling vaguely at him and he said 'Well, she's

paying' and she said OK, but she still kind of went to give the card back to him. There is a lot of ignorance out there.

S: Yeah. Do you ever get that impression of… I'm not very good at phrasing this, there was a phrase that came out ages ago where someone said 'Does he take sugar?' where someone asked about you when you're in the room?

J: Oh yes totally

S: Really?

J: Yes I've had that, yeah it's probably happened when I 've been with your Mum, I'm not sure, I

can't think, because I just don't say anything and whoever I am with says 'Well why don't you ask her then' or something, but yeah people will do that. Yeah, it hasn't happened recently to be fair, but it has happened, once when I was younger, when I was a student or just left university I was actually, at the front of the toilets, just me, I had gone to the bank or something and this chap came and literally pushed me out of the way and other times in tube stations, I will be ready to put my money in the old ticket machine, and I've had men, always men, putting their hands out, putting their arms across my head to get in first.

S: What?

J: yeah. And again I've turned round with an 'excuse me!' I know! 'Sorry, I didn't see you' which is an obvious lie. They try it.

S: Yeah literally if you were any closer you would be stepping on me, how about we don't.

J: Quite

S: Especially if they have pointy shoes on like.

J: That can get annoying, your mum knows that one. Sometimes we just have to laugh about things. Yeah as I say my Mum saw me with this woman in Marks and I could see her chuckling away, yeah you weren't going to let her get away with that and no I certainly wasn't so it can be kinda funny from the inside but yeah when Dad and using a walking frame and he was very slow, he had people pushing past and that kind of thing and you know once or twice I've told them to pack it in basically and I actually said on one occasion, the next person who does that is going to get a mouthful and then someone did push in front of me and they did get a bit of a mouthful. Yeah I have had enough of this today.

S: There is a real lack of patience and they think that anyone that might look like they might hold people up and suddenly all their patience is all gone and no they really won't.

J: Another time I was with Mum at Charing Cross and we were walking towards a train that we were going to get on I think and it was going to leave in a few minutes and this chap came racing down the platform behind us and he literally barged and pushed between us , nearly knocked us both flying and jumped on the train and that wasn't one we were going to get, because I was too angry I got on this train and I shouted at him 'You absolute pig, you nearly knocked us over, you, pig!' and everyone on the train knew who I was talking to, they didn't say anything, but they knew who it was. I was so furious, he could have knocked us flying and we could have broken a bone or something and he would have been on the train on his way home because he didn't want to wait.

S: He could have really hurt you J: Yeah he could have done

S: Especially your Mum keeps breaking things at the moment!

J: That's right yeah, you do get very nice people of course you do, but you do get this kind of thing happening a lot and on one occasion, you talk about 'does he take sugar', I remember a few years

back now being in London, I went to Harrods with Mum and a woman came in, well a man and a woman and she literally pushed me, I nearly fell, went flying the aisle and she just carried on going and I said 'Thank you, charming!' and she didn't even turn around and the man turned to Mum and said sorry about that! I just shouted 'It's me you should be apologising to!' So yeah you get all this kind of thing. You do, it's surprising isn't it?

S: Yeah it is

J: And again I've got so many examples, I forget them, when I worked in London in the MOD, I remember Vanessa came to meet me one day, she was in London for an interview or something and I was driving from near Suffolk so she came along and was going to drive back with me, which she, did and as we came out of the lift, I think it was getting on towards Christmas, so it was about 4 o'clock and a group of men in suits, you know usual thing, came towards us, I think they had been at the pub all afternoon and as they walked past one of them said 'Oh look there's a midget!'. Vanessa said, because the lift door was open and she said 'Do you know that man that was so rude?' and I said 'He's a drunken pig' I just said to the whole lift load of them, afterwards I should have put my foot in the door and said which one of you pigs said that then? I mean actually you are inaccurate but that's an irrelevant, that's not the point, I should have made more of an issue of it but you know I want to go home but yeah you just encounter this kind of thing, people think you are fair game for this sort of stuff and his mates didn't say to him don't be so rude or what a pig you're being, they just all huddled together and looked the other way, you know? So yeah that's the sort of thing you can get.

S: Urgh that's just horrible.

J: Yeah it can be and I get a bit cynical sometimes and I 've said people are just horrible and of course some people are, but not everyone is, but you do get days where you think I've had enough, everybody's rude really and obviously they're not but you get days where you think, really?

S: Yeah where you get days where they all seem to be in your space. All the horrible people are here! J: Yes they are all here today

S: So what's it like as a teenager?

J: Difficult actually, I feel as if I didn't have a normal teenage experience, I didn't really, and up to a point, I mean no one meant to be unkind of anything, but I got left out of a lot of the parties and things because really I couldn't walk the way other people did and I couldn't keep up with them so I just didn't get invited or they would go off! As I said no one meant to be unkind or anything but it was too much hassle probably. Yeah and then it could be embarrassing, when I was at university, I think it was the last year and the girl I was sharing a flat with, her boyfriend was at Brighton college and I was at Sussex uni and he was at Brighton poly and we would see him sometimes and some of his mates and we met him and one of his mates, I think we were in Lewes, we were going to the Bonfire thing and everywhere we went, each pub we went in, it happened about 4 times, somebody would say, we would walk and they would say 'No children allowed in here!'. And the last time, the boyfriend 'Oh god not again' and then of course people get embarrassed when they've realised they've just jumped to conclusions and the best one I have ever had, again I was with my brother, we were buying a telly, shopping in the East end when my nephew was little, my nephew was about 3 or something, we went into this shop and Ed was carrying him and the owner came over and he was very clever, because he had only seen me by size, he came over and he had two packs of crayons in his hand to give to the children and then, of course, he realised that I wasn't a child when he got close and he slipped it in his back pocket very neatly and thought that was quite sensible. And another occasion I was with my friend in Pizza hut as it was in the Strand all those years ago, there was three of us and we had one of those experiences where they were saying 'there's no children allowed' and we went into

this pizza hut, the girl, the waitress bought over menus to Ann and Nick who was with us and gave me a colouring book.

S: Oh my god!

J: And we all started laughing actually and Ann said 'oh I will have!' that and then she realised then of course and she got totally embarrassed and ran off and she didn't come back, we had a man after that, and that girl didn't come out until before we left, she stayed in the kitchen for ages. That's a bit crass. She didn't have it about her to say 'Oh I'm sorry, I didn't realise, I just caught sight of your height and didn't realise!' and people get embarrassed about apologising. So yes I do have strange experiences.

S: Yes. So, if it's not too much of an impertinent question, what age were you when you realised perhaps that you are a wee bit different?

J: I don't know to be honest, I do remember before I went to school we used to have somebody come round who was known as the school board man and, I didn't know this at the time because I was 4, 3 or 4, he was trying to get me a place at a special school, he was telling my mother that I should go to a special school and what she told me subsequently, is that she asked the doctor because it hadn't even occurred to her, because I wanted to go to the school that my brothers went to, she asked the doctor at Great Ormond's Street, he said absolutely not, don't allow it because even now in special schools even with the best will in the world they don't provide the best education because it is a very difficult situation for them and he said she has got a good brain, don't let them do that and she didn't, which is terrific. Yeah so and then, I don't know, because I suppose I always kind of knew, I don't think I had an eureka moment. Again I remember something we did at primary school and we had to go to the woods I think and I was given a lift by one of the teachers, one of the teachers drove there and they took me in the car, the others had to walk so I think I knew, but when you're a child, I think your friends kind of take you as you are, when you're young, I don't think children make a big deal when they have grown up with you. When I went to senior school, I do remember one of the girls who lived round the corner, who I was friendly with, who was a little bit older than me and she came over to my Mum on the way home from school and she told her that the girl who lived opposite, who we didn't know that well, she lived just across the road, we used to play with occasionally, she was at the senior school and she going round saying to people ' Oh poor little Joan, they won't allow her to come here, because she is too small'. Mum of course was terribly upset and she went over to speak to the girl's mother and said do you realise that your daughter is behaving like this and the mother wasn't very bright either and she said well to be honest, I've heard people say that, that was clearly where the girl had got it from. And one of the teachers at the primary school heard about it and he came round to apologise to my parents because he was so upset about it. So you know you get adults behaving like that. So yeah but I always found that a group of friends that you find, but I did feel left out as a teenager, I think I did up to a point, I did miss out on certain teenage experiences. And sometimes now, Vanessa and Kim will talk, with your Mum there, she wasn't part of that, she was a bit older and wasn't part of the group until a bit later, but they will talk about parties they went to and I'll say I wasn't there, you know I got a bit left out because I wasn't quite the same as the rest of them and yeah I was aware of that and I kept thinking I will go to university and hopefully it will be different there, there will be lots of people my age and hopefully they will be intelligent enough not to worry about things like that so yes I was aware of it. It did have an impact yeah.

S: Did things like … I imagine things like women's magazines or something where they always have a … 'this is what everyone should look like' J: I know what you mean. Yeah

S: Did that ever make you feel like 'Thank you' moment!

J: Yeah I don't think I was upset by it, I don't think, but yes I was aware that that wasn't me, if that kind of makes sense? I think you get to the stage where you just know that's how the world works, if you know what I mean? And you kind of think, yeah, yeah, yeah, I don't fit into this stereotyping stuff, it's kinda hard to explain but I sort of think it's like that. So you are always aware that you are a bit different. I don't think you could avoid it probably in any society really.

S: No, well one of the things I imagine was the idea of, I always think of statuary in Ancient Rome, they had the very perfect body, I mean all of the statues of the emperors, some of the heads on the statues are interchangeable, they wanted the same body and they just switched the heads over.

J: Oh wow

S: So everything was very sort of standard, the cult of body beautiful was perfect, was very very strong and I imagine that having, especially as they monumental and in public space, I think looking up you would feel 'erm' do you know what I mean?

J: Yes I think you would've feel a bit like a second class citizen really. I think I always felt like I lack confidence because of it, I think that is very true, because as you say it's all around you, that's what you're supposed to be, and although, if I was normal height and everything else, then I don't think I would be so bothered by the so called perfect image in magazines, I would just kind of ignore it, I think, I think but because magazines don't bother me but yes I have always been very aware that I am not a shape or a size or shape that is accepted in some ways, I'm always going to be different.

S: It always seems like, is some ways, on a really pragmatic level, if say you wanted to buy clothes on line, what would that look like on me? I have no idea.

J: Oh nightmare. Everything I buy has to be altered. In my wardrobe I have things that are donkeys years old because even if I don't wear them, but I think yes but if I can't get any clothes at least I can fall back on those. Everything has to be altered, it's such a nuisance and I am not very good at dress making and stuff you know, some people are and that's great, but I'm not, it's not something that has ever come naturally to me so yeah clothes are a problem and yeah sizes are very difficult and one silly thing that is just frustrating is that I take a size 2 in shoes and most adult ranges start at 3 and it's a real pain.

S: Actually a funny story, a friend of mine's sister has got very very small feet, I think she might be a size 2 or something and she is training to be a special constable and they had to specially make a pair of boots for her because they didn't store them at all.

J: Yeah I beat, lucky they did!

S: Yeah they did and at one point she went round someone's who was getting upset, some sort of domestic disturbance with someone who was mentally ill but she managed to diffuse the situation purely with her feet, because she saw her and said 'My god you got small feet' and got completely distracted, it was like a superpower.

J: In the same way that men are often taken more seriously than women, I think it is true that taller people are taken more seriously than shorter people

S: Do you think?

J: I do, when you look at TV and things how many seriously short people are there? I know Tom Cruise is supposed to be short, but I mean he's not massively short, he might be a bit shorter than the leading ladies.

S: He also does stuff to counter that, he does even in his wedding photos with Katie Holmes, they doctored them, because he is a lot shorter than her.

J: Oh wow, I think that is a bit oversensitive to me. I just think in the end, you have to think this is how it is really, it may not be ideal but it is how it is and sometimes think that people need to flaming get used to it. The world is as it is.

S: That's the thing, the reason the individual I am studying is so interesting to me especially because stature … you know that social model of disability, it's the perfect example of that, because really being short doesn't have to impair what you do, it's just the world is tall. It's completely world made problems. Does that make sense?

J: Yeah, I remember when working for the MOD and we were moving to a different building, well I knew I was going to leave before then because it was right in the centre of London and I wasn't going to drive there, but they asked me to go on a little panel of people with disabilities so that they could get things right in this building and the first thing I noticed was in the ladies toilets was that the soap dispensers were so high I couldn't even reach it and I said that, 'why is that so high?' And they said, well that doesn't matter you can use the disabled toilet. I thought, Why should I? Why can't you just make it accessible? And they just couldn't grasp that. There's a disabled one, they were just pushing you into this kind of there's a disabled person over there, they are not one of us.

S: Your being pushed into a category and usually there is only one disabled loo, which is no good and you know sometimes, I don't know, not usually at work but you sometimes want to go to do make up with a friend, I don't know, you know what I mean. Why would you distinguish, isolate someone unnecessarily?

J: Why can't you make things accessible?

S: Yeah. You don't have to isolate someone for that.

J: No, it's like they want to make special arrangements, oh we have taken everything into consideration, we've got disabled toilets, yeah big deal! I think this will make you laugh, I do remember at school, we had quite a nice young maths teacher and we were doing graphs, you know, and it was all about people's heights and weights and shoe size in the class and he said 'Do you mind if we miss you off because you distort all the graphs and averages, you bring all the averages down too much'.

S: Maybe that is something we should talk about!

J: I thought that was quite funny actually. He was very polite about, do you mind if we leave you off because you going to ruin the graphs! I thought that was quite good. Yeah it is the way people see you. So you constantly try to say, I mean you will be aware of a lot of this anyway, but you're constantly trying to say that I can do that as well as anyone else. I can do that, it might be more difficult, but I can do that, I've got my way of doing it, and then of course if you apply for any of the benefits the DLA, you have to say well I can't do anything, I need help to lift my little finger, I can't live without help you know, if you say yeah I can do it, it is hard, but I can do it. They say well you don't need any help then. So you are forced into portraying yourself as this helpless soul which is awful and that's what government does to you, which is what I find really awful. You spend your life saying, I can do this, I am as good as anyone else, I can do what they can do and then you end up having to say, well I need help to get around and your Mum was with me at the interview and it wasn't a bad interview but the woman's conclusions were stupid really. Yeah you are expected all the time, I had to fill out a 40 page form, which your Mum is going to have to do for Laurence probably and its very demeaning, it's awful, it's horrendous and that's what the government is doing to you, but I don't know if the Romans had anything like that. There wasn't any disability benefits.

S: No

J: I have no idea what she would have been doing, do you have any idea of that?

S: All I can sort of say is that a) industry and stuff around that area there was a lot of variability so it wasn't like everybody had to be say on the farm or stuff so there was always the option say if one role wasn't so great for her, there was other options if that makes sense.

J: Well that's something.

S: Because there has been quite a lot of work has been done on disabilities have been in hunter gatherer societies and I think a lot of that is due to we know what they were up to, they had a more restricted activity if that makes sense? The other thing to say, quite a lot of what the lady couldn't do in terms of politics was mainly related to her being a woman. There was quite a lot of restrictions on women. She was already, no matter about any kind of physical impairment. You see in my head, being a woman was a kind of physical impairment to these women because it got in the way of a lot of stuff.

J: Absolutely as you say the Romans were obsessed with the perfect form weren't they and all those orgies!

S: There was nothing stopping, say in Ancient Rome, it might have been a wee bit different in Britain, but in the centre of Rome there was nothing physically, if you were a senator, you could turn up in a sedan chair or however, they wouldn't help you get there, but there was nothing saying that if you had physical impairment that would stop you. The only thing they required you to do was to be able to hear and speak.

J: Yeah that's interesting

S: Yeah they wouldn't help, that was down to you

J: Yeah they wouldn't help you out, but they wouldn't block you particularly.

S: I think quite a lot of that was related because you had to be a certain age before you were allowed to go into certain parts of politics so quite a lot of the senators were older men anyway

J: Ah yes course, that's true

S: So it came more with the territory kind of thing.

J: Yeah that would make sense wouldn't it. Yeah. Yeah that's interesting stuff.

S: I like to think so anyway.

J: Yeah I think it is. Yeah that's good. Is there anything else you wanted to think about?

S: So the other thing I am thinking about with regard to this lady is that actually she is younger than we would expect for someone in Roman Britain to be getting married, actually the youngest bride is 19 and she's around 18. So it's kinda the time perhaps where you would start thinking about it. So do you think that having these impairments stopped or interfered with your dating life?

J: yeah I would say so yeah. I think maybe it's because I am more aware of it I don't know whether it was me or people I suppose I assumed that men wouldn't be very interested in me to be honest, that's my assumption, and it's probably very true but there's always exceptions of course, there are people with disabilities who have successful relationships. But as I say I found it knocked my confidence a lot actually I think so. Yes it has definitely affected me in that way, I wouldn't feel confident.

S: Did you ever, forgive me if I am going over the line, one of things that interested me particularly is that when you described that someone had called you a midget, you said you know that, that is

actually factually inaccurate and so you wanted to distance yourself potentially from other people who would maybe be described as people with dwarfism?

J: No not that, I just thought the man was showing what an idiot he was, he was bandying it around almost as an insult and didn't even know what it was, he had no idea what it was and was using it as a kind of generic insult, that's my point against him really, not that I would worried about being associated with it wouldn't bother me.

S: Have you ever wanted to have a community of other people, find some other friends who had similar experiences?

J: Yeah, I thought it would be interesting, but I never did anything about it, it's a bit it would be nice to have friends who were a bit more like me in that way on the other hand the down side is if you've got a few people with similar problems, then that attracts more attention in a way and that's not really a reason for not doing it, but I often thought I would join the restricted growth association but I never have, it's still something I might do at some point, it would be interesting to know people who are more like me. There aren't too many of us around I don't think quite. They thought, they told me that I had a particular condition Morquio Brailsford and I didn't actually know that because, when I was younger they didn't tell you or your parents anything, when I was a child, they didn't tell my parents this so I only found out from the rheumatologist when I was about 20 and then I looked it up and it was all fine and jolly, but it said most people with this condition, and it wasn't a genetic condition, there was a lot of similarities but people with this condition normally die by the time they're 50 and when I was getting near 50 I was saying to the rheumatologist 'well hang on I would like to know about this because I feel fine' and I was referred to a neurologist chap and actually didn't have that condition, it had been confused with a similar dysplasia type thing but I still remember seeing the doctor who diagnosed me with it and then my own consultant saying that they are usually knock kneed and I wasn't. I remember that when I was a kid. So at that point I had met someone else at an orthopaedic hospital who apparently did have Morquio, or they thought she did and we kept in touch for a little while but she lives a long way away and obviously we didn't have a lot in common overall so that dropped off. Yes so then I thought I had a diagnosis so then I went to the national Morquio, they actually had an event in Birmingham? Where was it, I can't remember, it was quite a way, and Mum came with me on that occasion and that was interesting because that's when I realised that it didn't seem right because nobody seemed quite like me, they were either more disabled or wheelchair users by the time they were in their 20s or something and when I got out of the car a girl in the car next to me, her parents said as soon as she saw you she said she's got to be the fittest one here or something. So just from talking to them I kind of realised that wasn't the correct diagnosis and that's why they kind of looked at it again so I did kind of make an attempt then to meet people in that situation but it turned out that I wasn't quite in that situation. And funnily enough, one of the people there, they were youngish mostly, one of them was a bit kind of annoyed with me, it was a kind of your saying you've got Morquio and you haven't and type stuff. And his parents were with him, he was in his early 20s or so and his mother said to him 'She's been given a diagnosis, you know she's got a diagnosis, it may be incorrect, that's what she's been told.' So yeah basically don't be stupid. It was almost like, you're trying to be one of us kind of thing like an exclusive club

S: Yeah it's not like I am just going to google this, you wouldn't know what to look for!

J: I'm not sure it's madly desirable, you likely to die at 50 and increasing disability all the way, it's not something you're dead keen to get.

S: No, just so I can be part of the gang

J: So I think there's also that reverse thing, a bit like in the deaf community a lot of deaf people want to be different, with their own culture and language and sign language and they want to be

separate and their own children they would like them to be deaf and I wouldn't. If I had a child, I wouldn't have wanted them to have the conditions I've got. I think their life would be easier if they didn't, you know I wouldn't choose that for them, for me deafness is the same I wouldn't choose that if I didn't have to.

S: Yeah that's always been an interesting one because they are starting to get to the situation now where they potentially could be able to help children who are born deaf, with deaf parents, they might be able to give them back their hearing and quite often parents are anti

J: yeah that's right

S: and it's a really interesting ethics kind of thing

J: It's like a reverse kind of discrimination. I'll use that term, I don't know if it's the right one but it's like the reverse thing, you're not one of us, you don't have this disability and I sort of think well you're welcome to it mate, whatever it is, I'd rather not on the whole. It complicates life.

S: It seems completely, I obviously don't understand fully, it seems like why would you deny your child that opportunity to hear. Why would you do that?

J: That's how I see it yeah, that's the way I look at it, I don't understand it. I suppose that factor would play in some areas, but as I say it wouldn't be how I look at it.

S: No. Another potentially quite difficult question, did Alice know that you were different before you were born?

J: No. She noticed things like as a baby I was gaining weight as you do and losing it the next week, things like that. And then of course I was smaller than average and she got a bit concerned about things like that and she went to the GP who said there is something wrong with this baby and I think she referred her to a local children's hospital in the East End and he said there was nothing wrong with this baby. I was probably a toddler by then and Mum was convinced things weren't right so she happened to get talking to someone at a bus stop actually I think the lady might have known a friend of Mum's, and they got chatting and she said she had a nephew or niece had some problem, whatever it was, and no one was able to diagnose it and she got referred to Great Ormond's Street and they diagnosed it and she said to mum was a wonderful place Great Ormond's Street was. So Mum went straight to the GP and said I want a referral to Great Ormond's Street, they said there is nothing wrong, she said if they say there is nothing wrong I'll accept it, but I want a referral they said OK fine, fine and she said you know I've got two sons who are of average height, I am not being an over-fussy mother, I've got two other children, I know there is something not right and yeah so got to Great Ormond's Street, she said that she was incredibly impressed by all the various tests they did and they came out with a diagnosis, scoliosis, definitely there and then basically. So that's where the whole thing started from there for us. Yeah so it was her as a mother being on the ball and insisting, being confident enough to insist on getting a referral she felt that I needed you know as a mother she had other children and she convinced there was something not right. And she was right unfortunately.

S: Alice always comes across as a suitably ballsy woman, a feisty woman. I always thought I wouldn't argue with Alice.

J: Yeah she has never been stroppy but yeah

S: Assertive, she is the epitome of assertive to me she is great.

J: I wouldn't normally say that but with any mother I suppose where her child was concerned, if she thought something was wrong, she would do anything. I mean it's totally nothing to do with this, but years back I was coming home from school on a bicycle and I had to pass some houses and one of them had an Alsatian dog and it was always sleeping on the pavement and I when I

went past, the bike tilted and the bike wheel scraped on the ground and it made a shrieking noise and the dog went mad, it was barking and I was terrified of this dog and every time I went that way in future, it jumped up and started barking at me really aggressively and I was really frightened of it, I wouldn't come back on that side of the road or anything, so Mum decided she would have to speak to the people and she told me afterwards that she was really scared of this thing, it was then in their garden, she went up the garden path and it jumped up and she said she was really frightened of it and she said when got there it was an elderly lady and she to this lady this dog is intimidating my daughter, it's not safe and the lady actually said it's my grandson's dog I can't control it, I will speak to him because I can't control it, and it went, and I think that's a mother for you. She would do anything like that as a mother she would do anything.

S: I just remember, completely separate, but I remember her telling me about a story where I think she was teenager and she was on a date with a GI and she was feeling a wee bit awkward because she was double dating and the other lass wasn't greatly fond of her because I think she was hoping that another friend would get the date that she was on but she was completely like I'm having a really good time so *raspberry*. I was like YES!

J: That's funny, that's good then. That's one side of her yeah. Yes you have to have confidence don't you.

S: Yeah absolutely, absolutely it's something that's stuck in my brain.

J: Yeah I had forgotten all about that, there was a date like that yes.

S: She wouldn't have said it quite like that, she would have said it with much more alacrity, I summarised.

J: She called a spade, a spade as they used to say. I'm not sure you're allowed to now, but they used to say that. Yeah so is any of that any help to you?

S: Yeah that's really helpful and insightful, my last question, I was wondering, once I have written the narrative that I want to do would you be happy to read it?

J: I would love to actually, I would be really interested

S: Brilliant, thank you

J: I am interested in what you're doing, it sounds fascinating to me

S: Brilliant I would like to send it through and get your perspective, I would like to hear if you feel like, that doesn't feel right to me or no, no your off the mark there Steph.

J: That's great Steph I would really like to see it yeah. That would be lovely.

S: Grand yeah I will

J: Brilliant, I do hope it's been of help to you

S: You've been really helpful, thank you

J: That's good, it will be nice to meet up with you sometime when your home

S: Yeah I am hoping to get my PhD submitted next year, that's the plan so it's all bit *gasp*

J: I know you're doing so well with it

S: Thank you

J: Your Mum tells us every now and again and why not I would too, if you were my daughter I would be as well

S: I need to thank you actually I still have, this is really silly, you gave me a book of the greatest women and you said make sure you're the next one and I've still got the post it, I love it, thank you

J: Oh wow, yes I'm so pleased

S: I love it, I love it so much.

J: Well your well on the way! You'll make it. It's been really nice talking to you Steph S: And you, thank you so much

J: Thank you, anything I could do to help you I would S: Thank you

J: OK, Right well good luck with it is all I can say

S: I will email you through what I come up with in the near future and I'll chat to you soon.

J: And maybe when you're with your Mum sometime, and you've got time we'll meet up for a coffee

S: Yeah that would be lovely

J: Yeah well take care

S: And you thank you J: Speak to you soon S: Speak to you soon J: Bye Steph

S: Bye

Appendix E - Osteobiographies

E.1. AA242

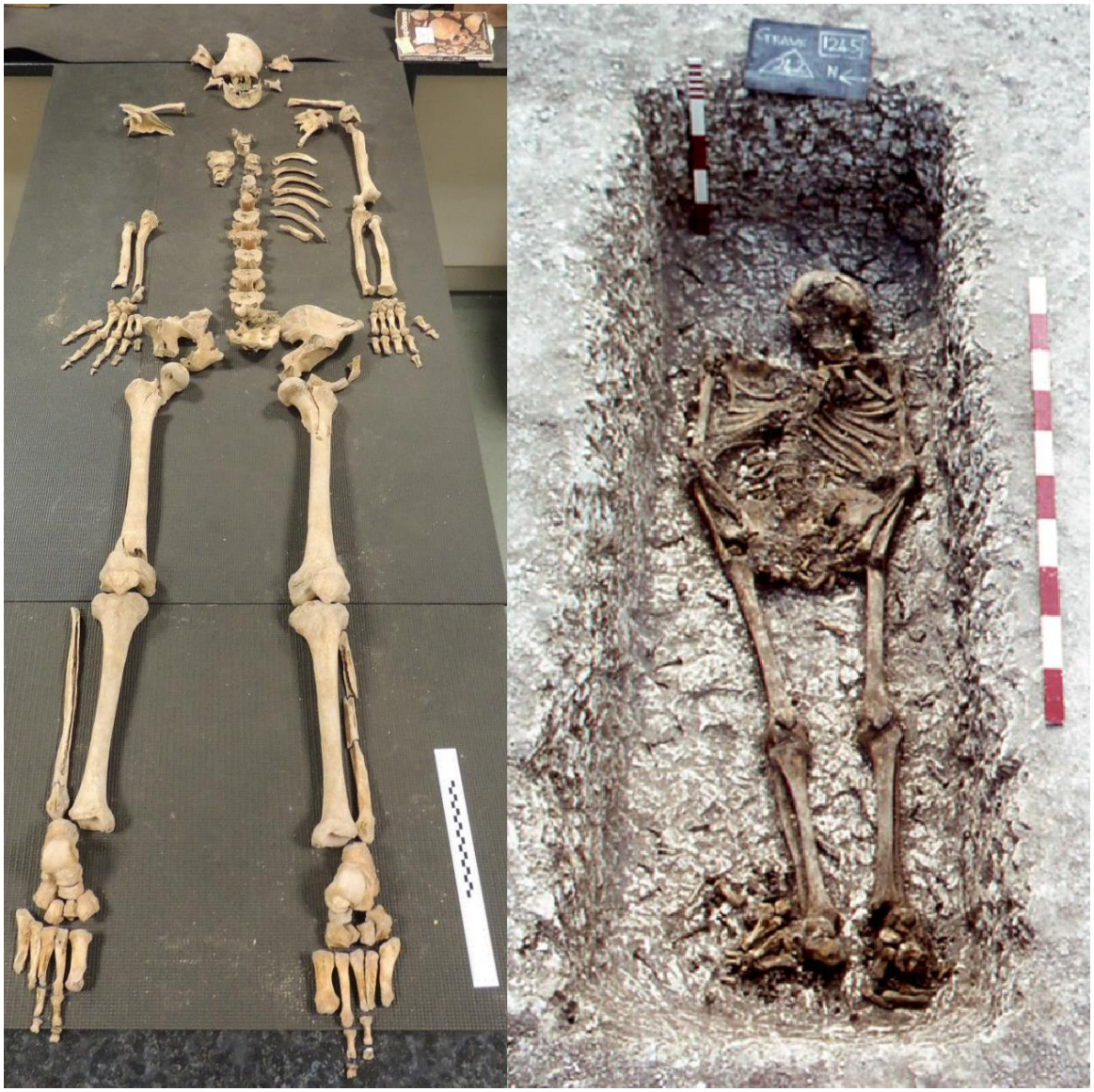
Sex: male **Age**: mature adult (33-45 years) **Stature:** 171cm
Preservation and completeness: c90% complete according to the excavation report (Davies et al. 2002: 148). At study, much of the axial skeleton and the right humerus was missing.

Grave number: 1245
Burial description: primary, singular interment, irregular grave cut, dimensions - 2.10m long, 0.80m wide, 0.45m deep. Wooden coffin. Position - supine, hands together over groin, head at south-east, oriented 125° (Davies et al 2002: 207).

Grave goods: coin at mouth (Constantine I struck AD 320-324 AD 320-340), hobnails worn

Pathologies observed: Osteoarthritic lesions on lumbar vertebrae 3-5, along with Schmorl's nodes on the same vertebral bodies on both superior and inferior surfaces.

Specialised analysis: archaeothanatology



E. 1.1 - AA242. Left laid out to study, Source: author's own image. Right skeleton in situ, Source: Dorset County Museum

E.1.1. Description

AA242 refers to the skeletal remains found in grave 1245 at Alington Avenue. The burial is dated, with a good degree of accuracy, to the 4th century AD, due to a coin found in the grave which was likely to have been deposited 320-340 AD (Davies et al. 2002). The remains have a good level of preservation, however, they have endured a good deal of the post-excavation damage, as evident when comparing the excavation and study photographs (figure E.1.1). Sex estimation, through analysis of the preserved features of the pelvic girdle and skull, suggests that the remains are that of a biological male. Transition ageing analysis estimated the individual to be aged 27-89 years old at time of death. Buckberry and Chamberlain's (2002) ageing of the auricular surface also estimated a large age range of 29-88 years of age. Brothwell's (1981) teeth wear analysis gave an estimate of 35-45 years, placing the individual in the mature adult age group. The individual is estimated to have been approximately 171cm tall (appendix C). Skeleton AA242 exhibits some evidence of vertebral pathology, in the form of severe osteophytic lipping and porosity in lumbar vertebrae (L) 3-5. The same vertebrae also show evidence of Schmorl's nodes in the superior and inferior surfaces.

E.1.2. Differential Diagnosis

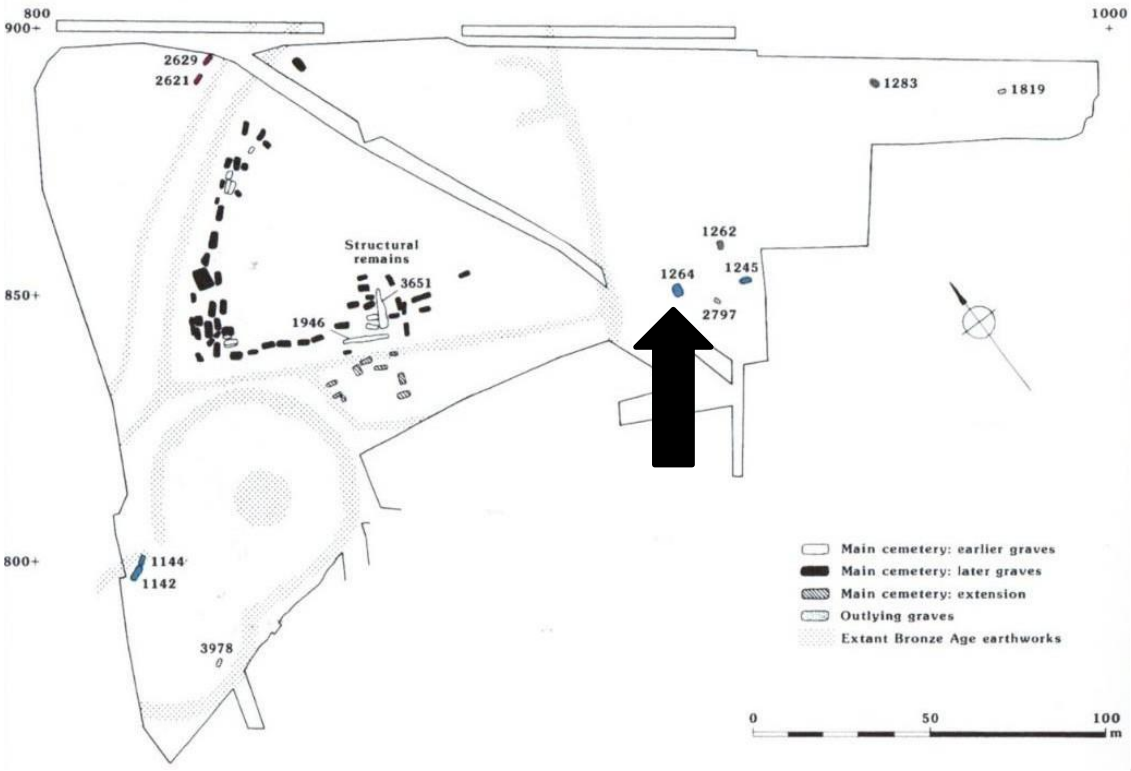
Pain and activity limitation in this instance can be inferred, as the osteoarthritic lesions are evident in conjunction with Schmorl's nodes (see section 5.3.2).The dental pathologies exhibited in AA242 are the loss of two mandibular teeth (the left 3rd molar and right 1st molar), and slight calculus evident throughout the entire present dentition on buccal and lingual sides. These dental pathologies are common within the population and represent a comparatively good level of oral hygiene (see section 6.5), however, the majority of the upper dentition and jaw is missing and so we do not know the full extent of the dental issues experienced.

E.1.3. Implications

It has been stated that the debilitating effects of back pain on past populations has been severely underestimated (Faccia and Williams 2008; Plomp 2017). The clinical study of Schmorl's nodes offer further insight into the experience of having such pathology. For example, 50% of the study participants reported that lifting actions caused back pain (Faccia and Williams 2008: 39). Perhaps, the most insightful piece of information is the kind of remedies patients used to placate their symptoms, such as, pain killers, applying heat, hot baths, lying on their side and applying cold (Faccia and Williams 2008: 39). Such methods are within the scope of possibility for the Roman period population. AA242 was far from alone from having had such palaeopathological lesions. He was one of 18 people in the sample with back problems (see figure 6.6).

Skeleton AA242 was excavated from a single internment grave 1245, which is one of a small cluster of four burials found situated to the south east of the main group of Roman period burials at Alington Avenue. This area is described as a cemetery extension (Davies et al. 2002). The cluster consists of two male skeletons, one infant and an empty grave (see figure E.1.2).

Archaeothanatological analysis confirms the primary nature of the grave through the maintenance of labile joints in the feet. The individual looks to have decomposed in a void, such as a coffin, as the sternal rib ends have fallen laterally. (see E.1.1 right)



E.

1.2 - Alington Avenue map showing the location wear AA242 was found. Source: DNHAS and Wessex Archaeology.

The movement of the ribs laterally would imply that there were no wrappings in the grave. However, the presence of hobnails surrounding the feet, as if worn, contradicts this (Davies et al. 2002). It is reasonable to suggest that the individual wore looser, thinner or more fragile clothing in the burial which decomposed quickly, allowing the free movement of the ribs laterally. This would perhaps point towards this individual wearing something of a different material than others in the burial population with more evident wrappings.

Another distinctive aspect of AA242's burial was the inclusion of a coin. From an archaeologist's point of view, this allows an opportunity for dating the burial. In this instance it is a Constantine I era coin, struck AD 320-324 and like to have been deposited AD 320-340 (Davies et al 2002). The find of a coin in an individual's mouth in a mortuary setting is often ascribed to the ritual of paying Charon or the ferry man for passage across the river Styx (Brown 2008). In the context of grave 1245, therefore, the coin can be seen as a religious or votive object, an adoption of a distinctly Roman custom by the Alington Avenue population at a most intimate moment of life. AA242 is one of four individuals found with a Charon's obol, suggesting that the votive was a minority rite at Alington Avenue.

E.1.4. Discussion

The evident reception of AA242 points towards ambivalence. Mature adulthood is a relatively unusual stage at which to die. He was one of four, in a total sample of 37, in this age category. The mature adult age group (36-45 years old) covers the optimal age for men of 42, according to Roman sources (Harlow and Laurence 2011), meaning he died having just missed, or just achieved this ideal rite of passage. The addition of a Charon's obol in the grave context points towards additional investment in the funerary rite, both financially and preparatorily. The position of the grave in the landscape, slightly apart from the main grave clusters, the provision of a coin and the use of different clothing material suggests a possible othering of the individual, either positively or negatively. The palaeopathology evident in the skeleton suggests that AA242 experienced pain and discomfort, likely later on in life, as a result of back pain, potentially affecting his perception of his body and his position on the dis/ability continuum. These experiences were, however, fairly common at Alington Avenue.

E.2. AA244

Sex: female **Age**: older adult (49-92 years) **Stature:** n/a

Preservation and completeness: c75% complete. Majority of the scapulae, thorax and pelvic girdle were missing at time of study.

Grave: 751.

Burial description: singular interment. Rectangular grave cut, dimensions - 2.6m long, 1.3m wide, 0.86m deep. Wooden coffin. Position - supine, left hand over groin, right arm at side, skull inverted, head at north-east, orientation 45° (Davies et al. 2002: 207).

Grave goods: hobnails, worn.

Pathologies observed: fused cervical vertebrae 2 and 3, severe eburnation and porosity at the base of 1st metacarpal on the left. Extensive dental pathologies were also observed.

Specialised analysis: n/a

E. 2.1 - AA244 laid out to study. Source: author's own source

E.2.1. Description

Skeleton AA244 was found in grave 751 at Alington Avenue. The burial is dated to 3rd – 4th century AD (Davies et al. 2002: 206). The remains have a good level of preservation, although the majority of the thorax area and hands were not present at time of study. Analysis of the sexually dimorphic traits of the pelvic girdle and skull suggests that AA244 was a biological female. Transition ageing analysis estimated the individual to be 49-92 years at death, placing the individual in the older adult group. The stature was not estimated due to the lack of unbroken limb bones. There was also no isotopic data concerning diet available for this individual. Nor was there an excavation photograph available at time of study for archaeothanatological assessment. Skeleton AA244 had a number of pathology evident within the skeleton. The vertebral bodies and neural arches of the 2nd and 3rd cervical vertebrae were fused together. There is evidence of severe eburnation, porosity and severe grooving on the base of the left 1st metacarpal. AA244 exhibited extensive dental pathology, including 13 teeth lost during life, four teeth worn to the root and two interproximal carious lesions.

E.2.2. Differential Diagnosis

The congenital fusion of cervical vertebrae is known as Klippel-Feil syndrome and results in a congenitally shortened neck (Aufderheide and Rodríguez-Martin 1998: 60). Under Klippel and Feil's original 1912 criteria, AA244 exhibits an incidence of type II Klippel-Feil syndrome (Lewis 2019; see figure E.2.2).

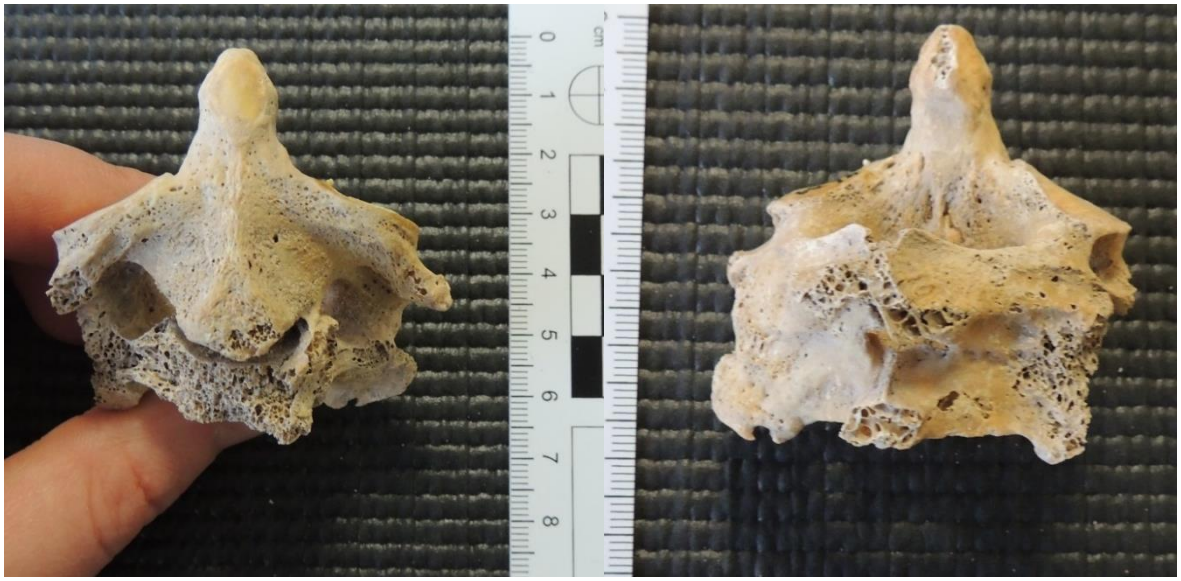
The eburnation, porosity and severe grooving on the left 1st metacarpal provide evidence of severe osteoarthritis. The eburnation and location of osteoarthritic lesions in this case fulfil two of the criteria suggested to allow inference of pain experience (section 5.3.2).

The pathology evident within the dentition of AA244 is extensive. The loss of 13 teeth in life, including all but one of their molar teeth, alongside four additional teeth worn down to the root, means that AA244, by time of death, lacked the 9-10 contacting pairs required for minimum functional dentition (Gotfredsen and Walls 2007).

E.2.3. Implications

Klippel-Feil syndrome has been documented in clinical literature (Smith and Griffin 1992; Lewis 2019; Thomsen et al. 1997). The causes of this pathology are not known but theories range from genetic predisposition and maternal alcoholism (Lewis 2019). Although Klippel-Feil syndrome is congenital, detection and diagnosis tend to occur later in life, in childhood or after a trauma. People with Klippel-Feil syndrome appear to have a short neck and have a decreased mobility ofthe neck, particularly affecting side to side and rotational movements (Lewis 2019). This syndrome can lead to complications after injury in relatively minor traumas, including numbness, paraesthesia, spasticity or paralysis. An individual with this syndrome can experience a number of symptoms including, severe neck pain, weakness, headaches, ataxia, vision and hearing problems and can also be associated with other congenital conditions such as scoliosis (Lewis 2019). All

these conditions have been witnessed in different proportions in samples of clinical patients but, never observed in all cases, meaning there is difficulty in determining how certainly experience can be inferred in this case (Lewis 2019). See section 6.8.1 for more detail.

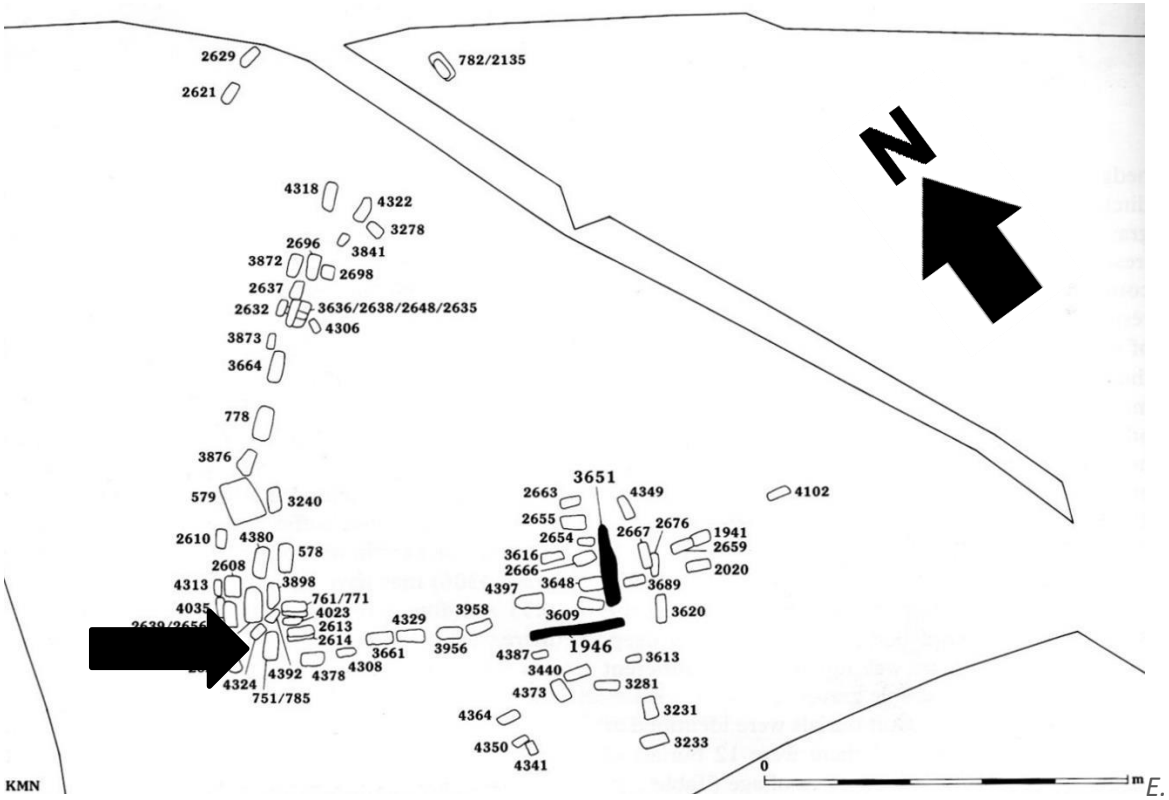


E. 2.2 - AA244 fused cervical vertebrae. Posterior and anterior views. Source: author's own images.

The eburnation, porosity and severe grooving on the 1st metacarpal of the left hand testifies to severe osteoarthritis. Jurmain (1999) claims that osteoarthritic lesions located in the base of the thumb are more likely to lead to experiences of pain. We will never know if the osteoarthritis was more widespread in this individual, due to the lack of preservation within many of the other joints, yet even if we assume this lesion to be purely localised, it could offer insight into difficulties in dexterity and experience of pain that is difficult to ignore.

The dental pathology evident in skeleton AA242 represents the most extensive studied in the Alington Avenue sample (appendix B). The pathology evident within the dentition of AA244 is extensive. In total the individual lost 13 teeth in their lifetime, including all but one of their molar teeth. Four more teeth were worn down to the root. Additionally, there was evidence for at least two interproximal carious lesions as well as slight to medium calculus on lingual and buccal surfaces of the remaining dentition. These extensive dental pathologies point towards poor oral health and a mouth in pain. Dentition performs a key part in normative oral function, including masticatory function and speech. To ensure a mouth can perform these roles, one needs at least 20 teeth or 9-10 contacting pairs (Gotfredsen and Walls 2007). AA244 is well below this minimum number, with even more teeth so severely worn that their use would have been impeded, we can therefore infer that over time AA244 experienced changes in their ability to eat and speak.

Grave 751 is located within the main cluster grouping at the Roman period skeletons at Alington Avenue. Evidence of nails in the grave alludes to the interment of the individual in a wooden coffin. The skeleton was in an extended position with the left hand over the groin and the right arm at side with the skull inverted (Davies et al. 2002: 206). Unfortunately, archaeothanatological analysis was not possible as the excavation photography of grave 751 was unavailable at the time of study, so we are reliant on the description offered by Davies et al. (2002).



E.2.3 - Map of Alington Avenue showing where AA244 was excavated. Source: DNHAS and Wessex Archaeology (2002)

E.2.4. Discussion

In the modern world Klippel-Feil syndrome is a rare condition affecting an estimated 1 in 40,000 to 42,000 newborns worldwide (GHR 2020). AA242 may have had a noticeably shortened neck in life. The lack of preservation of particularly the thorax region, however, means that there is no evidence of associated conditions such as scoliosis, therefore the full effect of this pathology will remain pure conjecture. Having reached the older age bracket, AA244 obtained pathology over the course of their lifetime and likely experienced pain toward the end of their life. Attached to this increase in pathology, AA244 noticed changes in their ability and bodily experience over time, which changed their position on the dis/ability continuum. These changes are gradual. Estimating the timing of the manifestation of symptoms from the Klippel-Feil syndrome is difficult to determine, however, but it may well have affected them as early as childhood. As well as the symptoms detailed above, the syndrome could have exacerbated problems with other traumas (see section 6.8.1). There is no of othering of the deceased, perhaps suggesting that despite the rare nature of Klippel-Feil syndrome, their experiences, manner of death and behaviour were not noticed as extraordinary by the burying population.

E.3. AA268

Sex: male **Age**: mature adult (34-91 years) **Stature**: 171cm

Preservation and completeness: c95% complete

Grave number: 767

Burial description: singular interment, irregular grave cut, dimensions: 2.5m long, 1.02m wide, 0.4m deep. Wooden coffin. Position – supine, left arm at side, right arm over waist, head at south-east, orientation 125° (Davies et al. 2002:206)

Grave goods: hobnails worn. coin Faustina I Struck AD 141-160, deposited AD150-250. domestic fowl. type 2 pottery jar (Davies et al. 2002: 206)

Pathologies observed: evidence of bilateral cribra orbitalia and some dental pathologies.

Specialised analysis: dietary isotopes (Redfern et al. 2010)

E. 3.1 - AA268 laid out for study. Source: author's own image.

E.3.1. Description

AA268 refers to the skeletal remains found in grave 767 at Alington Avenue cemetery site. This burial is dated to the late 2nd century – mid 3rd century AD. This date is estimated with some accuracy due to the inclusion of a coin in the grave. The remains have an excellent level of preservation, although there is a high level of fragmentation, particularly of the cranium. Sex estimation, through analysis of the preserved sexually dimorphic features of the pelvic girdle and the skull, suggests that the remains are that of a biological male. Transition ageing analysis estimated the individual to be 34-91 years. The stature of this individual is estimated at 171cm Dietary data was obtained from this individual in an isotopic study by Redfern et al. (2010). Skeleton AA268 exhibited no evidence of post cranial pathology. There was evidence of bilateral cribra orbitalia. Skeleton AA268 also had some evidence of dental pathology. This includes two incidents of carious lesions, one on the left upper 1st premolar on the mesial surface, the other on the right lower 2nd molar on the mesial surface. Additionally, the individual lost one tooth antemortem which was the left lower 1st molar and, had an abscess on the root of the left upper 1st premolar.

Skeleton AA268 formed part of the sample from the Alington Avenue cemetery population that was isotopically studied by Redfern et al. (2010). Skeleton AA268 shows slight elevation of the nitrogen (δ15N) and carbon (δ13C) levels within their diet, placing them in the 'G2' cluster. This has been interpreted as being the result of a marine protein rich diet (figure 6.5). Unfortunately, the excavation photography of AA268 in situ was not available at the time of study, and additional data concerning the position of the grave in the landscape is restricted to being included in the main cemetery, as the grave number was not included within the plans of the site.

E.3.2. Differential diagnosis

Cribra orbitalia is usually cited as an indication of anaemia (Roberts and Manchester 2010), although this designation has met criticism (Waldron 2009). The cribra orbitalia in AA268 has been graded differently in the two orbits, the right side being type D and the left side type B (Brothwell 1981).

E.3.3. Implications

At nearby Poundbury Camp Roman cemetery site, approximately 31% of the remains there exhibited evidence of anaemic response bony changes, so AA268 could be argued to be in good company. It is interesting to note is that the majority affected by this pathology were juveniles and has been interpreted as a response to infection (Roberts and Manchester 2010).

Cribraorbitalia is a fairly common lesion in osteoarchaeological assemblages, however, is has been noted that anaemia can contribute to fatigue, cognitive deficits and loss of body weight which could affect an individual's sense of wellbeing and thus their abilities (Zakrzewski 2014). The different cribra orbitalia types recognised in the individual could point towards an ongoing illness which the individual continued to fight for a long time in the later stages of their life.

AA268's grave does stand out due to its unusually high number of grave goods. The grave goods

included a coin at the mouth, a pot, worn hobnails and a bird skeleton. It is interesting to note that all the grave goods are set within the line of the coffin except the bird skeleton which appears outside, perhaps part of the grave backfill. The pot is described as BB1 type 2 and situated to the right of the pelvic girdle. The hobnails are worn, suggesting like many of the others the individual being clothed. The coin of Faustina I was found in the mouth of the individual isconfidently interpreted as a Charon's obol and therefore a votive grave good (Brown 2008; Davies et al 2002:131). AA268 is one of four people to be afforded this rite at Alington Avenue.

E.3.4. Discussion

The mature age category is a fairly unusual stage at which to die, AA268 being one of four, in a total of 37 in this age group. The mature adult age group (36-45 years old) covers the optimal age for men of 42, according to Roman sources (Harlow and Laurence 2011), meaning he died having just missed, or just achieved this ideal rite of passage. AA268's grave good provision is unusually rich, pointing towards additional investment on behalf of the burying community. The presence of birds in the burial context is usually interpreted as evidence of feasting (Philpott 1991). The domestic fowl in this case is largely intact and can be also interpreted as an offering (Morris 2011a). The cribra orbitalia is a fairly common pathology, however, it is one more associated with a younger individual. It perhaps alludes to a long period of health stress up to time of death, having implications on their dis/ability continuum at the stage in life when Roman ideals would suggest optimal conditions for male agency.

E.4. AA277

Sex: male **Age category assigned**: prime adult (23-39 years) **Stature**: 168cm

Preservation and completeness: c75% complete according to Waldron (2002: 148). Much of the thorax was missing at time of study.

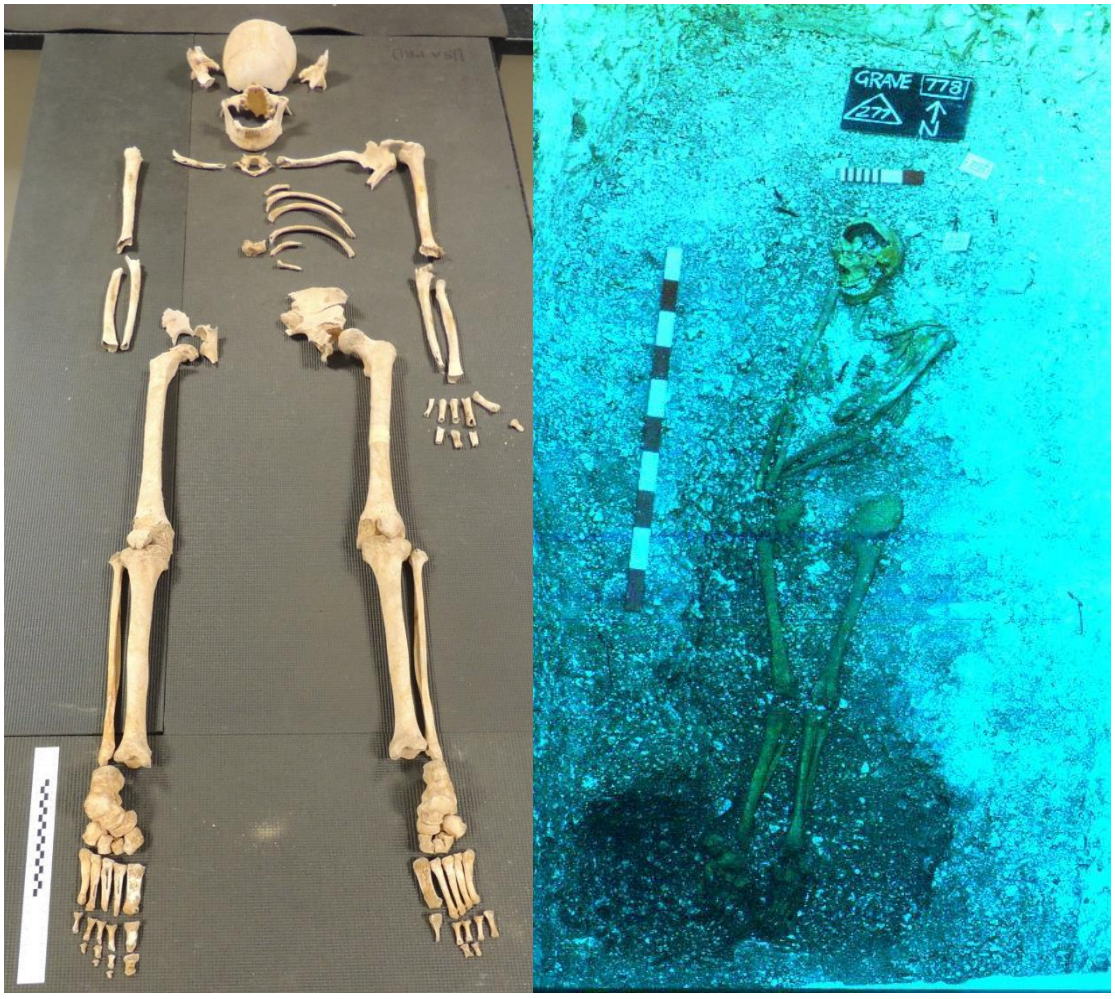
Grave number: 778

Burial description: primary, singular interment, rectangular grave cut, dimensions - 2.8m long, 1.25 m wide, 1.3m deep. Wooden coffin. Position – supine, extended, hands together over right hip, head to north east, orientation 48° (Davies et al. 2002: 206).

Grave goods: hobnails worn

Pathologies observed: small circular lesion on the lambdoid suture close to lambda. Bilaterial tibial posterior surface muscle attachments. Large lesion on the left humeral head in intertubercular sulcus. Left side atlas superior condyle with slight calculus like cover on posterior surface. Dental pathology is observed.

Specialised analysis: archaeothanatology

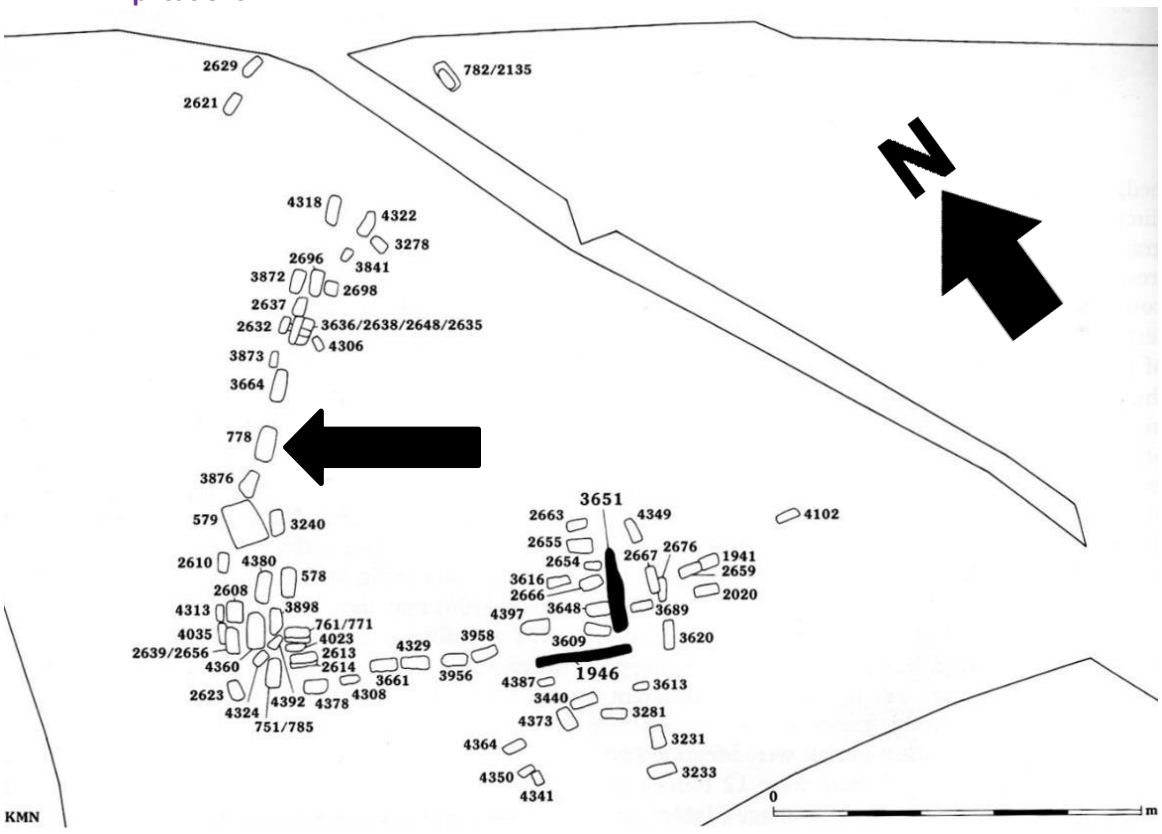


E. 4.1 - AA277. Left - laid out to study Source: author's own image. Right - in situ. Source: Dorset County Museum

E.4.1. Description

Skeleton AA277 refers to the well-preserved remains found in grave 778 at Alington Avenue. Grave 778 is part of the main Roman cemetery complex, situated alongside the extant bronze age earth works. AA277 has been identified to the remains of a biological male due to analysis of the sexually dimorphic traits of the cranium. Transition ageing techniques aged the individual to 23-39 years old at death, placing the individual in the prime adult age category. The stature of the individual was estimated as 168cm. This skeleton was not part of the isotopic study sample. The left humerus head has a lesion in the intertubercular sulcus. There is a circular lesion on the left lambdoid suture very close to the lambda. These pathologies are unlikely to have had an impact noticed by the individual during life. Dental pathology has also been observed. One incidence of a slight, interproximal carious lesion has been found on the right-side maxillary 2nd premolar. The dentition of AA277 has slight to medium calculus throughout the mouth. The dental pathology is relatively minor compared to other people of the same age group at Alington Avenue.

E.4.2. Implications



E. 4.2 - Plan of Alington Avenue with AA277's grave highlighted. Source: DNHAS and Wessex Archaeology 2002

Skeleton AA277 was excavated from a single interment, grave 778. Grave 778 is situated within the main Roman cemetery of Alington Avenue, alongside a pre-existing bronze age earth works. It is suggested that the skeleton was buried in a wooden coffin due to the presence of nails in the grave. The skeleton itself was supine in position, with hands together over the right hip; the head was to the north-east and the body at an orientation of 48° (Davies et al. 2002: 206). Although the excavation photograph was slightly damaged, archaeothanatological analysis of the skeleton's position can offer insight. The primary nature of the interment is confirmed as the labile joints in

the feet and neck have maintained their anatomical position. An '*effet de parois*' is visible particularly down the skeleton's right side, a likely result of a coffin wall. The verticalization of the left clavicle points towards the presence of clothing or a shroud.

E.4.3. Discussion

AA277 is a part of the prime adult age group, which makes up the largest proportion of the Alington Avenue population. There is no evidence of palaeopathology that would impact AA277's dis/ability continuum. His life and death seem to be in the realms of the normative for people at Alington Avenue, which is reflected in their normative burial provision.

E.5. AA278

Sex: female A**ge**: prime adult (25-35) **Stature**: 158cm

Preservation and completeness: c75% complete.

Grave number: 2135

Burial description: singular interment, irregular grave cut, dimensions: 1.70m long, 0.50m wide, 2.3m deep, irregularly shaped. Wooden coffin. Position – supine, extended, right hand over groin, left arm at side, head at north-west; orientation 350° (Davies et al. 2002: 208).

Grave goods, bone pin under mandible.

Pathologies observed: ossified bony spur muscle attachment on left femur, posterior surface lateral edge at the distal end of shaft.

Specialised analysis: n/a

E. 5.1 - AA278 laid out to study. Source: author's own image

E.5.1. Description

AA278 refers to a human skeleton from Alington Avenue found in grave 2135. This skeleton is c75% complete, however, the thorax is very poorly preserved. Sex estimation through available traits in the pelvic girdle and skull identified the individual to be a biological female. After consideration of both the results from transition and dentition ageing, the individual is identified as a prime adult. The individual is estimated to be 158cm tall. There has not been isotopic analysis undertaken and there is no photograph of the skeleton in situ and so archaeothanatological analysis is not possible. There is no evidence of osteoarthritis in any of the joints, however, the thorax is poorly preserved and so this has affected the possibility to identify these lesions. There is a slight ossification of a muscle attachment on the left side, distal, posterior, lateral femur surface. There is an extensive spread of slight to medium coverage calculus throughout the maxilla and mandible dentition on the buccal and lingual surfaces. There is one example of a small carious lesion on the left side, maxillary, second molar.

E.5.2. Differential Diagnosis

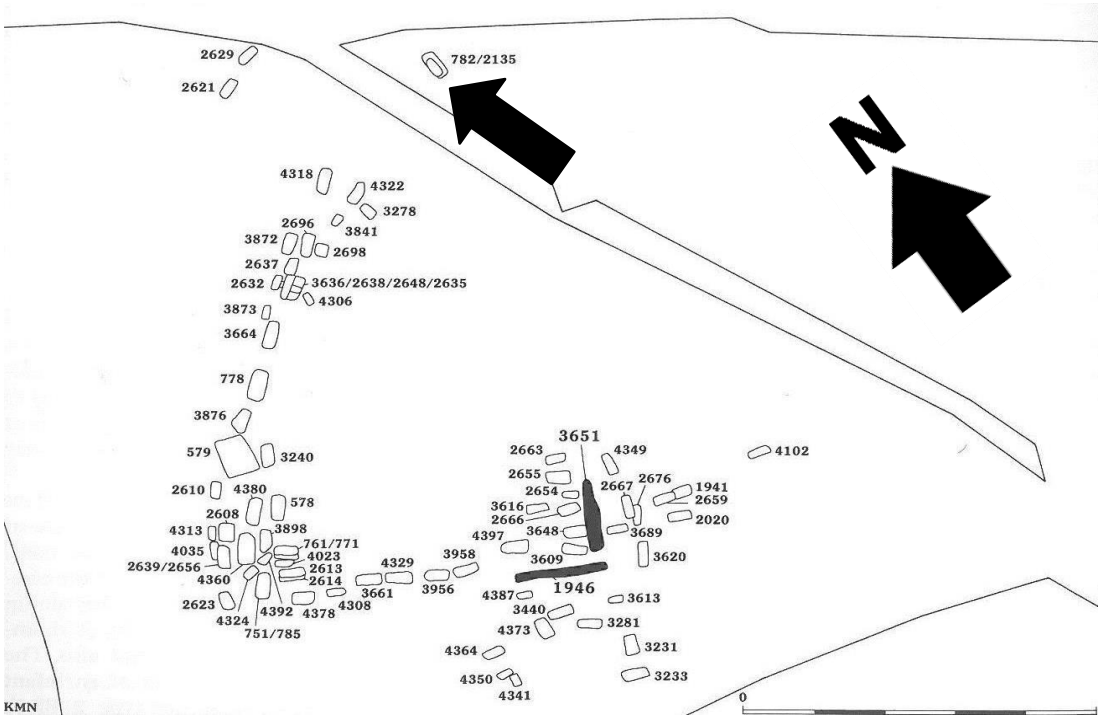
The bony spur is possibly the result of an osteochondroma, one of the most common benign bone tumour types. Solitary osteochondromas are generally asymptomatic (Ortner 2003). The location of the spur is one of the more common locations for this pathology type (Ortner 2003). Compared to the adults at Alington Avenue, AA278 exhibits a good level of dental health.

E.5.3. Implications

The burial of skeleton AA278 is located to the east of the main cluster at Alington Avenue's main later Roman cemetery, in close association to extant Bronze Age earthworks. Grave 2135 was found below grave 782. Unfortunately, the lack of excavation photography at time of study means that archaeothanatological analysis was not possible. Therefore, we rely on the description from the excavation report. The grave good provision includes a wooden coffin and a bone pin found under the mandible. Skeleton AA278 was the only individual to be found with a bone pin. It was a single, complete bone pin with a simple spherical head and a swollen shaft, described as a Colchester Type 3B (Stacey 2002: 168). This is a very common pin type and a number of other similar finds were found in the local area, known to have been in use in the 3rd-4th centuries AD (see Woodward et al. 1993: 184). The was likely buried in a wooden coffin, as evidenced through the presence of nails. The excavation report makes no reference of this individual having shoes within the grave context, which is quite unusual within this cemetery.

E.5.4. Discussion

The location of AA278's grave, slightly apart from the main burial cluster, and the provision of a bone pin as a grave good are features that makes the grave stand out from others at Alington Avenue. The placing of the pin below the mandible may point towards a fastening for a garment worn in burial, however the lack of excavation photography means that it is not possible to confirm the presence of clothing. There is no evidence of palaeopathology that would impact AA278's dis/ability continuum in life.



E. 5.2 - Plan of Alington Avenue main cemetery with AA278's grave location highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002).

E.6. AA320

Sex: male **Age**: prime adult (25-35 years old) **Stature**: 179cm

Preservation and completeness: c75% complete

Grave number: 771

Burial description: singular interment, sub-rectangular grave cut, dimensions: 2.63m long, 1.05m wide, 0.84m deep. Wooden coffin. Position – supine, extended, left hand over right pelvis, right arm at side, head to west; oriented 285° (Davies et al. 2002: 206).

Grave goods: hobnails worn.

Pathologies observed: dental pathology

Specialised analysis: n/a

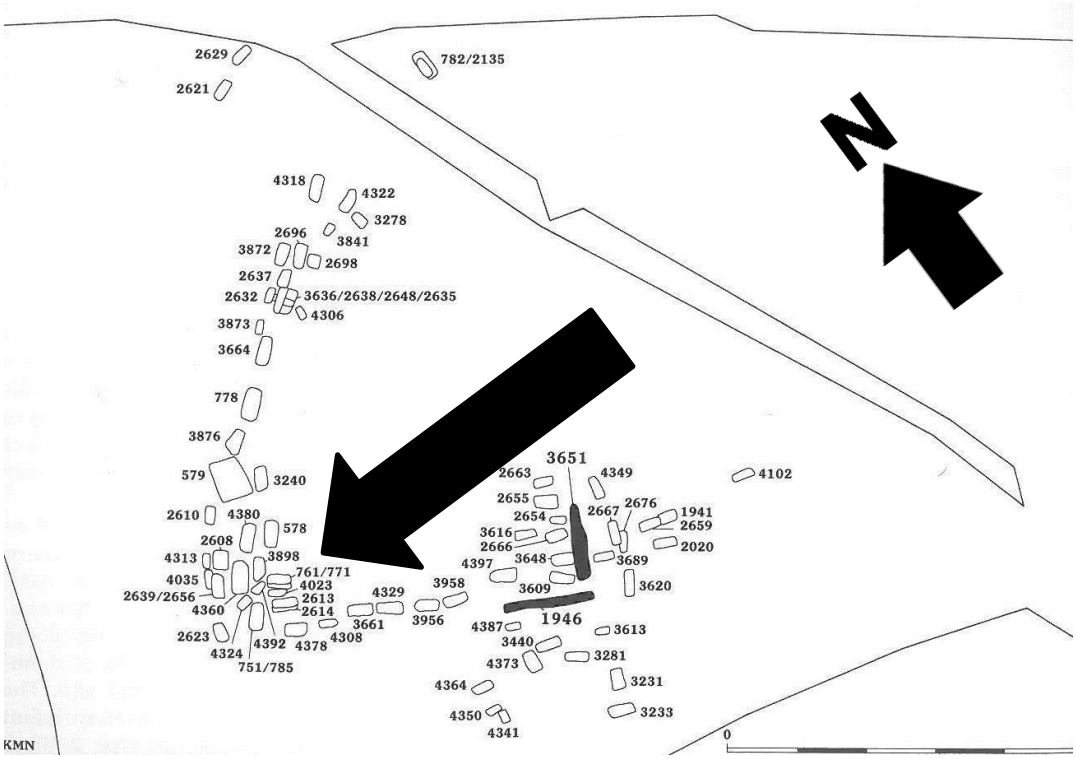
E. 6.1 - AA320 laid out to study. Source: author's own image.

E.6.1. Description

Skeleton AA320 refers to a human skeleton from Alington Avenue found in grave 771. This skeleton is a well-preserved specimen estimated to be 75% intact. The thorax, however, is very poorly preserved. Sex estimation through available traits in the pelvic girdle and skull identified the individual to be a biological male. After consideration of both transition ageing and dentition ageing, the individual is identified as a prime adult. The individual is estimated to be 179cm tall. No post-cranial palaeopathology was observed in skeleton AA320. There is evidence that skeleton AA320 lost two teeth before death, the bilateral maxillary 1st molars. The bilateral maxillary 1st premolars are also worn to the root. There is considerable coverage of calculus throughout the dentition.

E.6.2. Discussion

The lack of excavation photography of AA320 in situ available at time of study means that archaeothanatological analysis was not possible. According to the description made in the excavation report, the mortuary provision for the individual was very standard for the population of Alington Avenue, with worn shoes, coffin and supine burial position. There is no evidence of post-cranial palaeopathology that would alter the dis/ability continuum. This lack of palaeopathology puts the individual in a minority, as 84% of the burial sample did exhibit at least one type of palaeopathology.



E. 6.2 - Plan of Alington Avenue main cemetery with AA320's grave location highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002).

E.7. AA328

Sex: female **Age**: prime adult (27-53) **Stature**: 165cm

Preservation and completeness: c95% complete.

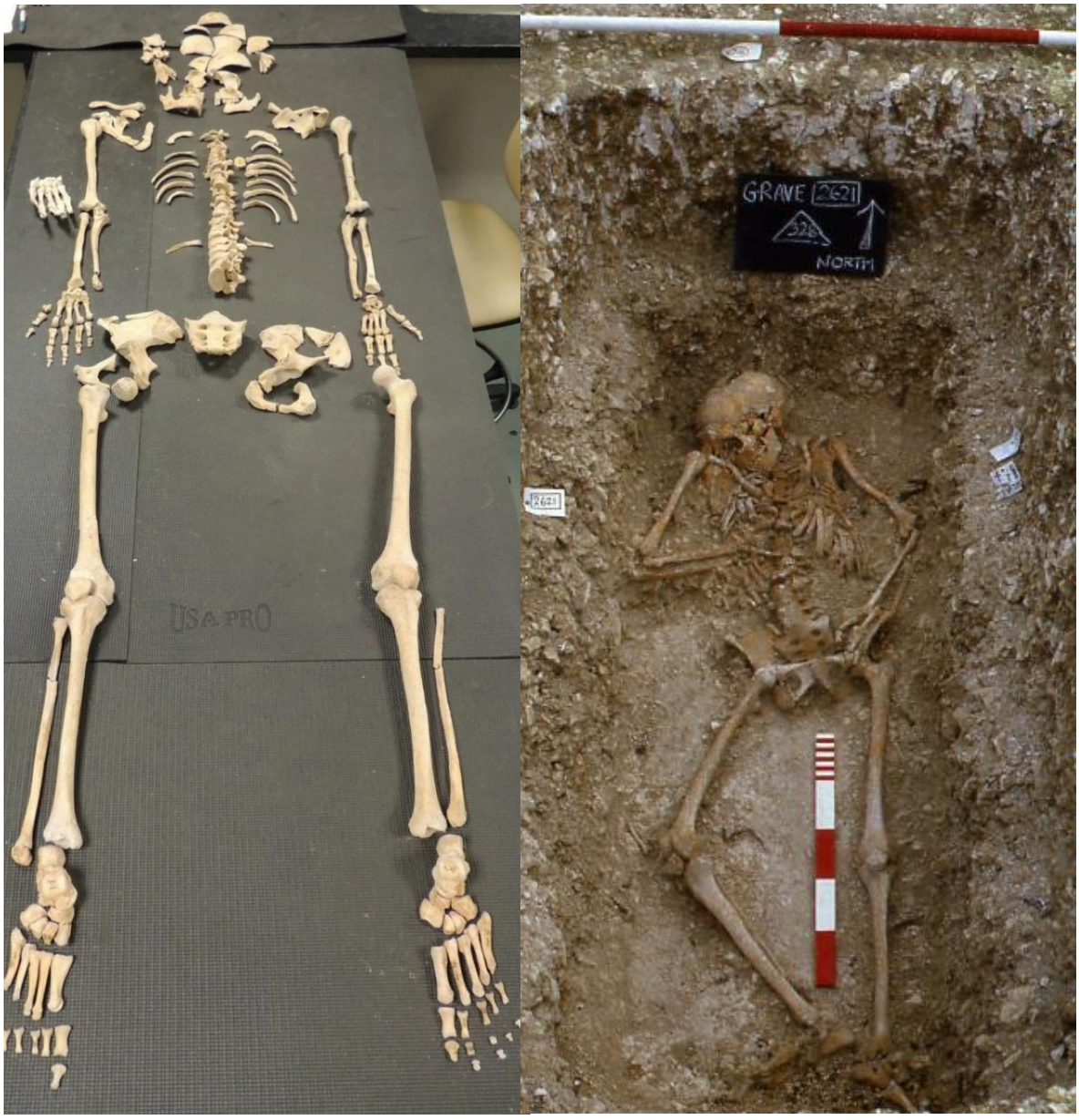
Grave number: 2621

Burial description: singular, primary interment, irregular grave cut, dimensions: 2.20m long, 0.70m wide, 0.7m deep. Wooden coffin. Position – supine, extended, right leg flexed, left hand over pelvis, right hand raised to right ribs, head to north-east; oriented 60° (Davies et al. 2002: 208).

Grave goods: small animal bones, hobnails

Pathologies observed: osteophytic lesions on right hand side femur, bilateral cribra orbitalia.

Specialised analysis: archaeothanatology



E. 7.1 - AA328. Left - laid out to study Source: author's own image, Right – in situ Source: Dorset County Museum.

E.7.1. Description

AA328 refers to a human skeleton from Alington Avenue found in grave 2621. This skeleton is a very well-preserved specimen, estimated to be 95% intact, however, many of the long bones have mid-shaft breaks. Sex estimation through available traits in the pelvic girdle and skull identified the individual to be a biological female. Transition ageing has identified AA328 to have been a prime adult at time of death. The individual is estimated to be 165cm tall. The skeleton exhibits evidence of osteoarthritic lesions in the right-side femoral head and slight bilateral cribra orbitalia. The only dental pathology noted is the fusion of the mandibular, right side 2nd incisor and canine.

E.7.2. Differential Diagnosis

There is evidence of osteoarthritic lesions within the right femoral head, in the form of porosity and eburnation. Jurmain (1999) argues that eburnation should be used as the major criterion for identifying the skeletal presence of severe osteoarthritis disease. Eburnation is the name given to the polished surface evident when cartilage has disintegrated within a joint so much that bone on bone rubbing is taking place (Ortner 2003).

Eburnation, therefore, represents a later stage of the disease (Craps 2015). The hip has been recognised as one of the regions where osteoarthritic lesions are most likely to be clinically significant and associated with pain (Waldron 2012). Therefore, this lesion could represent a likely experience of pain.

The individual shows slight cribra orbitalia in the bilateral orbits which are identified as type C and healing, which could represent an episode of anaemia and health stress (Brothwell 1981). The dental pathology is very limited within the specimen, which is a comparatively excellent level of dental health within the Alington Avenue context, with no incidence of tooth loss, carious lesions or calculus. The only dental pathology noted is the fusion of the mandibular, right side 2nd incisor and canine.

E.7.3. Implications

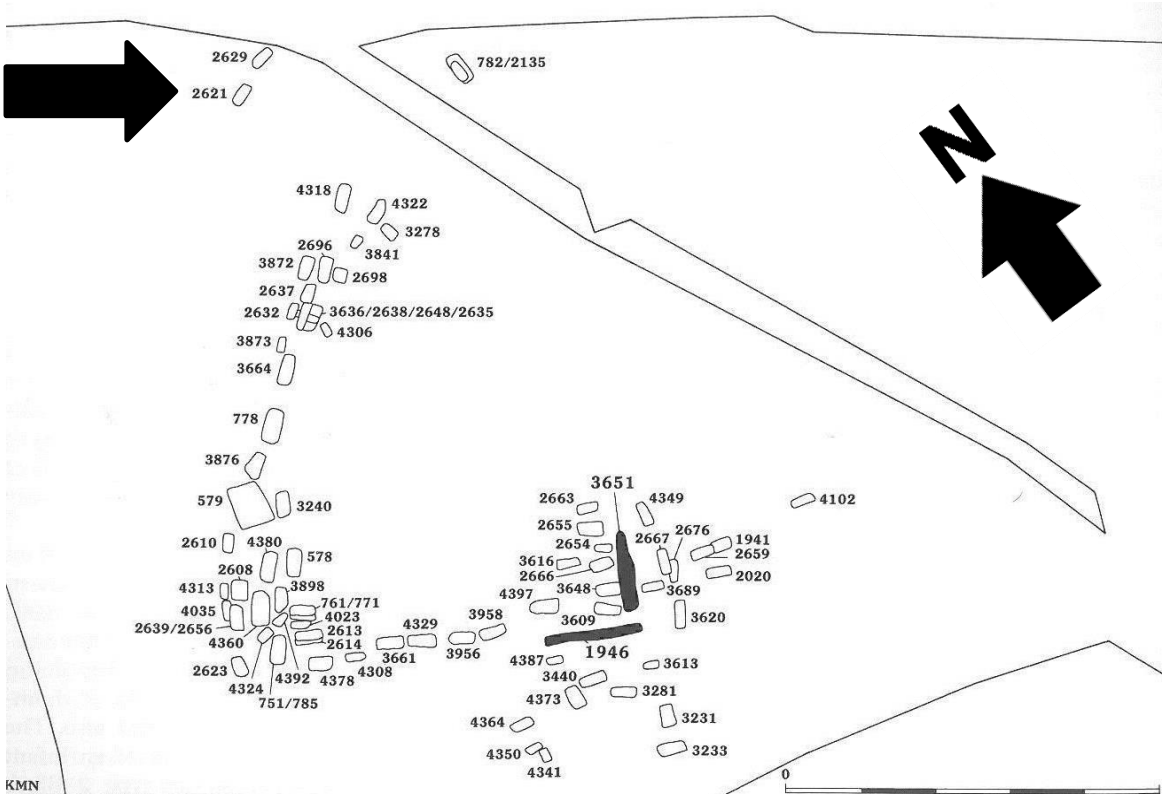
Grave 2621 is located slightly separate from the main burial cluster, in close association to the extant Bronze Age earthworks. The individual was buried in a coffin, whilst wearing shoes. The primary nature of the interment is confirmed by the maintenance of the anatomical position of the labile joints of the hands and feet. The position of skeleton AA328 is quite unusual.

Archaeothanatological analysis of the excavation photograph suggests that AA328 was positioned slightly crouched, the upper body leaning against the coffin wall, when first buried. The clavicles and the lower ribs have verticalized. The body appears to have decomposed in an open void as the right femur has fallen laterally out of the socket. It is interesting to note that this is the leg that had the osteoarthritic lesions. It appears that it is possible that the leg was bent slightly at burial and fallen side wards during decay. The burial had the bare minimum standard of grave goods with a coffin and shoes. There is also evidence of small animal bones, however without further information on which animal this is and its location, it is difficult to establish if this an

intentional grave good or not.

E.7.4. Discussion

AA328 is one of seven prime adults from Alington Avenue to have osteoarthritic lesions evident in their skeletons, which is 50% of the age group. These are the youngest individuals to have osteoarthritic lesions. Eburnation develops later in the disease process and so suggests a long-term condition. The location of the lesion is also more likely to represent a clinically significant pathology. This lesion therefore could represent significant long-term changes in the dis/ability continuum. The burial location and position are slightly different compared to the rest of the Alington Avenue population but, does include several of the standard features of burial such as shoes and a coffin.



E. 7.2 - Plan of Alington Avenue with grave of AA328 highlighted. Source: DNHAS and Wessex Archaeology 2002

E.8. AA338

Sex: male **Age**: much older adult (70-90 years) **Stature:** 164cm

Preservation and completeness: c75% complete.

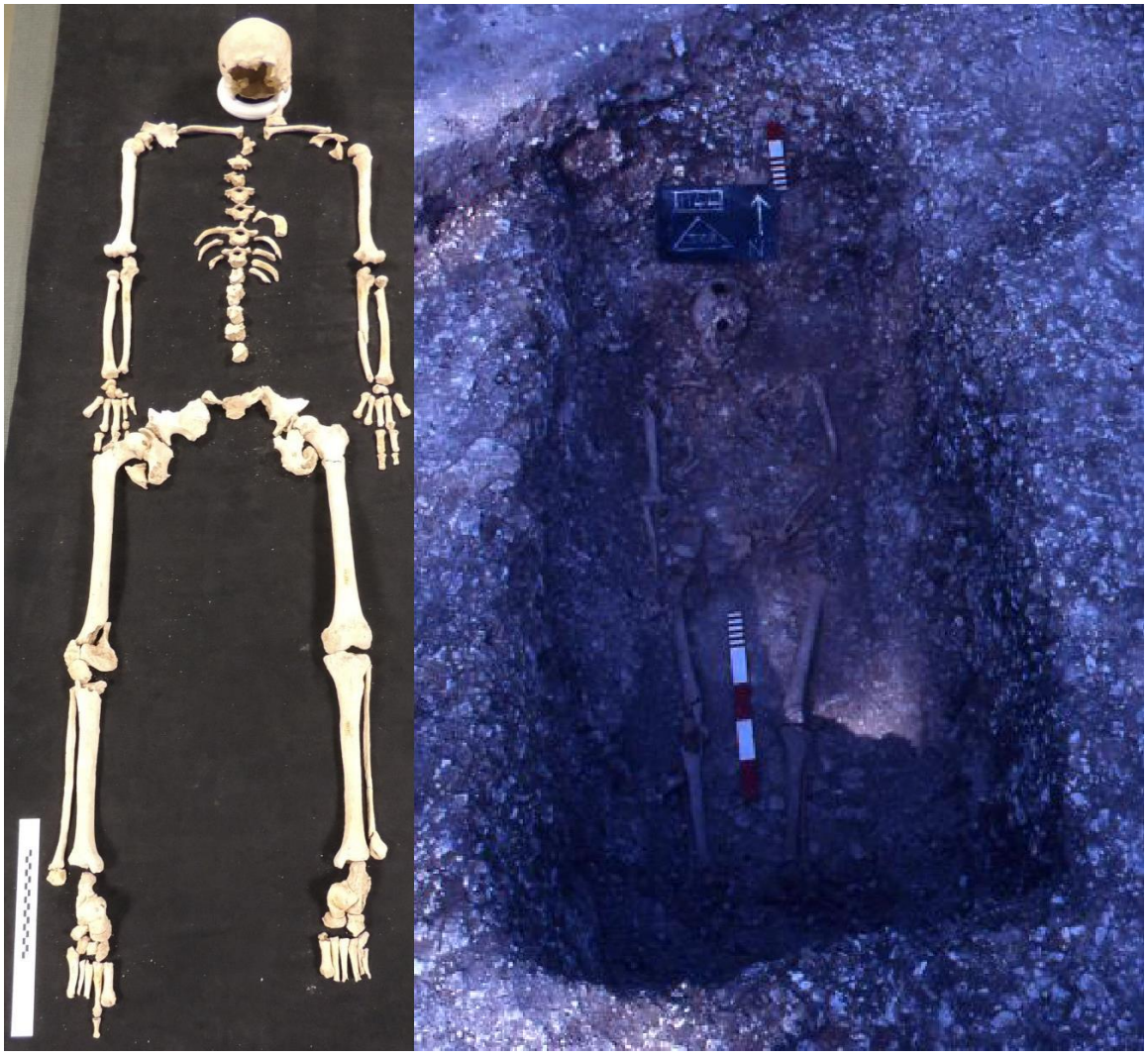
Grave good: grave 1144

Burial description: singular, possibly secondary interment, irregular grave cut, dimensions: 2.18m long, 0.98m wide, 0.77m deep. Wooden coffin. Position – supine, extended, left hand over groin, right arm at side, skull inverted, head at north-east, oriented 45° (Davies et al. 2002: 207).

Grave goods: n/a

Pathologies observed: osteoarthritic lesions in cervical, thoracic vertebrae and right distal femur.

Specialised analysis: archaeothanatology



E. 8.1 - AA338. Left - laid out to study. Source: author's own image. Right - AA338 in situ Source: Dorset County Museum

E.8.1. Description

Skeleton AA338 refers to a human skeleton from Alington Avenue found in grave 1144. This skeleton is a well-preserved specimen estimated to be 75% intact, although the thorax and dentition is poorly represented. Sex estimation through available traits in the pelvic girdle and skull identified the individual to be a biological female. Transition ageing identified the individual to be a much older adult. The individual is estimated to be 164cm tall. The skeleton exhibits

several osteoarthritic lesions in cervical and thoracic vertebrae and the right distal femur. AA338 has not been isotopically analysed.

E.8.2. Differential Diagnosis

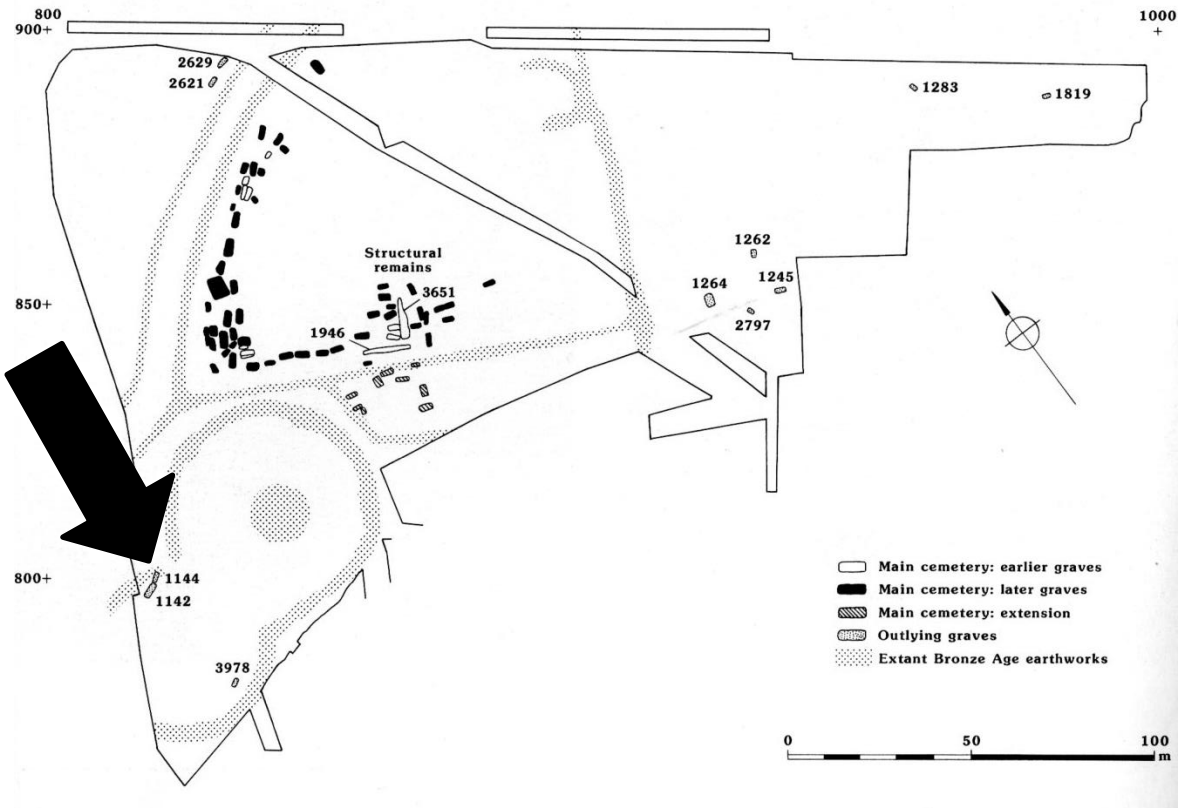
There is evidence of osteoarthritic changes in cervical vertebrae 4 and 5 which have been identified as grade 2 (Brothwell 1982). A single thoracic vertebra (possibly the 6th) showed evidence of diffuse idiopathic skeletal hyperostosis (DISH). DISH is associated with older age groups, diabetes and obesity (Waldron 2009). Severe osteoarthritic changes have also been identified in the right-side distal femur on the medial condyle. This kind of pathology has been associated particularly with functional deficit however, this can vary by sex (see Young and Lemaire 2012). Females are noted to be more likely to have functional deficit associated with osteoarthritis lesions in the knee (Young and Lemaire 2012). This example shows very little extant osteophytes but, grooving and eburnation which is graded CAOS grade 3 (Young and Lemaire 2012). This would identify this individual with severe osteoarthritic disease and more likely to have experienced pain (Jurmain 1999). This is a quite common experience especially within the older age groups.

E.8.3. Implications

Skeleton AA338 is found in grave 1144. The grave is identified as an outlier burial, located to the southwest to the main burial cluster in close association with extant Bronze Age earthworks and grave 1142 (AA806). The skeleton was described as extended, left hand over groin, right arm at side with an inverted skull, head at north-east, oriented 45° (Davies et al. 2002: 207). The only grave provision listed in the excavation report was a wooden coffin (Davies et al. 2002: 207). Archaeothanatology analysis of the excavation photograph perhaps suggests that the burial was secondary, or disturbed, as none of the visible labile joints have maintained anatomical position. The burial meets two of the three features of a standard burial Alington Avenue.

E.8.4. Discussion

The individual lived into older age. Rarely do people reach the age of 60 years without experiencing prolonged pain (Laes 2018). AA338's osteoarthritic lesions are certainly not extraordinary, in fact 8 out of a total 9 skeletons in the much older age category exhibited some evidence of osteoarthritis. The eburnation evident in the knee joint points towards the disease being a later stage, suggesting a long-term condition. AA338's osteobiography invites a similar discussion about the relationship between dis/ability and age, similar to that for AA210. The osteoarthritis seems to have been long term, but likely affecting the individual later in life. The individual surpassed the ideal age of 42 for males and was at the stage of life where infirmity was a part of the expected path. Yet, this expectation can have a detrimental impact on attitudes, self-worth and support gained.



E. 8.2 - Plan of Alington Avenue main cemetery with grave 1144 position highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology 2002.

E.9. AA617

Sex: male **Age**: prime adult (21-43 years **Stature**: 166cm)

Preservation and completeness: c95% complete.

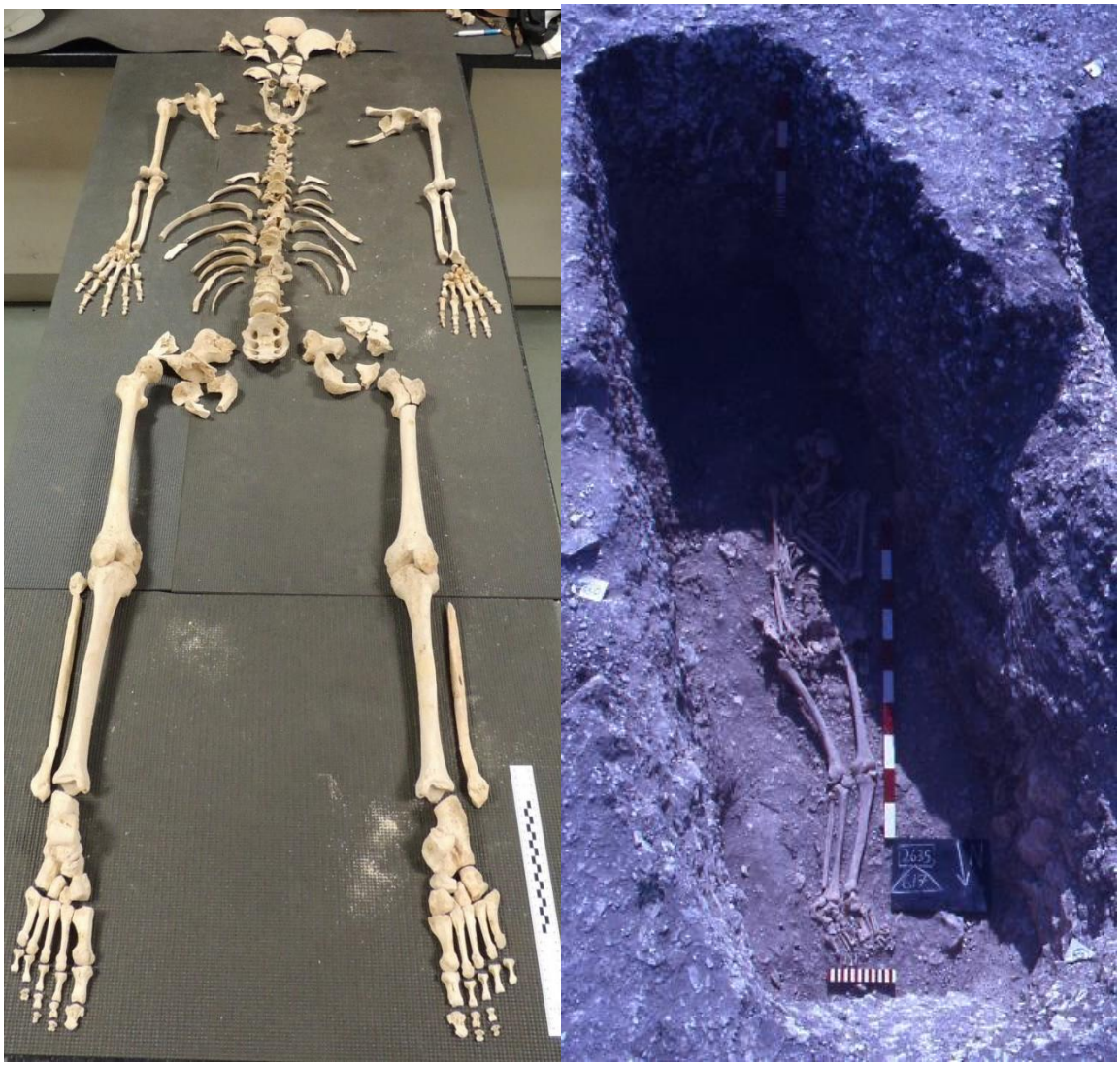
Grave number: 2635

Burial description: singular, primary interment, irregularly grave cut, dimensions: 2,80m long, 1.00m wide, 1.10m deep. Wooden coffin. Position – supine, extended, slightly flexed to left, left hand on right shoulder, right hand over groin, head to south-west, oriented 255° (Davies et al. 2002: 208).

Grave goods: n/a

Pathologies observed: severe dental and vertebral pathologies

Specialised analysis: archaeothanatology, dietary isotopes (Redfern et al. 2010).



E. 9.1 - AA617. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum.

E.9.1. Description

AA617 refers to a human skeleton from Alington Avenue found in grave 2635. This skeleton is estimated to be 95% intact. Sex estimation of the available sexually dimorphic traits of the pelvic girdle and cranium identified the individual to be a biological male. After consideration of the transition ageing traits, the individual is identified as a prime adult. This individual is estimated to

be 166cm tall. The skeleton exhibits dental pathologies and osteoarthritic lesions. Skeleton AA617 formed part of a larger isotopic study looking for changing dietary patterns over an extended period in Dorset (Redfern et al. 2010). AA617's isotopic signature formed part of the G1 cluster, the group whose diet appears to have less of a marine protein component (figure 6.5).

E.9.2. Differential Diagnosis

Osteoarthritic lipping has been identified throughout the cervical, thoracic and lumbar vertebrae. Alongside lipping, porosity is also evident in cervical vertebrae 2-6 and on all lumbar vertebrae. Schmorl's nodes are evident on all the anterior and inferior vertebral bodies of the lumbar vertebrae. Osteoarthritic lesions, in the form of eburnation and porosity were present in the articulation between the left side humerus and radius. The eburnation present in the elbow indicates long-term and severe osteoarthritis, eburnation being the result of direct bone on bone contact in the joint after cartilage has deteriorated (Craps 2015; Jurmain 1999).

The discussion in section 3.5.5 summarises the difficulty related to inferring functional limitation and pain experience through the presence of osteoarthritic lesions. In this case, however, it is possible to be more confident of an assertion of pain due to the presence of Schmorl's nodes in conjunction with osteoarthritic lesions in the lumbar vertebrae, which has been found to be a contributing factor to the experience of pain in clinical populations (Faccia and Williams 2008).

AA617 had lost at least nine teeth antemortem (out of 24 visible sockets). On the remaining dentition all teeth show severe levels of attrition with pulp showing. All teeth (apart from the 3rd molars) have extensive calculus on all surfaces. There is also evidence of a carious lesion on the maxillary right canine. The minimum functional dentition is 20 teeth (9-10 contacting pairs) (Gotfredsen and Walls 2007), which AA617 seems to have lacked, especially as the remaining teeth were also so worn.

E.9.3. Implications

AA617 was by no means unusual having such palaeopathology, 50% of prime adults from the Alington Avenue sample having some evidence of osteoarthritis (figure 6.8). It is reasonable to tentatively infer that AA617 experienced pain in relation to their dental and back pathologies. For example, 92% of participants in Faccia and Williams study (2008) claimed that the Schmorl's nodes limited their activity. It is also interesting to note that the study participants also described the action they took in response to their Schmorl's nodes, which included taking prescription pain killers and applying heat (Faccia and Williams 2008: 39). Such treatments were well within the Roman medical repertoire and so could have been actions the individual also could have taken.

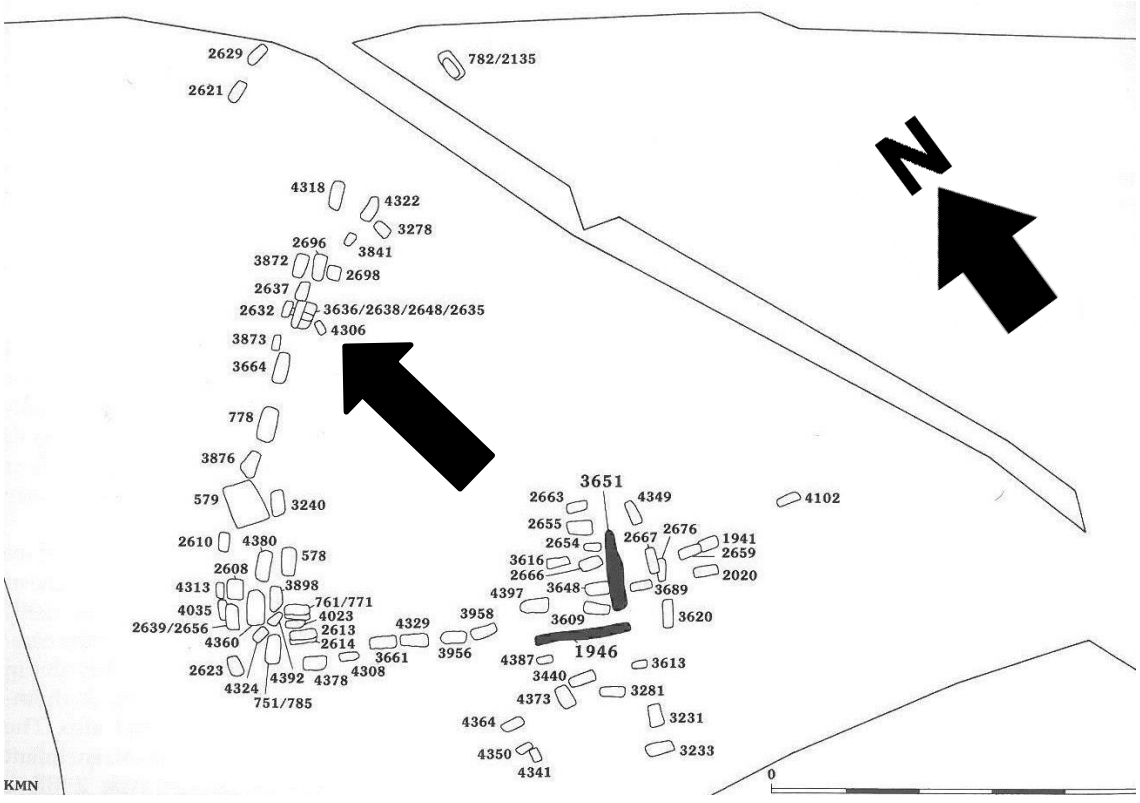
Dental health at Alington Avenue is often poor, however the dental pathology exhibited in skeleton AA617 is particularly severe, having lost well above the average number of teeth antemortem for prime adults (figure 6.9). Tooth pain is likely to have been a feature of this man's life. Dentition forms a key part in normative oral function, including masticatory function and speech. AA617 seems to have lost or worn sufficient number of teeth to have fewer than the minimum functional dentition, potentially affecting their ability to eat and speak. Celsus claimed

that ‘pain in the teeth … can be counted among the greatest torments’ and thus prescribed the most powerful drug for the relief of tooth ache (Jackson 1988: 121). One of these painkillers, henbane, has been found at Silchester and Carmarthen, which says that its availability in the UK is possible (Jackson 1988).

The burial of skeleton AA617 is located in the central cluster of the main cemetery of the later Roman period, in close association with grave 3636, 2638 and 2648. The only provision noted for this burial was a coffin. The primary nature of the interment is confirmed by the maintenance of labile joints in anatomical position, as evident in the feet. The use of a shroud or wrappings in the burial is particularly indicated by the verticalization of the clavicles. The individual seemed to lack shoes which is one of the more common grave provisions at Alington Avenue. Therefore, confirming whether the individual was shrouded or clothed is difficult to determine.

E.9.4. Discussion

The dental health and osteoarthritic lesions in skeleton AA617 indicate that even by prime adulthood, the individual had experienced changes in their body and its abilities, affecting their position on the dis/ability continuum. The severe dentition loss and attrition points to potential changes in their abilities to speak and eat. The osteobiography of AA617 is unexceptional when contextualised within the Alington Avenue sample, all the palaeopathological experiences were fairly common. Although, like in the osteobiography of AA210, it is worth remembering that difficulty related to dis/ability can be the result of experiences being perceived as normative and therefore not supported.



E. 9.2 - Plan of Alington Avenue main cemetery with AA617's grave position highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology 2002.

E.10. AA710

Sex: female **Age**: older adult (46-87 years) **Stature**: 160cm

Preservation and completeness: c95% complete is reported in the excavation report, but most of the thorax was missing at time of study (Davies et al. 2002: 148).

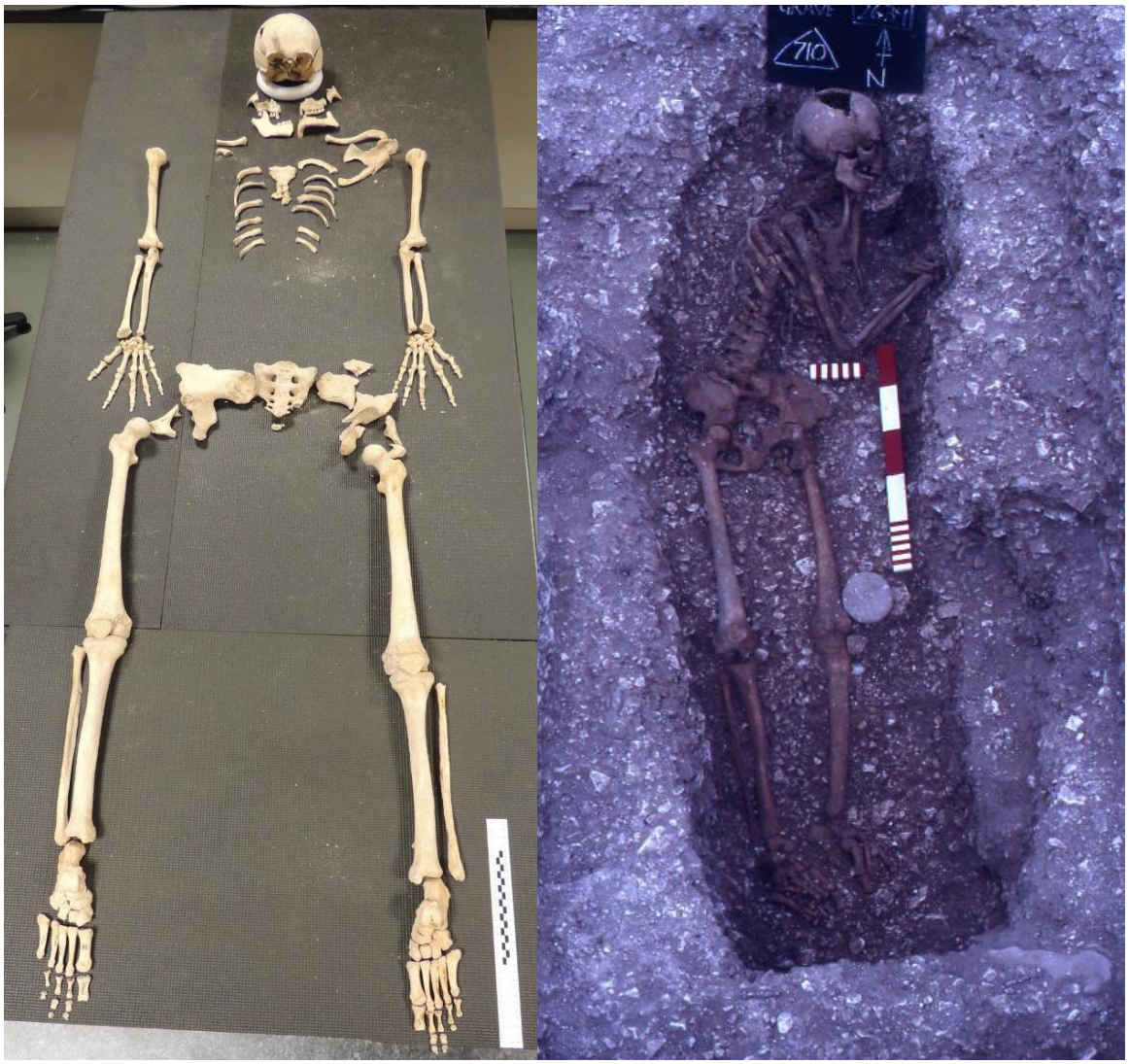
Grave number: 2639.

Burial description: singular, primary interment, sub-rectangular grave cut, dimensions: 2.00m long, 0.80m wide, 0.60m deep. Wooden coffin. Skeleton is extended, torso twisted to the left, left arm at side, right arm flexed in front of chest, head at north-east; orientation 30° (Davies et al. 2002: 209).

Grave goods: n/a

Pathologies observed: fusion of the manubrium to the sternum body, periosteal new bone present on bilateral tibiae.

Specialised analysis: dietary isotopes (Redfern et al. 2010), archaeothanatology



E. 10.1 - AA710. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum.

E.10.1. Description

AA710 refers to a human skeleton from Alington Avenue found in grave 2639. This skeleton is a well-preserved specimen estimated to be 95% intact in the excavation report (Davies et al. 2002), however, at study, much of the thorax was found to be missing. Sex estimation through available traits in the pelvic girdle and cranium identified the individual to be a biological female. Transition ageing has indicated the individual to be an older adult. This individual is estimated to be 160cm tall. Palaeopathology in the specimen includes, fusion of the manubrium to the sternum body, periosteal new bone growth in the bilateral tibiae and the antemortem loss of the first right side maxillary molar. Skeleton AA710 formed part of a larger isotopic study looking for changing dietary patterns over an extended period in Dorset (Redfern et al. 2010). AA710 shows slight elevation of the nitrogen (δ15N) and carbon (δ13C) levels within their diet, placing them in the 'G2' cluster. This has been interpreted as being the result of a marine protein rich diet (figure 6.5).

E.10.2. Differential Diagnosis

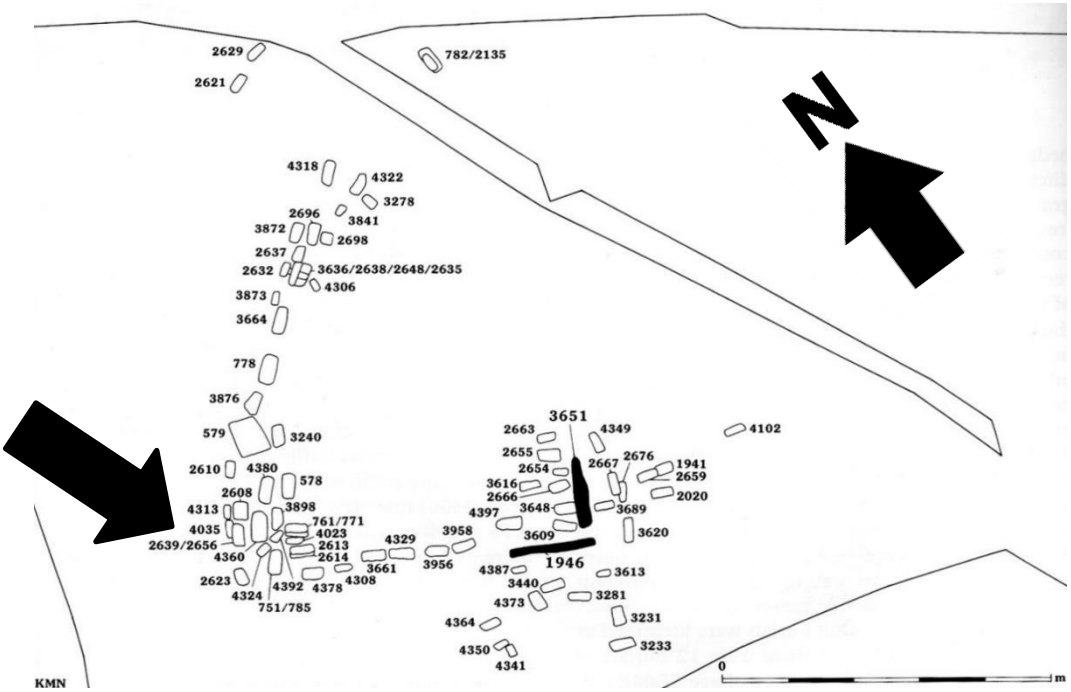
Fusion of the manubrium is asymptomatic for the individual, although it has been explored as a possible age indicator. In the case of AA710, it seems to corroborate the transition age of over 45 years old (Jaiswal 2018). The skeleton exhibits extensive periosteal new bone growth on the anterior surface of the bilateral tibiae. Periostitis is the term that describes the reaction to insults to the periosteum and the resulting new bone formation (Roberts 2019). Periosteal new bone growth can cause swelling in the limbs (Rana et al. 2009). In AA710, the periosteal new bone growth takes the form of lamellar bone, which is likely the result of long-standing periosteal bone deposition which has been completely incorporated into the bone cortex (Roberts 2019). This is a relatively common pathology in osteology, a well-known side effect of infectious disease or repeated minor trauma, especially the latter when exhibited on the medial and distal tibia, as in this case (Waldron 2009). In the majority of cases the aetiology is impossible to determine (Roberts 2019; Waldron 2009) and this appears to be the case in of AA710 as there is no additional indicators that could support this process.

E.10.3. Implications

The inability to confirm the cause of the periosteal new bone on the tibiae means that extensive exploration of the implications of this pathology is not possible. All that can be implied is that at some point during life, AA710 experienced an insult, such as a trauma or infection, that caused the periosteum to react. This insult was likely to have happened a good deal of time before death, to allow the periosteal new changes to be incorporated in the form of lamellar bone.

The burial of skeleton AA710 is located in the main cluster of the cemetery at Alington Avenue. The provision of the burial is reported to have been limited to a coffin. The primary nature of the interment is confirmed by the maintenance of anatomical position in the labile joints of the cervical vertebrae, feet and right hand. The position of the skeleton within the burial is unusual, with the upper body twisted to the left. The burial of the individual in a coffin is confirmed by the right femur head having fallen laterally out of anatomical position. The use of a shroud or

clothing, however, cannot be confirmed in this case.



E. 10.2 - Plan of Alington Avenue main cemetery with AA710's grave position highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology 2002

E.10.4. Discussion

At first glance, the palaeopathology exhibited by AA710 would seem to present an anomaly. AA710 is the only individual in their age group to not have osteoarthritic lesions evident and, is the oldest individual in the sample to show periosteal new bone growth (figure 6.8). Yet, the lack of evidence of osteoarthritis could be fairly argued to be the result of poor preservation particularly in the thorax. Additionally, the periosteal new bone growth indicates a reaction which occurred a reasonable time before death, allowing the incorporation of the bone growth as lamellar bone. The periosteal new bone growth could tentatively be described as a signal of a change in dis/ability continuum at some stage during the life of AA710, although the cause, length of time and exact nature of this is indeterminable. It is interesting to note that the grave provision of this individual seems fairly basic, for example, there is no evidence of shoes in this burial, making her part of a minority of the sample (41%) to lack such a provision. This sparing grave provision seems at odds with the evidence of the isotopes which seems to show a privileged access to a more diverse diet.

E.11. AA770

Sex: female **Age**: much older adult (72-90 years) **Stature**: 155cm

Preservation and completeness: c90% complete.

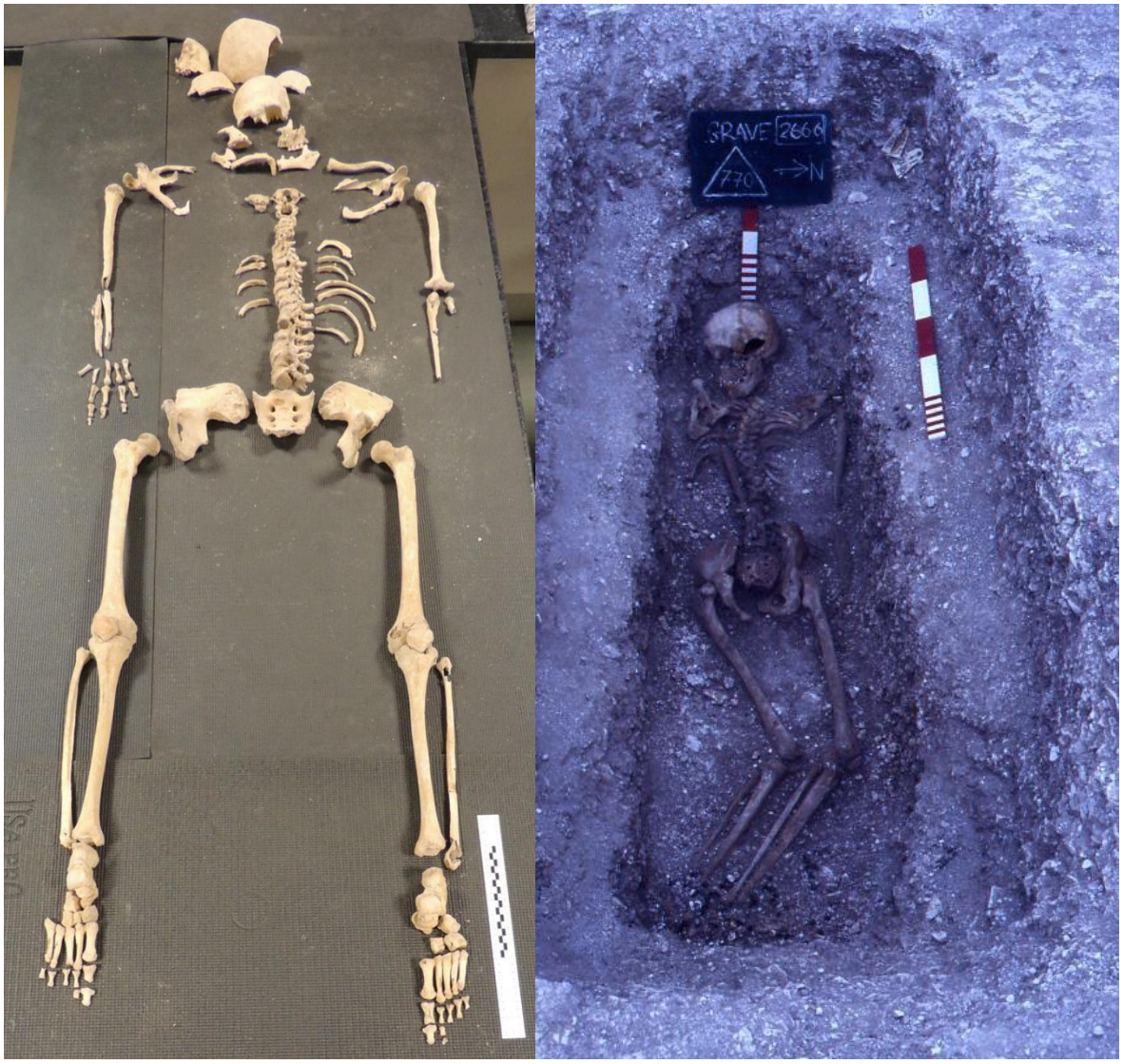
Grave number: 2666

Burial and grave type: singular, secondary interment, sub-rectangular grave cut, dimensions: 2.00m long, 0.90m wide, 0.20m deep. Wooden coffin. Position – prone and flexed, legs to left, right arm over waist, left arm at side, head at north-west; oriented 290° (Davies et al. 2002: 209).

Grave goods: hobnails worn.

Pathologies observed: severe osteoarthritic and dental pathologies

Specialised analysis: archaeothanatology



E. 11.1 - AA770. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.11.1. Description

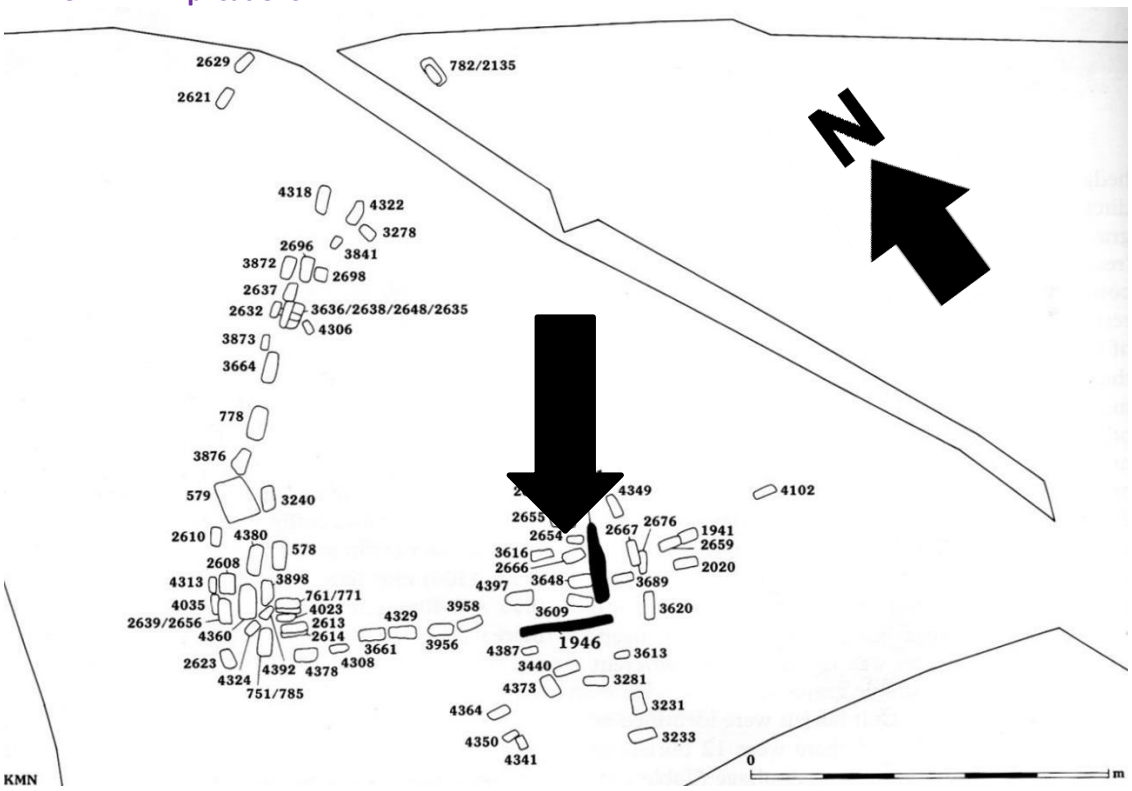
Skeleton AA770 refers to a human skeleton from Alington Avenue found in grave 2666. The skeleton is estimated to be the 90% complete remains of a much older adult biological female. This individual is estimated to be 155cm tall. Each of the four sections of the vertebral column shows at least some evidence of osteoarthritis at varying degrees. Cervical 5-6 and thoracic 1-2

show slight osteoarthritic lipping (grade I). Alongside this, cervical vertebrae 6-7 show signs of degenerative disc disease. Lumbar vertebrae 3-5 show severe osteoarthritis grade III and the sacrum exhibits grade II osteoarthritic lipping. Skeleton AA770 did not show any evidence of antemortem tooth loss, however, three carious lesions were present.

E.11.2. Differential Diagnosis

As we have seen in section 3.5.5, the consequences of osteoarthritic lesions can be profound or asymptomatic and, there seems to be little to no correlation between size and extent of pathological lesion and the experience or activity limitation resulting (Jurmain 1999; Weiss 2015). Despite this, certain situations increase the chances of painful and debilitating experiences, such as osteoarthritic lesions found in certain locations in the body or in concurrence with Schmorl's nodes (Faccia and Williams 2008; Waldron 2012). None of these situations are evident in the case of AA770. Therefore, a discussion of the potential affects these palaeopathology had on the individual's dis/ability continuum is not applicable in this case.

E.11.3. Implications



11.2 Plan of Alington Avenue main cemetery with AA770's grave position highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology 2002

Compared to the majority of the much older age group, skeleton AA770 demonstrated good dental health, having lost no teeth antemortem (figure 6.9).

The burial of skeleton AA770 is located in the main cemetery cluster, in close association with the ditch structure named 3651. AA770's grave is described as one of the two prone burials found at the Alington Avenue cemetery. These two burials are found in relatively close proximity to one another and the grave of the individual with dwarfism, all in the same 'arm' of the cemetery. Skeleton AA770, along with the individual with dwarfism were associated with the ditch structure

at 3651.

The burial posture of skeleton AA770 is unusual, particularly within the context of Alington Avenue. Archaeothanatological analysis strongly suggests that this burial was a secondary interment, as in the initial stages of decomposition occurred in another context. This is inferred through the lack of labile joints in anatomical position. Additionally, the skull is placed on the body backwards. This could be the result of a decapitation, however, there is no evidence of palaeopathological lesions to indicate this and the cranium have been placed backwards post-mortem. AA770's burial provision does have a number of the common grave features seen at Alington Avenue, such as footwear and coffin provision. However, a secondary burial would present a minority rite for Alington Avenue, along with the prone posture, presenting a deliberate choice to treat this person differently post-mortem.

E.11.4. Discussion

As seen in the osteobiography of AA852 (section 7.2), irregular burials have often been associated to an othering of the interred individual and necrophobia. In the case of AA770, however, there is no indication why this individual would merit a different burial treatment. Additionally, there is no palaeopathological evidence to indicate variation in the dis/ability continuum. It is worth remembering, however, that AA770 did live into older age and rarely do people reach such an age without experiencing prolonged pain or changes in their body's ability (Laes 2018). Theya Molleson (1999) explored a case of irregular burial provisioned for an individual with an invisible impairment (deafness). She argued that it was the individual's differential behaviour that merited the differential treatment. Although this can only remain a speculation, AA770's older age makes dementia a possible condition that would alter behaviour and leave no trace in the skeleton.

E.12. AA789

Sex: male **Age**: prime adult (22-36 years) **Stature**:164cm **Preservation and completeness**: c95% complete.

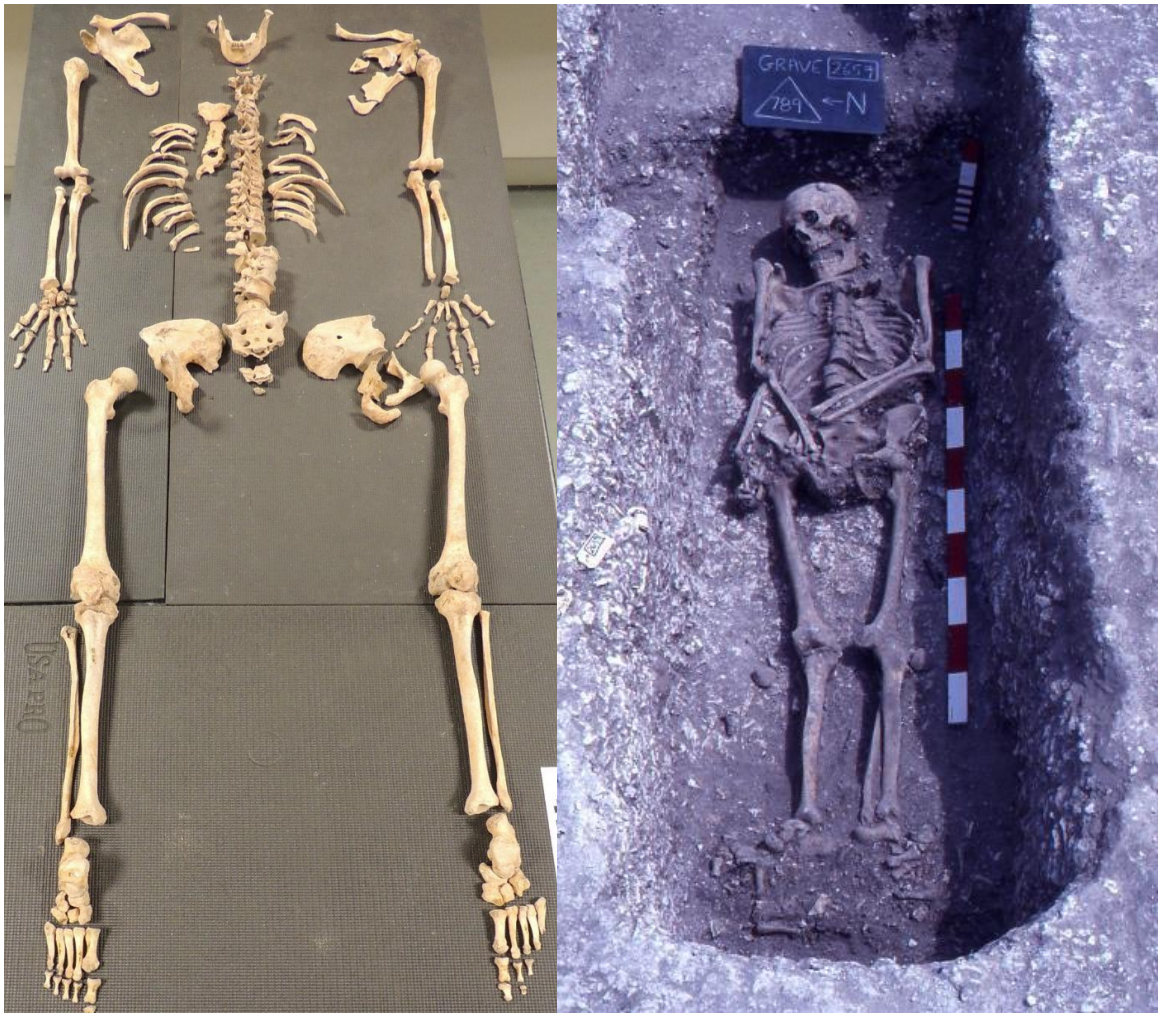
Grave number: 2659

Burial and grave type: singular, primary interment, sub-rectangular grave cut, dimensions 2.20m long, 0.70m wide, 0.40m deep. Wooden coffin. Position – supine, extended, hands crossed over right pelvis, head at east-south-east, oriented 105° (Davies et al. 2002: 209).

Grave goods: n/a

Pathologies observed: slight vertebral pathologies and dental pathology

Specialised analysis: archaeothanatology



E. 12.1 - AA789. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.12.1. Description

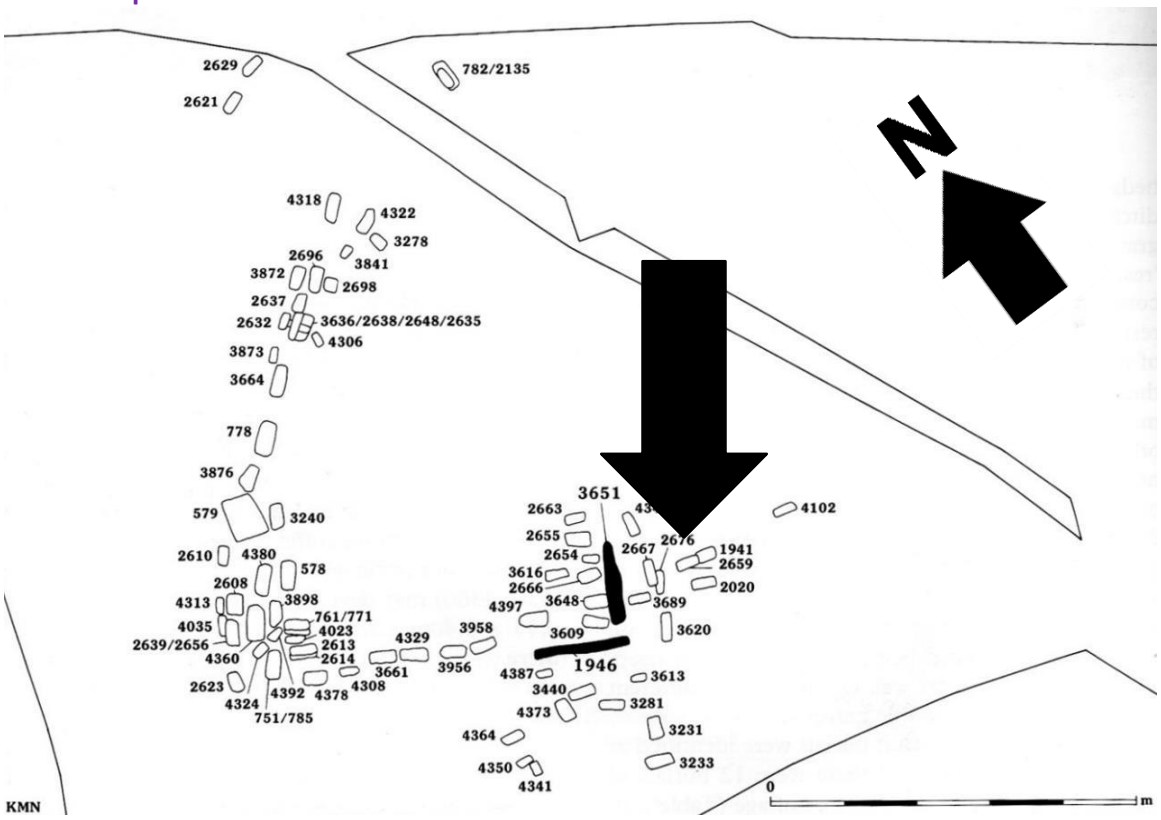
Skeleton AA789 was found at Alington Avenue in grave 2659. This skeleton was reported to be 95% complete in the excavation report (Davies et al. 2002), although at time of study the cranium was missing. Sex estimation of the preserved sexually dimorphic traits of the pelvic girdle and mandible identified the individual to be a biological male. Transition ageing identified the individual to be a prime adult. Skeleton AA789 is estimated to be 164cm tall. AA789 exhibits slight osteoarthritic lipping in the lower vertebral column and dental pathology. Thoracic vertebrae 8-12

and all lumbar vertebrae showed evidence of slight (grade I) osteoarthritic lipping. The maxillary dentition was mostly missing at time of study, with the exception of the left 3rd molar which shows evidence of a small interproximal carious lesion. The rest of the available dentition is extensively covered in calculus.

E.12.2. Differential Diagnosis

As section 3.5.5 details, the consequences of osteoarthritis can be profound but, it can also be asymptomatic and, the extent of bony symptoms do not correlate with pain or debilitating experiences (Weiss 2015). Despite this, certain palaeopathological manifestations do tend to relate to pain, such as eburnation and concurrence with Schmorl's nodes (Faccia and Williams 2008; Jurmain 1999). None of these situations are evident in the case of AA789, so discussion of the potential effects of osteoarthritis is not applicable in this osteobiography.

E.12.3. Implications



E. 12.2 - Alington Avenue main cemetery plan with position of grave 2659 highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology 2002.

The burial of skeleton AA789 is included into the main cemetery at Alington Avenue. The primary nature of the burial can be tentatively confirmed by the maintenance of the anatomical position of the visible labile joints in the hands. Skeleton AA789 is reported to have been buried in a coffin (Davies et al. 2002). This is strongly corroborated by the archaeothantological analysis. The feet and left femur, particularly, have fallen laterally out of anatomical position into a void. The left femur seems to have twisted the rest of the leg out of position also, making the patella fall and the fibula displace so that it rests medially to the tibia. It is interesting to note that AA789 is one of the few skeletons at Alington Avenue to appear not to be buried in clothing that creates an *effet de parois* effect. The rib cage has fallen outwards, away from the body's sagittal plane, a

strong indication of a coffin burial, that tend to feature bone mobility (Duday 2009). This analysis is further supported by the absence of evidence of footwear.

E.12.4. Discussion

AA789's burial lacks some of the standard provision for Alington Avenue. This lack of provision may be related to their being part of the largest age group found in the Alington Avenue study sample (figure 6.2). There is no evidence of deviations in the dis/ability continuum which can be remarked upon.

E.13. AA791

Sex: male **Age**: prime adult (26-61 years) **Stature**: 172cm

Preservation and completeness: c75% complete.

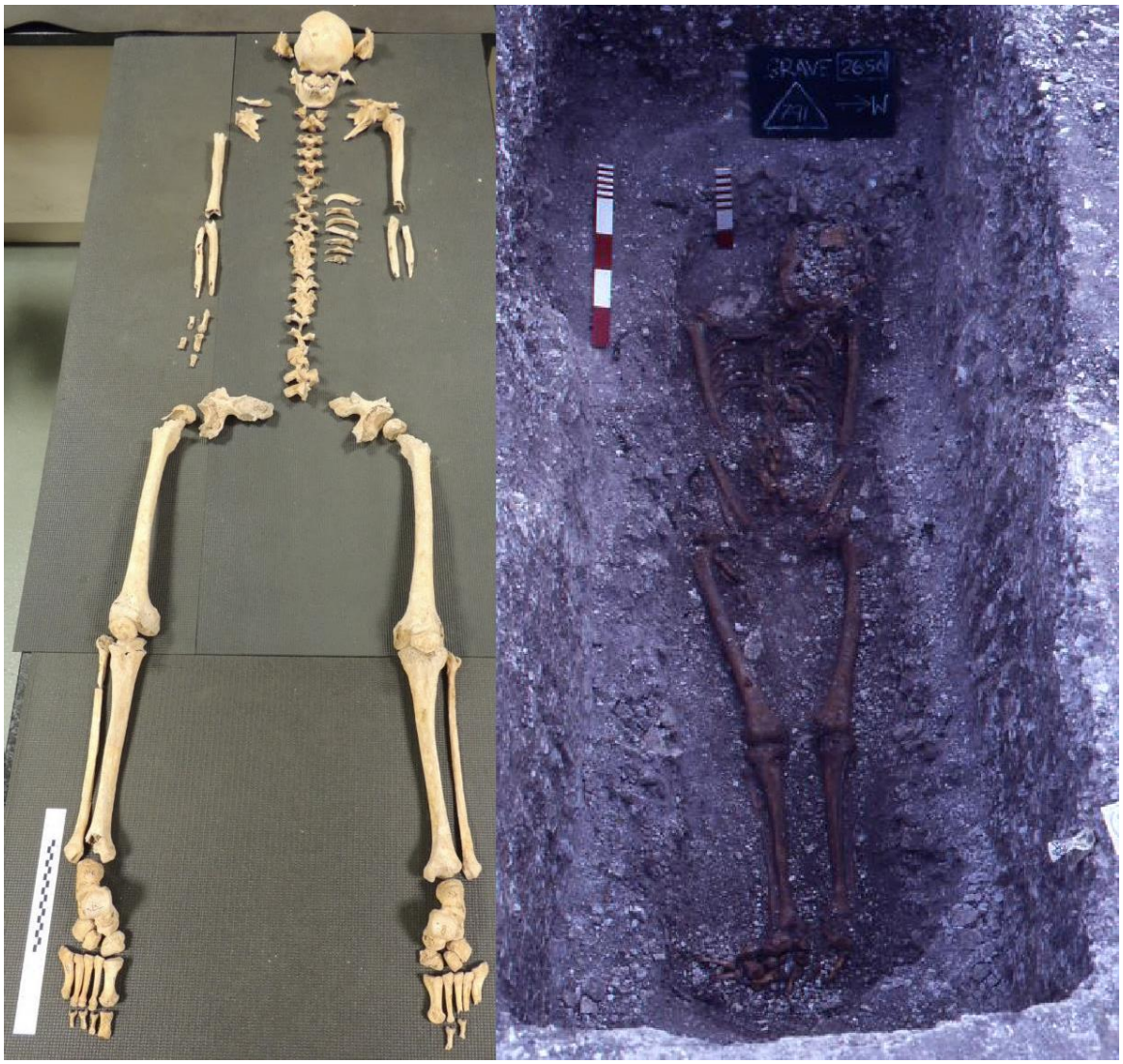
Grave number: 2667

Burial description: primary, singular interment, irregular grave cut, dimensions – 2.25m long, 0.65m wide, 0.90m deep. Wooden coffin. Position: supine, hands together over groin, head at south-west, oriented 200° (Davies et al 2002: 209).

Grave goods: n/a

Pathologies observed: exostosis on left tibial head anterior to medial intercondylar tubercle. Bony exostosis medial proximal right fibula head. Accessory process on left humerus situated medially distally to humeral head. Cribra orbitalia in the upper surface of both eye sockets. Slight dental pathology.

Specialised analysis: archaeothanatology



E. 13.1 - AA791. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.13.1. Description

AA791 refers to a skeleton found in grave 2667 at Alington Avenue. The remains have been estimated to be 75% complete. The cranium provided the most analysable sexually dimorphic traits and identified the individual as a biological male. Transition age and dentition analysis identified the individual to have died as a prime adult. AA791 is estimated to be 172cm tall. The left tibia and right fibula heads have bony exostosis evident. There is a bony spur evident near the left humeral head. Cribra orbitalia is evident in both orbits and there is evidence of minor dental pathology throughout the mouth.

E.13.2. Differential diagnosis

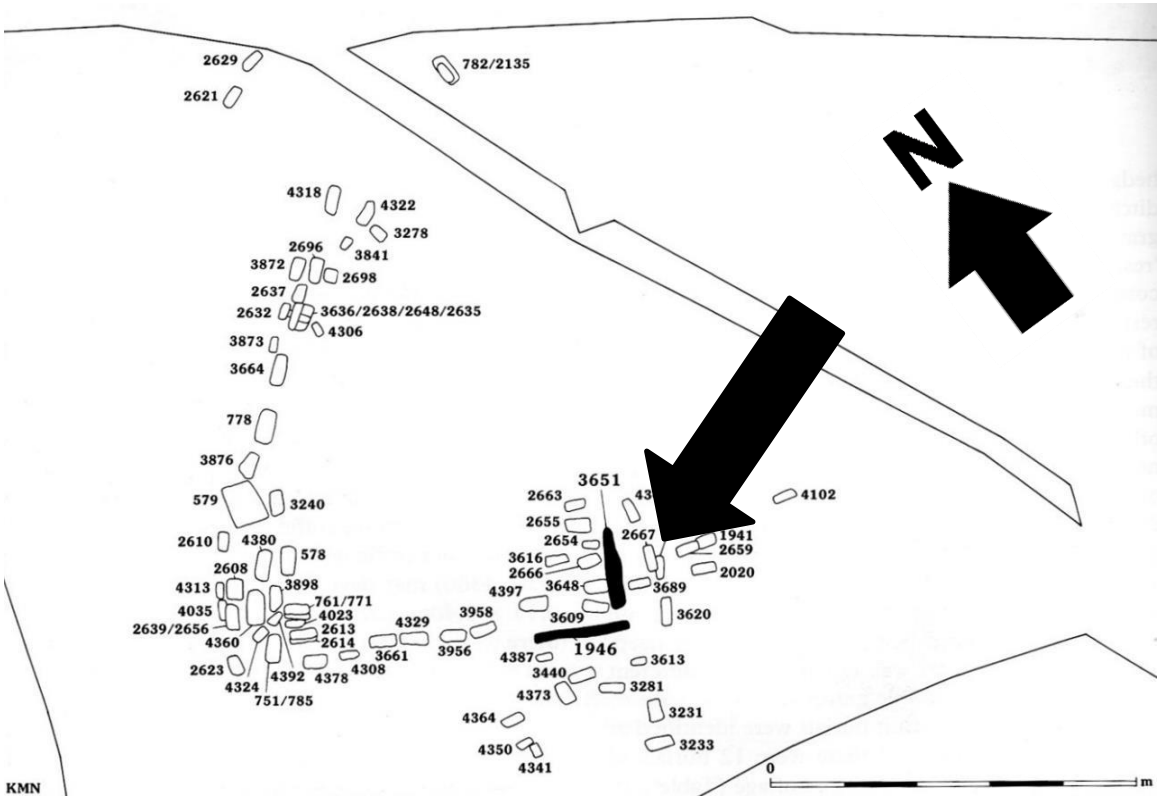
Exostoses and bony spurs on the site of tendons, ligaments or joint capsule attachments, like those identified in skeleton AA791, have been described as enthesopathies (Henderson 2008). The formation of enthesopathies have been related to physical exertion and repetitive labour, although there are a number of factors that contribute to their formation beyond physical activity levels. Therefore, there is an ongoing issue of how much these types of palaeopathology can be relied upon to estimate activity levels. Consequently, a discussion of these osteological markers needs to await future study (Henderson 2008).

Cribra orbitalia is usually cited as an indication of anaemia (Roberts and Manchester 2012), although this designation has met criticism (Waldron 2009). The cribra orbitalia in AA268 has been graded differently in the two orbits, the right side being type A and the left side type B (Brothwell 1981).

E.13.3. Implications

At the nearby Poundbury Camp Roman cemetery site, approximately 31% of the remains found exhibited evidence of anaemic response bony changes, so AA268 could be argued to be in good company. It is interesting to note is that the majority affected by this pathology were juveniles. Cribra orbitalia has been interpreted as a response to infection (Roberts and Manchester 2012). Cribra orbitalia is a fairly common lesion in osteoarchaeological assemblages, however, is has been noted that anaemia can contribute to fatigue, cognitive deficits and loss of body weight which could affect an individual's sense of wellbeing and thus their abilities (Zakrzewski 2014). The different cribra orbitalia types recognised in the individual could point towards an ongoing illness which the individual continued to fight for a long time in the later stages of their life.

Grave 2667, containing skeleton AA791, is located in the main cemetery cluster at Alington Avenue. The primary nature of the interment is tentatively confirmed by the maintenance of the bones in the right foot. There is evidence of an *effet de parois* on the left side, particularly in the upper left torso, with a verticalized clavicle. The individual was buried in a coffin, evident by the rolling of the right femur laterally out of anatomical position and the ribs falling laterally and posteriorly. Archaeothanatological analysis revealed a lack of evidence of clothing or shrouding in this individual, which is corroborated by a lack of evident footwear. This is unusual in the Alington Avenue context.



E. 13.2 - Alington Avenue main cemetery plan with position of grave 2667 highlighted. Source: Dorset History and Archaeological Society and Wessex Archaeology 2002

E.13.4. Discussion

AA791's burial lacks some of the standard provision for Alington Avenue, namely shoes or evident clothing. This lack of provision may be related to their being part of the largest age group found in the Alington Avenue study sample (figure 6.2). The presence of cribra orbitalia of different types could be tentatively interpreted as an ongoing episode of health stress occurring towards the end of the individual's life, potentially affecting their sense of wellbeing and position on the dis/ability continuum.

E.14. AA794

Sex: male **Age**: prime adult (15-38 years) **Stature**: 180cm

Preservation and completeness: c75% complete.

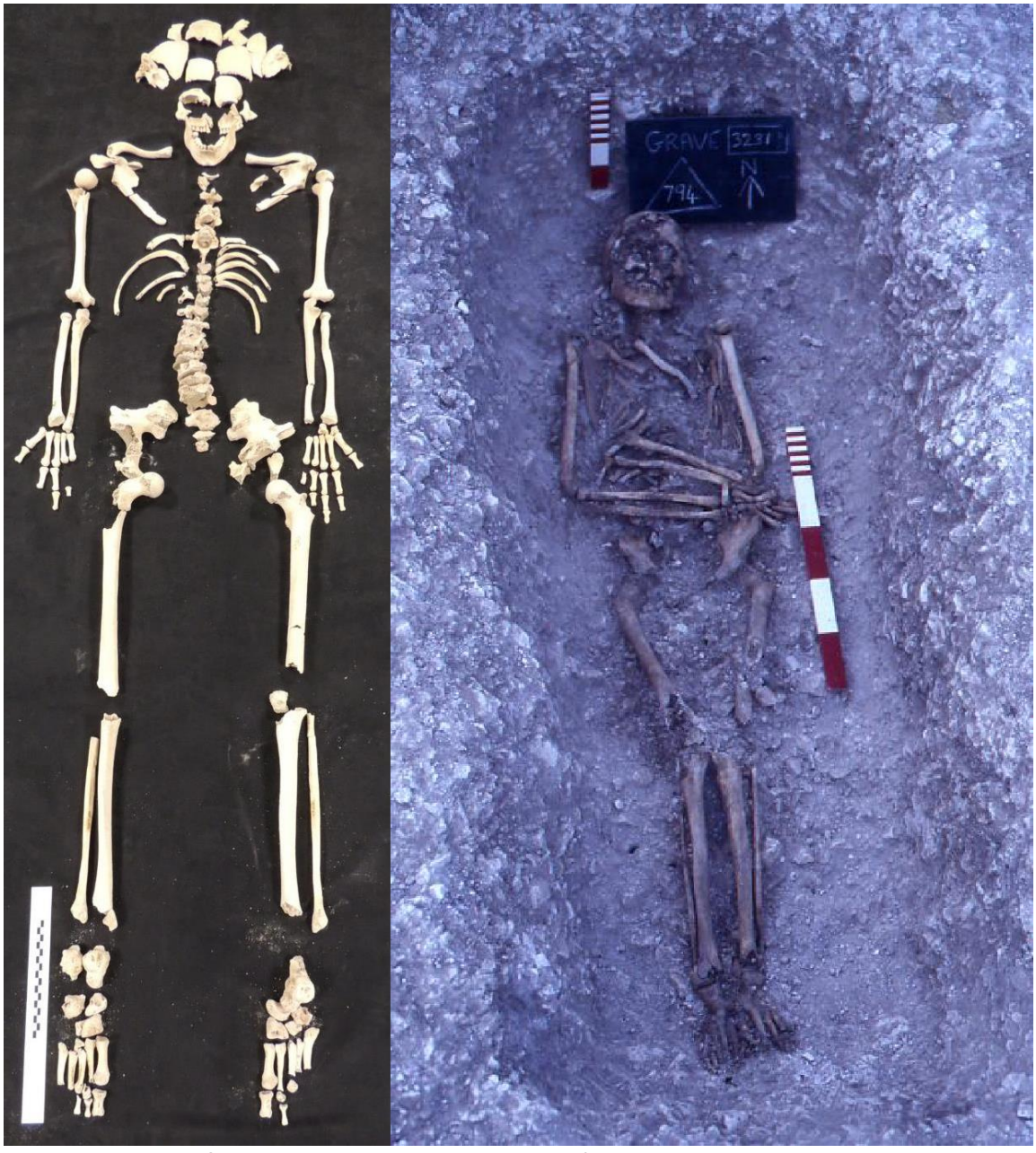
Grave number: 3231

Burial description: singular, primary interment, sub-rectangular grave cut, dimensions: 2.19m long, 1.10m wide, 0.45m deep. Position: supine, arms folded across waist, head at north-east, oriented 20° (Davies et al. 2002: 209).

Grave goods: n/a

Pathologies observed: very slight cribra orbitalia in left orbit and enamel hypoplasia.

Specialised analysis: archaeothanatology, dietary isotopic analysis (Redfern et al. 2010)



E. 14.1 - AA791. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.14.1. Description

AA794 refers to a human skeleton from Alington Avenue found in grave 3231. The skeleton is approximately 75% complete. Analysis of the available sexually dimorphic traits of the skeleton suggests that they were a biological male. Transition ageing, corroborated by dental attrition analysis, has indicated the individual to be a prime adult. This individual is estimated to be 180cm in stature. The left orbit exhibits a small trace of cribra orbitalia. Enamel hypoplasia has been found on all maxillary and mandibular teeth, save the second and third molars.

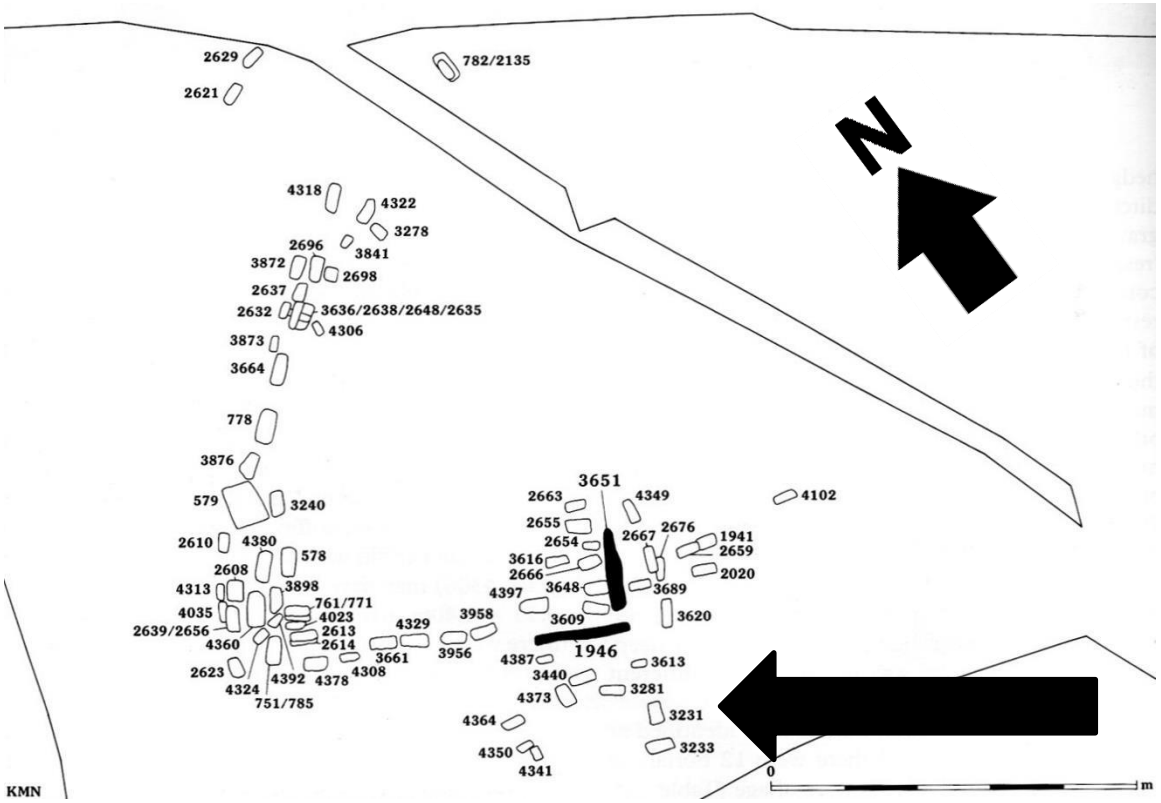
Skeleton AA794 formed part of a larger isotopic study looking for changing dietary patterns over an extended period in Dorset (Redfern et al. 2010). The isotopic signature of skeleton AA794 presents an anomaly compared to the other samples collected from Alington Avenue, as a result of its elevated δ13C levels (see section 6.3). Such a result points potentially towards a quite different regular diet compared to the majority of their burial peers, possibly with a larger marine component (Brown and Brown 2011).

E.14.2. Diagnosis

The lines of enamel hypoplasia point towards severe health stress during childhood. Enamel hypoplasia can form during the development of the tooth and, the presence of several lines across multiple teeth point towards persistent and severe health stress, approximately between ages 3-9 (AlQahtani et al. 2010; Roberts and Manchester 2010). Cribra orbitalia is generally cited as an indication of anaemia, although there has been notable criticism of this designation (Roberts and Manchester 2010; Waldron 2009). The lesion found in AA794 is slight and has been graded as type A, which could be interpreted as an incidence of health stress and/or anaemia at an earlier stage before death, but likely after the development of the teeth.

E.14.3. Implications

The pathology identified within AA794 points towards episodes of health stress occurring from an early age and into adulthood which, potentially altered the individual's position on the dis/ability continuum. For, as Sonia Zakrzewski (2014) points out, anaemia can cause fatigue, cognitive deficits and weight loss, affecting a person's wellbeing and abilities. Cribra orbitalia, for example, is not an uncommon palaeopathology, with 31% of specimens from the nearby Roman cemetery of Poundbury Camp exhibiting some evidence of anaemic bony response (Roberts and Manchester 2010). The individual is included within the main cemetery group, on its outer edge (see figure E.14.2).Yet, compared to other Alington Avenue burials, AA794's is poorly furnished. The individual is one of the four burials (11%) in the sample to show no sign of having been buried within a coffin. In addition, AA794 was in the minority of the burial population (41%) as having no evidence of footwear provision. Archaeothanatological analysis confirms the primary nature of the burial, as the labile joints in the hands and feet have maintained their anatomical position. The individual appears to have been tightly wrapped at burial. The right clavicle is verticalized and the knees and feet are tight together, an unstable position having been stabilised initially by material and then earth.



E. 14.2 - Plan of Alington Avenue main cemetery with AA794's grave position highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology 2002

E.14.4. Discussion

The osteobiography of AA794 presents an ambiguous image. Isotopic signatures, like AA794's, with increased levels of carbon and nitrogen is interpreted as the result of a diet with additional dietary resources in the form of marine protein. Indeed Redfern et al. (2010) interprets cluster G2, and the anomaly that Alington Avenue's sample presents compared to other Dorset assemblages, as the result of increased access to different food stuffs due to better access to the urban centre (section 6.3). Yet, other elements of AA794's osteobiography would seem to disagree with the assessment of unusual privilege. Grave 3231 lacks some of the more standard elements found in most burials from Alington Avenue. How should this ambiguous picture be interpreted? Could the dietary isotopes be the result of differential behaviour, perhaps owing to a different origin, which has been further demonstrated through a slightly different burial treatment? Or could marine protein be argued to be a response to AA794 persistent health stresses, could it have acted as a medicine? The link between palaeopathology and diet is one that would merit further exploration.

E.15. AA806

Sex: male **Age**: much older adult (44-88 years) **Stature**: 168cm

Preservation and completeness: c95% complete but many of the long limbs have mid-shaft breaks.

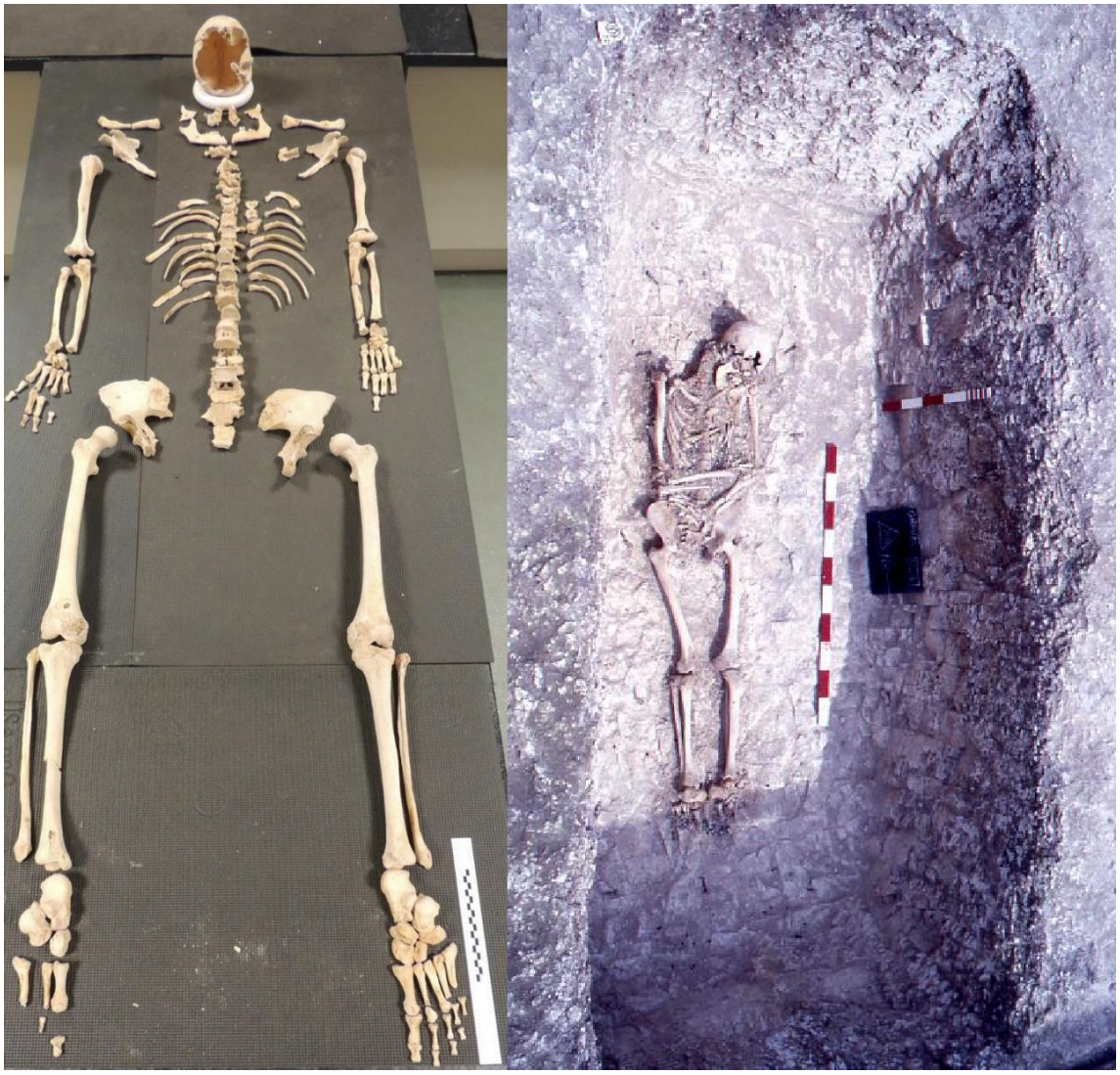
Grave number: 1142

Burial description: singular, primary interment, rectangular grave cut, dimensions: 2.53m long, 1.25m wide, 0.82m deep. Wooden coffin. Position – supine, left hand over groin, right arm over waist. Head at north east, orientation 65°. (Davies et al. 2002: 207).

Grave goods: hobnails worn, domestic fowl bird bones at right shoulder.

Pathologies observed: well healed fracture on the left distal shaft ulna. 5 antemortem teeth lost, 1 severe interproximal carious lesion, bilateral osteoarthritic lipping on the ilium.

Specialised analysis: archaeothanatology



E. 15.1 – AA806. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.15.1. Description

AA806 refers to the skeletal remains found in grave 1142 at Alington Avenue. The skeleton is described as 95% complete, although most of the long bones have mid-shaft breaks. Sex estimation, through analysis of the extant traits in the pelvic girdle and skull, determines that the

individual was a biological male. Transition age has identified the individual as an older adult. The individual is estimated to have been approximately 168cm tall. Skeleton AA806 exhibited several instances of palaeopathology within the skeleton, including osteoarthritic lipping on the bilateral ilia and a healed left arm fracture. Skeleton AA806 also has extensive dental pathology, including five instances of ante-mortem tooth loss and an advanced interproximal carious lesion on the left side second molar in the mandible.

E.15.2. Diagnosis

A fracture is evident in the distal shaft of the left ulna. The fracture was well healed by time of death, leaving only a callus to indicate the injury (the fragmentation in figure E.15.2 is post-mortem damage). An injury of this manner in the ulna mid-shaft is usually diagnosed as a parry fracture. Although the frequent designation by osteoarchaeologists of any arm injury as a parry fracture has been criticised, this particular example does fit the specification offered by Judd (2008), such as the lack of radial involvement. Fractures in people from older age categories has been interpreted as evidence of elder abuse, however, as in the osteobiography of AA210, AA806 lacks the typical signs that indicate elder abuse, such as multiple fractures or fractures in the face and ribs (Gowland 2015).

Bilateral lipping on the ilia crests has also been identified as potential evidence of osteoarthritis. In this case, however, assessment of the potential impact of these lesions is deemed inappropriate, as none of the risk factors associated with a more painful osteoarthritic experience is present (see section 3.5.5).

E. 15.2 - AA806 parry fracture in left ulna.

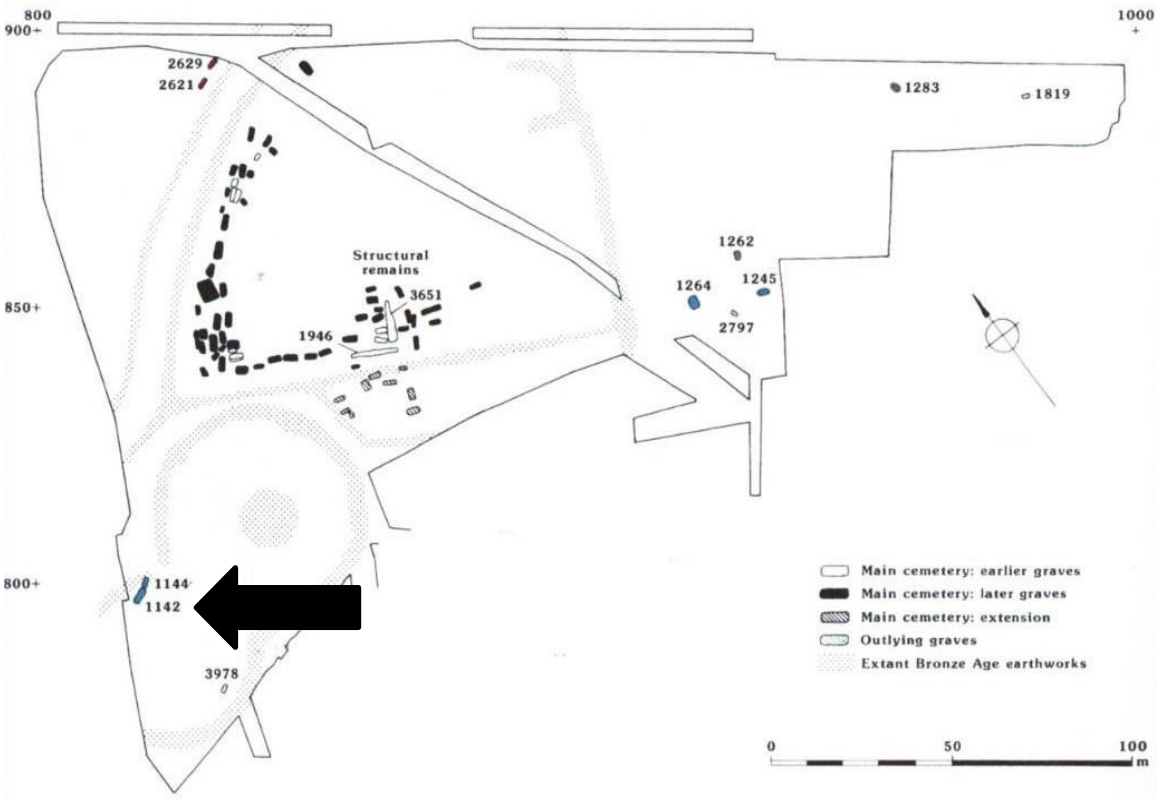
E.15.3. Implications

Parry fractures are so called as they are often interpreted as defensive injuries acquired during interpersonal violence. Trauma type pathology are only found within male skeletons at Alington Avenue and the majority (4/5) are found within the old and much older age categories. This seems to present a strong trend of males being the most at risk of fracture type trauma injury, perhaps suggesting as to gender differences in activity. Healing times of ulna fractures vary. A key factor, for example, is that fracture healing takes longer as one gets older (Buikstra 2019). Generally, estimates state that healing can take between six to twelve weeks (Dymond 1984),

although Waldron (2009) has stated the final reparative phase of healing can last up to seven years. There are three stages of healing: the inflammatory phase lasts up to 72hours after initial injury, the reparative phase begins on the second day and lasts approximately two weeks, the remodelling stage begins during the middle of the reparative phase (Waldron 2009). Unfortunately, it cannot be accurately determined when such an injury was incurred. All that can be stated is that it likely happened during adulthood, a few years before death, to allow healing to this degree (Waldron 2009).

Davies et al. (2002) describes grave 1142 as an outlier, as it is located a considerable distance from the main burial cluster, isolated with close association with grave 1144 (AA338) and an extant Bronze Age ring ditch. The individual was buried in a proportionally large grave.

Anthropologie de terrain analytical techniques attests that the burial was primary in nature, as the labile joints in the cervical vertebrae remained in anatomical position. The verticalization of the clavicles suggest a form of wrapping was worn in burial. This is corroborated by the presence of hobnails which appear to have been worn (Davies et al. 2002). The position of the skull may allude to the head being placed on a pillow as the head seems to be tilted forwards on to the front of the body. Skeleton AA806 was also buried with a grave good in the form of the bones of a domestic fowl found next to the right shoulder. Bones of animals such as domestic fowl are usually interpreted as evidence of feasting or votive offerings/provision for the afterlife. AA806 is one of three individuals to have been buried with feasting grave goods.



E. 15.3 - Plan of Alington Avenue cemetery with grave 1142 highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology 2002

E.15.4. Discussion

It is interesting to note that AA806's burial is an outlier, placed in close association with AA338, another older aged male. The fracture incidence evident in the Alington Avenue skeletal assemblage only occur in male skeletons, which perhaps alludes to gendered activity that means males were more likely to result in trauma. The fracture in AA806's remains is evidence of an episode in the individual's life where they were located on a different part of their dis/ability continuum with a temporary change in their ability.

E.16. AA821

Sex: male **Age**: much older adult (66-99 years) **Stature**: 161cm

Preservation and completeness: c75% complete.

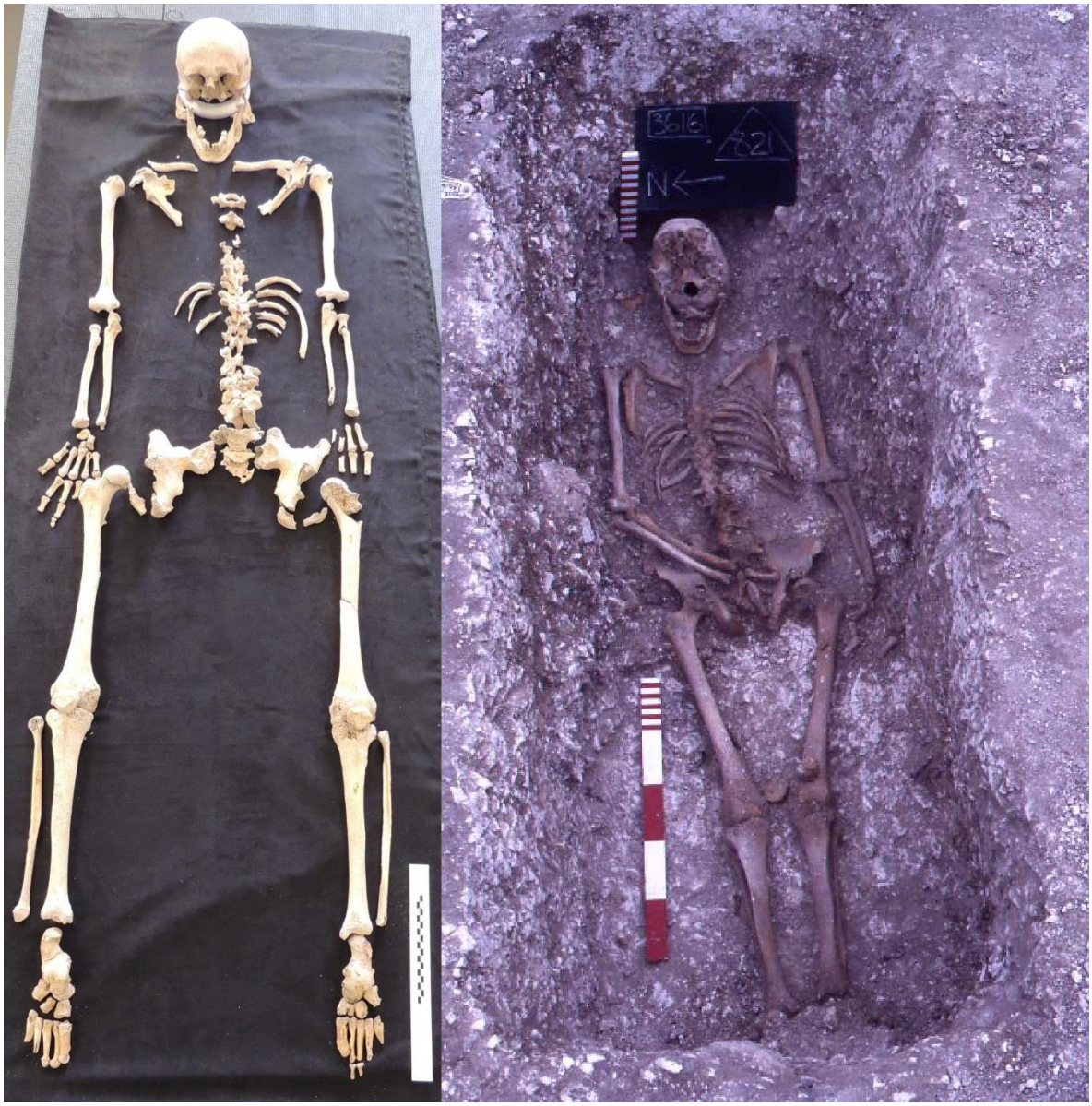
Grave number: 3616

Burial description: singular, primary interment, sub-rectangular grave cut, dimensions: 2.00m long, 0.75m wide, 0.30m deep. Wooden coffin. Position – supine, left arm straight at side, right hand over groin, head at east, orientation 110° (Davies et al. 2002: 211).

Grave goods: hobnails worn

Pathologies observed: osteophytic lesions lumbar vertebrae, dental pathology

Specialised analysis: archaeothanatology



E. 16.1 - AA806. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.16.1. Description

AA821 refers to a human skeleton from Alington Avenue found in grave 3616. This skeleton is a well-preserved specimen estimated to be 75% intact. Sex estimation through available traits in the pelvic girdle and skull identified the individual to be a biological male. Transition ageing has

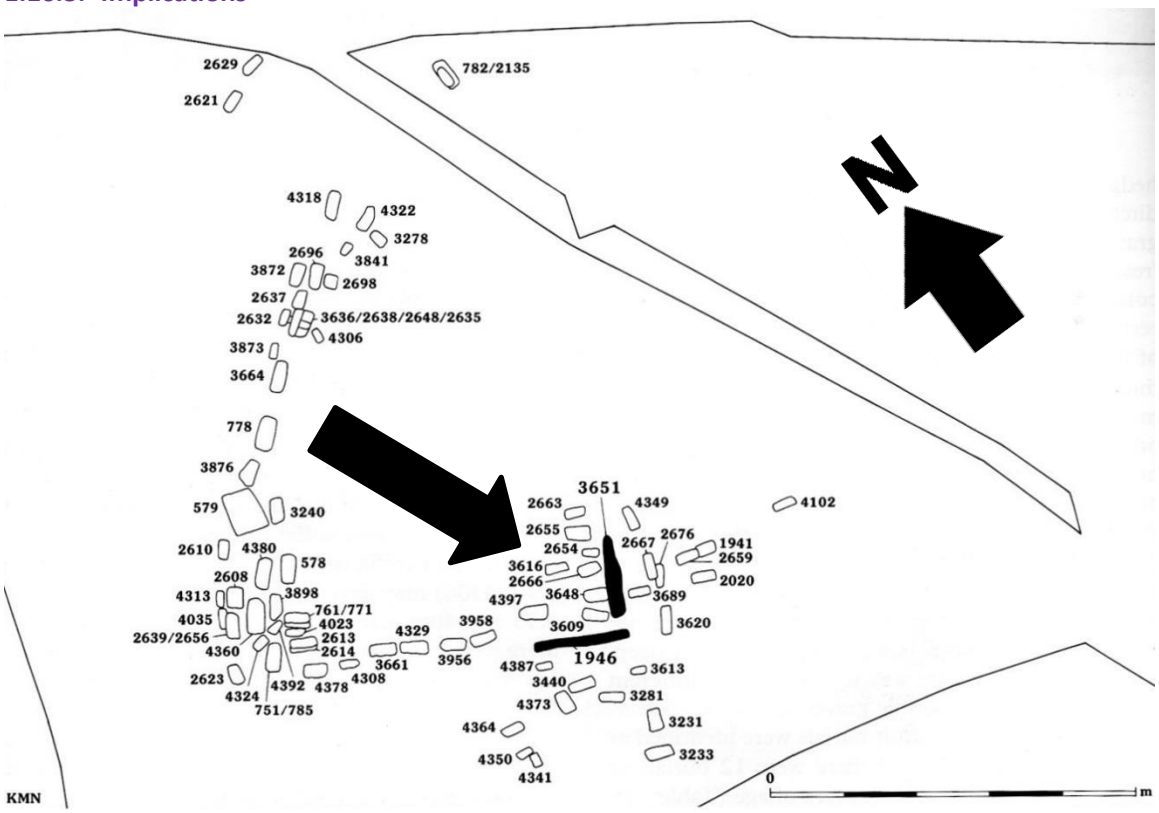
identified to have been a much older adult at time of death. The individual is estimated to be 161cm tall. Grade II osteophytes have been identified on the vertebral bodies and neural arch articulations in lumbar vertebrae 3, 4 and 5. Very slight (grade I) osteophytes were also observed in the right elbow on the distal humerus and proximal radius articulation. The maxillary teeth were missing at time of observation. Of the remaining mandibular teeth, three teeth were lost antemortem (the right side second premolar and first molar and the left side third molar).

E.16.2. Diagnosis

Grade II level osteophytes were found on the 3rd-5th lumbar vertebral bodies and articulations. As section 3.5.5 details, the consequences of osteoarthritic lesions vary dramatically and, the relationship between experience of symptoms and extent of bony pathology is not direct. Nevertheless, several risk factors have been identified that increase the likelihood of impairment as the result of osteoarthritis, including location of lesion and presence of eburnation. None of these are present in the case of AA821, therefore discussion of the possible ramifications of osteoarthritis is not applied in this case.

The maxillary dentition is missing in AA821. Three of the mandibular teeth were lost antemortem, which is a fairly common occurrence within the older age groups at Alington Avenue. Additionally, there are two instances of carious lesions, which points to a history of dental pain.

E.16.3. Implications



E. 16.2 - Plan of Alington Avenue with grave 3616 highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002).

The burial of AA821 was found in grave 3616 which is located in the main cemetery of the later Roman period, situated near the ditch structure called 3651. The visible labile joints are disturbed perhaps suggesting this burial is secondary. The individual was likely buried

in wrappings, such as clothes, as evident through the verticalized clavicles. The mobility of other joints, such as the mandible, suggest the individual was buried in a void, like a coffin, meaning that bones were not secure in unstable positions.

E.16.4. Conclusion

Skeleton AA821 presents no indications that would suggest an unexpected variation in the projected life course and dis/ability continuum. Alongside this, the grave presents a good example of a typical burial from Alington Avenue, meeting the standards of prone position, wooden coffin and footwear provision, but no more. This individual could be argued to present the normative for Alington Avenue.

E.17. AA827

Sex: male **Age**: young adult (17-25 years) **Stature**: 161cm

Preservation and completeness: c90% complete

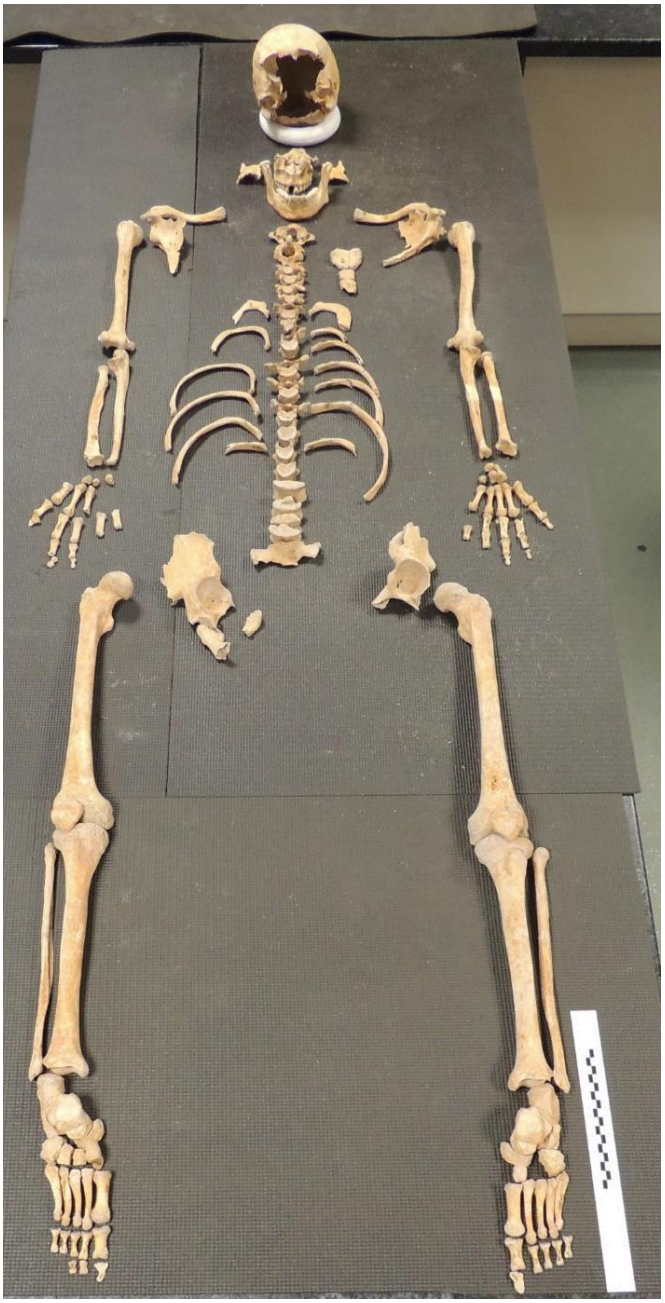
Grave number: 3620

Burial description: singular interment, irregular grave cut, dimensions: 2.25m long, 0.62m wide, 0.25m deep. Wooden coffin. Position – supine, left arm straight at side, right arm over groin. Head at south west, orientation 225° (Davies et al. 2002: 211).

Grave goods: n/a

Pathologies observed: porotic hyperostosis, right distal ulna fracture well healed and slight realignment

Specialised analysis: dietary isotopes (Redfern et al. 2010)



E. 17.1 - AA827 laid out to study. Source: author's own image.

E.17.1. Description

AA827 is the label given to the human remains that were found in grave 3620 at Alington Avenue. The remains have a good level of preservation, estimated at 90% complete (Davies et al. 2002: 149). Sex estimation through analysis of sexually dimorphic traits in the skull suggests that the remains are that of a biological male. Unfortunately, due to the limited number of traits available, transition ageing produced an age estimate spanning a large time frame (16-82 years). In this instance, Brothwell's dental analysis was used to narrow the age estimate, which placed the individual as between 17-25 years at death, which categorises the individual as a young adult. AA827's stature is estimated as 161cm. Skeleton AA827 has several instances of palaeopathology, including porotic lesions on the inner cranial surface and a well healed fracture in the right ulna. AA827 was included in Redfern et al.'s (2010) dietary isotopic study. AA827's isotopic signature formed part of the 'G1' cluster, the group whose diet appears to have less of a marine protein component (figure 6.5).

E.17.2. Differential Diagnosis

Skeleton AA827 exhibits evidence of a well healed fracture within the distal portion shaft of the right-side ulna. An injury in this region of the skeleton is usually described as a parry fracture, although this frequent designation has been highly criticised (Judd 2008). In this instance, however, a number of factors point to the validity of the parry fracture designation, including that it only affects the ulna and its exact position within the bone (Judd 2008). The fracture is well-healed, however poorly set, the styloid process is missing, and the articulation is flattened. Porotic hyperostosis has been identified, affecting large areas on interior surface of the parietal bones. Porotic hyperostosis, alongside cribra orbitalia, is generally understood as a sign of anaemia (Ortner 2003; Weiss 2015). Although such pathology can also be responses to infection and parasites (Weiss 2015). Despite the ambiguous aetiology, it seems reasonable to argue that these pathologies reflect periods of health stress.

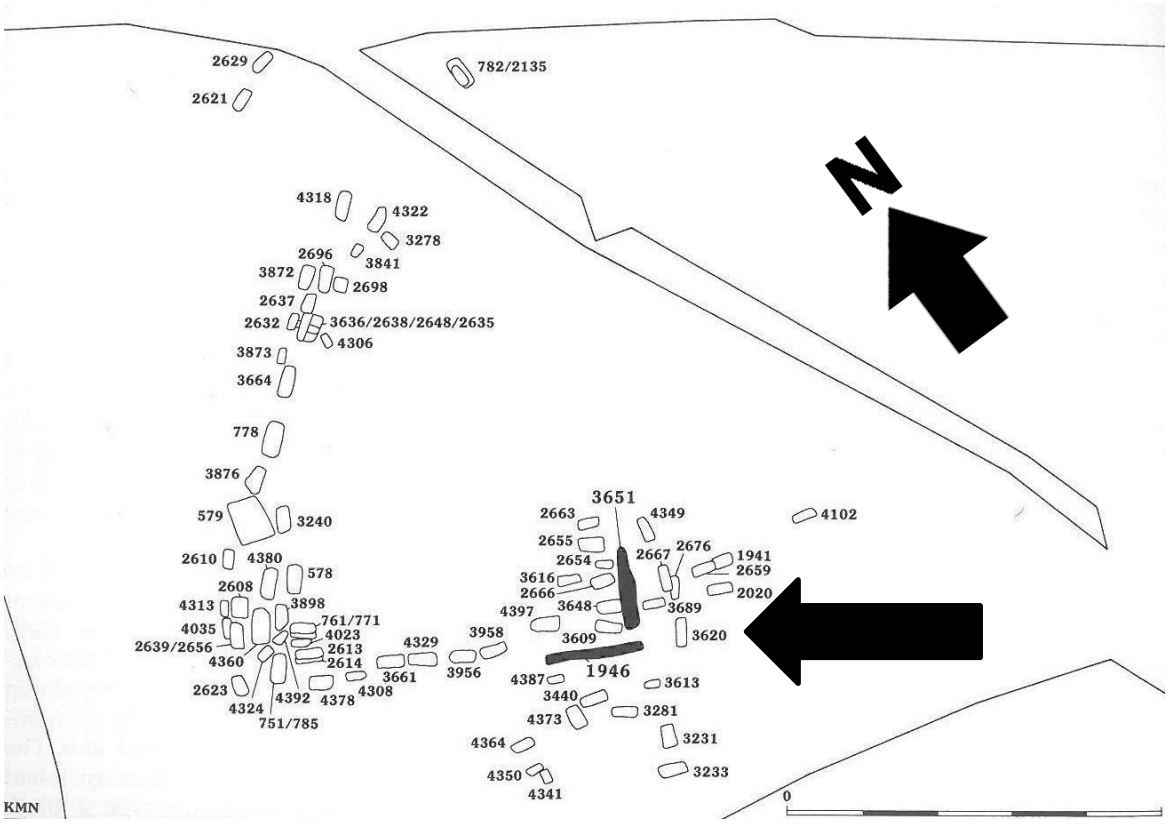
E.17.3. Implications

Parry fractures are so named as they are often interpreted as defensive injuries, although other mechanisms can cause this fracture type. Skeleton AA827 is the youngest individual within the Alington Avenue population with evidence of trauma exhibited in the skeleton, all other similar trauma is found within the skeletons of older men. The fracture in the ulna is very well healed and so is an injury which the individual which was lived with for at least a number of months. During healing however, the bone has not been properly splinted so that it healed straight. Instead the ulna bone realigned laterally, which perhaps shows limited access to medical intervention at least in the long-term recovery process. Healing time is separated into three stages: the inflammatory stage (up to 72 hours after injury),the reparative stage (second day post injury and lasts about 2 weeks) and the remodelling phase which can last up to 7 years (Waldron 2009: 146-7). This recovery process, especially for the first two weeks after injury can cause extensive pain and impairment to that individual and consequently, a differential position on the dis/ability

continuum. This injury had a long-term effect with a remodelled wrist, with the distal ulna reposition.

Porotic hyperostosis is reported as evidence of prolonged problems with health stress (Weiss 2015). This would therefore have a potential impact on an individual's sense of wellbeing and dis/ability continuum over a long period, anaemia, for example, resulting in fatigue and weight loss (Zakrzewski 2014).

Unfortunately, there was no excavation photography available of skeleton AA827 in context so anthropologie de terrain techniques could not be applied. Skeleton AA827's burial seems normative within the Alington Avenue population. A key difference however is the lack of evidence of hobnails within grave 3620. Within the context of Alington Avenue, the majority of the population (59%) wear shoes within the burial context. Shoes in the funerary context, has been interpreted as a key provision enabling the individual to walk to the underworld (van Driel Murray 1999). Denying an individual their shoes could be a considerable decision by the burying community. The burial is in the main cemetery cluster, in close association with the standing features.



E. 17.2 - Plan of Alington Avenue main cemetery with AA827's grave position highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology 2002

E.17.4. Discussion

The osteobiography of AA827 details a relatively short life marked by several periods of unprojected variation in the dis/ability continuum. The fracture represented a time of different ability, in likely their dominant hand. The poor fracture splinting perhaps alludes to a lack of medical intervention and permanent changes in the lived experience of that limb. Only

biologically male skeletons at Alington Avenue have been identified as having trauma related palaeopathology, which perhaps points towards gendered activity. Alongside this the individual seems to have experienced prolonged health stress. This health stress may explain to some extent the shorter life span. Despite some popular beliefs, the sub-adults and young adults seem to be relatively unusual ages in which to die at Alington Avenue, forming 7/37 (19%) of the study sample. The burial falls within the normative range, fulfilling two of the three criteria identified for burials at Alington Avenue (buried prone and in a coffin).

E.18. AA835

Sex: male **Age**: mature adult (33-45 years) **Stature**: 166cm

Preservation and completeness: c75% complete.

Grave number: 1941

Burial description: singular internment, sub-rectangular grave cut, dimensions: 2.25m long, 1.00m wide, 0.90m deep. Wooden coffin. Position – supine with hands together over right hip, head at west, orientation 285° (Davies et al. 2002: 207).

Grave goods: hobnails, iron object

Pathologies observed: osteoarthritis, dental pathology, ossified laryngeal tissue connecting manubrium and 1st rib.

Specialised analysis: n/a

E. 18.1 - AA835 laid out to study. Source: author's own image.

E.18.1. Description

AA835 refers to a human skeleton from Alington Avenue found in grave 1941, a well-preserved specimen (75% intact). Sex estimation through available traits in the pelvic girdle and skull identified the individual to be a biological male. Transition ageing offered a broad, imprecise age estimate of between 18-68 years of age. This estimate has therefore been narrowed through the use of dental attrition analysis, which identified the individual to have been a mature adult at time of death. The individual is estimated to be 166cm tall. There is evidence of slight osteoarthritis throughout the extant vertebral column, dental pathology and some soft tissue calcification in the thorax.

E.18.2. Differential diagnosis

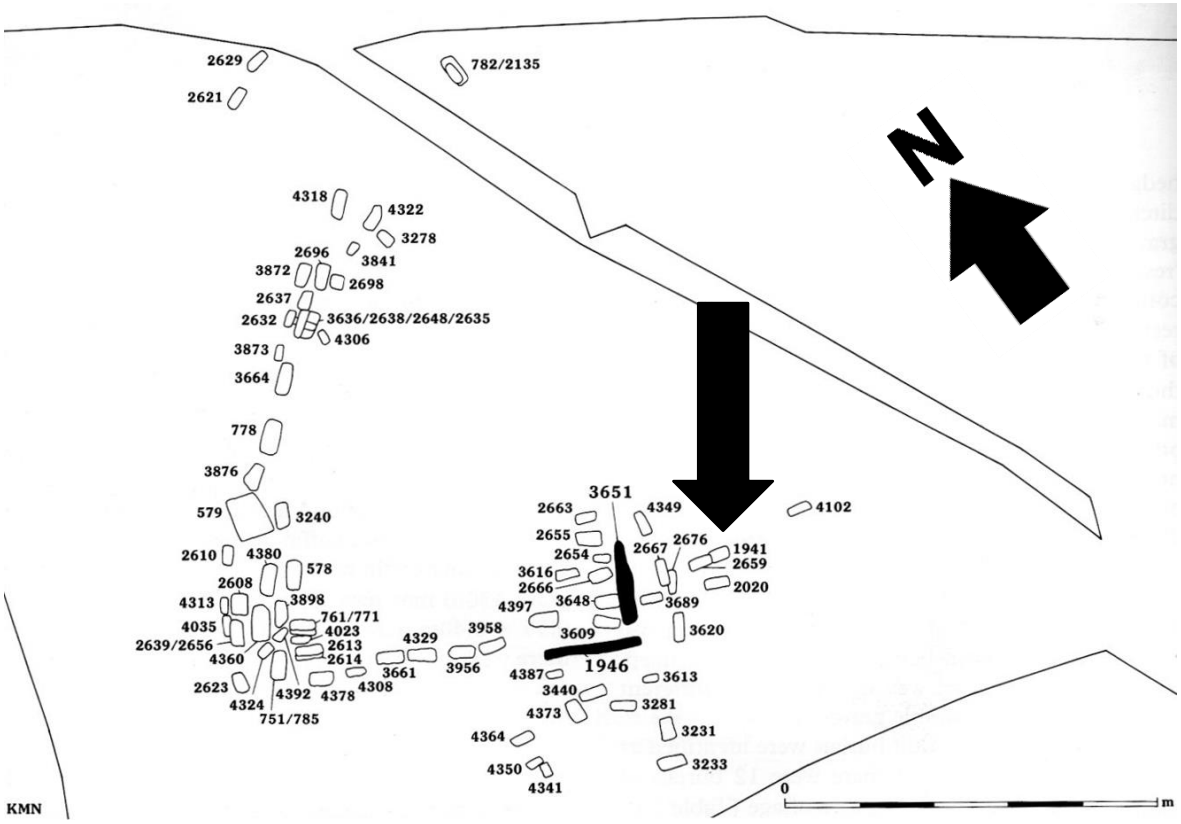
Grade I level osteophytes were found throughout the extant cervical and thoracic vertebral column, as well as very slight lipping on the bilateral glenoid fossa of the scapulae. As explored in section 3.5.5, the consequences of osteoarthritis can be profound, but it can also be asymptomatic and, tracing these differing experiences in the palaeopathological record is challenging (Weiss 2015). In the case of AA835, the individual fit none of the criteria identified as likely to be linked to a more debilitating experience. Therefore, the ramifications of this will not be explored in this case. Skeleton AA835 exhibits unusual evidence of ossified laryngeal cartilage. Although this ossification is a rare palaeopathological find, the ossification of the larynx and surround tissue is a well-documented part of normal aging and was likely asymptomatic for the individual (Scheuer and Black 2000). Skeleton AA835 lost two teeth (at least) before death, the mandibular left 2nd and 3rd molars. The two mandibular 1st molars were worn to the root. There is also evidence of a small carious lesion in the mandibular left 1st premolar. The individual's dental health is approximately average for their age group at Alington Avenue.

E.18.3. Implications

AA835 exhibited no palaeopathology that shows evidence of unprojected variations in the dis/ability continuum. The burial of skeleton AA835 was found in grave 1941 which is located in the main cemetery of the later Roman period, situated near the ditch structure called 3651 and grave 2659. The burial is described as including a wooden coffin with the individual wearing shoes. Unfortunately, there is no available excavation photography of the burial in situ to allow further archaeothanatological analysis. The burial also included an iron object, the further identification of which has not been possible.

E.18.4. Discussion

This specimen does not present much evidence that allows for a fruitful discussion about dis/ability. AA835's burial represents a typical Alington Avenue burial, including the three standard components of: supine position, wooden coffin and shoe provision. The individual is estimated to have died as a mature adult, which by Alington Avenue's standards, represents an unusual stage to die at (mature adults represent four out of the study sample of 37). This pattern could be the result, however, of the difficulty associated with age estimating middle aged populations (Milner and Boldsen 2012).



E. 18.2 - Plan of Alington Avenue with grave 1941 highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

E.19. AA848

Sex: male **Age:** prime adult (25-35 years) **Stature**: 164cm

Preservation and completeness: c75% complete.

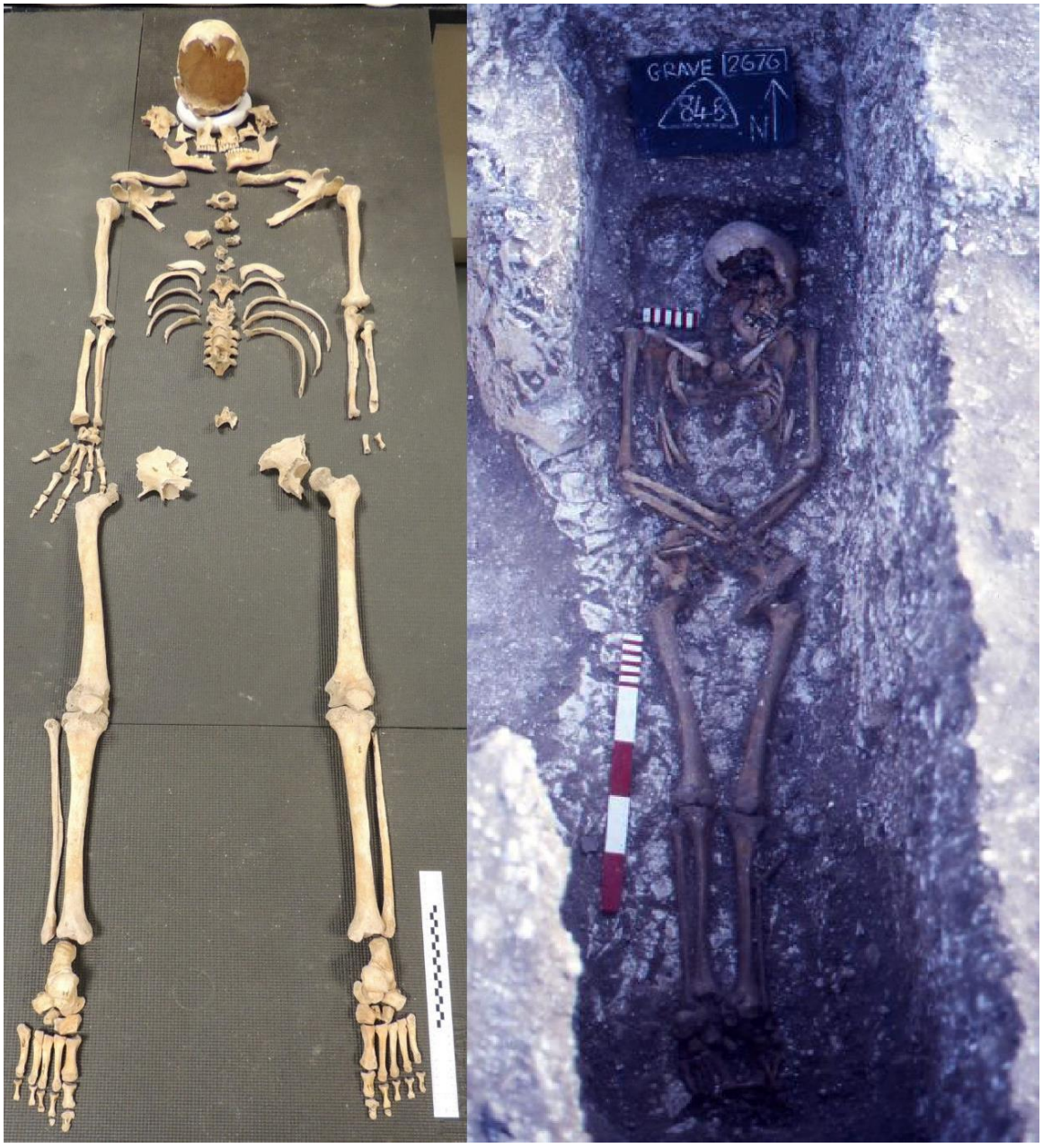
Grave number: 2676

Burial description: singular, primary interment, irregular grave cut dimensions: 2.30m long, 0.57m wide, 0.90m deep. Wooden coffin. Position – supine, hands together over waist, head at the north-east, orientation 38°.

Grave goods: n/a

Pathologies observed: dental pathology

Specialised analysis: archaeothanatology



E. 19.1 - AA848. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

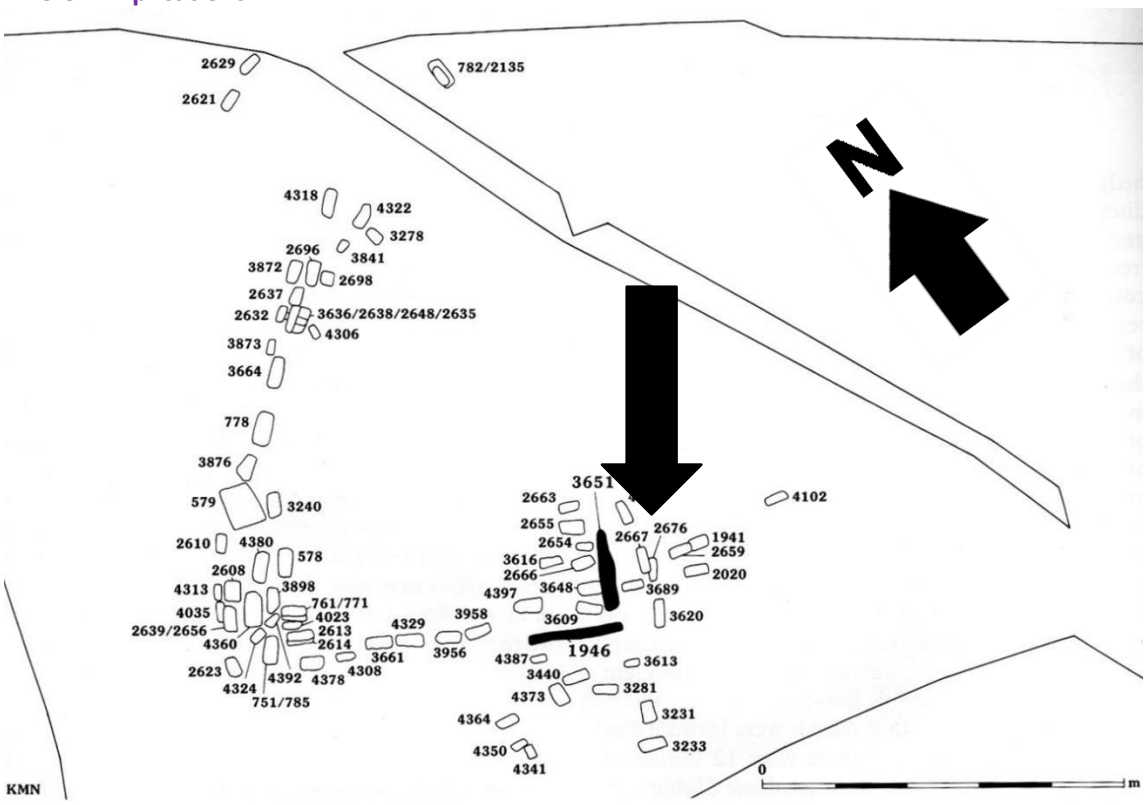
E.19.1. Description

AA848 refers to a human skeleton from Alington Avenue found in grave 2676. The specimen is well-preserved, estimated to be 75% intact. Sex estimation through available traits in the cranium identified the individual to be a biological male. Transition ageing produced a broad, imprecise age estimation of 16-59 years of age at death. Therefore, dental ageing narrowed this estimation, identifying the remains to be that of a prime adult. The individual is estimated to be 164cm tall. The remains show little notable incidence of palaeopathology, except slight incidence in the dentition.

E.19.2. Differential diagnosis

Skeleton AA848 shows a single incidence of an interproximal carious lesion in the right mandibular 2nd molar. The remaining dentition is covered at varying degrees in calculus on the lingual and buccal surfaces. The dental pathology falls below the average for the age group, which is estimated as one incidence of antemortem tooth loss. The individual falls in the minority of the Alington Avenue population with minimal palaeopathology evident in the skeleton.

E.19.3. Implications



E. 19.2 - Plan of Alington Avenue with AA848's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

AA848 exhibited no palaeopathology that shows evidence of unprojected variations in the dis/ability continuum. The burial of AA848 was found in grave 2676 in close proximity to the extant earthworks – 3651 and grave 2667 which housed AA791, another prime adult male (figure E.19.2). The primary nature of the interment is confirmed through the maintained anatomical position of the labile joints of the right foot and right hand (see figure E.19.3). The grave is narrow, at just over half a metre wide, (the third narrowest burial found at Alington Avenue), creating an *effet de parois*, resulting in the verticalization of the clavicles and reduced motion of

the limbs laterally. Therefore, inferring wrappings or clothing in this case is not possible as the *effet de parois* mimics that of clothing. The individual was not buried with hobnails either.

E.19.4. Discussion

The graves of AA848 and AA791 are quite similar. Both lack some of the standard provision identified for Alington Avenue, namely shoes or evident clothing, they are also both male and prime adults at time of death. These graves are also relatively unusual in that they are inter-cutting, a noted infrequency at Alington Avenue (Davies et al. 2002). This lack of provision may be related to their being part of the largest age group found in the Alington Avenue study sample (figure 6.2). There is no palaeopathological evidence of anything that might indicate a deviation from the expected dis/ability or life course trajectory in this case.

E.20. AA868

Sex: female **Age**: young adult (18-23 years) **Stature**: 160cm

Preservation and completeness: c95% complete.

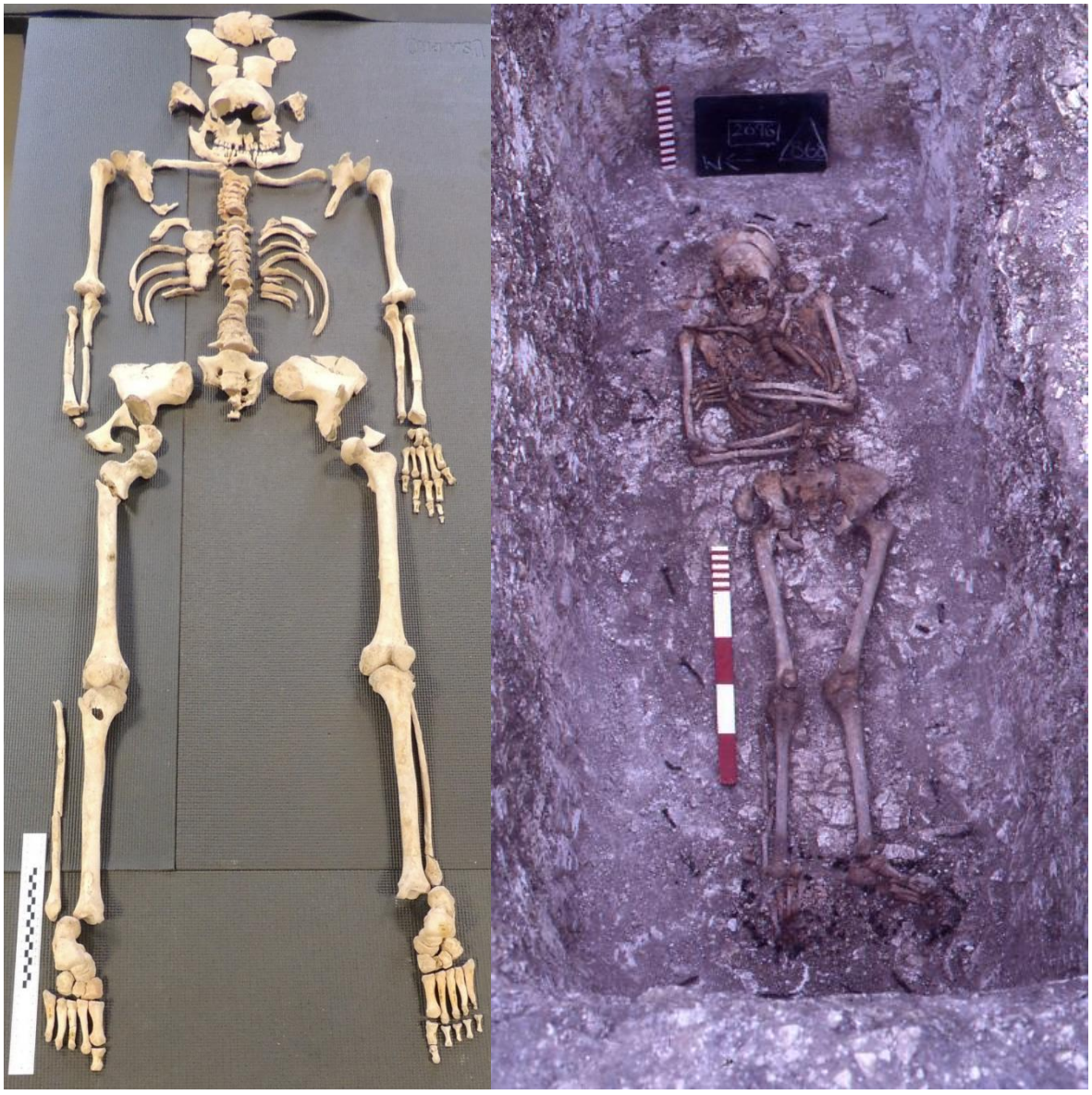
Grave number: 2696

Burial description: singular, primary interment, irregular grave cut, dimensions: 2.40m long, 1.00m wide, 0.95m deep. Wooden coffin. Position – supine, arms folded over thorax, head at north-east; oriented 40° (Davies et al. 2002: 209).

Grave goods: hobnails

Pathologies observed: n/a

Specialised analysis: archaeothanatology



E. 20.1 - AA868. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.20.1. Description

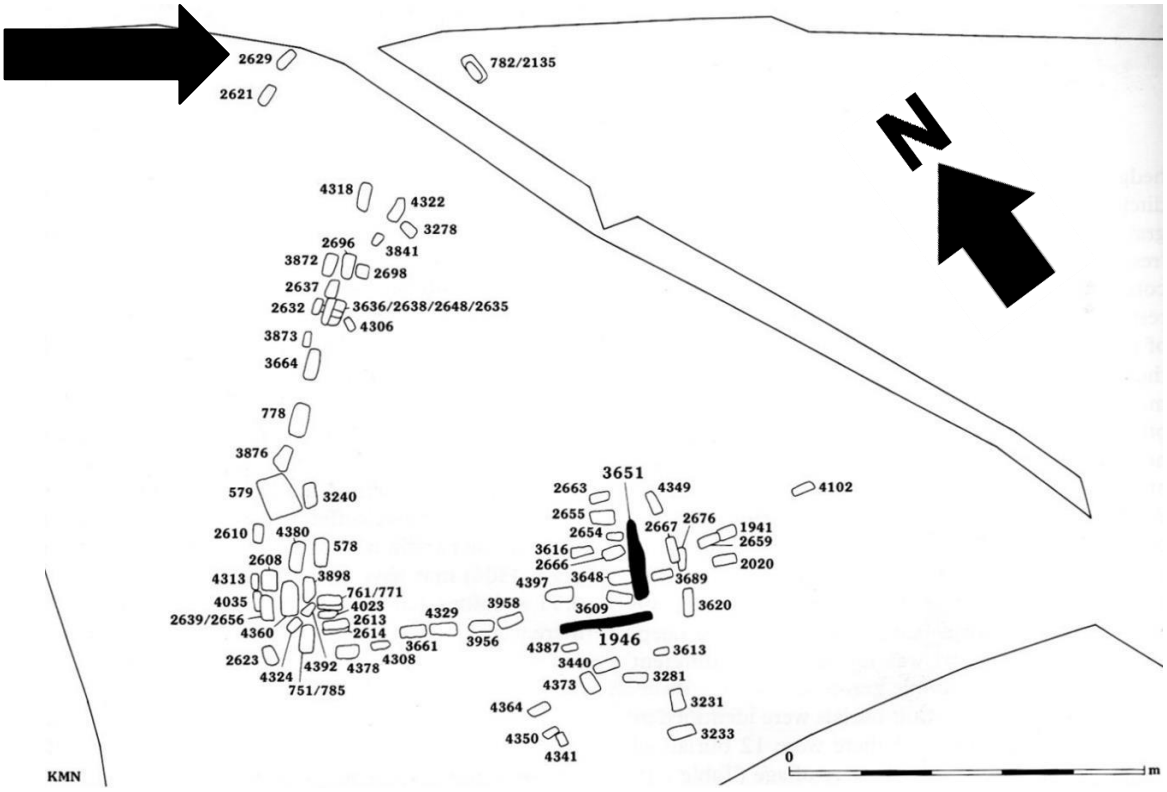
AA868 refers to a very well-preserved human skeleton (c95% complete) found in grave 2696 at Alington Avenue. Sex estimation through available traits in the pelvic girdle and skull identified the individual to be a biological female. Transition ageing has identified the individual to have

been between 18-23 years old at time of death. Recent epiphyseal fusion of the medial clavicle suggests an age of between 22-30 years of age (Scheuer and Black 2000). The recent fusion of the iliac crest points towards achieved menarche and complete maturation, estimated to occur between the ages of 16-23 years of age (Scheuer and Black 2000). AA868 is therefore comfortably assessed as a young adult at time of death. The individual is estimated to have been 160cm tall. There is little evidence of palaeopathology in this skeleton apart from an example of a supernumerary maxillary incisor on the right side.

E.20.2. Diagnosis

AA868 exhibits little in the way of palaeopathological lesions. There is an unusual incidence of a single supernumerary maxillary incisor on the right side, which is unlikely to have affected AA868 during life.

E.20.3. Implications



E. 20.2 - Plan of Alington Avenue with AA868's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

Supernumerary teeth are known to have genetic predisposition and can be related to other syndromes (Subasioglu et al. 2015), although none are evident in this case. A singular extra tooth is unlikely to cause major issues for this individual and, the Romans did have capacity to remove teeth as required (Jackson 1988). The burial of skeleton AA868 was found in grave 2696. This grave is located to the north of the main cluster and in close association to extant Bronze Age earthworks and grave 2621 which contained AA328, a prime adult female (see figure E.20.2).

Archaeothanatological study of the excavation photograph strongly confirm the primary nature of the burial, as the labile joints of both feet and left hand have maintained anatomical position

(see figure E.20.3). Verticalisation of the clavicles, particularly evident on the left, point towards the use of wrappings in the burial. The excavation photograph clearly shows the hobnails surrounding both feet, indicating footwear being worn in the burial. It is possible that something heavy like a coffin lid fell on to the remains, as evident through the post-mortem broken face and pelvic girdle. Additionally, the excavation photography clearly shows nails surrounding the individual, heavily suggestive of coffin use.

E.20.4. Discussion

Young adulthood is a relatively unusual stage in which to die, the age group representing four out of a total of 37 individuals. The recent attainment of full maturity would place the individual at marital age. Although there is no evidence that this person's death was a result of problems related to pregnancy, this cannot be ruled out. Childbirth is cited as a high-risk factor for Roman women (Jackson 1988). There is no evidence of particular investment in this burial, however, which has been recognised elsewhere and described as *mors immatura*, a response to a perceived premature death particularly evident for young women (Martin-Kilcher 2000). There is no palaeopathology to help understand the dis/ability related experiences had in this short life, therefore all discussion remains speculative.

E.21. AA893

Sex: Male **Age**: young adult (20-25 years) **Stature**: 172cm

Preservation and completeness: c95% complete.

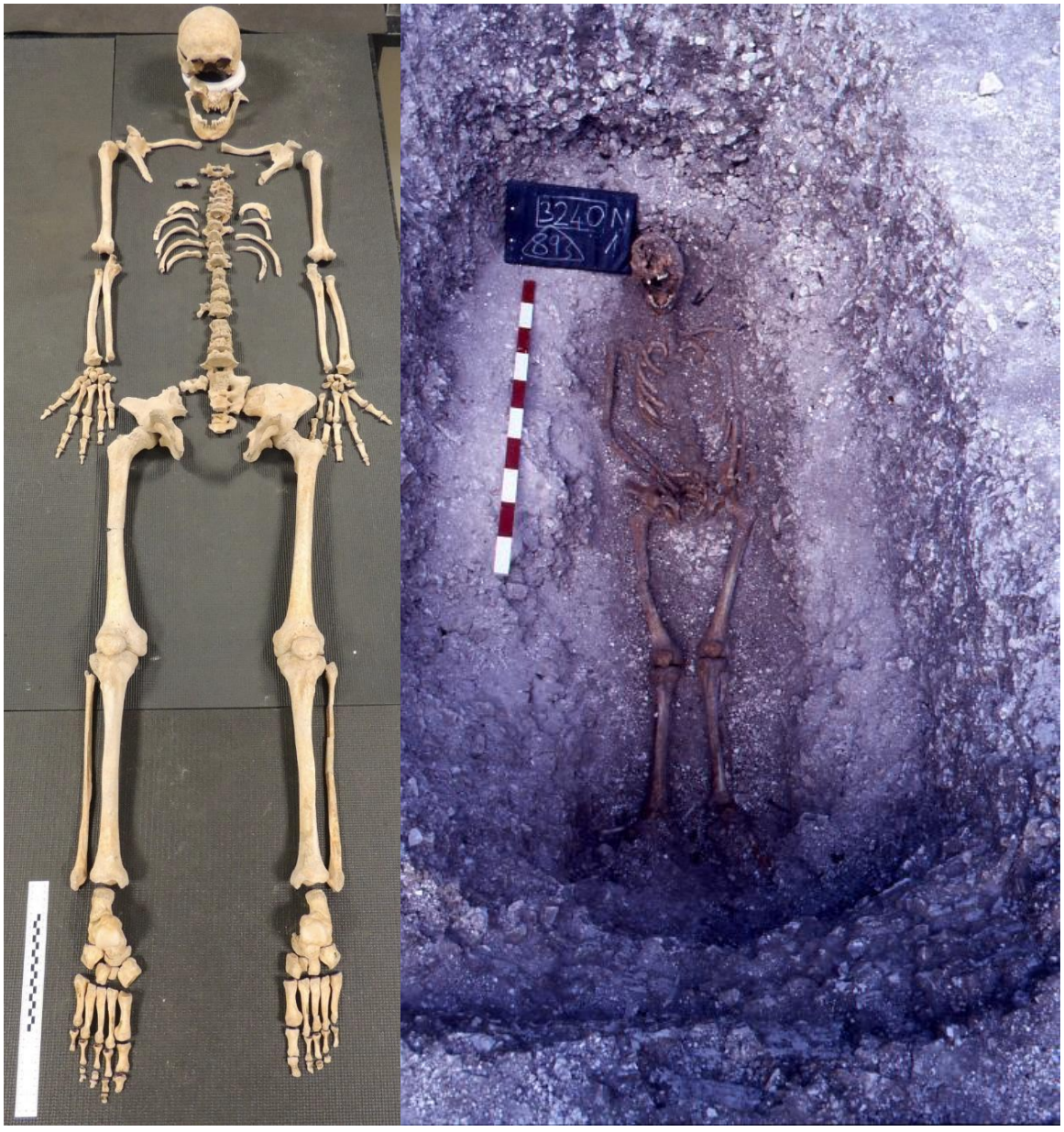
Grave number: 3240

Burial description: singular, primary interment, irregular grave cut, dimensions: 1.80m long, 1.00m wide, 0.83m deep. Wooden coffin. Position – supine with hands together over groin, head at north-east, orientation 25° (Davies et al. 2002: 210).

Grave goods: hobnails

Pathologies observed: Schmorl's nodes in four thoracic vertebrae, spina bifida occulta

Specialised analysis: archaeothanatology



E. 21.1 - AA893. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.21.1. Description

AA893 refers to the c.95% complete set of human skeletal remains found at Alington Avenue in grave 3240. Sex estimation through available traits in the pelvic girdle and skull identified the individual to be a biological male. Transition ageing combined with dental attrition analysis identified the individual to have been a young adult at time of death. The individual is estimated to have been 172cm tall. AA893 exhibits spina bifida occulta throughout the whole length of the sacrum and severe Schmorl's nodes in the anterior vertebral bodies of four thoracic vertebrae. Skeleton AA893 has congenitally missing 3rd molars (except in the left side maxilla).

E.21.2. Differential diagnosis

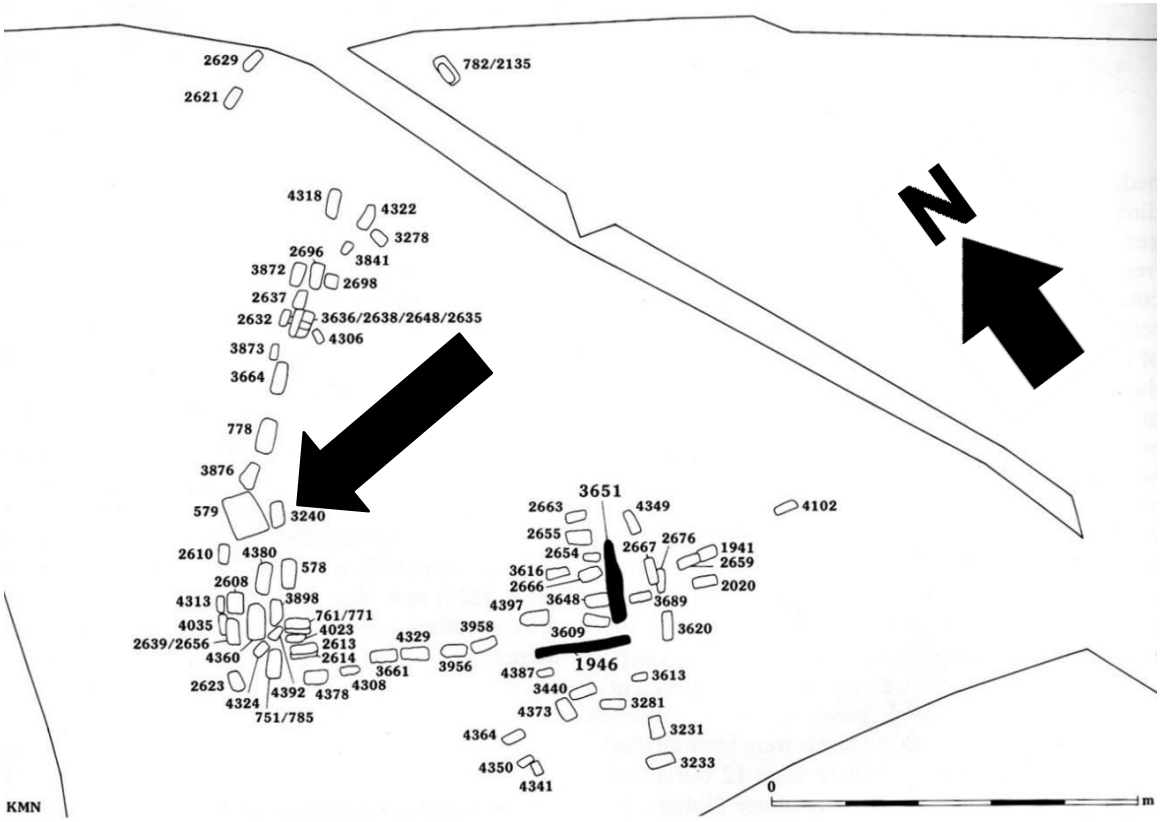
AA893 exhibits an example of spina bifida occulta over the entire length of the sacrum. Spina bifida is the name given to failed vertebral arch development (Ortner 2003). In cases of spina bifida occulta the arch defects will be covered over by connective tissue. The individual would likely not have been aware of the pathology and experienced little to no impairment as a result (Ortner 2003). Similar to osteoarthritis, Schmorl's nodes can be asymptomatic or a severe impairment. As AA893 features none of the incidents that Faccia and Williams (2008) describe as particularly linked to severe symptoms, the potentially impairing nature of the pathology is not discussed in this case.

E.21.3. Implications

There are palaeopathological indications which would point toward unprojected variation in the dis/ability continuum. The burial of AA893 was found in grave 3240 which is located in the main cemetery of the later Roman period (figure E.21.2). The primary nature of the burial is evident through the maintained anatomical position of the labile joints in the right hand particularly (figure E.21.3). The hobnails present in the burial around the feet suggest that the corpse was clothed, the possible verticalization of the right clavicle lends weight to this suggestion. Coffin use is suggested by the presence of nails found in the burial. The mobility of the mandible suggests that the joint was able to move in a void during burial.

E.21.4. Discussion

There are no palaeopathological indicators that suggest a variation in the dis/ability continuum. Young adulthood is a relatively unusual age at which to die, the age group being represented by four out of a total of 37 people at Alington Avenue. The burial, however, represents a typical example of Alington Avenue mortuary treatment, with prone position, coffin and shoe provision, seeming to reveal nothing exceptional about this individual or the circumstances surrounding their death.



E. 21.2 - Plan of Alington Avenue with AA893's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

E.22. AA960

Sex: Female **Age**: much older adult (66-94 years) **Stature**: 166cm

Preservation and completeness: c95% complete.

Grave number: 3281

Burial description: singular, primary interment, sub-rectangular grave cut, dimensions: 2.40m long, 0.80m wide, 0.70m deep. Wooden coffin. Position – Supine, with arms straight, hands on hips, head at south-east, orientation 115° (Davies et al. 2002: 210).

Grave goods: hobnails

Pathologies observed: cervical vertebrae osteoarthritis

Specialised analysis: archaeothanatology

E. 22.1 - AA960 laid out to study. Source: author's own image.

E.22.1. Description

Skeleton AA960 refers to the remains found in grave 3281 at Alington Avenue. The specimen is very well-preserved, approximately 95% intact. Sex estimation, through available traits in the pelvic girdle and skull, identified the individual to be a biological female. Transition ageing has identified the individual to have been a much older adult at time of death. The individual is estimated to have stood at 166cm tall. The excavation report suggests that the lumbar vertebrae 4-5 showed evidence of tuberculosis (Waldron 2002). At the time of study, these bones were missing and so this diagnosis could not be confirmed. The only notable example of palaeopathology found at time of study was incidence of osteoarthritis and vertebral pathology in the cervical vertebrae. The dentition was missing.

E.22.2. Diagnosis

AA960 has exhibited severe palaeopathology in the cervical vertebrae. Cervical 4-7 shows extensive porosity and lipping that are graded to level III on the vertebral bodies (Brothwell 1981). Cervical vertebrae 5 and 6 are also severely compressed anteriorly. As discussed in section 3.5.5, the connection between osteoarthritic lesions with pain and debilitating experiences is unclear (Jurmain 1999). None of the characteristics associated with increased likelihood of impairment has been identified in this case so, the potential consequences are not explored further.

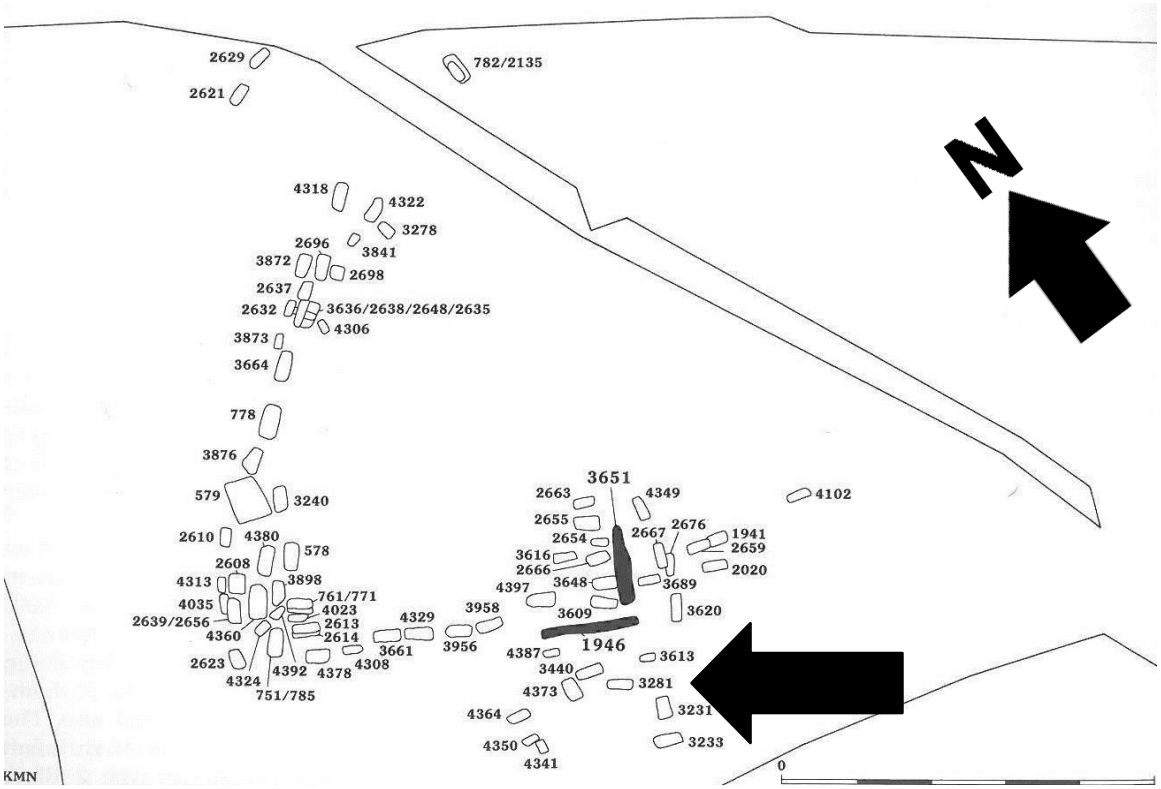
E.22.3. Implications

E. 22.2 - AA960 in situ. Source: Dorset County Museum.

AA960 exhibited no palaeopathology that could infer unprojected variations in the dis/ability continuum. The burial of skeleton AA960 was found in grave 3281 which is located in the main cemetery of the later Roman period, just south of ditch 1946 (figure E.22.2). The burial is described as including a coffin and hobnailed shoes. The primary nature of this interment is difficult to confirm, although the labile joints in the right foot seem to be in anatomical position. There seems to have been a fair amount of movement in the grave, for example the right tibia has laterally moved out of anatomical position (figure E.22.3). This free movement perhaps suggests the body was placed in a void. The left side clavicle suggests an *effet de parois*, which may have been the result of clothing. The presence of hobnails in the grave corroborates this.

E.22.4. Discussion

There are no palaeopathological indicators that suggest a variation in the dis/ability continuum. The burial in many ways is typical of Alington Avenue, fulfilling the criteria of coffin use, shoe provision and supine position. There is no evidence that the individual's experiences or death were perceived as exceptional.



E. 22.3 - Plan of Alington Avenue with AA960's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

E.23. AA962

Sex: male **Age**: prime adult (25-35 years) **Stature**: 164cm

Preservation and completeness: c95% complete.

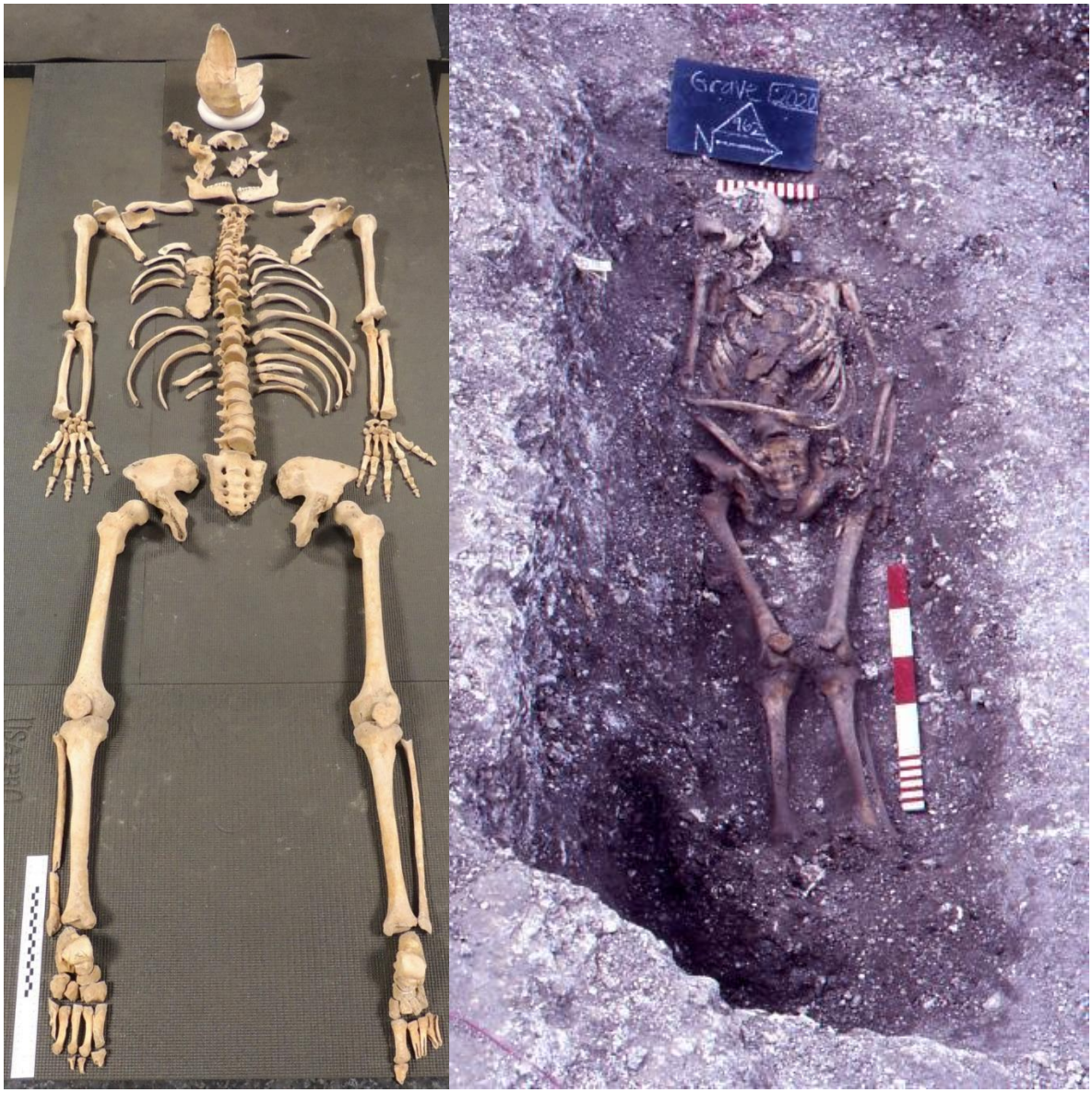
Grave number: 2020

Burial description: singular, primary interment, sub-rectangular grave cut, dimensions 2.30m long, 0.65m wide, 0.50m deep. Wooden coffin. Position – Supine, left hand over groin, right arm at side, head at north-west, orientation 300° (Davies et al. 2002: 207).

Grave goods: hobnails, boot plate

Pathologies observed: Schmorl's nodes

Specialised analysis: archaeothanatology, dietary isotopic analysis



E. 23.1 - AA962. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.23.1. Description

AA962 refers to the c.95% complete human skeleton from Alington Avenue found in grave 2020. Sex estimation through available traits in the pelvic girdle and skull identified the individual to be a biological male. Transition ageing estimated that the individual died between the age of 15-42

years. Dental attrition analysis narrowed this age estimate, identifying the individual as a prime adult at time of death. The individual is estimated to be 164cm tall. Thoracic vertebrae 9-12 and lumbar vertebrae 1 have Schmorl's nodes in the anterior vertebral bodies. There is a single severe interproximal carious lesion between the left mandibular first and second molars. Skeleton AA962 formed part of a larger isotopic study looking for changing dietary patterns over an extended period in Dorset (Redfern et al. 2010). AA962's isotopic signature formed part of the 'G1' cluster, the group whose diet appears to have had less of a marine protein component (figure 6.5).

E.23.2. Differential Diagnosis

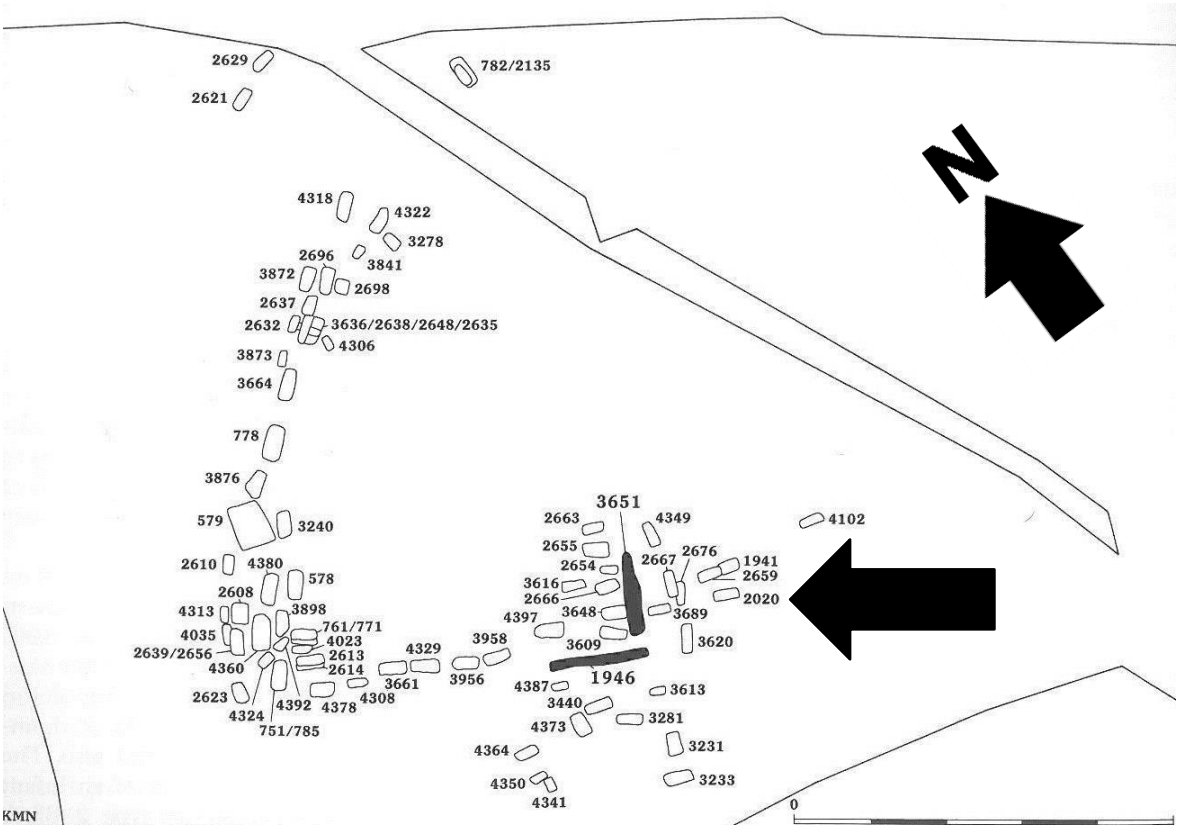
Schmorl's nodes, like osteoarthritic lesions, can have varied clinical presentation, ranging from severe pain and impairment to completely asymptomatic. There appears to be a lack of correlation between the size and extent of the lesion and the experience had by the patient (Faccia and Williams 2008). In the case of AA962, none of the characteristics which is associated with increased likelihood of symptomatic experience are present, therefore their potential consequences are not explored in this case (see section 3.5.5). The individual's dentition is comparatively good compared to the rest of the Alington Avenue population and AA962's age group (section 6.5).

E.23.3. Implications

AA962 exhibited no palaeopathology that could infer unprojected variations in the dis/ability continuum. The burial of skeleton AA962 was found in grave 2020 which is located in the main cemetery of the later Roman period in close association with the ditch structures at 3651 (see figure E.23.2). The burial is described as including a wooden coffin and hobnailed shoes. The coffin is represented with more components including stud fittings, spike loop fittings and coffin nails (Davies et al. 2002: 207). The primary nature of the burial is difficult to infer, although some of the labile joints in the left hand have maintained anatomical position. There has been some disturbance within the burial, however, evident due to the right radius and ulna having separated into an anatomically impossible position (see figure E.23.3). The use of wrappings can be inferred by a clear effet de parois is evident of the right side of the body, with verticalization of the right clavicle. Additionally, the rib cage clearly fallen tightly towards the medical plane, suggesting that material stopped the ribs fallen into lateral space.

E.23.4. Discussion

There are no palaeopathological indicators in skeleton AA962 that suggest a variation in the dis/ability continuum. The burial in many ways is typical of Alington Avenue, fulfilling the criteria of coffin use, shoe provision and supine position. There is no evidence that the individual's experiences or death were perceived as exceptional.



E 23.1 - Plan of Alington Avenue with AA960's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

E.24. AA1009

Sex: female **Age**: prime adult (26-43 years) **Stature**: 167cm

Preservation and completeness: c90% complete, although at time of study much of the surface of the bones are damaged.

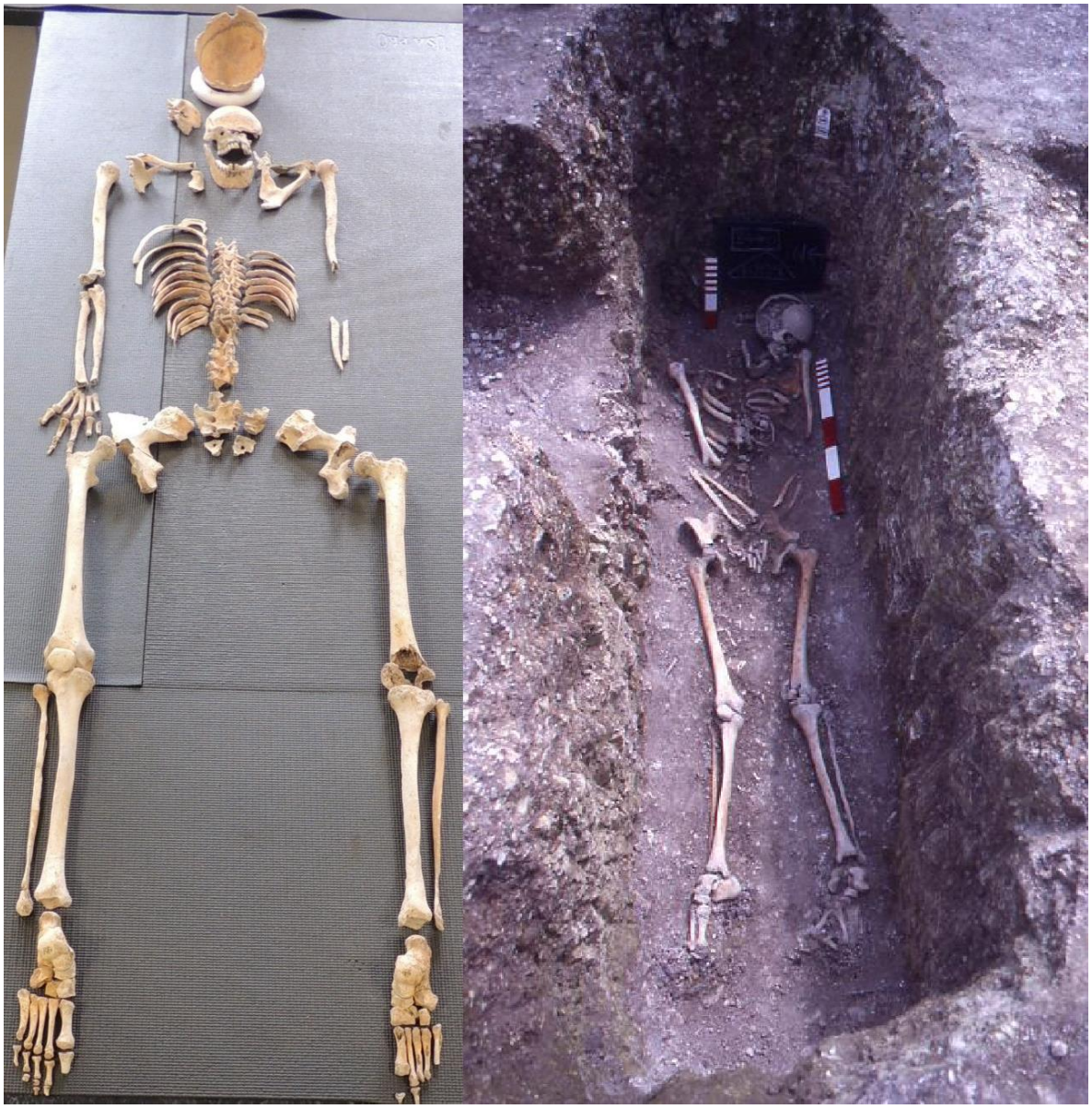
Grave number: 3440

Burial description: singular, primary interment, irregular grave cut, dimensions: 2.10m long, 0.54m wide, 1.80m deep. Wooden coffin. Position – Supine, hands together over groin, head at east, orientation 101° (Davies et al. 2002: 210).

Grave goods: coin at mouth (Tetricus I, likely deposited between AD270-330), hobnails worn

Pathologies observed: semi fusion of the fifth lumbar vertebra to the sacrum.

Specialised analysis: archaeothanatology



E 24.1 – AA1009. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.24.1. Description

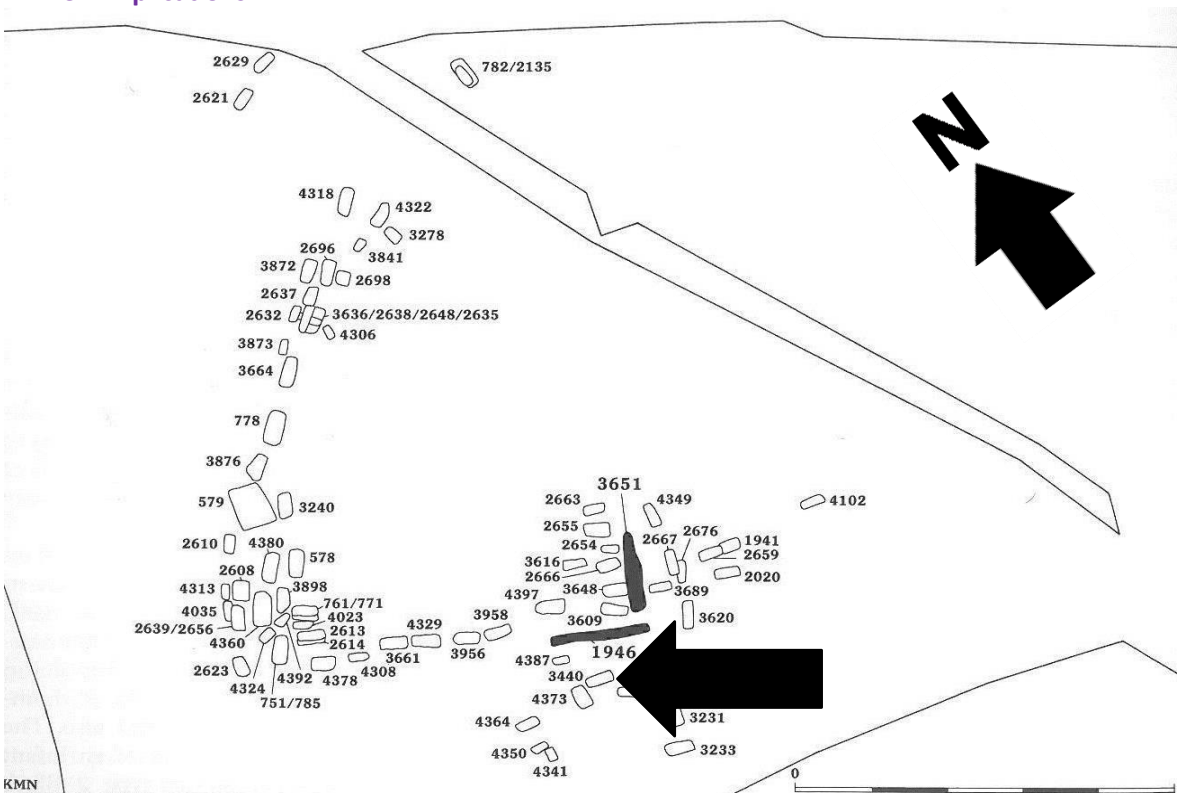
AA1009 refers to a human skeleton from Alington Avenue found in grave 3440. The burial is dated, with a good degree of confidence, to the late 3rd – early 4th century AD, due to a coin

found in the grave likely deposited between AD270-330. This skeleton is a very well-preserved specimen estimated to be 90% intact. Sex estimation through available traits in the pelvic girdle and skull identified the individual to be a biological female. Transition ageing has identified the individual to have been a prime adult at time of death. The individual is estimated to be 167cm tall. The fifth lumbar vertebra is semi-fused to the sacrum. There is no evidence of additional palaeopathology, perhaps due to the severe degradation of the bony surfaces.

E.24.2. Differential Diagnosis

Fusion of the fifth lumbar vertebrae to the sacrum is known as sacralization, which is a reasonably common congenital anomaly developed as an embryo (Hecht 2018; Ortner 2003). Sacralization is usually asymptomatic and has been recognised as a non-metric trait (Brothwell 1982).

E.24.3. Implications



E 24.2 - Plan of Alington Avenue with AA1009's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

AA1009 exhibited no palaeopathology that would indicate variation in the dis/ability continuum. The burial of the skeleton was found in grave 3440 which is located in the main cemetery of the later Roman period in close association with the ditch structures at 1946 (see figure E.24.2). The primary nature of the burial is confirmed by the maintenance of the anatomical position of the labile joints in both feet. It is tentatively suggested that the verticalization of the left humerus and medial repositioning of the right ribs point towards wrappings. The bones have shown a good deal of mobility, suggestive of coffin use (Duday 2009). Both these findings are corroborated by the finding of hobnails and coffins nails in the burial. The individual was found with a coin in the mouth. The buccal side of the maxillary teeth from right 1st molar to the left 1st premolar are discoloured green, as a result of the coin. This is an example of a Charon's obol, a payment to the

mythical ferryman, an example of pagan burial ritual (Brown 2008). AA1009 is one of four individuals found with a Charon's obol, suggesting that the votive was a minority rite at Alington Avenue.

E.24.4. Discussion

There are no palaeopathological indicators in skeleton AA1009 that suggest a variation in the dis/ability continuum. The burial in many ways is typical of Alington Avenue, fulfilling the criteria of coffin use, shoe provision and supine position. The addition of a Charon's obol in the grave context points towards additional investment in the funerary rite, both financially and preparatorily.

E.25. AA1032

Sex: male **Assigned age category**: much older adult (64-100 years) **Stature**: 174cm

Preservation and completeness: c95% complete.

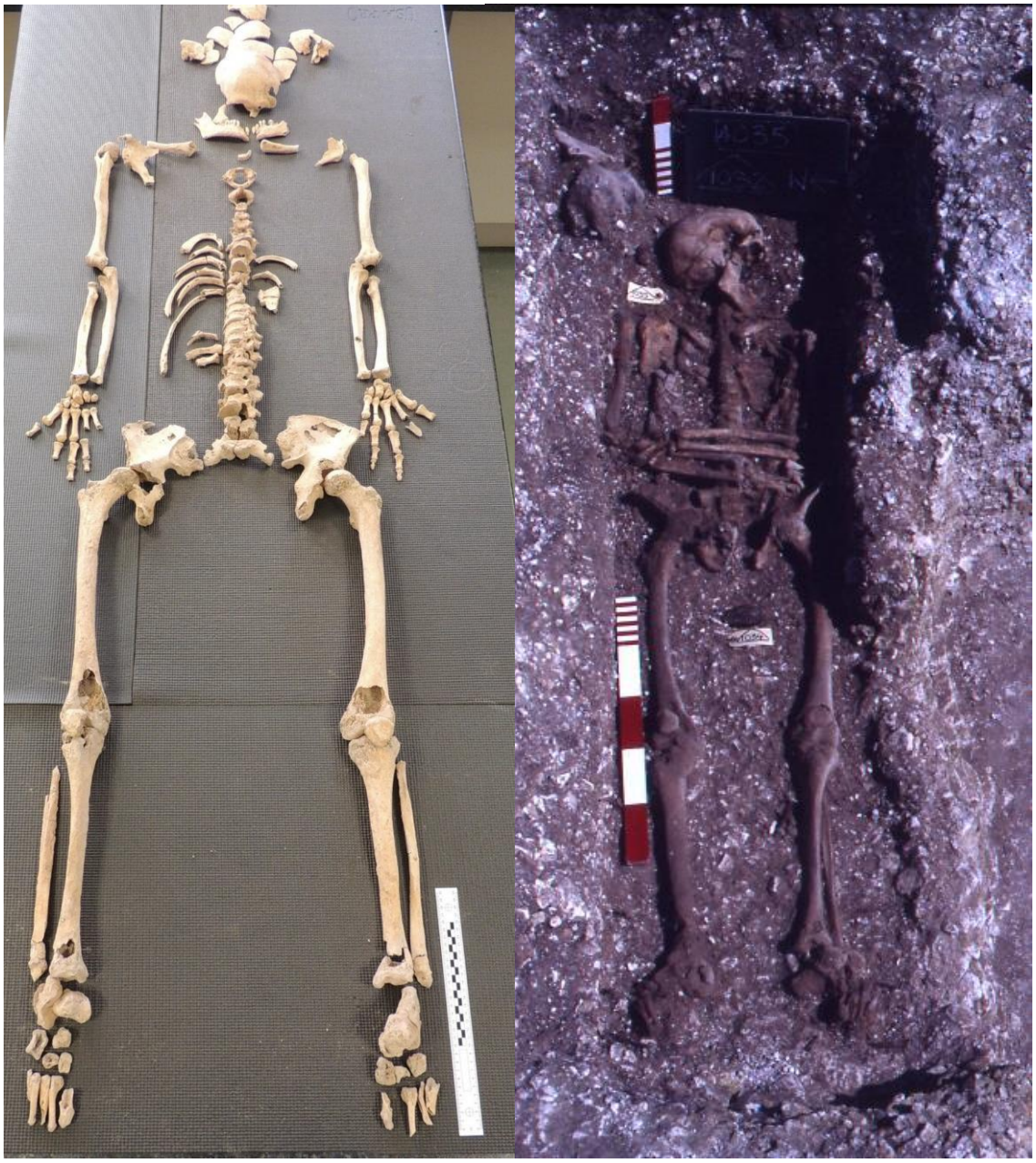
Grave number: 4035

Burial description: singular, primary interment, sub-rectangular grave cut, dimensions: 1.80m long, 0.3m wide, 0.3m deep. Position – supine, arms folded across waist, head at north, orientation 25° (Davies et al. 2002).

Grave goods: n/a

Pathologies observed: osteoarthritis in the spine, extensive dental pathologies, fracture 5th metacarpal in right hand.

Specialised analysis: archaeothanatology



E 25.1 - AA1032. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.25.1. Description

AA1032 refers to the human remains found in grave 4035 at Alington Avenue. The skeleton is fairly complete, although the majority of the sexually dimorphic traits within the pelvic girdle were poorly preserved. Assessment of the sexually dimorphic traits, particularly in the cranium, determined AA1032 to have been a biological male. Transition ageing analysis estimated the individual to have been aged over 64 years at time of death, placing them in the much older age category. Their stature is estimated to have been 174cm tall. Skeleton AA1032 exhibits several examples of palaeopathology typical of the older age group including osteoarthritic lesions throughout the spine and considerable dental pathology. AA1032 also had a fracture in the fifth metacarpal in the right hand.

E.25.2. Differential Diagnosis

There are considerable incidents of osteoarthritic lesions throughout the spine. In the 11th and 12th thoracic and 3rd-5th lumbar vertebrae, osteoarthritic lesions occur alongside severe Schmorl's nodes. Coincidental osteoarthritis and Schmorl's nodes have been recognised to more likely result in painful and debilitating experience and so is explored further here (Faccia and Williams 2008).

AA1032 exhibited a fracture in the mid-shaft of the fifth metacarpal of the right hand. The break has left a line marking a diagonal break from the distal medial surface to the proximal lateral surface, suggesting an oblique or spiral fracture type (Lovell 1997). The metacarpal is well-healed however, a new bony callus remains on the palmar side at the fracture site. The associated proximal phalanx has a large bony enthesophyte along the palmar ridges.

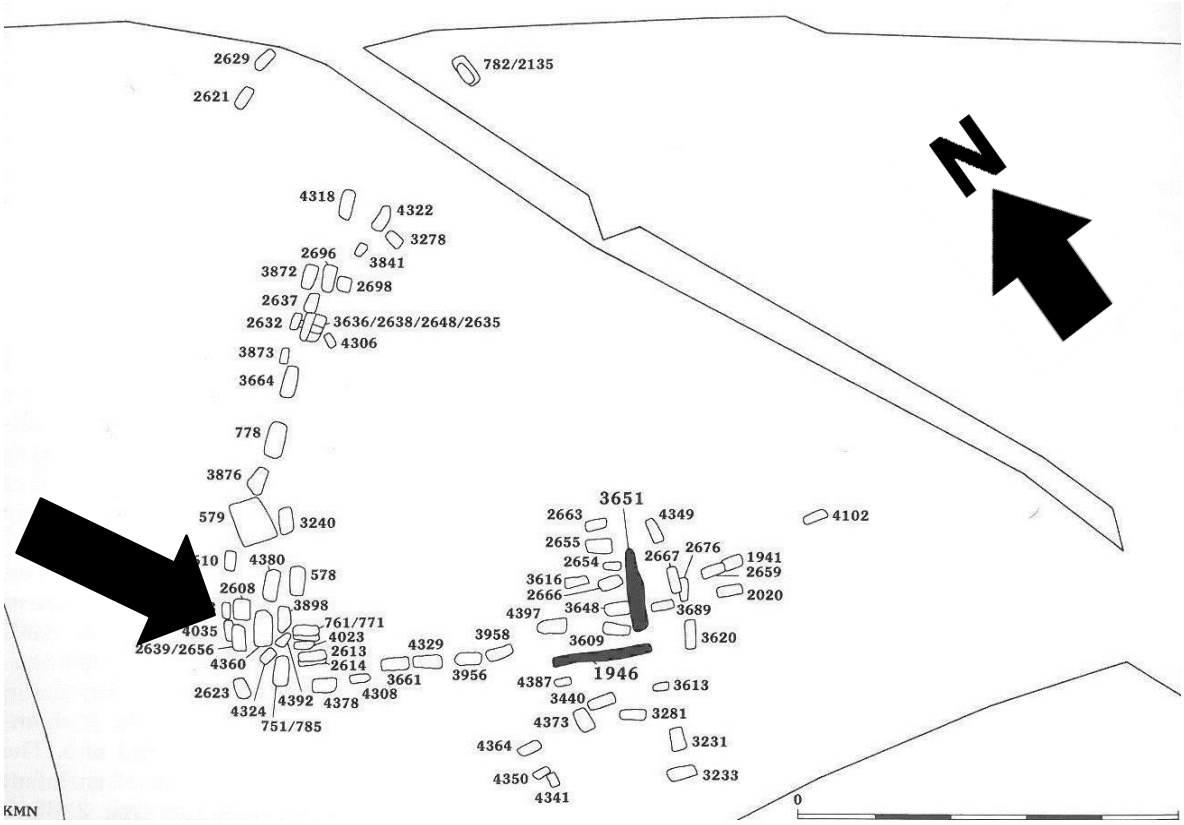
Only the mandibular teeth were available for study. The individual lost three mandibular teeth antemortem: the two first incisors and the left first molar. There are also two incidents of carious lesions within both sides' molar dentition.

E.25.3. Implications

AA1032 was by no means unusual for having osteoarthritis related palaeopathology. Eight out of the nine individuals in the much older age group have some osteoarthritis palaeopathology (figure 6.8). It is reasonable to tentatively infer that AA1032 experienced pain in relation to their back pathologies. For example, 92% of participants in Faccia and Williams study (2008) claimed that the Schmorl's nodes limited their activity. It is also interesting to note that the study participants also described the action they took in response to their Schmorl's nodes, which included taking prescription pain killers and applying heat (Faccia and Williams 2008: 39). Such treatments were well within the Roman medical repertoire and so could have been actions AA1032 also could have taken.

Skeleton AA1032 was one of five individuals from Alington Avenue to exhibit trauma palaeopathology, all of which were adult males. Such injuries are often associated with punching motions or crushing injuries (Lovell 1997). The injury in the fifth metacarpal is well-healed which suggests that the injury occurred at least months if not longer before death. Small bone fractures

generally take four to six weeks to heal (Waldron 2009), however, healing times do vary, for example fractures tend to take longer to heal as one gets older (Buikstra 2019). This healing period represents a very short time of variation in the dis/ability continuum. The changes in the bone however, represents a more permanent change in the live experience of using the, probably, dominant hand. The enthesophyte in the associated proximal phalanx is perhaps indicative of additional stress on the ligaments in that region, responding to that injury (Waldron 2009).
The dentition pathology exhibited in AA1032 is within the typical level of the much older age category at Alington Avenue (figure 6.9).



E 25.2 - Plan of Alington Avenue with AA1032's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

Skeleton AA1032's burial was in the main cemetery cluster at Alington Avenue (see figure E.25.2). The excavation photography of AA1032 in situ (figure E.25.3) confirmed the primary nature of the interment, as the labile joints of the feet are in anatomical position. The grave is narrow, at 0.3m wide, creating an *effet de parois*, reducing motion of the limbs laterally. The effet de parois could also possibly have caused the verticalization of the clavicles. Therefore, inferring wrappings or clothing in this case is not possible as the effet de parois mimics that of clothing. The narrow nature of the grave also disguises some of the evidence used to infer coffin usage. The excavation report does not record evidence of hobnails or a wooden coffin, frequently recorded for other individuals (Davies et al. 2002).

E.25.4. Discussion

The palaeopathology presented in AA1032 is not exceptional. It does, however, represent some detectable variation in the dis/ability continuum of the individual and, changes in their abilities

and bodily experiences. Fractures at Alington Avenue occur exclusively in biological male skeletons. It could be tentatively argued that such trauma represents a gendered distinction in behaviour, perhaps relating to the male tending to experience violence. The fracture in the metacarpal lends weight to this assessment, as this is a typical (although not exclusively) injury found in boxing. It is also notable that all but one of the fractures were found in the older age groups, perhaps suggesting that this was a high-risk age group for such an experience. This would perhaps be linked to elder abuse, although none of the Alington Avenue population exhibit a trauma pattern that has been recognised as most likely to represent abuse (Gowland 2015). It is also difficult to be certain when such injuries were obtained during a lifetime. The burial of AA1032 could be argued to have been a rushed affair. The dimensions of the grave cut are narrow and shallow and some of the standard mortuary provisions, such as a wooden coffin and shoes, are not evident. The individual is, however, buried within the main burial cluster and the experiences of the individual are within the expected trajectory of someone that age.

E.26. AA1062

Sex: male **Age**: prime adult (aged 27-35 years) **Stature:** 173cm

Preservation and completeness: c90% complete, although left leg long bones were missing at time of study.

Grave number: 4322

Burial description: singular, primary interment, irregular grave cut, dimensions: 2.20m long, 1.00m wide, 1.00m deep. Wooden coffin. Position – supine, flexed position left hand over groin, right arm slightly flexed, right hand by right hip, head at south-west, orientation 230° (Davies et al. 2002: 213).

Grave goods: n/a

Pathologies observed: osteoarthritis

Specialised analysis: archaeothanatology

E 26.1 - AA1062. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.26.1. Description

Skeleton AA1062 refers to the human remains found in grave 4332 at Alington Avenue, Dorset. This specimen is estimated to be 95% intact (Davies et al. 2002), however, at time of study the right left femur, tibia and fibula were missing. Sex estimation, through available traits in the pelvic girdle and skull, identified the individual to be a biological male. Transition ageing estimated AA1062 to have been between 27-42 years old at time of death. This estimation has been further honed through dental attrition analysis, confirming the individual to have been a prime adult. The individual is estimated to have been 173cm tall. Slight osteophytes are present in the elbow joints and the thoracic vertebrae 6-8. The same vertebrae also exhibit Schmorl's nodes. In the dentition, the right-side maxillary premolars are displaced by 90° distally. The two teeth's usually labial surfaces are turned distally, towards the back of the jaw. The second premolar's labial surface is tight against the first molar mesial surface. There was also evidence of a slight interproximal carious lesion on the left maxillary first molar and the antemortem loss of the left maxillary second molar.

E.26.2. Differential Diagnosis

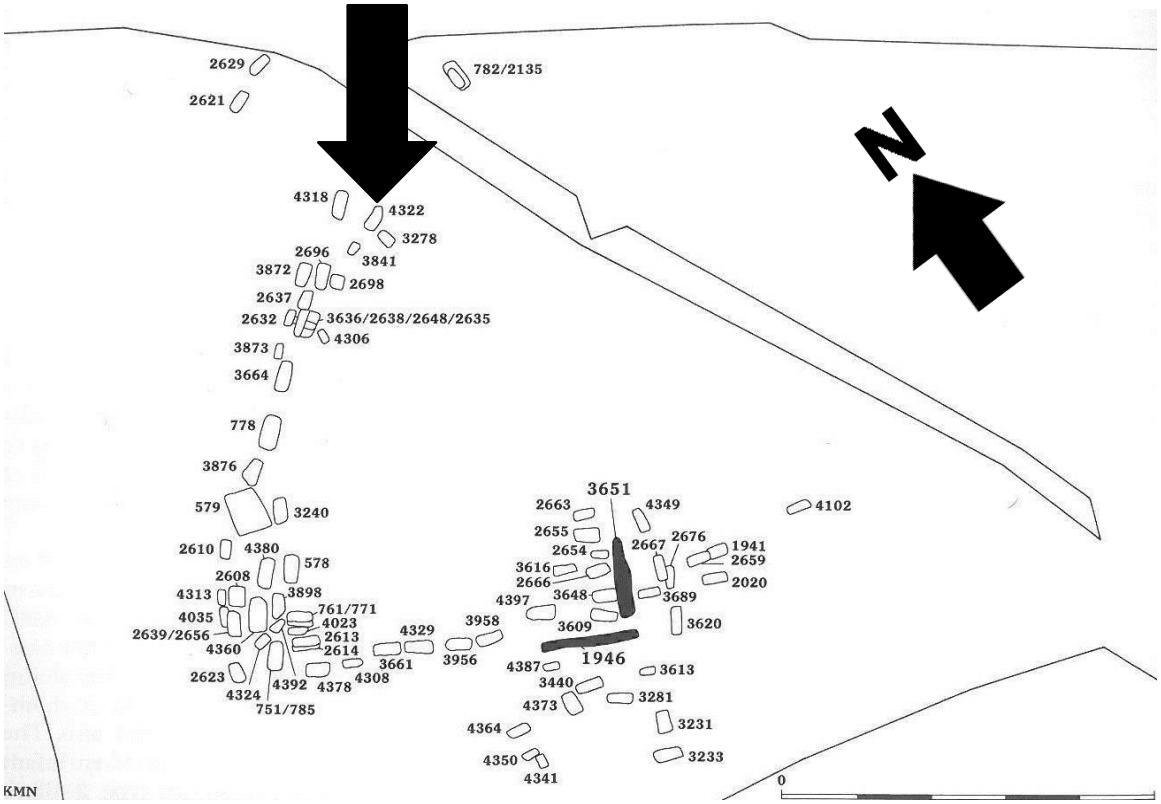
The osteophytes observed in the thoracic (T) vertebrae 6-8 and olecranon processes of the bilateral ulnae has been categorised as grade I and slight. Schmorl's nodes have been found alongside these osteophytes, in the inferior vertebral body of T6, the superior of T8 and both sides of T7. As discussed previously in section 3.5.5, the connection between osteoarthritic lesions with pain and debilitating experiences is unclear (Jurmain 1999), however the simultaneous exhibition of Schmorl's nodes and osteoarthritis has been noted as particularly likely to result in symptomatic presentation (Faccia and Williams 2008). The unusual displacement of the premolar teeth seems to have caused minimal disruption. Although the labile surface of premolar two encroached on the mesial surface of molar one, no resulting carious lesions has been noted. The displacement of the teeth may be related to a smaller jaw space, the individual is also congenitally missing their third molars which lends weight to this idea.

E.26.3. Implications

It is reasonable to tentatively infer that AA1062 experienced pain in relation to their back pathologies. For example, 92% of participants in Faccia and Williams study (2008) claimed that the Schmorl's nodes limited their activity. It is also interesting to note that the study participants also described the action they took in response to their Schmorl's nodes, which included taking prescription pain killers and applying heat (Faccia and Williams 2008: 39). Such treatments were well within the Roman medical repertoire and so could have been actions AA1062 also could have taken.

Despite the unusual dental pathology observed, it does not seem to have resulted in particularly adverse effects. The dental health seems to therefore be fairly normative for an individual at Alington Avenue, as indicated through the rate of antemortem tooth loss being exactly average for the prime adult age group (figure 6.9).

Skeleton AA1062 was found in grave 4332 which is located in the main cemetery of the later Roman period in close association with extant bronze age earthworks (see figure E.26.2). The maintenance of the labile joints in hands and feet in anatomical position suggests that grave 4332 was a primary interment (see figure E.26.3). The burial is described as including a coffin (Davies et al. 2002). Archaeothanatological analysis of the excavation photograph strongly supports this. The bone displacement demonstrates a great deal of movement within the burial. For example, the left femur has rolled out of anatomical position, the anterior surface of the bone facing down. This would only be possible if the body decomposed in a void. There is no evidence that the individual was clothed, unlike the majority of the Alington Avenue sample. There is no evidence of hobnailed shoes referenced in the excavation report (Davies et al. 2002), and the mobility of the bones is such to suggest that tight wrappings are unlikely to have been present.



E 26.2 - Plan of Alington Avenue with AA1062's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

E.26.4. Discussion

AA1062 presents evidence of a life that had, by time of death, seen changes in body experience. These experiences are, however, within the normal range for the population of Alington Avenue. Prime adulthood is the youngest age at which osteoarthritic lesions have been recognised in the skeletal population of Alington Avenue. AA1062 is, however, not alone in this experience. Half of all the prime adults at Alington Avenue had some evidence of osteoarthritic lesions in their skeletons (see section 6). Additionally AA1062's experience of death seems to be within the normal range for Alington Avenue, the prime adult age group being the most abundantly represented in the sample (see graph 6.2) and the individual has evidence for two out of the three standard mortuary provisions from the site – supine burial position and coffin use.

E.27. AA1066

Sex: n/a **Age**: juvenile (10.5-12.5 years) **Stature**: n/a

Preservation and completeness: described as c80% complete in the excavation report (Davies et al. 2002: 149), although many of joints are badly damaged or not observable.

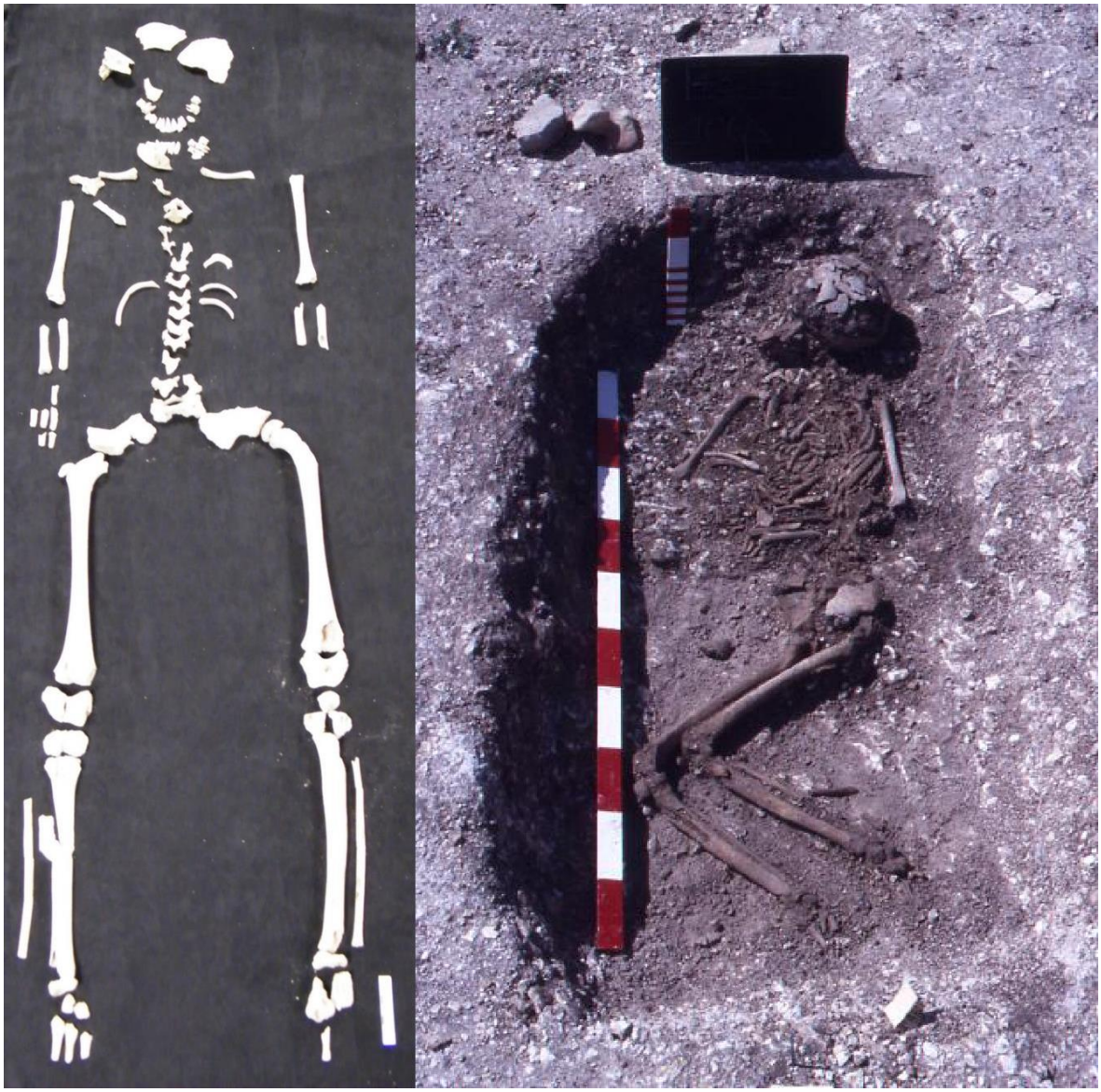
Grave number: 4324.

Burial description: singular interment, irregular grave cut, dimensions: 1.50m long, 0.80m wide, 0.30m deep. Position – flexed on right side, legs to right, arms unclear, head at west, orientation 265° (Davies et al. 2002: 213).

Grave goods: n/a

Pathologies observed: enamel hypoplasia

Specialised analysis: archaeothanatology



E 27.1 - AA1066. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

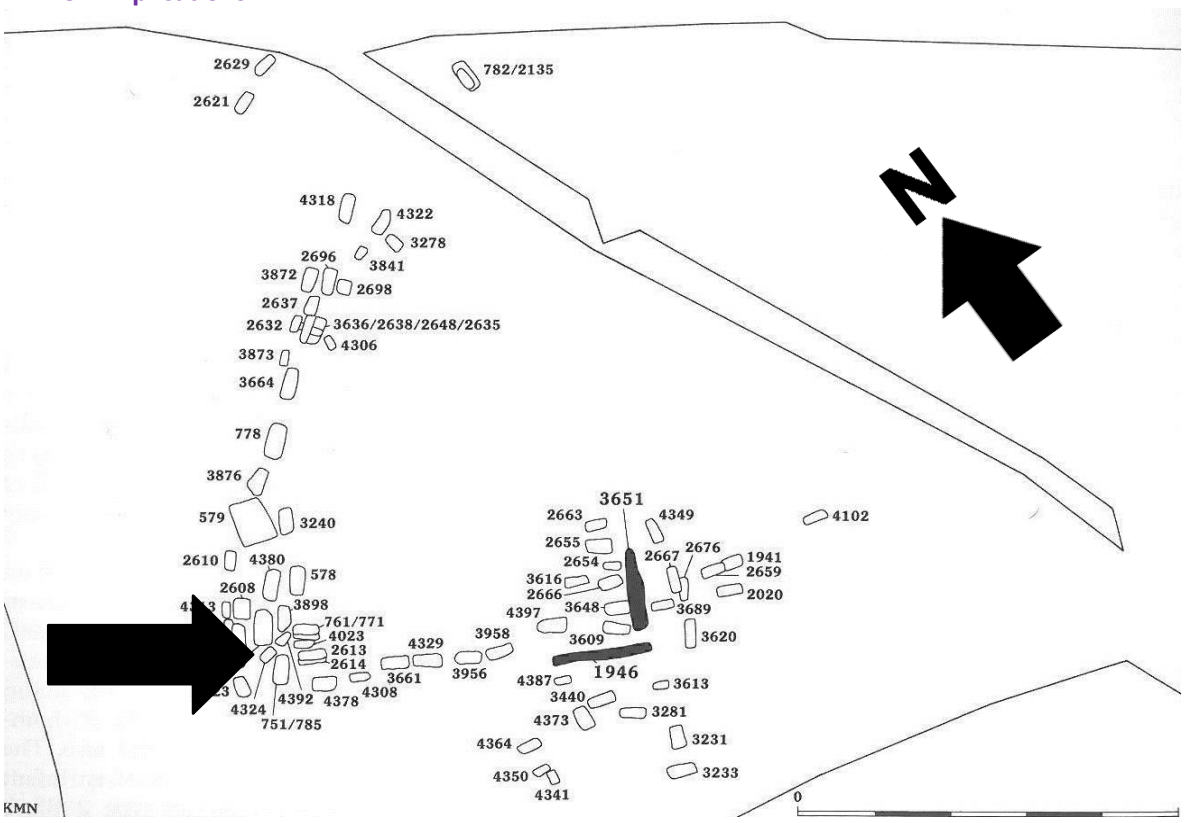
E.27.1. Description

Skeleton AA1066 refers to the human remains from Alington Avenue found in grave 4324. AA1066 is a well-preserved skeleton of a sub-adult, approximately 80% intact, although many of the long bone joints were severely damaged or missing at time of study. The majority of the joints are not observable, making the analysis of plate fusion for age determination unusable. An age estimation of between 10.5-12.5 years at time of death, was therefore obtained through the analysis of the dental eruption, placing the individual in the sub-adult age category (AlQahtani et al. 2010). As the remains have been assessed to be that of a sub-adult, sex determination was not possible. The palaeopathology evidence is quite limited, although there is incidence of enamel hypoplasia.

E.27.2. Diagnosis

Several incidence of enamel hypoplasia points towards health stress during the period when the teeth are developing, approximately between ages 3-9 (AlQahtani et al. 2010; Roberts and Manchester 2010).

E.27.3. Implications



E 27.2 - Plan of Alington Avenue with AA1066's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

The pathology identified within AA1066 points towards episodes of health stress occurring during early childhood. There is however no clue as to the cause of death.

The individual is included within the main cemetery group, in the very centre of the cluster (see figure E.27.2). Confirming the primary or secondary nature of the burial is difficult, particularly due to the flexed position of the skeleton, as a number of the labile joints are unobservable or in unstable position (see figure E.27.3). The presence of a coffin was not reported in the excavation

report (Davies et al. 2002) and this seems to be confirmed by archaeothanatological analysis, especially as there has been limited mobility of the bones in the grave during decomposition, typical of an un-coffined burial.

E.27.4. Discussion

The burial of AA1066 fulfilled none of the three criteria of a standard burial identified at Alington Avenue. They were buried flexed, without a coffin or evident footwear. The burial represents a deviation from the normative at Alington Avenue. Yet, the position of the burial in a very central location suggests inclusion. The individual is one of three sub-adults studied in the sample. This age is a relatively unusual stage at which to die and would be a candidate for mors immatura (Martin-Kilcher 2000). There is no evidence of this behaviour however, perhaps relating to the presence of enamel hypoplasia and incidences of health stress suggesting that their death was not unexpected.

E.28. AA1088

Sex: female **Age**: prime adult (32-88 years) **Stature**: 168cm

Preservation and completeness: described as c90% complete in the excavation report (Davies et al. 2002: 149). At time of study, however, the majority of the right-side body was missing.

Grave number: 4341

Burial description: singular, primary interment, irregular, oval shaped grave cut, dimensions: 1.45m long, 0.75m wide, 0.35m deep. Position – supine skeleton with left hand over groin, right arm slightly flexed away from body, head at south, orientation 210° (Davies et al. 2002: 213).

Grave goods: type 8 jar (Davies et al. 2002).

Pathologies observed: osteoarthritis and Schmorl's node

Specialised analysis: archaeothanatology

E 28.1 - AA1088. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.28.1. Description

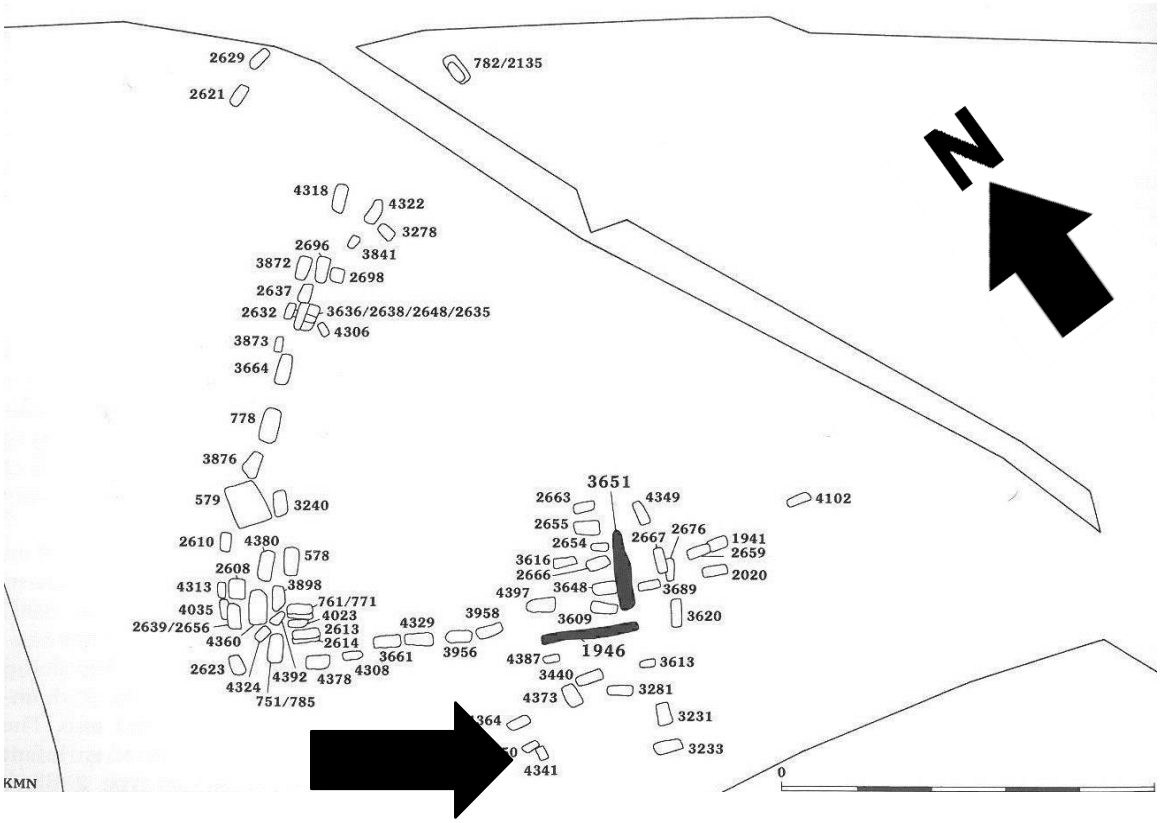
AA1088 refers to a human skeleton from Alington Avenue found in grave 4341. This skeleton was described as 90% preserved (Waldron 2002: 149), however at the time of study the majority of the right-side of the skeleton was missing. Sex estimation, through available traits in the pelvic girdle and skull, identified the individual to be a biological female. Transition ageing has identified AA1088 to be aged between 32-88 years at time of death. Analysis of the dentition attrition helps to focus that age estimation to the younger end of the range, categorising the individual as a prime adult. The individual is estimated to be 168cm tall. Skeleton AA1088 exhibited instances of dental pathology. Additionally, slight osteophytes were observed on thoracic vertebrae 7-9 and a severe Schmorl's node was present in the 12th thoracic vertebra.

E.28.2. Differential Diagnosis

Grade I osteophytes are present on thoracic vertebrae 7-9. A severe Schmorl's node has also been identified on the superior vertebral body surface on the 12th thoracic vertebra. As discussed previously in section 3.5.5, the connection between osteoarthritic lesions with pain and debilitating experience is unclear (Jurmain 1999). Simultaneous Schmorl's nodes and osteophytes has been demonstrated to more likely be associated with pain experience, but only if they affect the same areas of the spine, which is not the case in this skeleton. Therefore, the potential consequences of these lesions are not explored in this osteobiography. The 1st maxillary molar on the left side is affected by a large advanced interproximal carious lesion. This however presents a comparatively good level of dental health compared to the rest of the age group (see section 6.5).

E.28.3. Implications

AA1088 exhibited no palaeopathology that would indicate variation in the dis/ability continuum. Skeleton AA1088 was found in grave 4341 which is located on the edge of the main cemetery, in close association with grave 4350 (AA1137) (see figure E.28.2). This was one of the few examples of an individual which was not buried in a coffin. This burial is one of three examples studied where the individual was buried with an example of pottery which, in this case, was a type 8 jar placed at the head end of the grave (Davies et al. 2002). The labile joints of the hands have maintained their anatomical position, suggesting that grave 4341 was a primary interment. The individual was buried with the upper body leant against the edge of the grave. This position would appear necessitated by the grave length which, at 1.45m long, was too short to accommodate the individual's entire 1.68m stature. The excavation photography shows a fair degree of post-burial mobility of the bones (see figure E.28.3). The burial position is likely the cause of some of this movement. The decomposition of the thorax would have left an empty space and the bones in an unstable position, causing them to fall out of anatomical position into the void. As a result of the unusual burial position it is difficult to determine whether the individual was buried clothed and, there is a lack of hobnails in the burial to corroborate a speculation. The oval shaped grave cut suggests that the individual was not buried in a coffin.



E 28.2 - Plan of Alington Avenue with AA1088's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

E.28.4. Discussion

AA1088 exhibited no palaeopathology that would indicate variation in the dis/ability continuum. The burial shares a number of features with its neighbour (AA1137) including a lack of two of the three standard provisions described for Alington Avenue – a coffin and shoe provision. The burial stands out compared to its peers in many ways including the oval shaped, too short grave cut and the pot grave good. Gendered grave goods have mostly been ruled out for this region and time period (Hamlin 2007), so the provision of pottery for this individual and not for AA1137 is unlikely to be related to gender. The provision of pottery and an oval burial seems to match the earlier Durotrigian burial tradition described for Alington Avenue (Davies et al. 2002). Burial in amongst earlier earthworks has been argued to represent a cemetery population's symbolic connection to past peoples as ancestors (Esmonde-Cleary 2000). The mimicking of their burial tradition could be argued to continue this pattern.

E.29. AA1089

Sex: n/a **Age**: sub-adult (16-18 years) **Stature**: n/a

Preservation and completeness: described as c75% complete in the excavation report (Davies et al. 2002: 149). At time of study, most of the lower limbs were missing.

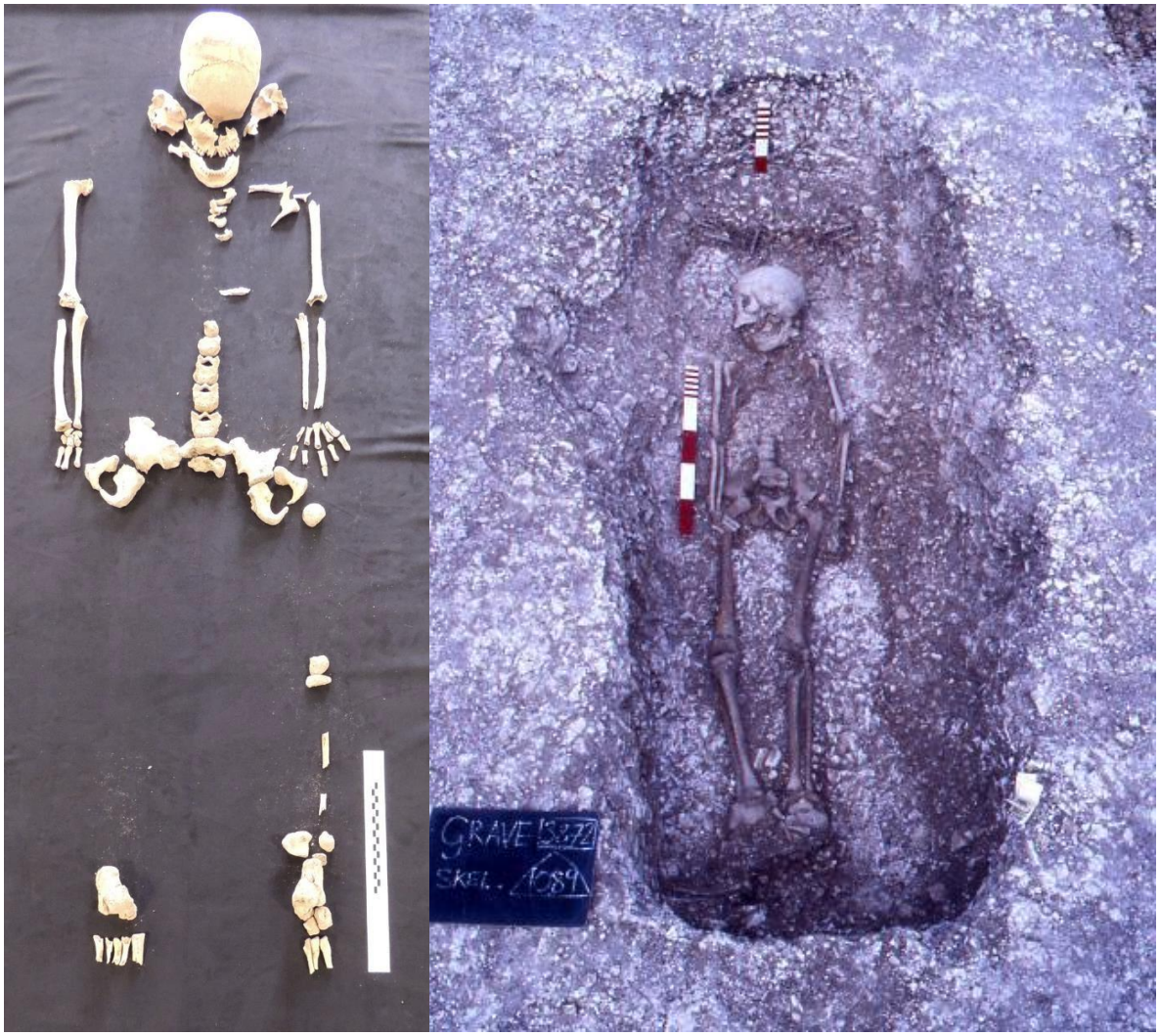
Grave number: 3872.

Burial description: singular, primary (?) interment, slight ovate grave cut, dimensions: 2.15m long, 0.90m wide, 0.35m deep. Wooden coffin. Position – supine skeleton, arms straight at side, head at north-east, orientation 55° (Davies et al. 2002: 212).

Grave goods: hobnails

Pathologies observed: periostitis, cribra orbitalia, enamel hypoplasia

Specialised analysis: archaeothanatology



E 29.1 - AA1089. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.29.1. Description

Skeleton AA1089 refers to the human remains found in grave 3872 at Alington Avenue. The skeleton was reported to be a well-preserved specimen, however at the time of study, much of the lower body was missing. A combination of analysis of the dental development and fusion levels of the extant joints helped age this individual. The third molars were erupting at time of

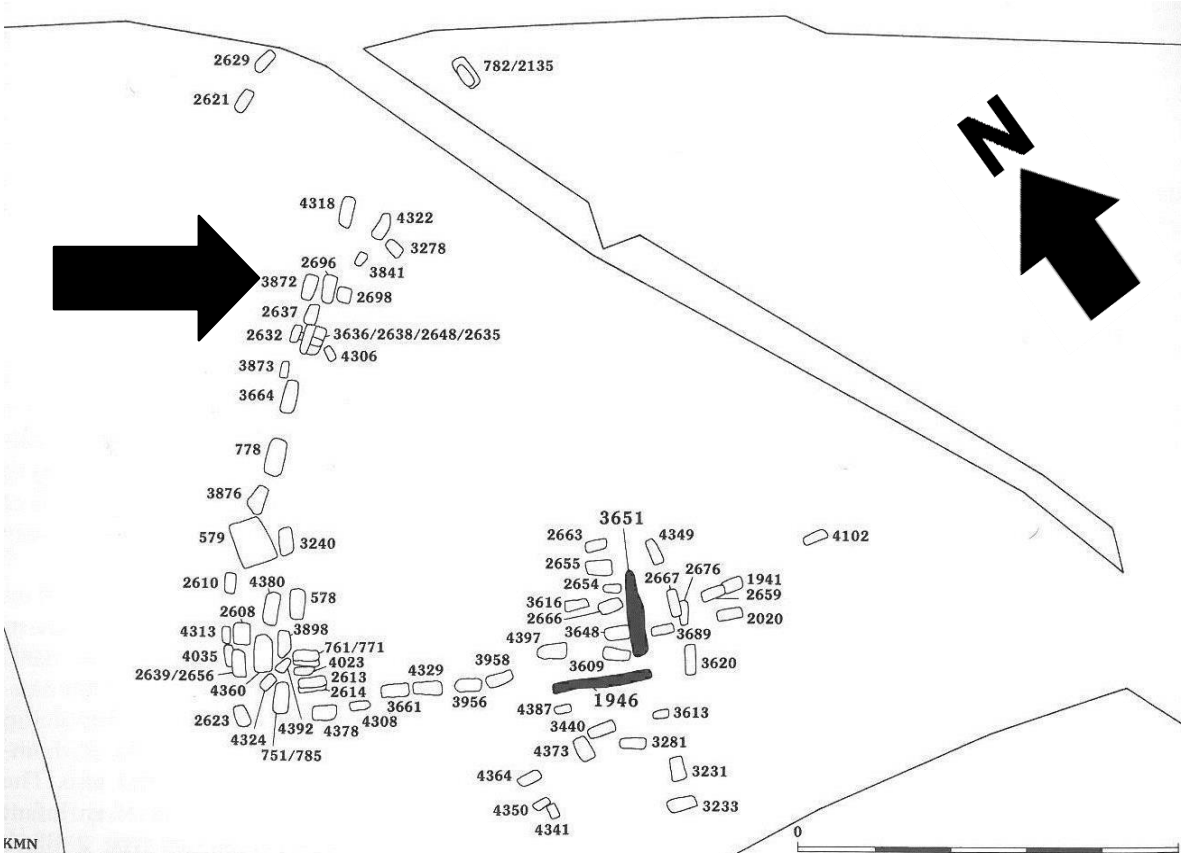
death, placing the individual to be likely over the age of 16 (AlQahtani et al. 2010). The inferior unfused tibiae and fibulae epiphyses suggests the individual was under the age of 18 (Black and Scheuer 2000). The individual was, therefore, aged between 16-18 years at time of death. As the individual was determined to be a sub-adult, sex estimation was not attempted. From what is available to observe, the iliac crest was not fused at time of death. This could suggest that the individual was undergoing puberty at time of death (Buehl and Pyle 1942). A method has been proposed for the estimation of pubertal stage in osteoarchaeological remains, this requires, however, sex estimation of the remains and good preservation of bones like the hamate and phalanges (Shapland and Lewis 2013). Therefore, estimation of pubertal stage, in this case, could progress no further than suggesting that puberty was still ongoing at time of death. The remains showed extensive palaeopathological evidence of metabolic disease.

E.29.2. Differential Diagnosis

E 29.2 - Considerable periosteal changes on right ulna of AA1089. Source: author's own image.

The skeleton of AA1089 exhibits extensive periosteal new bone growth, covering the entire shaft of the right ulna (figure E.29.2), partial bilateral humeral shafts, the centre third of right-side radius and posterior surfaces of the ilia. This is a relatively common pathology in osteology, a well-known side effect of infectious disease or repeated minor trauma (Waldron 2009). In the majority of cases the aetiology is impossible to determine (Waldron 2009) and this appears to be the case in skeleton AA1089 as there is no additional indicators that could support this process. Periosteal new bone growth can cause swelling in the limbs. The pathology exhibited within skeleton AA1089 indicates several incidences of childhood health stress. The maxillary and mandibular incisors and canines show several instances of enamel hypoplasia, which points to severe health stress whilst those teeth were developing, approximately between ages 3-6 years (AlQahtani et al. 2010; Roberts and Manchester 2010). Additionally, there is a slight incidence of cribra orbitalia in the left orbit (type C) which can be interpreted as an incidence of health stress and/or anaemia at a later stage before death, although this designation has its critics (Waldron 2009).

E.29.3. Implications



E 29.3 - Plan of Alington Avenue with AA1089's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

The palaeopathological evidence hints towards a short life that saw several phases of health stress, varying the dis/ability continuum at the individual. At the nearby Roman cemetery site of Poundbury Camp, approximately 31% of the remains exhibited evidence of anaemic response bony changes, the majority of which were found in juvenile skeletons and has been interpreted as a response to infection (Roberts and Manchester 2010). Similarly, cribra orbitalia is more often found in the younger age groups of Alington Avenue (figure 6.8). Adolescent women are particularly at risk of iron deficiency at menarche, which is a possibility for this individual, although we are uncertain on the sex in this case (Ferguson 2017). Cribra orbitalia is a fairly common lesion in osteoarchaeological assemblages, affecting 8 out of 37 skeletons at Alington Avenue, however, it is has been noted that anaemia can contribute to fatigue, cognitive deficits and loss of body weight which could affect an individual's sense of wellbeing and thus their abilities (Zakrzewski 2014).

The individual was buried in grave 3872, which is part of the main cemetery cluster (figure E.29.3). The primary nature of interment in grave 3872 is difficult to confirm as the cervical vertebrae are not observable in the excavation photograph (E.29.4) and, the labile joints of the hands and feet are largely disrupted, although in the case of the right hand, this seems to be the result of the placement on top of the upper thigh which decomposed and moved the bones. The individual was buried lying slightly on its right side, so that, for example the right femoral head fell laterally out of anatomical position. This kind of movement within the grave would tentatively suggest that

the individual was buried in a void, which would allow this mobility, which is confirmed by the coffin nails found at excavation. It is difficult to confirm in this case whether they were clothed or wrapped at time of death, although the excavation report says hobnails were found in the grave (Davies et al 2002).

E.29.4. Discussion

The palaeopathology of skeleton AA1089 suggests that the individual lived through several changes in their dis/ability continuum by the end of their short life. AA1089 was one of only three people estimated to have died below the age of 18 at Alington Avenue. The age of death for this individual is at a potential time of transition of males and females in the Roman life course. At around this time, boys were coming of age, whereas a girl would be on the cusp of marital eligibility. A death at this kind of stage would be a candidate for Martin-Kilcher's (2000) mors immatura, a showing of particular grief in the form of grave provision, at a loss seen as particularly tragic. This does not seem to have occurred in this case, perhaps as a result of the persistent ill-health, the loss of this individual was not unexpected. The individual was however provisioned with the three standard parts of an Alington Avenue burial – shoes, supine position and coffin – and placed amongst the cemetery population, a signal of inclusion.

E.30. AA1114

Sex: female **Age**: much older adult (70-94 years) **Stature**: 152cm

Preservation and completeness: c95% complete.

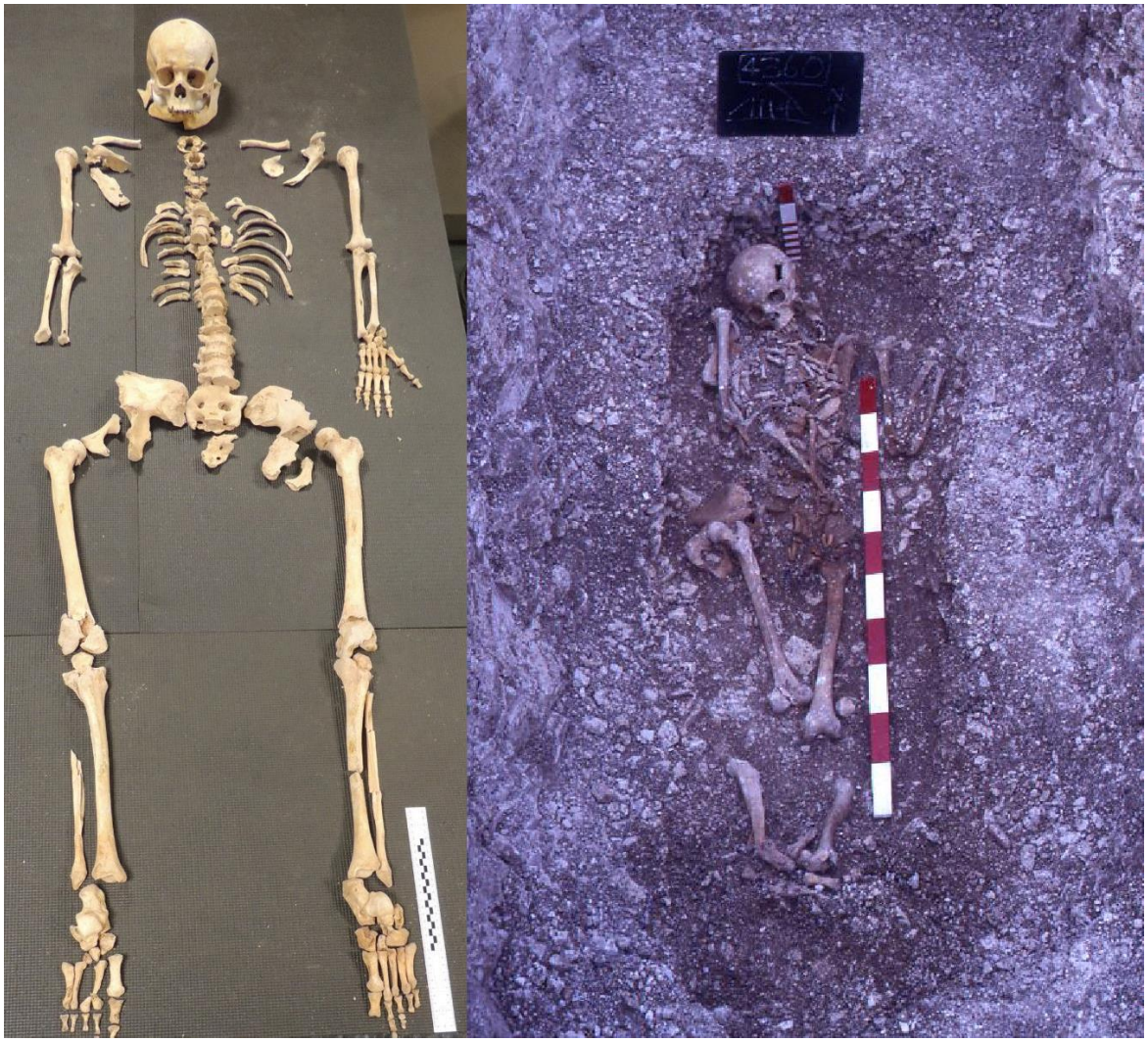
Grave number: 4360

Burial description: singular, secondary interment, irregular grave cut, dimensions: 3.30m long, 1.40m wide, 1.80m deep. Wooden coffin. Position – supine skeleton with left arm flexed to shoulder level, right arm over waist, head at north, orientation 35° (Davies et al. 2002: 213).

Grave goods: hobnails

Pathologies observed: osteoarthritis, button osteoma on frontal bone

Specialised analysis: archaeothanatology



E 30.1 - AA1114. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.30.1. Description

AA1114 refers to a human skeleton from Alington Avenue found in grave 4360. This skeleton is a very well-preserved specimen estimated to be 95% intact. Sex estimation, through available traits in the pelvic girdle and skull, identified the individual to be a biological female. Transition ageing determined that AA1114 was aged between 70-94 years at time of death, placing them in the much older adult age category. The individual is estimated to have been 152cm tall. The skeleton

exhibited several instances of palaeopathology including a button osteoma on the frontal bone, osteoarthritis throughout the vertebral column and dental pathology.

E.30.2. Diagnosis

The vertebral column exhibits osteoarthritis throughout its length graded to different levels of severity. Cervical vertebrae 3-4 showed grade II lipping, cervical vertebrae 5-6 and all the extant thoracic vertebrae were designated grade I. The entire lumbar spine had severe osteoarthritis (grade III). The bilateral sacro-illiac and ulna articulator joints have slight lipping also. As discussed in section 3.5.5, the connection between osteoarthritic lesions with pain and debilitating experiences is unclear (Jurmain 1999). In this case, none of the criteria recognised as increasing the likelihood of debilitating experience were met, therefore it cannot be ruled out that this individual's experience was entirely asymptomatic. AA1114 also exhibits an incidence of button osteoma on the frontal bone, a benign tumour with usually no clinical significance (Waldron 2009).

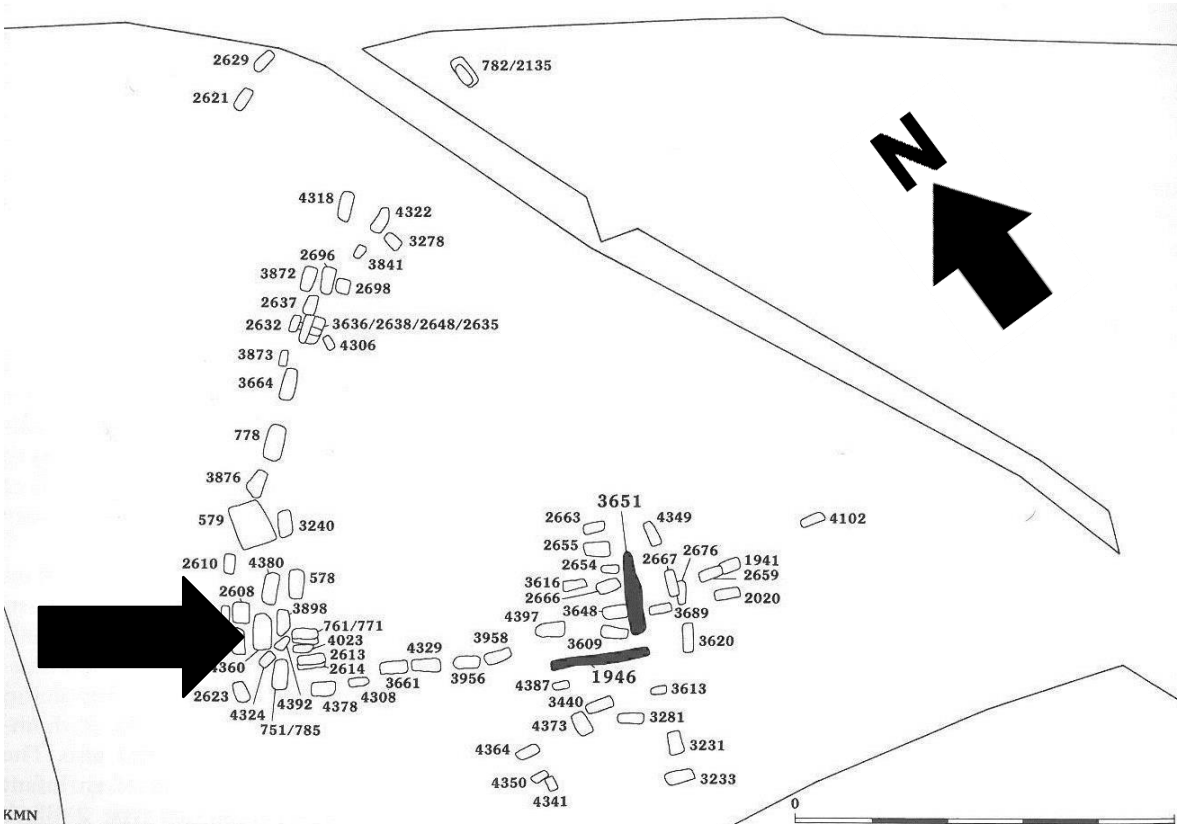
AA1114 exhibits a number of dental pathologies. The preservation issues makes knowing the exact extent of AA1114's tooth loss impossible to determine, however the loss of at least seven teeth antemortem (possibly up to five more) and four incidents of carious lesions evident in the remaining dentition, points towards likely and severe tooth pain being a part of this person's experience. Tooth loss is a common occurrence at Alington Avenue, 18/35 adults with teeth available to study in the sample had lost at least one tooth before death. Antemortem tooth loss is particularly associated with older age at Alington Avenue (see section 6.5).

E.30.3. Implications

The tooth loss exhibited in skeleton AA1114 points towards a changing dis/ability experience. The trends evident from Alington Avenue points to this being a factor more associated in older age, suggesting perhaps that the bulk of the tooth loss occurs at over the age of 45 years (section 6.5). Although it is not possible to be certain of the exact timings of the loss of the teeth, the carious lesions present at time of death point to an ongoing dental health problem. Due to the preservation issues, knowing the exact number of teeth left at time of death and, therefore, whether the individual had the minimum number required for fully function dentition is not possible.

The burial of skeleton AA1114 was found in grave 4360 which is located in the main cemetery of the later Roman period (see figure E.30.2). Archaeothanatological analysis of the excavation photography (figure E.30.3) suggests that this is a case of secondary burial. None of the visible labile joints are in anatomical position. The anatomical position of the bones more generally are highly disturbed, for example the right femur has displaced so that its posterior surface faces upwards. This would therefore suggest that post initial decomposition the body was disturbed and moved. The burial is described as having included a coffin, which would also allow freer movement of the bones (Davies et al. 2002). Archaeothanatological analysis cannot help determine whether the individual was clothed or shrouded in this case, although it was reported

that hobnails were found in this burial, suggesting the presence of clothing (Davies et al. 2002).



E 30.2 - Plan of Alington Avenue with AA1114's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

E.30.4. Discussion

The changes in the dis/ability continuum discussed in this individual is likely to have affected their later years. The loss of teeth was a common feature of life for the population of Alington Avenue, one that is frequently associated with older age. As seen in the osteobiography of AA210 (section 7.3), tooth loss can have a large impact on a person's ability to speak and eat. Although in this case we are uncertain whether the loss of dentition had progressed to this stage by time of death, it does seem however that that was where it was headed. The burial is unusual for the site of Alington Avenue in that it is one of the few examples of a secondary burial, which suggests a slightly different post-mortem treatment of the body. The body does however meet the other criteria of: supine position, coffin use and shoes provided. The location of the burial is also very central, perhaps reflective of a community standing in life.

E.31. AA1137

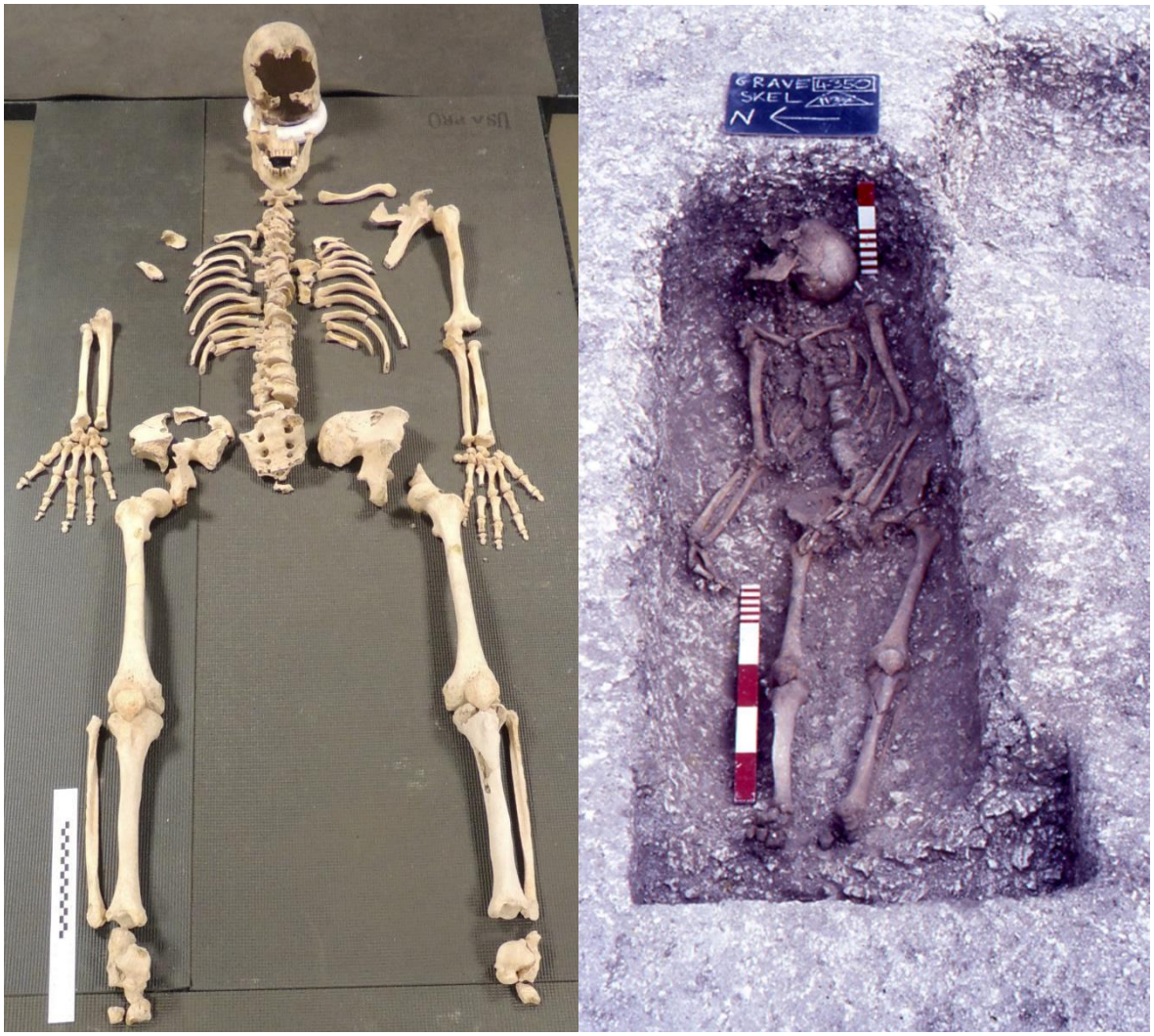
Sex: male **Age**: much older adult (39-88 years) **Stature**: 153cm **Preservation and completeness**: described as c95% complete. **Grave number**: 4350

Burial description: singular, primary interment, irregular oblong grave cut, dimensions: 1.40m long, 0.50m wide, 0.30m deep. Skeleton is extended and cramped skeleton with arms flexed to right, left hand over groin, pelvis against left side of grave, head at east, orientation 90° (Davies et al. 2002: 213).

Grave goods: n/a

Pathologies observed: slight osteoarthritic lesions, minor dental pathology.

Specialised analysis: archaeothanatology



E 31.1 - AA1137. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.31.1. Description

AA1137 refers to a human skeleton from Alington Avenue found in grave 4350. This skeleton is a very well-preserved specimen, at approximately 95% intact. Sex estimation, through the macroscopic observation of the sexually dimorphic traits in the pelvic girdle and cranium, determine the individual to be a biological male. Transition ageing techniques estimated AA1137 to have died between the ages of 39-88 years, placing them in the much older age category. The

individual is estimated to have been 153cm tall. The remains showed slight osteoarthritic lesions throughout the spine.

E.31.2. Diagnosis

AA1137 exhibits slight osteoarthritic lesions throughout the vertebral column, (specifically cervical vertebrae 3-6, thoracic vertebrae 8-12 and the fifth lumbar vertebra). As discussed in section 3.5.5, the connection between osteoarthritic lesions with pain and debilitating experiences is unclear (Jurmain 1999). In this case, none of the criteria recognised as increasing the likelihood of debilitating experience were met, therefore it cannot be determined with necessary confidence that the individual's experience of the palaeopathology was not entire asymptomatic.

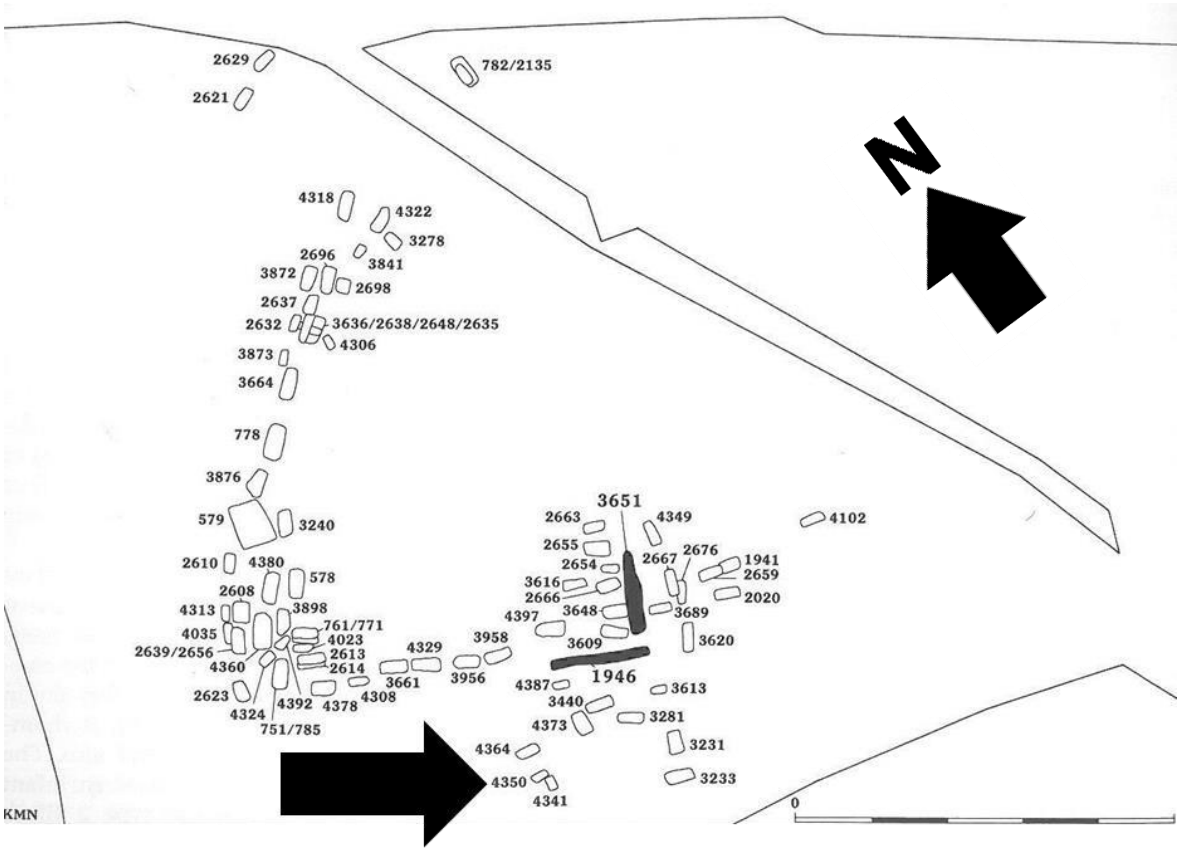
AA1137 lost two teeth antemortem (the second premolar and first molar of the left-side). The left-side second premolar in the mandible was also worn to the root. This level of tooth loss, however, is below average for the older age groups (see figure 6.9) and so presents a comparatively good level of dental health.

E.31.3. Implications

AA1137 exhibited no palaeopathology that would indicate variation in the dis/ability continuum. Skeleton AA1137 was found in grave 4350 which is located in the main cemetery of the later Roman period, in close association with grave 4341 (AA1088) (see figure E.31.2). The primary nature of the interment is confirmed by maintenance of the labile joints in the hands and cervical vertebrae (see figure E.31.3). Excavation of the burial found no evidence of a coffin (Davies et al. 2002). Archaeothanatological study of the excavation photograph seems to support this, as the bones show limited mobility during decomposition, especially within the post-cranial skeleton. This, therefore, would suggest that this individual was not buried in a void, but more directly in the ground. In this case, it is difficult to determine whether the individual was clothed or wrapped at burial. Although the right clavicle shows notable verticalization, this could be the result of an effet de parois caused by the individual laying slightly on its right side. There was also a lack of hobnails reported in this burial to confirm the presence of wrappings (Davies et al. 2002).

E.31.4. Discussion

AA1137 exhibited no palaeopathology that would indicate variation in the dis/ability continuum. The burial shares a number of features, and is located in close association, with that of AA1088 (Appendix E.27). These features include the lack of two of three standard provisions identified for Alington Avenue – coffin and shoe provision. This pair are also on the outer edge of the cluster, a spatial separation that perhaps alludes to a degree of social disparity that unites the two also represented by their slightly different grave provision.



E 31.2 - Plan of Alington Avenue with AA1137's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

E.32. AA1161

Sex: male **Age**: mature adult (19-34 years) **Stature**: 167cm

Preservation and completeness: c75% complete, although most of the thorax was missing at time of study and many of the extant bones are damaged taphonomically.

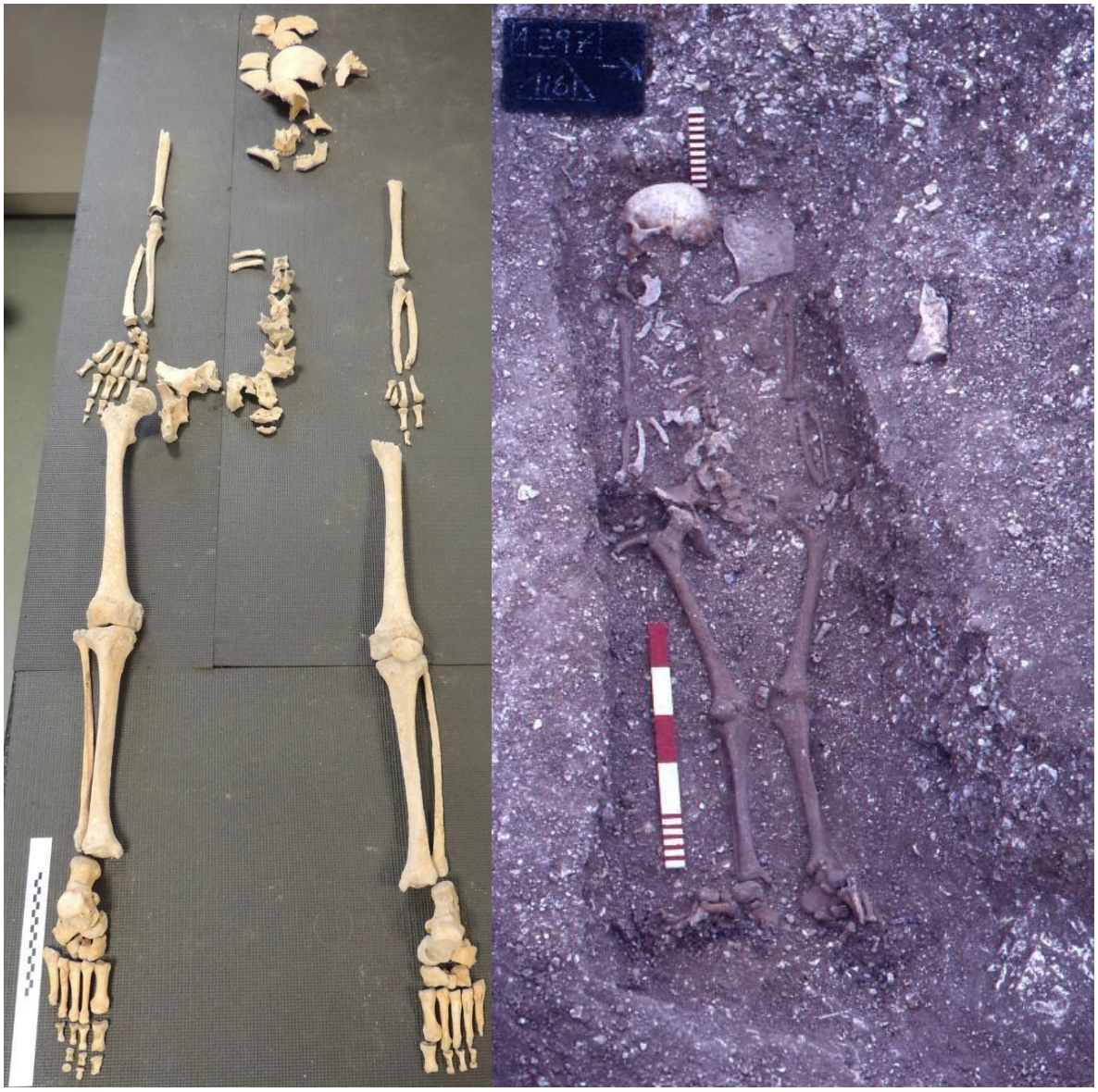
Grave number: 4397

Burial description: singular, primary interment, sub-rectangular grave cut, dimensions: 2.30m long, 0.90m wide, 0.70m deep. Wooden coffin. Position – supine and extended, arms straight by side, head at north-west, orientation 305° (Davies et al. 2002: 214).

Grave goods: hobnails

Pathologies observed: fused right-side sacroiliac joint? Dental pathology.

Specialised analysis: archaeothanatology



E 32.1 - AA1161. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.32.1. Description

Skeleton AA1161 refers to the human remains found in grave 4397 at Alington Avenue. This skeleton is estimated to be 75% intact, although most of the thorax is missing and much of the

extant bones are subject to taphonomic changes. Sex estimation, through available traits in the skull, identified the individual to be a biological male. Transition ageing provided an estimate of between 19-34 years of age at time of death, placing the individual in the mature adult age category. The individual is estimated to be 167cm tall. The preservation of the specimen has made identification and analysis of palaeopathology difficult. There is, however, limited evidence of the fusion of the right-side sacroiliac joint and dental pathology.

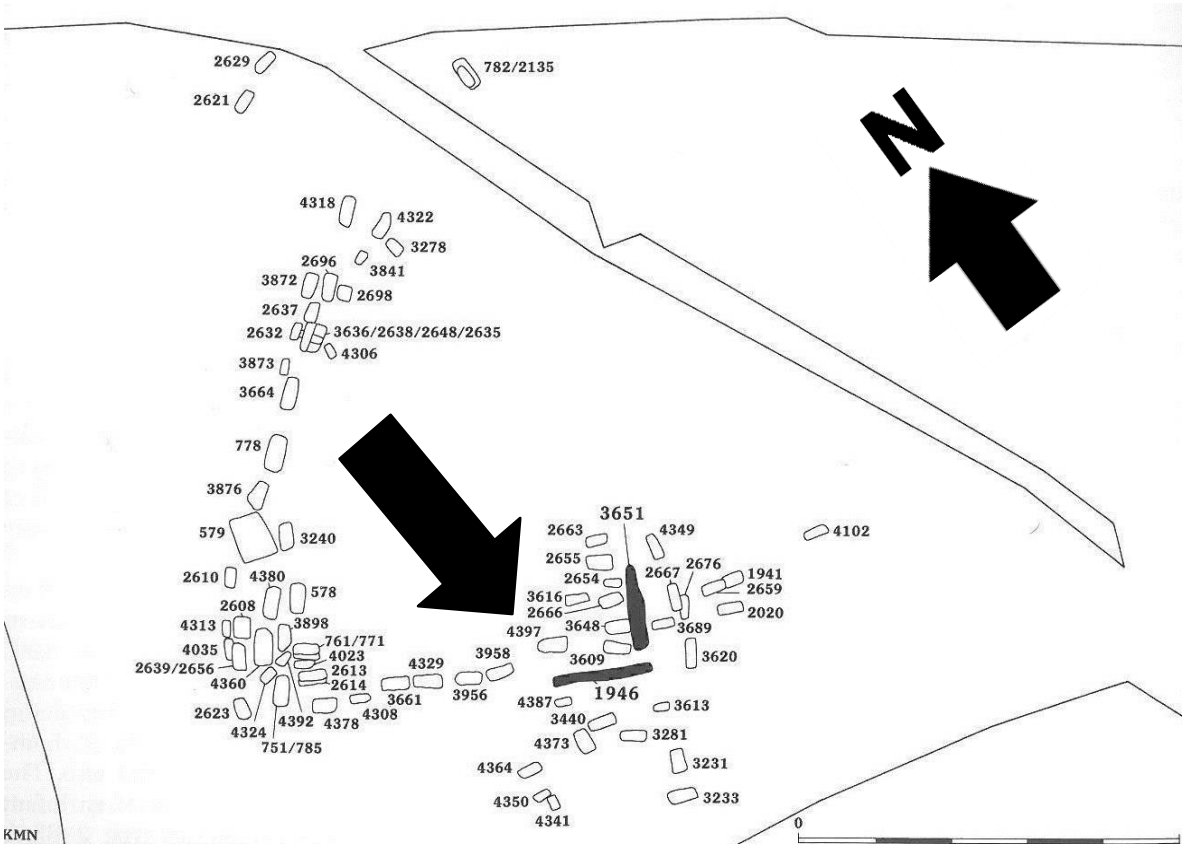
E.32.2. Differential Diagnosis

AA1161's pathology was difficult to identify because of the severe taphonomic damage of the bone surfaces. There is, however, some evidence that the right-side sacroiliac joint is fused. Spondyloarthritis is an umbrella term for inflammatory diseases that cause arthritis and/or inflammation in joints. Ankylosing spondylitis is the most common type of Spondyloarthritis (Waldron 2009). Ankylosing spondylitis tends to cause fusion of the bilateral sacroiliac joints, as response to sacroiliiitis, an inflammation of the entheses in the joint (points where ligaments and tendons connect to bone) (Rashbaum 2015; Waldron 2009). Such inflammation can be the result of significant physical stresses (Rashbaum 2015). The sacroiliac joint is a low motion joint which acts like a shock absorber (Kutz 2017). The fusion of this joint can, however, cause pain and difficulty bending forward, backward and side to side (Rashbaum 2015). Although, the deliberate surgical fusion of this joint can be used in modern medicine to reduce these symptoms (Kutz 2017). In the case of AA1161, the preservation of the pelvic girdle is such that it is impossible to know how much of the joint was affected. It is also unknown whether the condition impacted one or both sides, an important factor when distinguishing between the different types of spondyloarthritis (Waldron 2009). It is therefore not possible to offer a more specific diagnosis than that of possible and generalised spondyloarthritis. The lack of preserved spine and joints also makes assessing the extent of the disease impossible to determine, although the damage to the vertebral column could be partially the result of osteoporosis and kyphosis which, can make the vertebrae more fragile to taphonomic processes. Without further bioarchaeological data, however, it is not possible to know the extent of the condition and, therefore, discuss its possible impact on the individual's dis/ability continuum.

AA1161 lost three teeth antemortem: the left side 2nd premolar, 1st molar and 2nd molar. There is one example of an interproximal carious lesion on the left 3rd molar. The left side 1st premolar is worn to the root. This level of tooth loss is slightly above average for mature adults at Alington Avenue, although not uncommon in the broader Alington Avenue population (see section 6.5).

E.32.3. Implications

In the case of AA1161, there is insufficient palaeopathology preserved to estimate changes in their projected dis/ability continuum.



E 32.2 - Plan of Alington Avenue with AA1161's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

The burial of AA1161 was found in grave 4397 which was located in the main cemetery of the later Roman period, near ditch feature 1946 (see figure E.32.2). The primary nature of the burial can be confirmed as the labile joints, particularly in the left foot, maintained their anatomical position (see figure E.32.3). Davies et al. (2002) reported the burial contained evidence of a wooden coffin having been used. Archaeothanatological analysis of the bone position in the grave corroborates this, the bones showed a good degree of mobility likely the result of burial in a void, for example the right femoral head has fallen laterally out of anatomical position. The clavicles are not observable in the excavation photograph, making archaeothanatological assessment of wrapping use not possible, although the presence of hobnails surrounding the feet suggest that the individual was clothed in burial.

E.32.4. Discussion

The palaeopathology evident in AA1161 was insufficiently preserved to allow discussion of potential variations in the dis/ability continuum during the individual's lifetime.

The burial includes all the hallmarks of a typical Alington Avenue burial – clothed and supine body buried in a coffin. Although mature adulthood seems to present a relatively unusual stage at which to die for the Alington Avenue population, this may be the result of the reported difficulties of securing age estimations for middle aged populations.

E.33. AA1169

Sex: n/a **Age**: juvenile (4.5-5.5 years) **Stature**: n/a

Preservation and completeness: c85% complete.

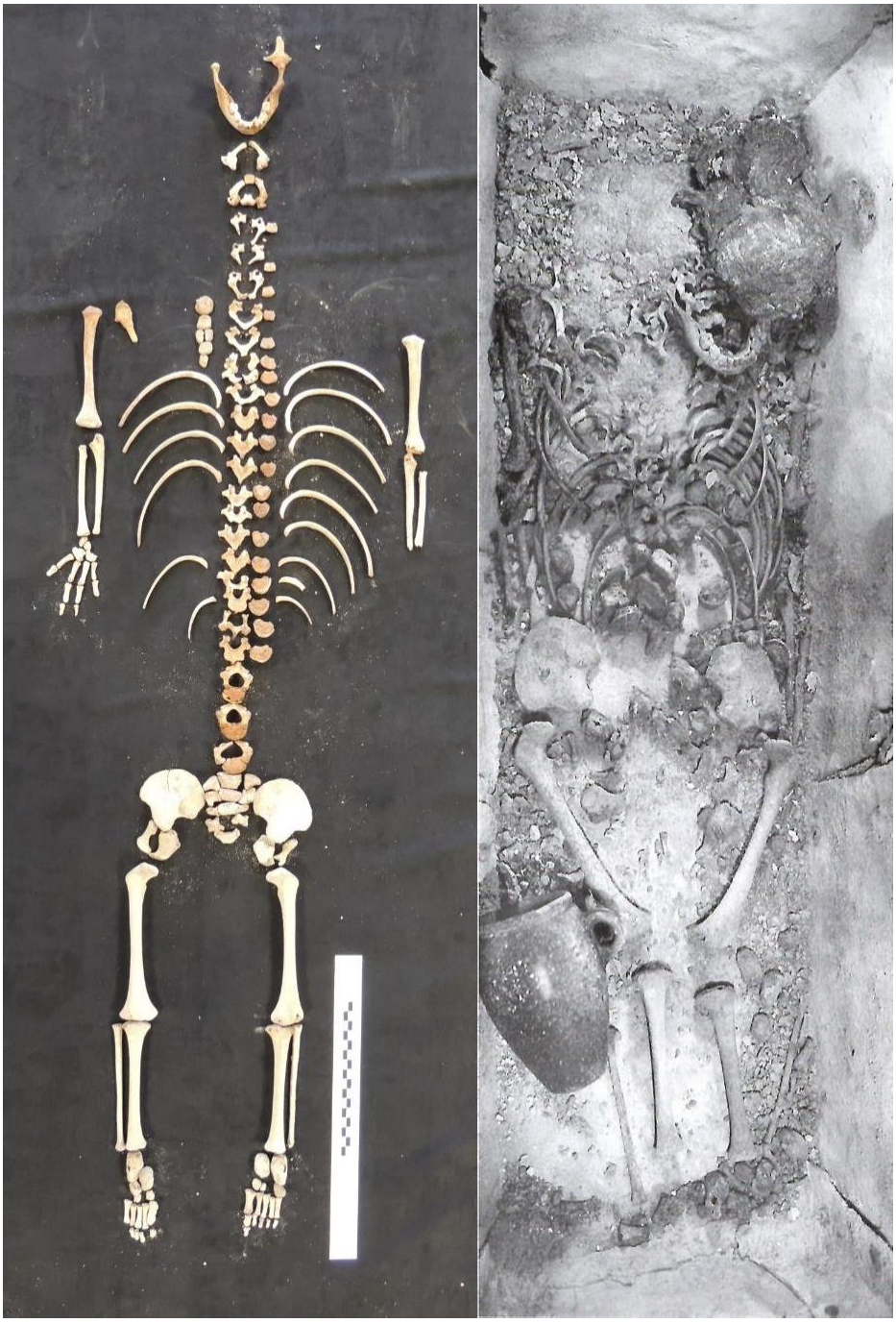
Location of grave: grave 4378 in the main cemetery cluster.

Burial and grave type: singular, primary interment, sub-square grave cut, dimensions: 1.86m long, 1.38m wide, 0.81m deep. Lead-lined coffin. Position – extended, supine, arms straight at sides, head at south-east, orientation 125° (Davies et al. 2002: 213).

Grave goods: Type 9 jar containing Marcus Aurelius coin, iron rod, textile, fibres.

Pathologies observed: n/a

Specialised analysis: archaeothanatology



E 33.1 - AA1169. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

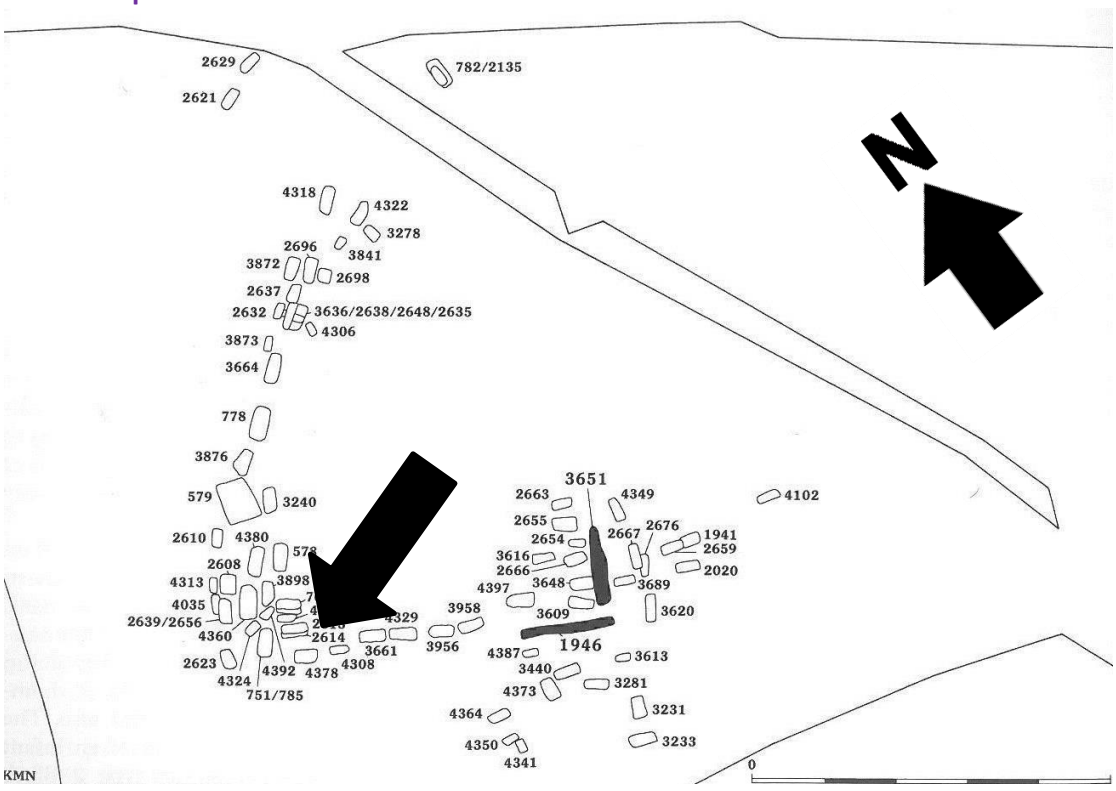
E.33.1. Description

AA1169 refers to the human skeletal remains found in grave 4378 at Alington Avenue. The burial is dated, with a good degree of confidence, to the 3rd century AD, due to the coin found in the burial. AA1169 is a very well preserved sub-adult skeleton, estimated to be 85% intact. Analysis of the dental eruption progress has estimated the individual to be aged between 4.5-5.5 years at time of death (AlQahtani et al. 2010). Analysis of the progress of epiphyseal fusion strengthens this estimation, for example the sacrum is unfused which, tends to occur before 6 years of age (Scheuer and Black 2000). There are no examples of palaeopathology identified in this specimen.

E.33.2. Differential Diagnosis

No examples of palaeopathology have been identified in specimen AA1169. This may be due to the reported difficulty in identifying palaeopathology in the remains of children (Lewis 2010).

E.33.3. Implications



E 33.2 - Plan of Alington Avenue with AA1169's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

No palaeopathology was identified that suggested a variation in the dis/ability continuum in this individual's short lifetime. There is no evidence to suggest a cause of death. The burial of skeleton AA1169 was found in grave 4378 which is located in the main cemetery of the later Roman period. The individual was interred in the richest burial evident within the site of Alington Avenue. The individual had the only lead lined coffin found at the site. The individual also had the greatest number of grave goods, including a coin, type 9 jar, an iron rod and evidence of textiles. The burial in a coffin that survived to excavation renders archaeothanatological analysis mostly unnecessary. The labile joints are mostly out of anatomic position, which would perhaps suggest secondary burial, however the level of completeness of the hands and feet in this case may suggest a primary burial, the sub-adult bones being so small that they could have been easily lost in transit.

The clavicles are verticalized, but this could be the result of an effet de parois with the coffin wall as much as wrappings. Yet, woollen stripes of fabric dyed imperial purple using tyrian shellfish imported from the Mediterranean survived in the coffin, pointing towards dyed fabric of some form (Pearce 2013).

E.33.4. Discussion

The burial of AA1169 stands out within the Alington Avenue context as by far the richest example. The burial within a lead coffin is unique within this setting and helped preserve the skeleton and grave goods. The burial is a step away from the normative at Alington Avenue. Particularly the finding the purple dyed fabric has led to the belief that this burial was of a wealthy member of aristocracy (Davies et al. 2002). It seems likely that this case presents an incidence of mors immatura (Martin-Kilcher 2000). The high investment of the burial reflecting particularly acute grief of a life cut short. This is further discussed in section 8.2.1.

E.34. AA1178

Sex: female **Age**: prime adult (27-44 years) **Stature**: 166cm

Preservation and completeness: c95% complete.

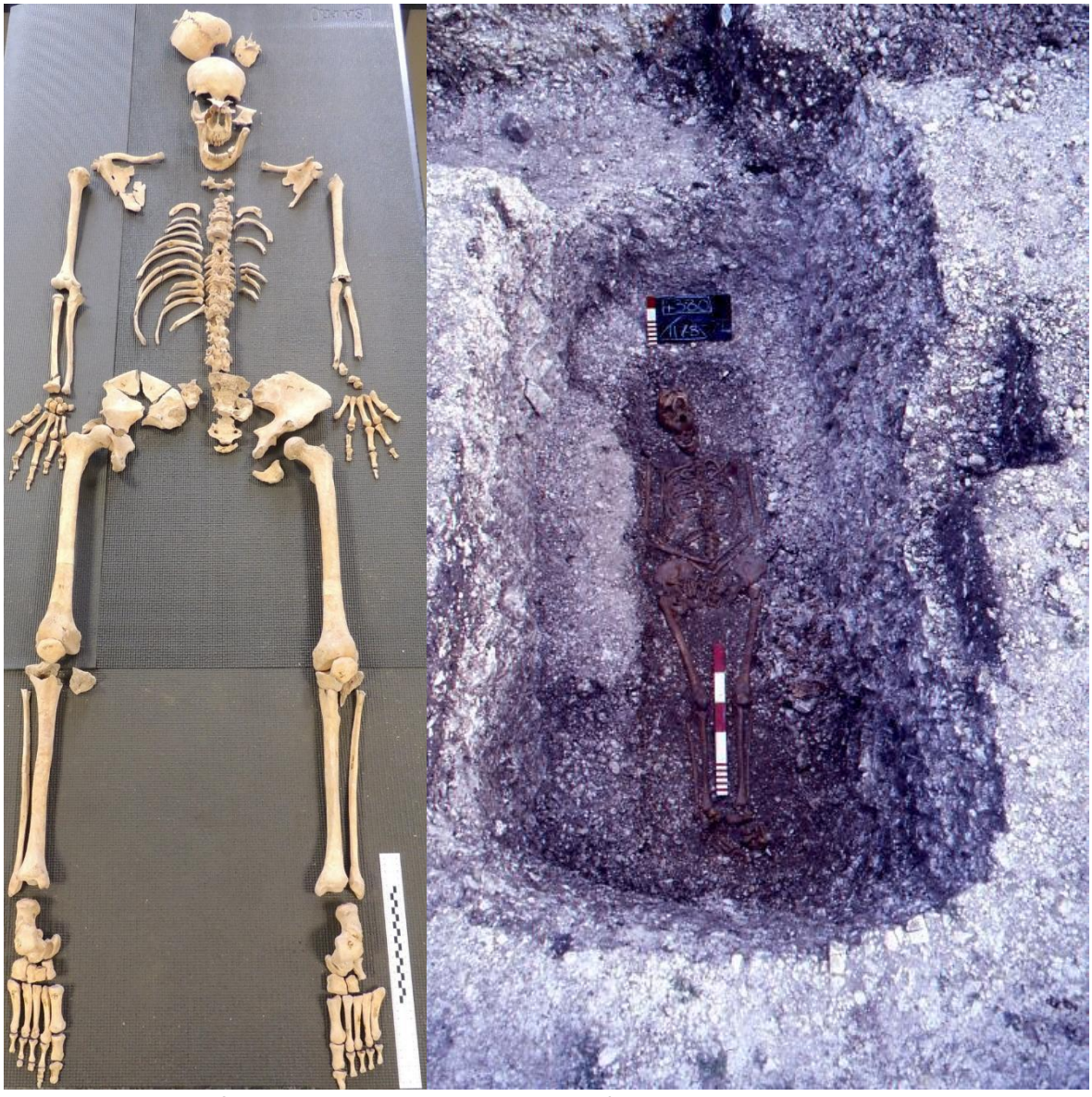
Grave number: 4380

Burial description: singular, primary interment, irregular oblong grave cut, dimensions: 2.72m long, 1.15m wide, 1.20m deep. Wooden coffin. Position – supine and extended, hands together over middle of pelvis, head at north, orientation 35° (Davies et al. 2002: 213).

Grave goods: hobnails, dog skeleton outside coffin

Pathologies observed: cribra orbitalia

Specialised analysis: archaeothanatology, dietary isotopes (Redfern et al. 2010)



E 34.1 - AA1178. Left - laid out to study. Source: author's own image. Right - in situ. Source: Dorset County Museum

E.34.1. Description

Skeleton AA1178 refers to the remains found in grave 4380 at Alington Avenue. This skeleton is a very well-preserved specimen, estimated to be 95% intact. Sex estimation, through available traits in the pelvic girdle and cranium, identified the individual as a biological female. Transition ageing

has estimated the individual to have been aged between 27-44 years old at time of death, placing them in the prime adult age category. This individual is estimated to have been 166cm tall. The skeleton exhibits considerable dental pathologies and cribra orbitalia. Skeleton AA1178 formed part of a larger isotopic study looking for changing dietary patterns over an extended period in Dorset (Redfern et al. 2010). AA1178's isotopic signature formed part of the 'G1' cluster, the group whose diet appears to have had less of a marine protein component (figure 6.5).

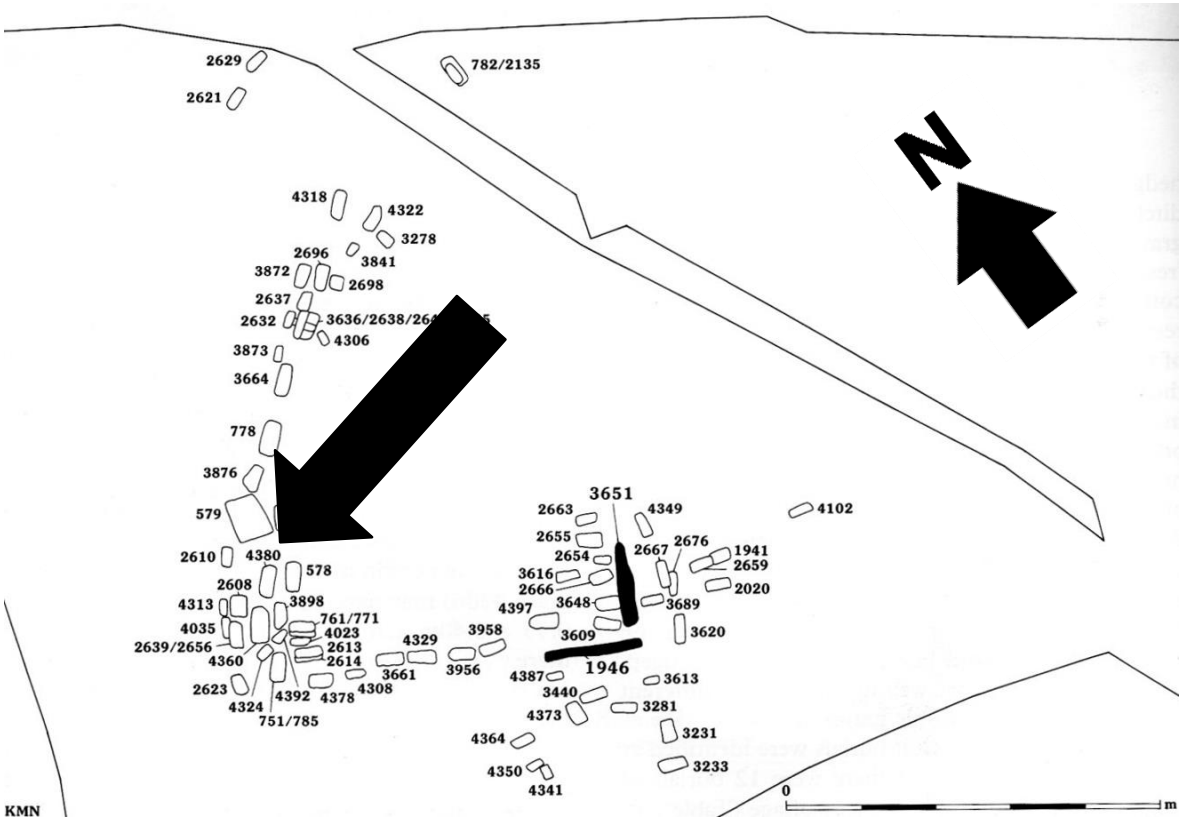
E.34.2. Differential Diagnosis

Skeleton AA1178 shows evidence of bilateral very slight cribra orbitalia (type B in the right orbit and type A on the left side (Brothwell 1981)). Cribra orbitalia is usually cited as an indication of anaemia (Roberts and Manchester 2010), although this designation has met criticism (Waldron 2009). There is one incidence of antemortem tooth loss in skeleton AA1178 (the left side mandibular first molar). This level of antemortem tooth loss exactly matches the average for the prime adult age group (see section 6.5). The individual also exhibits five incidences carious lesions affecting the teeth which would have been a very painful ailment.

E.34.3. Implications

At nearby Poundbury Camp Roman cemetery site, approximately 31% of the remains there exhibited evidence of anaemic response bony changes, so AA1178's experience is fairly common in the Dorset area. Cribra orbitalia is a fairly common lesion in osteoarchaeological assemblages, however, it has been noted that anaemia can contribute to fatigue, cognitive deficits and loss of body weight which could affect an individual's sense of wellbeing and thus their abilities (Zakrzewski 2014). The different cribra orbitalia types recognised in the individual could point towards an ongoing illness which they continued to fight for a long time in the later stages of their life.

The burial of skeleton AA1178 is located in the main cluster of the main cemetery at Alington Avenue (see figure E.34.2). The primary nature of the burial is confirmed particularly as a result of the maintenance of anatomical position of the labile joints in the feet. Davies et al. (2002) reported evidence of a wooden coffin. Archaeothanatological analysis of the excavation photograph supports this evidence, the pelvic girdle showed mobility during decomposition away from the midline and the skull has rolled backwards which is commonly seen within coffin burials, as the ground cannot stabilise the position of the bones after decomposition. Davies et al. (2002) also reports the presence of hobnailed shoes worn in the burial, suggesting the likelihood of worn clothing. The verticalization of the clavicles, as evident in the excavation photograph (figure E.34.3), supports this interpretation, although this verticalization could also be the result of an effet de parois as the grave appears narrow at this point.



E 34.2 - Plan of Alington Avenue with AA1178's grave highlighted. Source: Dorset Natural History and Archaeological Society and Wessex Archaeology (2002)

E.34.4. Discussion

The burial of AA1178 was one of two at Alington Avenue to include a body of a dog in the context. Contrasting with AA852, however, in this case the dog was placed outside the coffin rather than in direct contact with the human body. This seems to more closely align with rites identified at Lankhills in Winchester, for example, where interred dogs were interpreted as performing a guard function (Philpott 1991). A discussion of the various roles dogs can play in burials can be found in section 7.2.3. The cribra orbitalia is a fairly common pathology and perhaps alludes to a long period of health stress up to time of death, having implications on their dis/ability continuum