

**Weapons, Warfare and Society in Britain
1250-750BC**

Volume II

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<u>Contents</u>	Page
<u>Volume I</u>	
<i>Acknowledgements</i>	ii
<i>Abstract</i>	iii
<u>1 Introduction</u>	1
1.1 Aims	1
1.1.1 The Research Programme	2
1.1.2 Interpretation	3
1.1.3 Warfare, Weapons and Social Context	5
1.1.4 Regionality	6
1.2 Weapon Typology and Chronology	9
1.2.1 Sword Typology	9
1.2.2 Spearhead Typology	13
1.2.3 Chronology	15
1.3 Literature Review	17
1.3.1 War	18
1.3.2 Death	19
1.3.3 Sites	20
1.3.4 Mining	22
1.3.5 Movement of Materials and Artefacts	24
1.3.6 Deposition	25
1.4 Artefact Research Review	27
1.4.1 LBA Weapons	28
1.4.2 Wear Studies	30
1.5 Metallurgical Studies	33
1.6 British LBA Weapons in Museum Collections	40
1.6.1 Data Collection	41
1.6.2 Estimation of Sword Population	42
1.6.3 Estimation of Spearhead Population	43
<u>2 Microstructural and Compositional Analyses</u>	45
2.1 Sampling Criteria	45
2.2 Method	48
2.3 Microstructural Characteristics	51
2.3.1 Porosity	52
2.3.2 Distortion of Inclusions	54
2.3.3 Corrosion	58
2.3.4 High Tin Phases	57
2.3.5 Coring & Recrystallisation	59
2.3.6 Distortion of Grains	61
2.3.7 Grain Size	62
2.3.8 Hardness	64
2.4 Metallographic Examinations of Small Samples - Summary	68
2.5 Cross Sectional Microstructures	72

2.5.1	Blackmoor Hoard, Sample BM20, Sword 1891 5-14 35	72
2.5.2	Gilmonby Hoard, Sample Gil 76	73
2.5.3	Gilmonby Hoard, Sample Gil 81	74
2.5.4	Royal Armouries, G06	74
2.5.5	Manufacturing Processes	75
2.6	Composition	77
2.6.1	Trace Elements	77
2.6.1.1	<i>Total Trace Elements</i>	78
2.6.1.2	<i>Compositional Groups</i>	79
2.6.1.3	<i>Trace Elements - Summary</i>	83
2.6.2	Alloying Elements	84
2.6.2.1	<i>Tin</i>	84
2.6.2.2	<i>Lead</i>	86
2.6.2.3	<i>Alloying Elements - Summary</i>	88
2.6.3	Compositional Comparisons	89
3	<u>Experimental Replication of Edge Damage</u>	92
3.1	Experimental Blade Manufacture	92
3.1.1	Edge Finishing - First Session: Sword Section 1.	94
3.1.2	Edge Finishing - Second Session: Sword Sections 2, 3 and 4.	97
3.1.3	Edge Finishing - Third Session: Sword Sections 5 and 6.	99
3.1.4	Blade Edge Finishing - Summary	101
3.2	Replication of Edge Damage	102
3.2.1	Blade on Blade Impacts	103
3.2.2	Further Impact Modes	103
3.3	Results	104
3.4	Impact Damage from Actual Sword Fighting	108
4	<u>Physical Characteristics of Weapons</u>	109
4.1	Methodological Considerations	109
4.1.1	Typology	109
4.1.2	Design	111
4.1.3	Manufacture	112
4.1.4	Use	116
4.2	Swords	117
4.2.1	Sword Typology	117
4.2.2	Sword Design Characteristics	119
4.2.3	Sword Manufacturing Characteristics	122
4.2.4	Sword Use Characteristics	124
4.2.5	Swords - Summary	128
4.3	Spearheads	131
4.3.1	Spearhead Typology	131
4.3.1.1	<i>Definitions of characteristics</i>	132
4.3.1.2	<i>Analyses of characteristics</i>	134
4.3.1.3	<i>Spearhead groups</i>	137
4.3.1.4	<i>Dimensional analyses</i>	138
4.3.1.5	<i>Spearhead Typology - Summary</i>	141

4.3.2 Spearhead Design	142
4.3.3 Spearhead Manufacture	144
4.3.4 Spearhead Use	145
4.3.5 Spearheads - Summary	148
<u>5 Warfare, Weapon Deposition and Social Contexts</u>	151
5.1 Conflict and Warfare	151
5.1.1 Varieties of Warfare and their Characteristics	151
5.1.2 Modes of Combat in LBA Britain	155
5.2 Weapon Deposition	160
5.2.1 Weapon Deposition and Hoard Contents	160
5.2.2 Deposition Contexts	161
5.2.3 State of Completeness of Deposited Weapons	165
5.2.3.1 <i>State of Completeness of Swords</i>	169
5.2.3.2 <i>State of Completeness of Spearheads</i>	170
5.2.4 Interaction between Deposition Context and Completeness of Weapons	172
5.2.4.1 <i>Swords - Completeness and Context</i>	173
5.2.4.2 <i>Spearheads - Completeness and Context</i>	174
5.2.5 Deposition Patterns - Summary	175
5.3 Social Contexts	178
<u>6 Regionality</u>	187
6.1 Raw materials - Metal Production and Circulation	187
6.2 Weapon Production - Workshops and Weapon Makers	192
6.2.1 Metal Working Sites	192
6.2.2 Manufacturing Techniques and Practitioners	196
6.3 Weapon Use and Warfare Patterns	201
6.3.1 Combat Damage	201
6.3.2 Weapon Design	203
6.3.3 Topography, Travel, Land Use, Settlement and Warfare	206
6.4 Weapon Deposition - Regional Variations	211
<u>7 Summary and Conclusions</u>	213
7.1 Metallurgical Analysis - Weapon Production and Weapon Makers	214
7.2 Experimental Impacts - Combat Damage	219
7.3 Weapon Design, Use, Decommissioning and Deposition	220
7.4 Weapons, Warfare and Warriors in their Social Context	224
7.5 Weapons, Warfare and Society - Regional Differentiation within Britain	226
7.6 Further Work	233
<u>Bibliography</u>	237

Volume II

Tables

2.3.1 Porosity	1
2.3.2 Inclusion Distortion	3
2.3.3 Corrosion	5
2.3.4 High Tin Phases	7
2.3.5 Coring and Recrystallisation	9
2.3.6 Grain Distortion	11
2.3.7 Grain Size	13
2.3.8 Hardness	15
2.6.1.1 Total Trace Elements	17
2.6.1.2 Compositional Groups	20
2.6.2.1 Tin	22
2.6.2.2 Lead	25
3.1 Preparation of Blade Edges	28
3.3 Impact Testing	29
4.2.1 Morphological Data for Swords	31
4.2.2 Balance Data for Swords	33
4.2.3 Casting Quality & Edge Fineness Data for Swords	34
4.2.4 Edge Damage Data for Swords	35
4.3.1 Blade Shape, Characteristics and Dimensional Data for Spearheads	36
4.3.3 Casting Quality Data for Spearheads	47
4.3.4 Damage Data for Spearheads	48
5.2.2 Deposition Context	50
5.2.3.1 Completeness Data for Swords	51
5.2.3.2 Completeness Data for Spearheads	54

Figures

1.1.4 Regional Division	57
1.2 Chronological Division	58
1.6.1 Museum Questionnaire	59
2.3.1 Porosity	60
2.3.2 Inclusion Distortion	62
2.3.3 Corrosion	64
2.3.4 High Tin Phases	66
2.3.5 Coring and Recrystallisation	68
2.3.6 Grain Distortion	70
2.3.7 Grain Size	72
2.3.8 Hardness	74
2.6.1.1 Total Trace Elements	77
2.6.1.2 Compositional Groups	81
2.6.2.1 Tin	83
2.6.2.2 Lead	87
2.6.3 Twice Sampled Weapons - Comparisons of Compositions	91
3.1 Casting Alloy	92
4.2.1 Morphological Data for Swords	94
4.2.2 Balance Data for Swords	103
4.2.3 Casting Quality & Edge Fineness Data for Swords	104
4.2.4 Edge Damage Data for Swords	106

4.3.1 Blade Shape, Characteristics and Dimensional Data for Spearheads	107
4.3.3 Casting Quality Data for Spearheads	112
4.3.4 Damage Data for Spearheads	113
5.2.2 Deposition Context	115
5.2.3 Completeness	117
5.2.3.1 Completeness Data for Swords	118
5.2.3.2 Completeness Data for Spearheads	121
5.2.4.1 Completeness and Context for Swords	124
5.2.4.2 Completeness and Context for Spearheads	127
6.1 Bronze Age Mines	131
6.3.3 Location of Bronze Age 'Forts'	133
Plates	
2.1 Metallurgical Samples	134
2.3 Burnt Microstructures	135
2.3.1 Porosity	136
2.3.2 Inclusion Distortion	137
2.3.3 Corrosion	139
2.3.4 High Tin Phases	140
2.3.5 Coring and Recrystallisation	141
2.3.6 Grain Distortion and Hardness	142
2.3.7 Grain Size	143
3.1 Experimental Blade Manufacture	148
3.1.1 Edge Finishing - First Session: Sword Section 1.	149
3.1.2 Edge Finishing - Second Session: Sword Sections 2, 3 and 4.	151
3.1.3 Edge Finishing - Third Session: Sword Sections 5 and 6.	152
3.2 Replication of Edge Damage	153
3.3 Results	154
3.4 Impact Damage from Actual Sword Fighting	186
4.1.3 Manufacture	187
4.2.1 Sword Features and Types	188
4.2.2 Sword Design	189
4.2.3 Sword Manufacture	190
4.2.4 Sword Edge Damage	191
4.3.1 Spearhead Shapes and Characteristics	193
4.3.2 Spearhead Decoration	199
4.3.4 Spearhead Damage	200
5.2.3 Decommissioned' Weapons	202
5.3 Flag Fen + Burnt Weapons	204
6.1 Great Orme and Copa Hill	205
6.3.3 Beeston Castle	207
Appendix 1 Chi-squared Tests	208
Appendix 2 Metallurgical Data	217
Appendix 3 Sword Data	235
Appendix 4 Spearhead Data	267

Table 2.3.1(i)

Porosity by Region and by Typological Grouping

Rating	Region				
	East Anglia	Scotland	South East	West	Total
<u>All weapons (excluding burnt)</u>					
1	8 (6)	9 (6)	13 (12)	2 (1)	32 (25)
2	11 (10)	14 (12)	15 (14)	5 (5)	45 (41)
3	7 (5)	16 (13)	24 (22)	6 (6)	53 (46)
4	4 (2)	7 (5)	27 (26)	9 (8)	47 (41)
5	<u>4 (2)</u>	<u>12 (7)</u>	<u>13 (12)</u>	<u>3 (3)</u>	<u>32 (24)</u>
Total	34 (25)	58 (43)	92 (86)	25 (23)	209 (177)
<u>Swords (excluding burnt)</u>					
1	7 (5)	9 (6)	7 (7)	1 (1)	24 (19)
2	11 (10)	14 (12)	11 (10)	5 (5)	41 (37)
3	4 (4)	12 (10)	18 (16)	4 (4)	38 (34)
4	4 (2)	6 (4)	8 (7)	8 (7)	26 (20)
5	<u>4 (2)</u>	<u>7 (4)</u>	<u>6 (5)</u>	<u>1 (1)</u>	<u>18 (12)</u>
Total	30 (23)	48 (36)	50 (47)	19 (18)	147 (122)
<u>Spears (excluding burnt)</u>					
1	1 (1)	0 (0)	6 (5)	1 (0)	8 (6)
2	0 (0)	0 (0)	3 (3)	0 (0)	3 (3)
3	2 (1)	3 (3)	6 (6)	2 (2)	13 (12)
4	0 (0)	1 (1)	17 (17)	1 (1)	19 (19)
5	<u>0 (0)</u>	<u>5 (3)</u>	<u>7 (7)</u>	<u>1 (1)</u>	<u>13 (11)</u>
Total	3 (2)	9 (7)	39 (38)	5 (4)	56 (51)

Type

Rating	Type				Total
	Early	Wilburton	Ewart Park	Late	
<u>All weapons (excluding burnt)</u>					
1	9 (6)	8 (7)	13 (10)	2 (2)	32 (25)
2	5 (5)	8 (6)	28 (26)	3 (3)	44 (40)
3	6 (6)	15 (11)	30 (27)	0 (0)	51 (44)
4	5 (4)	8 (7)	32 (28)	0 (0)	45 (39)
5	<u>2 (2)</u>	<u>5 (2)</u>	<u>23 (18)</u>	<u>0 (0)</u>	<u>30 (22)</u>
Total	27 (23)	44 (33)	126 (109)	5 (5)	202 (170)
<u>Swords (excluding burnt)</u>					
1	4 (3)	6 (5)	12 (9)	2 (2)	24 (19)
2	4 (4)	7 (5)	26 (24)	3 (3)	40 (36)
3	4 (4)	11 (9)	22 (20)	0 (0)	37 (33)
4	3 (2)	6 (5)	17 (13)	0 (0)	26 (20)
5	<u>0 (0)</u>	<u>5 (2)</u>	<u>13 (10)</u>	<u>0 (0)</u>	<u>18 (12)</u>
Total	15 (13)	35 (26)	90 (76)	5 (5)	145 (120)
<u>Spears (excluding burnt)</u>					
1	5 (3)	2 (2)	1 (1)	0 (0)	8 (6)
2	1 (1)	1 (1)	1 (1)	0 (0)	3 (3)
3	2 (2)	2 (1)	7 (7)	0 (0)	11 (10)
4	2 (2)	1 (1)	14 (14)	0 (0)	17 (17)
5	<u>2 (2)</u>	<u>0 (0)</u>	<u>9 (7)</u>	<u>0 (0)</u>	<u>11 (9)</u>
Total	12 (10)	6 (5)	32 (30)	0 (0)	50 (45)

Rating: 1 = no porosity, 5 = high porosity

Table 2.3.1(ii)

Porosity by Region for Typological Groups

Rating	Region					Total
	East Anglia	Scotland	South East	West		
<u>Ewart Park swords (excluding burnt)</u>						
1	3 (3)	8 (5)	1 (1)	0 (0)		12 (9)
2	6 (6)	13 (11)	3 (3)	4 (4)		26 (24)
3	3 (3)	12 (10)	5 (5)	2 (2)		22 (20)
4	1 (1)	6 (4)	3 (2)	7 (6)		17 (13)
5	<u>2 (2)</u>	<u>7 (4)</u>	<u>3 (3)</u>	<u>1 (1)</u>		<u>13 (10)</u>
Total	15 (15)	46 (34)	15 (14)	14 (13)		90 (76)
<u>Ewart Park spears (excluding burnt)</u>						
1	0 (0)	0 (0)	1 (1)	0 (0)		1 (1)
2	0 (0)	0 (0)	1 (1)	0 (0)		1 (1)
3	0 (0)	3 (3)	3 (3)	1 (1)		7 (7)
4	0 (0)	1 (1)	13 (13)	0 (0)		14 (14)
5	<u>0 (0)</u>	<u>4 (2)</u>	<u>5 (5)</u>	<u>0 (0)</u>		<u>9 (7)</u>
Total	0 (0)	8 (6)	23 (23)	1 (1)		32 (30)
<u>Early swords (excluding burnt)</u>						
1	1 (0)	0 (0)	2 (2)	1 (1)		4 (3)
2	1 (1)	1 (1)	2 (2)	0 (0)		4 (4)
3	0 (0)	0 (0)	2 (2)	2 (2)		4 (4)
4	1 (0)	0 (0)	1 (1)	1 (1)		3 (2)
5	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>		<u>0 (0)</u>
Total	3 (1)	1 (1)	7 (7)	4 (4)		15 (13)
<u>Early spears (excluding burnt)</u>						
1	1 (1)	0 (0)	3 (2)	1 (0)		5 (3)
2	0 (0)	0 (0)	1 (1)	0 (0)		1 (1)
3	0 (0)	0 (0)	1 (1)	1 (1)		2 (2)
4	0 (0)	0 (0)	1 (1)	1 (1)		2 (2)
5	<u>0 (0)</u>	<u>1 (1)</u>	<u>0 (0)</u>	<u>1 (1)</u>		<u>2 (2)</u>
Total	1 (1)	1 (1)	6 (5)	4 (3)		12 (10)
<u>Late swords (excluding burnt)</u>						
1	1 (1)	1 (1)	0 (0)	0 (0)		2 (2)
2	0 (0)	0 (0)	2 (2)	1 (1)		3 (3)
3	0 (0)	0 (0)	0 (0)	0 (0)		0 (0)
4	0 (0)	0 (0)	0 (0)	0 (0)		0 (0)
5	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>		<u>0 (0)</u>
Total	1 (1)	1 (1)	2 (2)	1 (1)		5 (5)

Region

	Region			Region	
	East Anglia	South East		East Anglia	South East
<u>Wilburton swords (excluding burnt)</u>					
1	2 (1)	4 (4)	<u>Wilburton spears (excluding burnt)</u>		
2	4 (3)	3 (2)	0 (0)	2 (2)	
3	1 (1)	10 (8)	0 (0)	1 (1)	
4	2 (1)	4 (4)	2 (1)	0 (0)	
5	<u>2 (0)</u>	<u>3 (2)</u>	0 (0)	1 (1)	
Total	11 (6)	24 (20)	<u>0 (0)</u>	<u>0 (0)</u>	
			2 (1)	4 (4)	

Rating: 1 = no porosity, 5 = high porosity

Table 2.3.2(i)

Inclusion Distortion by Region and by Typological Grouping

Rating	<u>Region</u>				
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
<u>All weapons (excluding burnt)</u>					
1	5 (5)	16 (11)	14 (10)	3 (3)	38 (29)
2	7 (2)	15 (8)	28 (27)	5 (5)	55 (42)
3	3 (2)	9 (7)	23 (23)	5 (5)	40 (37)
4	14 (12)	14 (13)	20 (19)	8 (6)	56 (50)
5	<u>5 (4)</u>	<u>4 (4)</u>	<u>7 (7)</u>	<u>3 (3)</u>	<u>19 (18)</u>
Total	34 (25)	58 (43)	92 (86)	24 (22)	208 (176)

<u>Swords (excluding burnt)</u>					
1	3 (3)	11 (7)	8 (4)	3 (3)	25 (17)
2	5 (2)	11 (6)	14 (13)	2 (2)	32 (23)
3	3 (2)	9 (7)	16 (16)	5 (5)	33 (30)
4	14 (12)	13 (12)	6 (6)	6 (5)	39 (35)
5	<u>5 (4)</u>	<u>4 (4)</u>	<u>6 (6)</u>	<u>3 (3)</u>	<u>18 (17)</u>
Total	30 (23)	48 (36)	50 (45)	19 (18)	147 (122)

<u>Spears (excluding burnt)</u>					
1	2 (2)	5 (4)	6 (6)	0 (0)	13 (12)
2	1 (0)	3 (2)	14 (14)	2 (2)	20 (18)
3	0 (0)	0 (0)	6 (6)	0 (0)	6 (6)
4	0 (0)	1 (1)	12 (11)	2 (1)	15 (13)
5	<u>0 (0)</u>	<u>0 (0)</u>	<u>1 (1)</u>	<u>0 (0)</u>	<u>1 (1)</u>
Total	3 (2)	9 (7)	39 (38)	4 (3)	55 (50)

Typological Grouping

Rating	<u>Typological Grouping</u>				
	<u>Early</u>	<u>Wilburton</u>	<u>Ewart Park</u>	<u>Late</u>	<u>Total</u>
<u>All weapons (excluding burnt)</u>					
1	4 (4)	9 (6)	23 (17)	1 (1)	37 (28)
2	2 (2)	12 (6)	36 (29)	1 (1)	51 (38)
3	9 (9)	11 (10)	17 (15)	1 (1)	38 (35)
4	6 (3)	8 (7)	40 (38)	2 (2)	56 (50)
5	<u>5 (4)</u>	<u>4 (4)</u>	<u>10 (10)</u>	<u>0 (0)</u>	<u>19 (18)</u>
Total	26 (22)	44 (33)	126 (109)	5 (5)	201 (169)

<u>Swords (excluding burnt)</u>					
1	2 (2)	7 (4)	15 (10)	1 (1)	25 (17)
2	0 (0)	9 (5)	20 (15)	1 (1)	30 (21)
3	7 (7)	9 (8)	16 (14)	1 (1)	33 (30)
4	1 (0)	7 (6)	29 (27)	2 (2)	39 (35)
5	<u>5 (4)</u>	<u>3 (3)</u>	<u>10 (10)</u>	<u>0 (0)</u>	<u>18 (17)</u>
Total	15 (13)	35 (26)	90 (76)	5 (5)	145 (120)

<u>Spears (excluding burnt)</u>					
1	2 (2)	2 (2)	8 (7)	0 (0)	12 (11)
2	2 (2)	2 (1)	14 (13)	0 (0)	18 (16)
3	2 (2)	1 (1)	0 (0)	0 (0)	3 (3)
4	5 (3)	0 (0)	10 (10)	0 (0)	15 (13)
5	<u>0 (0)</u>	<u>1 (1)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>1 (1)</u>
Total	11 (9)	6 (5)	32 (30)	0 (0)	49 (44)

Rating: 1 = undistorted, 5 = extremely distorted

Table 2.3.2(ii)

Inclusion Distortion by Region for Typological Groups

Rating	<u>Region</u>				
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
<u>Ewart Park swords (excluding burnt)</u>					
1	2 (2)	10 (6)	2 (1)	1 (1)	15 (10)
2	2 (2)	11 (6)	5 (5)	2 (2)	20 (15)
3	0 (0)	8 (6)	4 (4)	4 (4)	16 (14)
4	8 (8)	13 (12)	3 (3)	5 (4)	29 (27)
5	<u>3 (3)</u>	<u>4 (4)</u>	<u>1 (1)</u>	<u>2 (2)</u>	<u>10 (10)</u>
Total	15 (15)	46 (34)	15 (14)	14 (13)	90 (76)
<u>Ewart Park spears (excluding burnt)</u>					
1	0 (0)	4 (3)	4 (4)	0 (0)	8 (7)
2	0 (0)	3 (2)	10 (10)	1 (1)	14 (13)
3	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
4	0 (0)	1 (1)	9 (9)	0 (0)	10 (10)
5	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>
Total	0 (0)	8 (6)	23 (23)	1 (1)	32 (30)
<u>Early swords (excluding burnt)</u>					
1	0 (0)	0 (0)	0 (0)	2 (2)	4 (3)
2	0 (0)	0 (0)	0 (0)	0 (0)	4 (4)
3	0 (0)	1 (1)	5 (5)	1 (1)	4 (4)
4	1 (0)	0 (0)	0 (0)	0 (0)	3 (2)
5	<u>2 (1)</u>	<u>0 (0)</u>	<u>2 (2)</u>	<u>1 (1)</u>	<u>0 (0)</u>
Total	3 (1)	1 (1)	7 (7)	4 (4)	15 (13)
<u>Early spears (excluding burnt)</u>					
1	1 (1)	1 (1)	0 (0)	0 (0)	2 (2)
2	0 (0)	0 (0)	1 (1)	1 (1)	2 (2)
3	0 (0)	0 (0)	2 (2)	0 (0)	2 (2)
4	0 (0)	0 (0)	3 (2)	2 (1)	5 (3)
5	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>
Total	1 (1)	1 (1)	6 (5)	3 (2)	11 (9)
<u>Late swords (excluding burnt)</u>					
1	0 (0)	1 (1)	0 (0)	0 (0)	2 (2)
2	0 (0)	0 (0)	1 (1)	0 (0)	3 (3)
3	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)
4	1 (1)	0 (0)	0 (0)	1 (1)	0 (0)
5	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>
Total	1 (1)	1 (1)	2 (2)	1 (1)	5 (5)

Region

	<u>Region</u>			<u>Region</u>	
	<u>East Anglia</u>	<u>South East</u>		<u>East Anglia</u>	<u>South East</u>
<u>Wilburton swords (excluding burnt)</u>			<u>Wilburton spears (excluding burnt)</u>		
1	1 (1)	6 (3)	1 (1)	1 (1)	
2	3 (0)	6 (5)	1 (0)	1 (1)	
3	3 (2)	6 (6)	0 (0)	1 (1)	
4	4 (3)	3 (3)	0 (0)	0 (0)	
5	<u>0 (0)</u>	<u>3 (3)</u>	<u>0 (0)</u>	<u>1 (1)</u>	
Total	11 (6)	24 (20)	2 (1)	4 (4)	

Rating: 1 = undistorted, 5 = extremely distorted

Table 2.3.3(i)

Corrosion by Region and by Typological Grouping

Rating	Region				Total
	East Anglia	Scotland	South East	West	
<u>All weapons (excluding burnt)</u>					
1	6 (6)	4 (4)	2 (0)	0 (0)	12 (10)
2	11 (9)	16 (13)	31 (28)	6 (6)	64 (56)
3	11 (7)	20 (14)	51 (50)	7 (7)	89 (78)
4	6 (3)	18 (12)	8 (8)	12 (10)	44 (33)
Total	34 (25)	58 (43)	92 (86)	25 (23)	209 (177)

<u>Swords (excluding burnt)</u>					
1	6 (6)	4 (4)	2 (0)	0 (0)	12 (10)
2	10 (8)	16 (13)	21 (19)	6 (6)	53 (46)
3	10 (7)	18 (14)	26 (25)	7 (7)	61 (53)
4	4 (2)	10 (5)	1 (1)	6 (5)	21 (13)
Total	30 (23)	48 (36)	50 (45)	19 (18)	147 (122)

<u>Spears (excluding burnt)</u>					
1	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
2	1 (1)	0 (0)	9 (8)	0 (0)	10 (9)
3	0 (0)	1 (0)	24 (24)	0 (0)	25 (24)
4	2 (1)	8 (7)	6 (6)	5 (4)	21 (18)
Total	3 (2)	9 (7)	39 (38)	5 (4)	56 (51)

Typological Grouping

Rating	Typological Grouping				Total
	Early	Wilburton	Ewart Park	Late	
<u>All weapons (excluding burnt)</u>					
1	1 (1)	3 (1)	7 (7)	1 (1)	12 (10)
2	9 (7)	12 (10)	40 (36)	3 (3)	64 (56)
3	12 (11)	23 (19)	48 (42)	1 (1)	84 (73)
4	5 (4)	6 (3)	31 (24)	0 (0)	42 (31)
Total	27 (23)	44 (33)	126 (109)	5 (5)	202 (170)

<u>Swords (excluding burnt)</u>					
1	1 (1)	3 (1)	7 (7)	1 (1)	12 (10)
2	6 (5)	10 (8)	34 (30)	3 (3)	53 (46)
3	8 (7)	20 (17)	30 (26)	1 (1)	59 (51)
4	0 (0)	2 (0)	19 (13)	0 (0)	21 (13)
Total	15 (13)	35 (26)	90 (76)	5 (5)	145 (120)

<u>Spears (excluding burnt)</u>					
1	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
2	3 (2)	2 (2)	5 (5)	0 (0)	10 (9)
3	4 (4)	1 (1)	16 (15)	0 (0)	21 (20)
4	5 (4)	3 (2)	11 (10)	0 (0)	19 (16)
Total	12 (10)	6 (5)	32 (30)	0 (0)	50 (45)

Rating: 1 = no corrosion, 4 = heavily corroded

Table 2.3.3(ii)

Corrosion by Region for Typological Groups

Rating	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
<u>Ewart Park swords (excluding burnt)</u>					
1	3 (3)	4 (4)	0 (0)	0 (0)	7 (7)
2	7 (7)	15 (12)	8 (7)	4 (4)	34 (30)
3	3 (3)	17 (13)	6 (6)	4 (4)	30 (26)
4	2 (2)	10 (5)	1 (1)	6 (5)	19 (13)
Total	15 (15)	46 (34)	15 (14)	14 (13)	90 (76)
<u>Ewart Park spears (excluding burnt)</u>					
1	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
2	0 (0)	0 (0)	5 (5)	0 (0)	5 (5)
3	0 (0)	1 (0)	15 (15)	0 (0)	16 (15)
4	0 (0)	7 (6)	3 (3)	1 (1)	11 (10)
Total	0 (0)	8 (6)	23 (23)	1 (1)	32 (30)
<u>Early swords (excluding burnt)</u>					
1	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)
2	1 (0)	0 (0)	4 (4)	1 (1)	6 (5)
3	1 (0)	1 (1)	3 (3)	3 (3)	8 (7)
4	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	3 (1)	1 (1)	7 (7)	4 (4)	15 (13)
<u>Early spears (excluding burnt)</u>					
1	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
2	1 (1)	0 (0)	2 (1)	0 (0)	3 (2)
3	0 (0)	0 (0)	4 (4)	0 (0)	4 (4)
4	0 (0)	1 (1)	0 (0)	4 (3)	5 (4)
Total	1 (1)	1 (1)	6 (5)	4 (3)	12 (10)
<u>Late swords (excluding burnt)</u>					
1	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)
2	0 (0)	1 (1)	1 (1)	1 (1)	3 (3)
3	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)
4	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	1 (1)	1 (1)	2 (2)	1 (1)	5 (5)

Region

	<u>East Anglia</u>	<u>South East</u>	<u>East Anglia</u>	<u>South East</u>
<u>Wilburton swords (excluding burnt)</u>		<u>Wilburton spears (excluding burnt)</u>		
1	1 (1)	2 (0)	0 (0)	0 (0)
2	2 (1)	8 (7)	0 (0)	2 (2)
3	6 (4)	14 (13)	0 (0)	1 (1)
4	2 (0)	0 (0)	2 (1)	1 (1)
Total	11 (6)	24 (20)	2 (1)	4 (4)

Rating: 1 = no corrosion, 5 = heavily corroded

Table 2.3.4(i)

High Tin Phases by Region and by Typological Grouping

Rating	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
<u>All weapons (excluding burnt)</u>					
1	10 (4)	15 (6)	15 (11)	9 (7)	49 (28)
2	10 (7)	22 (18)	30 (28)	7 (7)	69 (60)
3	11 (11)	18 (17)	30 (30)	6 (6)	65 (64)
4	<u>3 (3)</u>	<u>3 (2)</u>	<u>17 (17)</u>	<u>3 (3)</u>	<u>26 (25)</u>
Total	34 (25)	58 (43)	92 (86)	25 (23)	209 (177)
<u>Swords (excluding burnt)</u>					
1	8 (4)	9 (2)	10 (6)	6 (5)	33 (17)
2	10 (7)	19 (15)	20 (19)	5 (5)	54 (46)
3	9 (9)	17 (17)	16 (16)	6 (6)	48 (48)
4	<u>3 (3)</u>	<u>3 (2)</u>	<u>4 (4)</u>	<u>2 (2)</u>	<u>12 (11)</u>
Total	30 (23)	48 (36)	50 (45)	19 (18)	147 (122)
<u>Spears (excluding burnt)</u>					
1	1 (0)	5 (4)	5 (5)	3 (2)	14 (11)
2	0 (0)	3 (3)	9 (8)	2 (2)	14 (13)
3	2 (2)	1 (0)	13 (13)	0 (0)	16 (15)
4	<u>0 (0)</u>	<u>0 (0)</u>	<u>12 (12)</u>	<u>0 (0)</u>	<u>12 (12)</u>
Total	3 (2)	9 (7)	39 (38)	5 (4)	56 (51)

Rating	<u>Typological Grouping</u>				<u>Total</u>
	<u>Early</u>	<u>Wilburton</u>	<u>Ewart Park</u>	<u>Late</u>	
<u>All weapons (excluding burnt)</u>					
1	7 (5)	12 (4)	28 (17)	1 (1)	48 (27)
2	9 (7)	17 (14)	38 (34)	4 (4)	68 (59)
3	5 (5)	9 (9)	47 (46)	0 (0)	61 (60)
4	<u>6 (6)</u>	<u>6 (6)</u>	<u>13 (12)</u>	<u>0 (0)</u>	<u>25 (24)</u>
Total	27 (23)	44 (33)	128 (109)	5 (5)	202 (170)
<u>Swords (excluding burnt)</u>					
1	3 (2)	9 (3)	19 (10)	1 (1)	32 (16)
2	5 (4)	15 (12)	30 (26)	4 (4)	54 (46)
3	4 (4)	7 (7)	36 (36)	0 (0)	47 (47)
4	<u>3 (3)</u>	<u>4 (4)</u>	<u>5 (4)</u>	<u>0 (0)</u>	<u>12 (11)</u>
Total	15 (13)	35 (26)	90 (76)	5 (5)	145 (120)
<u>Spears (excluding burnt)</u>					
1	4 (3)	2 (1)	8 (7)	0 (0)	14 (11)
2	4 (3)	1 (1)	8 (8)	0 (0)	13 (12)
3	1 (1)	1 (1)	10 (9)	0 (0)	12 (11)
4	<u>3 (3)</u>	<u>2 (2)</u>	<u>6 (6)</u>	<u>0 (0)</u>	<u>11 (11)</u>
Total	12 (10)	6 (5)	32 (30)	0 (0)	50 (45)

Rating: 1 = no high tin phases visible, 4 = substantial network of high tin phases visible

Table 2.3.4(ii)

High Tin Phases by Region for Typological Groups

Rating	<u>Region</u>				
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
<u>Ewart Park swords (excluding burnt)</u>					
1	2 (2)	9 (2)	2 (1)	6 (5)	19 (10)
2	5 (5)	18 (14)	5 (5)	2 (2)	30 (26)
3	7 (7)	16 (16)	8 (8)	5 (5)	36 (36)
4	<u>1 (1)</u>	<u>3 (2)</u>	<u>0 (0)</u>	<u>1 (1)</u>	<u>5 (4)</u>
Total	15 (15)	46 (34)	15 (14)	14 (13)	90 (76)
<u>Ewart Park spears (excluding burnt)</u>					
1	0 (0)	4 (3)	3 (3)	1 (1)	8 (7)
2	0 (0)	3 (3)	5 (5)	0 (0)	8 (8)
3	0 (0)	1 (0)	9 (9)	0 (0)	10 (9)
4	<u>0 (0)</u>	<u>0 (0)</u>	<u>6 (6)</u>	<u>0 (0)</u>	<u>6 (6)</u>
Total	0 (0)	8 (6)	23 (23)	1 (1)	32 (30)
<u>Early swords (excluding burnt)</u>					
1	1 (0)	0 (0)	2 (2)	0 (0)	3 (2)
2	1 (0)	0 (0)	2 (2)	2 (2)	5 (4)
3	1 (1)	1 (1)	1 (1)	1 (1)	4 (4)
4	<u>0 (0)</u>	<u>0 (0)</u>	<u>2 (2)</u>	<u>1 (1)</u>	<u>3 (3)</u>
Total	3 (1)	1 (1)	7 (7)	4 (4)	15 (13)
<u>Early spears (excluding burnt)</u>					
1	0 (0)	1 (1)	1 (1)	2 (1)	4 (3)
2	0 (0)	0 (0)	2 (1)	2 (2)	4 (3)
3	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)
4	<u>0 (0)</u>	<u>0 (0)</u>	<u>3 (3)</u>	<u>0 (0)</u>	<u>3 (3)</u>
Total	1 (1)	1 (1)	6 (5)	4 (3)	12 (10)
<u>Late swords (excluding burnt)</u>					
1	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)
2	0 (0)	1 (1)	2 (2)	1 (1)	4 (4)
3	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
4	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>
Total	1 (1)	1 (1)	2 (2)	1 (1)	5 (5)

Region

	<u>Region</u>		<u>Region</u>	
	<u>East Anglia</u>	<u>South East</u>	<u>East Anglia</u>	<u>South East</u>
<u>Wilburton swords (excluding burnt)</u>		<u>Wilburton spears (excluding burnt)</u>		
1	4 (1)	5 (2)	1 (0)	1 (1)
2	4 (2)	11 (10)	0 (0)	1 (1)
3	1 (1)	6 (6)	1 (1)	0 (0)
4	<u>2 (2)</u>	<u>2 (2)</u>	<u>0 (0)</u>	<u>2 (2)</u>
Total	11 (6)	24 (20)	2 (1)	4 (4)

Rating: 1 = no high tin phases visible, 4 = substantial network of high tin phases visible

Table 2.3.5(i)

Coring and Recrystallisation by Region and by Typological Grouping

Rating	Region				
	East Anglia	Scotland	South East	West	Total
<u>All weapons (excluding burnt)</u>					
1	11 (2)	17 (2)	17 (11)	5 (3)	50 (18)
2	9 (9)	15 (15)	39 (39)	6 (6)	69 (69)
3	12 (12)	17 (17)	19 (19)	6 (6)	54 (54)
4	0 (0)	2 (2)	9 (9)	3 (3)	14 (14)
5	<u>2 (2)</u>	<u>4 (4)</u>	<u>6 (6)</u>	<u>4 (4)</u>	<u>16 (16)</u>
Total	34 (25)	55 (40)	90 (84)	24 (22)	203 (171)

<u>Swords (excluding burnt)</u>					
1	8 (1)	12 (0)	11 (6)	4 (3)	35 (10)
2	9 (9)	15 (15)	20 (20)	6 (6)	50 (50)
3	12 (12)	17 (17)	14 (14)	5 (5)	48 (48)
4	0 (0)	1 (1)	3 (3)	2 (2)	6 (6)
5	<u>1 (1)</u>	<u>2 (2)</u>	<u>1 (1)</u>	<u>2 (2)</u>	<u>6 (6)</u>
Total	30 (23)	47 (35)	49 (44)	19 (18)	145 (120)

<u>Spears (excluding burnt)</u>					
1	2 (1)	4 (2)	6 (5)	1 (0)	13 (8)
2	0 (0)	0 (0)	16 (16)	0 (0)	16 (16)
3	0 (0)	0 (0)	5 (5)	0 (0)	5 (5)
4	0 (0)	1 (1)	6 (6)	1 (1)	8 (8)
5	<u>1 (1)</u>	<u>2 (2)</u>	<u>5 (5)</u>	<u>2 (2)</u>	<u>10 (10)</u>
Total	3 (2)	7 (5)	38 (37)	4 (3)	52 (47)

Typological Grouping

Rating	Early	Wilburton	Ewart Park	Late	Total
<u>All weapons (excluding burnt)</u>					
1	11 (7)	14 (3)	24 (7)	1 (1)	50 (18)
2	6 (6)	12 (12)	47 (47)	2 (2)	67 (67)
3	4 (4)	13 (13)	35 (35)	2 (2)	54 (54)
4	1 (1)	2 (2)	7 (7)	0 (0)	10 (10)
5	<u>4 (4)</u>	<u>2 (2)</u>	<u>10 (10)</u>	<u>0 (0)</u>	<u>16 (16)</u>
Total	26 (22)	43 (32)	123 (106)	5 (5)	197 (165)

<u>Swords (excluding burnt)</u>					
1	5 (3)	11 (2)	18 (4)	1 (1)	35 (10)
2	4 (4)	9 (9)	34 (34)	2 (2)	49 (49)
3	4 (4)	12 (12)	30 (30)	2 (2)	48 (48)
4	0 (0)	1 (1)	4 (4)	0 (0)	5 (5)
5	<u>2 (2)</u>	<u>1 (1)</u>	<u>3 (3)</u>	<u>0 (0)</u>	<u>6 (6)</u>
Total	15 (13)	34 (25)	89 (75)	5 (5)	143 (118)

<u>Spears (excluding burnt)</u>					
1	6 (4)	2 (1)	5 (3)	0 (0)	13 (8)
2	2 (2)	2 (2)	11 (11)	0 (0)	15 (15)
3	0 (0)	0 (0)	4 (4)	0 (0)	4 (4)
4	1 (1)	1 (1)	3 (3)	0 (0)	5 (5)
5	<u>2 (2)</u>	<u>1 (1)</u>	<u>7 (7)</u>	<u>0 (0)</u>	<u>10 (10)</u>
Total	11 (9)	6 (5)	30 (28)	0 (0)	47 (42)

Rating: 1 = no coring and complete recrystallisation, 5 = highly cored and no recrystallisation

Table 2.3.5(ii)

Coring and Recrystallisation by Region for Typological Groups

Rating	Region				
	East Anglia	Scotland	South East	West	Total
<u>Ewart Park swords (excluding burnt)</u>					
1	0 (0)	12 (0)	3 (2)	3 (2)	18 (4)
2	7 (7)	15 (15)	7 (7)	5 (5)	34 (34)
3	8 (8)	15 (15)	3 (3)	4 (4)	30 (30)
4	0 (0)	1 (1)	1 (1)	2 (2)	4 (4)
5	<u>0 (0)</u>	<u>2 (2)</u>	<u>1 (1)</u>	<u>0 (0)</u>	<u>3 (3)</u>
Total	15 (15)	45 (33)	15 (14)	14 (13)	89 (75)
<u>Ewart Park spears (excluding burnt)</u>					
1	0 (0)	3 (1)	2 (2)	0 (0)	5 (3)
2	0 (0)	0 (0)	11 (11)	0 (0)	11 (11)
3	0 (0)	0 (0)	4 (4)	0 (0)	4 (4)
4	0 (0)	1 (1)	2 (2)	0 (0)	3 (3)
5	<u>0 (0)</u>	<u>2 (2)</u>	<u>4 (4)</u>	<u>1 (1)</u>	<u>7 (7)</u>
Total	0 (0)	6 (4)	23 (23)	1 (1)	30 (28)
<u>Early swords (excluding burnt)</u>					
1	2 (0)	0 (0)	2 (2)	1 (1)	5 (3)
2	0 (0)	0 (0)	3 (3)	1 (1)	4 (4)
3	1 (1)	1 (1)	2 (2)	0 (0)	4 (4)
4	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
5	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>2 (2)</u>	<u>2 (2)</u>
Total	3 (1)	1 (1)	7 (7)	4 (4)	15 (13)
<u>Early spears (excluding burnt)</u>					
1	1 (1)	1 (1)	3 (2)	1 (0)	6 (4)
2	0 (0)	0 (0)	2 (2)	0 (0)	2 (2)
3	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
4	0 (0)	0 (0)	0 (0)	1 (1)	1 (1)
5	<u>0 (0)</u>	<u>0 (0)</u>	<u>1 (1)</u>	<u>1 (1)</u>	<u>2 (2)</u>
Total	1 (1)	1 (1)	6 (5)	3 (2)	11 (9)
<u>Late swords (excluding burnt)</u>					
1	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)
2	1 (1)	0 (0)	1 (1)	0 (0)	2 (2)
3	0 (0)	1 (1)	0 (0)	1 (1)	2 (2)
4	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
5	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>
Total	1 (1)	1 (1)	2 (2)	1 (1)	5 (5)

Region

	Region			Region	
	East Anglia	South East		East Anglia	South East
<u>Wilburton swords (excluding burnt)</u>		<u>Wilburton spears (excluding burnt)</u>			
1	6 (1)	5 (1)	1 (0)	1 (1)	
2	1 (1)	8 (8)	0 (0)	2 (2)	
3	3 (3)	9 (9)	0 (0)	0 (0)	
4	0 (0)	1 (1)	0 (0)	1 (1)	
5	<u>1 (1)</u>	<u>0 (0)</u>	<u>1 (1)</u>	<u>0 (0)</u>	
Total	11 (6)	23 (19)	2 (1)	4 (4)	

Rating: 1 = no coring and complete recrystallisation, 5 = highly cored and no recrystallisation

Table 2.3.6(i)

Grain Distortion by Region and by Typological Grouping

Rating	Region				Total
	East Anglia	Scotland	South East	West	
<u>All weapons (excluding burnt)</u>					
1	5 (0)	18 (5)	8 (5)	5 (5)	36 (15)
2	20 (17)	31 (30)	56 (55)	18 (16)	125 (118)
3	7 (7)	4 (4)	16 (15)	0 (0)	27 (26)
Total	32 (24)	53 (39)	80 (75)	23 (21)	188 (159)
<u>Swords (excluding burnt)</u>					
1	3 (0)	11 (1)	5 (2)	2 (2)	21 (5)
2	19 (16)	30 (29)	31 (31)	16 (15)	96 (91)
3	7 (7)	4 (4)	11 (10)	0 (0)	22 (21)
Total	29 (23)	45 (34)	47 (43)	18 (17)	139 (117)
<u>Spears (excluding burnt)</u>					
1	1 (0)	6 (4)	3 (3)	2 (2)	12 (9)
2	1 (1)	1 (1)	22 (21)	2 (1)	26 (24)
3	0 (0)	0 (0)	5 (5)	0 (0)	5 (5)
Total	2 (1)	7 (5)	30 (29)	4 (3)	43 (38)

Rating	Typological Grouping				Total
	Early	Wilburton	Ewart Park	Late	
<u>All weapons (excluding burnt)</u>					
1	5 (5)	9 (2)	22 (8)	0 (0)	36 (15)
2	14 (10)	23 (22)	80 (78)	4 (4)	121 (114)
3	5 (5)	9 (8)	14 (14)	0 (0)	28 (27)
Total	24 (20)	41 (32)	116 (100)	4 (4)	185 (156)
<u>Swords (excluding burnt)</u>					
1	2 (2)	7 (2)	12 (1)	0 (0)	21 (5)
2	9 (7)	20 (19)	61 (59)	4 (4)	94 (89)
3	2 (2)	6 (5)	14 (14)	0 (0)	22 (21)
Total	13 (11)	33 (26)	87 (74)	4 (4)	137 (115)
<u>Spears (excluding burnt)</u>					
1	3 (3)	1 (0)	8 (6)	0 (0)	12 (9)
2	5 (3)	2 (2)	17 (17)	0 (0)	24 (22)
3	3 (3)	2 (2)	0 (0)	0 (0)	5 (5)
Total	11 (9)	5 (4)	25 (23)	0 (0)	41 (36)

Rating: 1 = undistorted, 3 = substantially distorted

Table 2.3.6(ii)

Grain Distortion by Region for Typological Groups

Rating	Region				Total
	East Anglia	Scotland	South East	West	
<u>Ewart Park swords (excluding burnt)</u>					
1	0 (0)	11 (1)	1 (0)	0 (0)	12 (1)
2	9 (9)	29 (28)	9 (9)	14 (13)	61 (59)
3	<u>6 (6)</u>	<u>4 (4)</u>	<u>4 (4)</u>	<u>0 (0)</u>	<u>14 (14)</u>
Total	15 (15)	44 (33)	14 (13)	14 (13)	87 (74)
<u>Ewart Park spears (excluding burnt)</u>					
1	0 (0)	5 (3)	3 (3)	0 (0)	8 (6)
2	0 (0)	1 (1)	16 (16)	0 (0)	17 (17)
3	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>
Total	0 (0)	6 (4)	19 (19)	0 (0)	25 (23)
<u>Early swords (excluding burnt)</u>					
1	0 (0)	0 (0)	0 (0)	2 (2)	2 (2)
2	2 (0)	0 (0)	6 (6)	1 (1)	9 (7)
3	<u>1 (1)</u>	<u>0 (0)</u>	<u>1 (1)</u>	<u>0 (0)</u>	<u>2 (2)</u>
Total	3 (1)	0 (0)	7 (7)	3 (3)	13 (11)
<u>Early spears (excluding burnt)</u>					
1	0 (0)	1 (1)	0 (0)	2 (2)	3 (3)
2	1 (1)	0 (0)	2 (1)	2 (1)	5 (3)
3	<u>0 (0)</u>	<u>0 (0)</u>	<u>3 (3)</u>	<u>0 (0)</u>	<u>3 (3)</u>
Total	1 (1)	1 (1)	5 (4)	4 (3)	11 (9)
<u>Late swords (excluding burnt)</u>					
1	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
2	1 (1)	1 (1)	1 (1)	1 (1)	4 (4)
3	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>
Total	1 (1)	1 (1)	1 (1)	1 (1)	4 (4)

	Region			Region	
	East Anglia	South East		East Anglia	South East
<u>Wilburton swords (excluding burnt)</u>			<u>Wilburton spears (excluding burnt)</u>		
1	3 (0)	4 (2)	1 (0)	0 (0)	
2	7 (6)	13 (13)	0 (0)	2 (2)	
3	<u>0 (0)</u>	<u>6 (5)</u>	<u>0 (0)</u>	<u>2 (2)</u>	
Total	10 (6)	23 (20)	1 (1)	4 (4)	

Rating: 1 = undistorted, 3 = substantially distorted

Table 2.3.7(i)

Grain Size by Region and by Typological Grouping

Grain Size Group	Region				Total
	East Anglia	Scotland	South East	West	
<u>All weapons (excluding burnt)</u>					
a	4 (4)	2 (2)	11 (11)	1 (1)	18 (18)
b	10 (10)	16 (16)	32 (32)	4 (4)	62 (62)
c	1 (1)	9 (9)	12 (12)	3 (3)	25 (25)
d	7 (7)	3 (3)	10 (10)	6 (6)	26 (26)
e	2 (2)	7 (7)	6 (6)	3 (3)	18 (18)
f	<u>10 (1)</u>	<u>19 (4)</u>	<u>17 (11)</u>	<u>8 (6)</u>	<u>54 (22)</u>
Total	34 (25)	56 (41)	88 (82)	25 (23)	203 (171)
<u>Swords (excluding burnt)</u>					
a	4 (4)	2 (2)	7 (7)	1 (1)	14 (14)
b	9 (9)	16 (16)	17 (17)	4 (4)	46 (46)
c	1 (1)	9 (9)	9 (9)	3 (3)	22 (22)
d	6 (6)	2 (2)	7 (7)	6 (6)	21 (21)
e	2 (2)	6 (6)	2 (2)	2 (2)	12 (12)
f	<u>8 (1)</u>	<u>13 (1)</u>	<u>7 (2)</u>	<u>3 (2)</u>	<u>31 (6)</u>
Total	30 (23)	48 (36)	49 (44)	19 (18)	146 (121)
<u>Spears (excluding burnt)</u>					
a	0 (0)	0 (0)	4 (4)	0 (0)	4 (4)
b	1 (1)	0 (0)	14 (14)	0 (0)	15 (15)
c	0 (0)	0 (0)	2 (2)	0 (0)	2 (2)
d	1 (1)	1 (1)	3 (3)	0 (0)	5 (5)
e	0 (0)	1 (1)	4 (4)	0 (0)	5 (5)
f	<u>1 (0)</u>	<u>5 (3)</u>	<u>9 (8)</u>	<u>5 (4)</u>	<u>20 (15)</u>
Total	3 (2)	7 (5)	36 (35)	5 (4)	51 (46)

Type

Grain Size Group	Type			Total	
	Early	Wilburton	Ewart Park		Late
<u>All weapons (excluding burnt)</u>					
a	1 (1)	4 (4)	14 (14)	0 (0)	19 (19)
b	7 (7)	13 (13)	38 (38)	2 (2)	60 (60)
c	4 (4)	4 (4)	13 (13)	2 (2)	23 (23)
d	1 (1)	6 (6)	18 (18)	1 (1)	26 (26)
e	4 (4)	3 (3)	11 (11)	0 (0)	18 (18)
f	<u>10 (6)</u>	<u>13 (2)</u>	<u>28 (11)</u>	<u>0 (0)</u>	<u>51 (19)</u>
Total	27 (23)	43 (32)	122 (105)	5 (5)	197 (165)
<u>Swords (excluding burnt)</u>					
a	0 (0)	3 (3)	11 (11)	0 (0)	14 (14)
b	5 (5)	10 (10)	28 (28)	2 (2)	45 (45)
c	3 (3)	4 (4)	12 (12)	2 (2)	21 (21)
d	1 (1)	5 (5)	14 (14)	1 (1)	21 (21)
e	2 (2)	2 (2)	8 (8)	0 (0)	12 (12)
f	<u>4 (2)</u>	<u>10 (1)</u>	<u>17 (3)</u>	<u>0 (0)</u>	<u>31 (6)</u>
Total	15 (13)	34 (25)	90 (76)	5 (5)	144 (119)
<u>Spears (excluding burnt)</u>					
a	1 (1)	0 (0)	3 (3)	0 (0)	4 (4)
b	2 (2)	2 (2)	10 (10)	0 (0)	14 (14)
c	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)
d	0 (0)	1 (1)	4 (4)	0 (0)	5 (5)
e	2 (2)	1 (1)	2 (2)	0 (0)	5 (5)
f	<u>6 (4)</u>	<u>2 (1)</u>	<u>9 (7)</u>	<u>0 (0)</u>	<u>17 (12)</u>
Total	12 (10)	6 (5)	28 (26)	0 (0)	46 (41)

Rating: a = <10, b = 10-15, c = 15-20, d = 20-25, e = 25-35, f = >35 (micrometres)

Table 2.3.7(ii)

Grain Size by Region for Typological Groups

Grain Size Group	Region				
	East Anglia	Scotland	South East	West	Total
<u>Ewart Park swords (excluding burnt)</u>					
a	4 (4)	2 (2)	4 (4)	1 (1)	11 (11)
b	6 (6)	15 (15)	4 (4)	3 (3)	28 (28)
c	1 (1)	8 (8)	1 (1)	2 (2)	12 (12)
d	4 (4)	2 (2)	2 (2)	6 (6)	14 (14)
e	0 (0)	6 (6)	1 (1)	1 (1)	8 (8)
f	<u>0 (0)</u>	<u>13 (1)</u>	<u>3 (2)</u>	<u>1 (0)</u>	<u>17 (3)</u>
Total	15 (15)	46 (34)	15 (14)	14 (13)	90 (76)
<u>Ewart Park spears (excluding burnt)</u>					
a	0 (0)	0 (0)	3 (3)	0 (0)	3 (3)
b	0 (0)	0 (0)	10 (10)	0 (0)	10 (10)
c	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
d	0 (0)	1 (1)	3 (3)	0 (0)	4 (4)
e	0 (0)	0 (0)	2 (2)	0 (0)	2 (2)
f	<u>0 (0)</u>	<u>5 (3)</u>	<u>3 (3)</u>	<u>1 (1)</u>	<u>9 (7)</u>
Total	0 (0)	6 (4)	21 (21)	1 (1)	28 (26)
<u>Early swords (excluding burnt)</u>					
a	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
b	1 (1)	1 (1)	2 (2)	1 (1)	5 (5)
c	0 (0)	0 (0)	3 (3)	0 (0)	3 (3)
d	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)
e	0 (0)	0 (0)	1 (1)	1 (1)	2 (2)
f	<u>2 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>2 (2)</u>	<u>4 (2)</u>
Total	3 (1)	1 (1)	7 (7)	4 (4)	15 (13)
<u>Early spears (excluding burnt)</u>					
a	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)
b	1 (1)	0 (0)	1 (1)	0 (0)	2 (2)
c	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)
d	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
e	0 (0)	1 (1)	1 (1)	0 (0)	2 (2)
f	<u>0 (0)</u>	<u>0 (0)</u>	<u>2 (1)</u>	<u>4 (3)</u>	<u>6 (4)</u>
Total	1 (1)	1 (1)	6 (5)	4 (3)	12 (10)
<u>Late swords (excluding burnt)</u>					
a	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
b	1 (1)	0 (0)	1 (1)	0 (0)	2 (2)
c	0 (0)	1 (1)	0 (0)	1 (1)	2 (2)
d	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)
e	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
f	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>
Total	1 (1)	1 (1)	2 (2)	1 (1)	5 (5)

Region

Grain Size Group	East Anglia		South East	
	East Anglia	South East	East Anglia	South East
<u>Wilburton swords (excluding burnt)</u>				
a	0 (0)	3 (3)	0 (0)	0 (0)
b	1 (1)	9 (9)	0 (0)	2 (2)
c	0 (0)	4 (4)	0 (0)	0 (0)
d	2 (2)	3 (3)	1 (1)	0 (0)
e	2 (2)	0 (0)	0 (0)	1 (1)
f	<u>6 (1)</u>	<u>4 (0)</u>	<u>1 (0)</u>	<u>1 (1)</u>
Total	11 (6)	23 (19)	2 (1)	4 (4)
<u>Wilburton spears (excluding burnt)</u>				
a	0 (0)	0 (0)	0 (0)	0 (0)
b	0 (0)	0 (0)	0 (0)	2 (2)
c	0 (0)	0 (0)	0 (0)	0 (0)
d	0 (0)	0 (0)	0 (0)	0 (0)
e	0 (0)	0 (0)	0 (0)	1 (1)
f	<u>0 (0)</u>	<u>0 (0)</u>	<u>0 (0)</u>	<u>1 (1)</u>
Total	0 (0)	0 (0)	0 (0)	4 (4)

Rating: a = <10, b = 10-15, c = 15-20, d = 20-25, e = 25-35, f = >35 (micrometres)

Table 2.3.8(i)

Hardness (HV) by Region and Typological Grouping

	<u>Region</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
All samples (excluding burnt):				
Mean	148.4 (153.1)	140.0 (144.8)	172.9 (172.8)	159.7 (161.0)
Standard Deviation	28.7 (28.1)	26.6 (25.3)	41.7 (41.7)	36.1 (35.3)
Number	34 (26)	56 (42)	91 (85)	25 (23)
Sword blade samples (excluding burnt):				
Mean	150.5 (154.3)	143.3 (148.4)	181.4 (183.7)	161.1 (164.2)
Standard Deviation	25.0 (22.9)	26.3 (24.1)	31.0 (30.1)	25.3 (33.7)
Number	30 (23)	48 (36)	49 (44)	19 (18)
Spearhead samples (excluding burnt):				
Mean	136.7 (143.9)	120.7 (123.3)	166.6 (164.6)	159.9 (153.2)
Standard Deviation	53.1 (62.6)	20.8 (23.1)	49.8 (48.9)	44.0 (47.8)
Number	4 (3)	8 (6)	39 (38)	5 (4)
	<u>Type</u>			
	<u>Early</u>	<u>Wilburton</u>	<u>Ewart Park</u>	<u>Late</u>
All samples (excluding burnt):				
Mean	182.8 (181.3)	165.5 (173.9)	149.5 (153.0)	166.1 (166.1)
Standard Deviation	44.6 (46.4)	38.9 (36.8)	32.8 (32.3)	29.8 (29.8)
Number	27 (23)	43 (33)	124 (108)	5 (5)
Sword blade samples (excluding burnt):				
Mean	180.3 (182.1)	165.9 (175.2)	153.2 (157.9)	166.1 (166.1)
Standard Deviation	37.7 (40.0)	37.8 (35.0)	29.0 (27.0)	29.8 (29.8)
Number	15 (13)	34 (25)	90 (76)	5 (5)
Spearhead samples (excluding burnt):				
Mean	185.9 (180.3)	160.5 (168.0)	142.4 (144.5)	
Standard Deviation	53.6 (55.9)	48.6 (48.6)	40.5 (41.0)	
Number	12 (10)	7 (6)	31 (29)	

Table 2.3.8(ii)

Hardness (HV) by Region for Typological Groups

	<u>Area</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
Ewart Park sword blades (excluding burnt):				
Mean	159.6 (159.6)*	142.3 (147.5)	178.7 (180.4)	155.0 (158.9)
Standard Deviation	19.0 (19.0)	26.3 (24.3)	31.0 (31.5)	26.9 (23.5)
Number	15 (15)	46 (34)	15 (14)	14 (13)
Ewart Park spearheads (excluding burnt):				
Mean		122.5 (126.3)	145.0 (145.0)	222.8 (222.8)
Standard Deviation		21.8 (24.4)	41.0 (41.0)	
Number		7 (5)	23 (23)	1 (1)
Early sword blades (excluding burnt):				
Mean	167.9 (165.7)	178.5 (178.5)	188.3 (188.3)	176.3 (176.3)
Standard Deviation	14.3		34.6 (34.6)	61.3 (61.3)
Number	3 (1)	1 (1)	7 (7)	4 (4)
Early spearheads (excluding burnt):				
Mean	216 (216)	108 (108)	221.7 (217.7)	144.2 (130.0)
Standard Deviation			37.8 (40.8)	30.6 (13.9)
Number	1 (1)	1 (1)	6 (5)	4 (3)
Late sword blades (excluding burnt):				
Mean	121.2 (121.2)	150.1 (150.1)	186.8 (186.8)	185.8 (185.8)
Standard Deviation			6.1 (6.1)	
Number	1 (1)	1 (1)	2 (2)	1 (1)
Wilburton sword blades (excluding burnt):				
Mean	134.5 (144.6)		181.0 (184.9)	
Standard Deviation	26.1 (29.2)		33.3 (31.4)	
Number	11 (6)		23 (19)	
Wilburton spearheads (excluding burnt):				
Mean	110.3 (107.8)		198.1 (198.1)	
Standard Deviation	5.8 (5.5)		17.4 (17.4)	
Number	3 (2)		4 (4)	

* Distribution diverges significantly from normal

Table 2.6.1.1(i)

Trace Element Total % by Typological Grouping and Region

	<u>Type</u>			
	<u>Early</u>	<u>Wilburton</u>	<u>Ewart Park</u>	<u>Late</u>
All samples:				
Geometric Mean	0.88	1.54	0.81	0.61
Mean	1.06	1.89	1.04	0.72
Standard Deviation	0.76	1.13	0.78	0.50
Number	27	43	124	5
Sword samples:				
Geometric Mean	1.11	1.54*	0.86	0.61
Mean	1.31	1.89	1.08	0.72
Standard Deviation	0.89	1.14	0.79	0.50
Number	15	37	94	5
Spearhead samples:				
Geometric Mean	0.66	1.54	0.67	
Mean	0.74	1.88	0.91	
Standard Deviation	0.39	1.20	0.77	
Number	12	6	30	
	<u>Region</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
All samples:				
Geometric Mean	1.08	0.91	0.98	0.69*
Mean	1.41	1.14	1.31	0.83
Standard Deviation	0.96	0.85	1.00	0.70
Number	34	57	82	25
Sword samples:				
Geometric Mean	1.01	0.97	1.18	0.73*
Mean	1.32	1.21	1.52	0.88
Standard Deviation	0.91	0.88	1.07	0.77
Number	31	49	50	20
Spearhead samples:				
Geometric Mean	2.14	0.61	0.73	0.56
Mean	2.34	0.75	0.98	0.61
Standard Deviation	1.28	0.57	0.79	0.31
Number	3	8	32	5

* Distribution not adequately 'normalised' by log transform

Table 2.6.1.1(ii)

Trace Element Total % by Region within Typological Grouping

	<u>Region</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
Early samples:				
Geometric Mean	0.90	0.81	1.03	0.68
Mean	0.96	0.82	1.18	0.97
Standard Deviation	0.36	0.13	0.57	1.20
Number	4	2	13	8
Wilburton samples:				
Geometric Mean	1.41		1.64*	
Mean	1.80		1.97	
Standard Deviation	1.12		1.16	
Number	14		28	
Ewart Park samples:				
Geometric Mean	0.93	0.90	0.68	0.71
Mean	1.23	1.15	0.92	0.78
Standard Deviation	0.82	0.87	0.75	0.30
Number	15	54	39	16
Late samples:				
Geometric Mean	0.47	1.53	0.49	0.47
Mean	0.47	1.53	0.57	0.47
Standard Deviation			0.42	
Number	1	1	2	1

* Distribution not adequately 'normalised' by log transform

Table 2.6.1.1(iii)

Trace Element Total % by Region within Typological Grouping and Weapon Category

	<u>Area</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
Ewart Park swords:				
Geometric Mean	0.93	0.96	0.70	0.70
Mean	1.23	1.21	0.88	0.75
Standard Deviation	0.82	0.89	0.64	0.30
Number	15	47	17	15
Ewart Park spearheads:				
Geometric Mean		0.60	0.67	1.12
Mean		0.75	0.95	1.12
Standard Deviation		0.61	0.83	
Number		7	22	1
Early swords:				
Geometric Mean	0.79	0.91	1.42	0.98
Mean	0.82	0.91	1.50	1.45
Standard Deviation	0.29		0.48	1.65
Number	3	1	7	4
Early spearheads:				
Geometric Mean	1.36	0.73	0.71	0.47
Mean	1.36	0.73	0.81	0.49
Standard Deviation			0.44	0.14
Number	1	1	6	4
Late swords:				
Geometric Mean				
Mean	0.47	1.53	0.57	0.47
Standard Deviation			0.42	
Number	1	1	2	1
Wilburton swords:				
Geometric Mean	1.27		1.74*	
Mean	1.63		2.06	
Standard Deviation	1.06		1.18	
Number	12		24	
Wilburton spearheads:				
Geometric Mean	2.68		1.17	
Mean	2.84		1.41	
Standard Deviation	1.29		0.96	
Number	2		4	

*Distribution not adequately 'normalised' by log transform

Table 2.6.1.2(i)

Compositional Group by Typological Grouping and Region

<u>All Samples</u>					
<u>Type</u>					
<u>Compositional Group</u>	<u>Early</u>	<u>Wilburton</u>	<u>Ewart Park</u>	<u>Late</u>	<u>Total</u>
1	5	0	12	1	18
2	10	1	7	0	18
3	2	19	8	0	29
4	4	13	20	0	37
5	2	1	14	0	17
6	1	3	6	0	10
7	1	2	23	2	28
8	1	2	10	0	13
9	0	1	18	2	21
<u>10</u>	<u>1</u>	<u>1</u>	<u>6</u>	<u>0</u>	<u>8</u>
Total	27	43	124	5	199

<u>All Samples</u>					
<u>Region</u>					
<u>Compositional Group</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
1	3	7	4	4	18
2	4	3	7	4	18
3	8	3	17	1	29
4	6	8	21	2	37
5	2	7	8	0	17
6	1	4	5	0	10
7	4	16	6	2	28
8	5	6	0	2	13
9	0	1	10	9	20
<u>10</u>	<u>1</u>	<u>2</u>	<u>4</u>	<u>1</u>	<u>8</u>
Total	34	57	82	25	198

See text for definitions of Compositional Groups.

Table 2.6.1.2(ii)

Compositional Group by Region within Typological Grouping and Weapon Category

Early Sword (Spear) Samples

<u>Group</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
1	0	0	0 (2)	1 (2)	1 (4)
2	1 (1)	1	0 (4)	2 (1)	4 (6)
3	0	0	1	1	2
4	1	0	3	0	4
5	0	0 (1)	1	0	1 (1)
6	0	0	1	0	1
7	0	0	1	0	1
8	1	0	0	0	1
<u>10</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0 (1)</u>	<u>0 (1)</u>
Total	3 (1)	1 (1)	7 (6)	4 (4)	15 (12)

Wilburton Sword (Spear) Samples

<u>Group</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
2	1		0		1
3	5 (2)		11 (1)		16 (3)
4	2		8 (3)		10 (3)
5	0		1		1
6	1		2		3
7	1		1		2
8	2		0		2
9	0		0		0
<u>10</u>	<u>0</u>		<u>1</u>		<u>1</u>
Total	12 (2)		24 (4)		36 (6)

Ewart Park Sword (Spear) Samples

<u>Group</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
1	3	6	1 (1)	1	11 (1)
2	1	1 (1)	2 (1)	1	5 (2)
3	1	3	2 (2)	0	6 (2)
4	2	6 (2)	6 (2)	2	16 (4)
5	2	5 (1)	2 (4)	0	9 (5)
6	0	4	0 (2)	0	4 (2)
7	2	13 (3)	1 (2)	2	18 (5)
8	2	6	0 (0)	1 (1)	9 (1)
9	0	1	2 (7)	8	11 (7)
<u>10</u>	<u>1</u>	<u>2</u>	<u>2 (1)</u>	<u>0</u>	<u>5 (1)</u>
Total	14	47 (7)	18 (22)	15 (1)	94 (30)

Late Sword Samples

<u>Group</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
1	0	1	0	0	1
7	1	0	1	0	2
<u>9</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>2</u>
Total	1	1	2	1	5

See text for definitions of Compositional Groups

Table 2.6.2.1(i)

Tin Content % by Typological Grouping and by Region

	<u>Type</u>			
	<u>Early</u>	<u>Wilburton</u>	<u>Ewart Park</u>	<u>Late</u>
All samples:				
Mean	10.51	8.89	9.98	9.26
Standard Deviation	2.60	1.72	2.19	1.80
Number	27	43	124	5
Sword samples:				
Mean	10.20	8.90	10.23	9.26
Standard Deviation	2.81	1.78	1.95	1.80
Number	15	37	94	5
Spearhead samples:				
Mean	10.91	8.81*	9.20	
Standard Deviation	2.37	1.39	2.71	
Number	12	6	30	

	<u>Region</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
All samples:				
Mean	9.93	9.94	9.49	10.36
Standard Deviation	2.02	2.09	2.28	2.40
Number	34	57	82	25
Sword samples:				
Mean	9.92	10.10	9.26	10.79
Standard Deviation	2.04	1.89	2.00	2.41
Number	31	49	50	20
Spearhead samples:				
Mean	9.95	8.96	9.84	8.64
Standard Deviation	2.22	3.07	2.65	1.54
Number	3	8	32	5

* Distribution diverges significantly from normal

Table 2.6.2.1(ii)**Tin Content % by Region within Typological Grouping**

	<u>Region</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
Early samples:				
Mean	10.83	10.30	10.18	10.95
Standard Deviation	2.14	3.17	2.89	2.64
Number	4	2	13	8
Wilburton samples:				
Mean	9.18		8.75	
Standard Deviation	2.07		1.57	
Number	14		28	
Ewart Park samples:				
Mean	10.49	9.93	9.81	10.04
Standard Deviation	1.83	2.11	2.40	2.38
Number	15	54	39	16
Late samples:				
Mean	8.34	9.54	8.91	10.6
Standard Deviation			3.16	
Number	1	1	2	1

Table 2.6.2.1(iii)

Tin Content % by Region within Typological Grouping and Weapon Category

	<u>Area</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
Ewart Park swords:				
Mean	10.49	10.06	10.47	10.22
Standard Deviation	1.83	1.89	1.96	2.35
Number	15	47	17	15
Ewart Park spearheads:				
Mean		9.09	9.31	7.36
Standard Deviation		3.29	2.62	
Number		7	22	1
Early swords:				
Mean	10.27	12.54	8.26	12.95
Standard Deviation	2.23		2.21	1.77
Number	3	1	7	4
Early spearheads:				
Mean	12.51	8.06	12.42	8.96
Standard Deviation			1.71	1.57
Number	1	1	6	4
Late swords:				
Mean	8.34	9.54	8.91	10.60
Standard Deviation			3.16	
Number	1	1	2	1
Wilburton swords:				
Mean	9.26		8.73	
Standard Deviation	2.24		1.57	
Number	12		24	
Wilburton spearheads:				
Mean	8.68		8.88	
Standard Deviation	0.21		1.78	
Number	2		4	

Table 2.6.2.2(i)

Lead Content % by Typological Grouping and by Region

	<u>Type</u>			
	<u>Early</u>	<u>Wilburton</u>	<u>Ewart Park</u>	<u>Late</u>
All samples:				
Geometric Mean	0.22	1.64*	1.25	1.82*
Mean	0.61	3.83	2.75	2.65
Standard Deviation	1.10	5.14	3.56	1.62
Number	25	43	122	5
Sword samples:				
Geometric Mean	0.35	1.41	1.04	1.82*
Mean	0.91	3.29	2.57	2.65
Standard Deviation	1.34	4.09	3.80	1.62
Number	15	37	92	5
Spearhead samples:				
Geometric Mean	0.11	4.17	2.17	
Mean	0.17	7.18	3.28	
Standard Deviation	0.17	9.29	2.69	
Number	10	6	30	

	<u>Region</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
All samples:				
Geometric Mean	0.52	1.39	1.23*	1.00
Mean	1.72	2.76	2.73	4.00
Standard Deviation	4.47	3.19	3.38	5.39
Number	33	56	81	23
Sword samples:				
Geometric Mean	0.44	1.19	1.25	1.62
Mean	0.95	2.44	2.92	4.80
Standard Deviation	1.38	3.12	3.89	5.62
Number	31	48	50	19
Spearhead samples:				
Geometric Mean	2.85	3.64	1.21	0.10
Mean	9.70	4.70	2.44	0.19
Standard Deviation	14.01	3.08	2.38	0.27
Number	3	8	31	4

* Distribution not adequately 'normalised' by log transform

Table 2.6.2.2(ii)**Lead Content % by Region within Typological Grouping**

	<u>Region</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
Early samples:				
Geometric Mean	0.14	0.63	0.35	0.10*
Mean	0.22	0.63	0.90	0.33
Standard Deviation	0.17	0.02	1.47	0.69
Number	4	2	12	7
Wilburton samples:				
Geometric Mean	1.08		2.02*	
Mean	3.30		4.18	
Standard Deviation	6.70		4.37	
Number	14		28	
Ewart Park samples:				
Geometric Mean	0.33	1.49	1.23	2.62*
Mean	0.52	2.89	2.27	5.71
Standard Deviation	0.65	3.23	2.65	5.97
Number	15	53	39	15
Late samples:				
Geometric Mean	3.65	0.21	2.50	4.10
Mean	3.65	0.21	2.65	4.10
Standard Deviation			1.20	
Number	1	1	2	1

* Distribution not adequately 'normalised' by log transform

Table 2.6.2.2(iii)

Lead Content % by Region within Typological Grouping and Weapon Category

	<u>Area</u>			
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
Ewart Park swords:				
Geometric Mean	0.33	1.25	0.75	2.92*
Mean	0.52	2.53	1.63	6.07
Standard Deviation	0.65	3.16	2.92	6.01
Number	15	46	17	14
Ewart Park spearheads:				
Geometric Mean		4.69	1.81	0.59
Mean		5.29	2.76	0.59
Standard Deviation		2.81	2.40	
Number		7	22	1
Early swords:				
Geometric Mean	0.11	0.64	0.83	0.17
Mean	0.20	0.64	1.46	0.53
Standard Deviation	0.20		1.75	0.91
Number	3	1	7	4
Early spearheads:				
Geometric Mean	0.30	0.61	0.11	0.06
Mean	0.30	0.61	0.12	0.06
Standard Deviation			0.06	0.03
Number	1	1	5	3
Late swords:				
Geometric Mean	3.65	0.21	2.51	4.10
Mean	3.65	0.21	2.65	4.10
Standard Deviation			1.20	
Number	1	1	2	1
Wilburton swords:				
Geometric Mean	0.76		1.91	
Mean	1.45		4.28	
Standard Deviation	1.82		4.66	
Number	12		24	
Wilburton spearheads:				
Geometric Mean	8.79		2.88	
Mean	14.40		3.58	
Standard Deviation	16.12		2.24	
Number	2		4	

* Distribution not adequately 'normalised' by log transform

Table 3.1

Preparation of Blade Edges

<u>Section #</u>	<u>1st Working</u>			<u>1st Annealing</u>			<u>2nd Working</u>			<u>2nd Annealing</u>			<u>3rd Working</u>			<u>Grinding</u>	<u>Hardness HV</u>		
	<u>Hammer Type</u>	<u>Red'n %</u>	<u>Temp °C</u>	<u>Time Mins</u>	<u>Cooling</u>	<u>Hammer Type</u>	<u>Red'n %</u>	<u>Temp °C</u>	<u>Time Mins</u>	<u>Cooling</u>	<u>Hammer Type</u>	<u>Red'n %</u>	<u>Temp °C</u>	<u>Time Mins</u>	<u>Cooling</u>			<u>Hammer Type</u>	<u>Red'n %</u>
1	Steel - various	40(part)	550	2	Air	Steel - large	40	?	5	Water	Steel - large	70	n/a	5	Water	Steel - large	70	Sandstone wheel	215
2	Steel - large	>50	610	1	Water	Steel - various	70	n/a	n/a	n/a	Steel - n/a	n/a	n/a	n/a	n/a	n/a	n/a	Wheel & buffer	241
3	Steel - small	40	550	<1	Air	Steel - small	80	570	1	Air	Copper - large	70	570	1	Air	n/a	n/a	Wheel & buffer	145
4	Copper - large	40	560	<1	Air	Copper - large	70	570	1	Air	Copper - large	70	570	1	Air	n/a	n/a	Wheel & buffer	133
5	Copper - large	40	560	<1	Air	Copper - large	70	570	1	Air	Copper - large	70	570	1	Air	Copper-large	75	Ground manually	149
6	Copper - large	40	570	<1	Air	Copper - small	70	570	1	Air	Copper - small	70	570	1	Air	Copper-large	75	Ground manually	153
7	n/a		n/a			n/a		n/a			n/a		n/a			n/a		n/a	120

Table 3.3

Impact Testing

Impact #	Block		Arm		Mount Type	Effect of Impact on Mounting		Effect of Impact on (see 3.3 for key)	
	Segment #	Type	Segment #	Type		Block Blade	Arm Blade	Block Blade	Arm Blade
1	1.2	Hard	2.1	Hard	Straight	Large block broke	Notched + bowed	Notched, nicked & torn	
2	1.6	Hard	6.1	Medium	Straight	Rotation - arm	Bowed & heavily chipped	Notched	
3	1.4	Hard	4.1	Soft	Straight	Rotation - arm	Bowed, torn & chipped	Notched & scored	
4	5.2	Medium	2.5	Hard	Straight	Rotation - arm	Bowed & chipped	Slightly bowed + notched	
5	6.5	Medium	5.6	Medium	Straight	Rotation - arm	Bowed & chipped	Notched, scored & slightly torn	
6	4.5	Soft	5.4	Medium	Straight	Rotation - both	Bowed & chipped	Bowed twice, chipped & scored	
7	3.2	Soft	2.3	Hard	Straight	Rotation - block	Bowed & chipped	Slightly notched & torn	
8	6.3	Medium	3.6	Soft	Straight	Rotation - both	Bowed twice	Notched	
9	4.3	Soft	3.4	Soft	Straight	Rotation - both	Bowed & heavily chipped	Notched, torn & heavily scored	
10	2.2	Hard	1.1	Hard	Angled	Rotation - arm	Notched & torn	Notched + bowed & chipped	
11	1.5	Hard	5.1	Medium	Angled	Rotation - both	Slightly bowed & chipped	Bowed & scored	
12	3.1	Soft	1.3	Hard	Angled	Rotation - block	Bowed, torn & slightly chipped	Slightly bowed & chipped	
13	6.6	Medium	5.5	Medium	Angled	Rotation - block	Bowed	Bowed	
14	3.5	Soft	5.3	Medium	Angled	Rotation - block	Bowed twice, scored & chipped	Slightly notched twice & torn	
15	4.4	Soft	3.3	Soft	Angled	Rotation - block	Bowed & heavily chipped	Slightly notched & scored	
16	4.7	Soft	1.7	Hard	Angled	Rotation - both	Bowed	Slightly notched	
17	6.7	Medium	2.7	Hard	Angled	Rotation - block	Bowed & scored	Bowed, torn & scored	
18	5.7	Medium	4.2	Soft	Angled	Rotation - block	Bowed	Notched & torn	
<u>Edge to Blade Face Impacts</u>									
19			1.8	Hard	Straight		Scored	Slightly bowed	
20			5.8	Medium	Straight		Scored	Bowed	
21			3.8	Soft	Straight	Rotation - arm	Scored	Slightly bowed	
22			2.8	Hard	Angled	Rotation - block	Scored	Very slightly bowed	
23			4.8	Soft	Angled	Rotation - block	Scored	Slightly bowed	
24			6.8	Medium	Angled	Rotation - block	Scored	Slightly bowed	

Table 3.3 (ctd)

Impact Testing

Impact #	Block Segment #	Block Segment #	Arm Segment #	Mount Type	Effect of Impact on Mounting	Edge to Hide Impacts	
						Block Blade/Material	Effect of Impact on Arm Blade
25				Straight	Rotation - arm	Cut	No damage
26		2.6 Hard		Angled		Cut	No damage
27		3.9 Soft		Straight		Cut	No damage
28		4.9 Soft		Angled		Cut	No damage
29		5.9 Medium		Straight	Rotation - arm	Cut	No damage
30		6.9 Medium		Angled		Cut	No damage
<u>Edge to 'Axe' Impacts</u>							
31	1.10 Hard					Notched & slightly nicked	Notched
32	1.9 Hard					Notched twice	Notched
33	3.7 Soft					Notched & slightly chipped	Notched
34	6.4 Medium					Notched & slightly nicked	Notched
<u>Edge to Bone Impacts</u>							
35		2.4 Hard		Straight	Rotation - block	Bone scored	No damage
36		2.10 Hard		Angled		Bone scored	No damage
37		5.10 Medium		Straight		Bone scored	No damage
38		6.10 Medium		Angled		Bone cracked	No damage
39		4.10 Soft		Straight		Bone cracked	No damage
40		3.10 Soft		Angled	Rotation - arm	Bone cracked & chipped	Slightly blunted
<u>Edge to Hide-wrapped Wood Impacts</u>							
41		6.2 Medium		Straight	Rotation - arm	Cut hide & into wood	No damage
42		4.6 Soft		Straight		Cut hide & into wood	No damage

Table 4.2.1(i)

Morphological Data for Swords

Sword Group	Statistic	(1) Hilt Length	(2) Shoulder Width	(3) Blade Length	(4) Blade Width	(5) Blade Thickness	(6) (2)/(1)	(7) (5)/(4)	(8) (2)/(4)	(9) (1)/(3)
Early	Mean	102.3	58.5	518.6	43.8	7.80	0.598	0.180	1.310	0.194
	sd	7.2	9.6	81.9	5.6	1.13	0.104	0.033	0.171	0.033
	Range	112-84	74-40	686-350	59-32	10.5-5.5	.976-.372	.253-.114	1.586-.917	.283-.150
	Number	27	34	32	34	37	26	33	29	23
Wilburton	Mean	98.6	58.8	512.2	42.6	7.41	0.596	0.174	1.342	0.192
	sd	5.2	4.7	40.4	4.7	0.87	0.048	0.024	0.162	0.011
	Range	111-93	72-50	587-410	51-33	9.7-5.5	.717-.524	.213-.136	1.783-1.127	.216-.175
	Number	19	36	18	23	30	18	22	18	11
Ewart Park	Mean	103.1	50.0	485.8	41.2	6.59	0.483	0.165	1.214	0.215
	sd	4.1	3.8	59.2	4.5	0.94	0.033	0.027	0.087	0.027
	Range	112-91	58-41	632-306	54-29	8.9-4.3	.545-.400	.246-.106	1.406-.974	.288-.155
	Number	83	109	84	91	119	70	90	74	59
Late	Mean	103.6	55.8	565.2	36.1	7.07	0.533	0.200	1.585	0.187
	sd	9.6	5.2	52.4	5.2	0.80	0.040	0.035	0.268	0.025
	Range	113-91	64-45	644-481	47-30	8.4-5.9	.587-.489	.258-.143	1.871-1.234	.210-.146
	Number	8	17	14	15	16	7	14	12	7

Table 4.2.1(ii)

Morphological Data for Ewart Park Swords

Area	Statistic	(1) Hilt Length	(2) Shoulder Width	(3) Blade Length	(4) Blade Width	(5) Blade Thickness	(6) (2)/(1)	(7) (5)/(4)	(8) (2)/(4)	(9) (1)/(3)
West	Mean	103.7	49.3	455.3	38.6	7.16	0.478	0.185	1.243	0.229
	sd	3.4	2.4	46.6	3.9	0.91	0.007	0.007	0.062	0.018
	Range	107-99	51-46	509-425	43-34	8.0-6.2	.486-.471	.195-.177	1.314-1.186	.247-.210
	Number	4	4	3	5	5	3	5	4	3
South East	Mean	101.5	48.6	470.9	41.3	7.10	0.482	0.175	1.228	0.215
	sd	5.1	3.0	55.5	4.7	0.76	0.027	0.032	0.088	0.017
	Range	112-95	55-44	537-306	54-33	8.4-5.7	.522-.420	.246-.106	1.398-1.083	.247-.191
	Number	17	21	17	21	22	14	21	14	12
Scotland	Mean	104.1	49.9	490.3	41.5	6.62	0.476	0.163	1.205	0.218
	sd	3.5	4.0	64.3	4.7	0.95	0.034	0.024	0.096	0.033
	Range	112-94	58-41	632-324	51-29	8.9-4.3	.543-.400	.220-.119	1.407-.974	.288-.155
	Number	39	50	52	46	58	30	46	42	33
East Anglia	Mean	102.4	51.2	484.3	40.5	6.00	0.502	0.154	1.214	0.204
	sd	4.3	3.7	41.4	3.8	0.76	0.030	0.029	0.072	0.011
	Range	110-91	57-42	519-388	48-34	7.7-5.0	.545-.449	.226-.125	1.326-1.106	.225-.193
	Number	20	30	9	16	30	17	15	11	8

Table 4.2.2(i)**'Balance' Data for Swords**

<u>Type</u>	<u>Statistic</u>	<u>Turning Moment (cm.gms)</u>
Early	Mean	14589
	sd	5457
	Range	25262-4980
	Number	24
Wilburton	Mean	12.979
	sd	3440
	Range	19215-8259
	Number	13
Ewart Park	Mean	11692
	sd	3663
	Range	24786-3563
	Number	47
Late	Mean	14277
	sd	2850
	Range	19159-8429
	Number	11

'Balance' Data for Ewart Park Swords

<u>Region</u>	<u>Statistic</u>	<u>Turning Moment (cm.gms)</u>
East Anglia	Mean	9893
	sd	3128
	Range	12738-5676
	Number	6
Scotland	Mean	12423
	sd	4259
	Range	24786-6346
	Number	22
South East	Mean	11238
	sd	3228
	Range	16340-3563
	Number	12
West	Mean	10768
	sd	3166
	Range	13933-7415
	Number	4

Table 4.2.3(i)**Casting Quality Data for Swords.**

<u>Sword Type</u>	<u>Good</u>	<u>Quality Fair</u>	<u>Poor</u>	<u>Total</u>
Early	20	19	5	44
Wilburton	20	23	4	47
Ewart Park	82	108	13	203
Late	17	13	1	31
Total	139	163	23	325

<u>Region</u>	<u>Good</u>	<u>Quality Fair</u>	<u>Poor</u>	<u>Total</u>
East Anglia	46	73	7	126
Scotland	44	35	8	87
South East	90	96	10	196
West	4	12	1	17
Total	184	216	26	426

Table 4.2.3(ii)**Edge Fineness Data for Swords.**

<u>Sword Type</u>	<u>Sharp</u>	<u>Fineness Medium</u>	<u>Blunt</u>	<u>Total</u>
Early	13	22	8	43
Wilburton	17	16	6	39
Ewart Park	64	74	34	172
Late	6	14	10	30
Total	100	126	58	284

<u>Region</u>	<u>Sharp</u>	<u>Fineness Medium</u>	<u>Blunt</u>	<u>Total</u>
East Anglia	48	52	9	109
Scotland	18	25	21	64
South East	45	94	44	183
West	1	3	4	8
Total	112	174	78	364

Table 4.2.4(i)

Edge Damage Data for Swords.

<u>Sword Type</u>	<u>Damage Rating</u> (see text for definitions)					<u>Total</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
Early	9	12	21	1	1	44
Wilburton	2	8	20	10	3	43
Ewart Park	15	23	82	35	12	167
Late	6	2	11	9	0	28
Total	32	45	134	55	16	282

<u>Region</u>	<u>Damage Rating</u> (see text for definitions)					<u>Total</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
East Anglia	13	12	37	37	13	112
Scotland	4	12	41	8	1	66
South East	39	31	73	18	2	163
West	2	1	5	0	0	8
Total	58	56	156	63	16	349

South Eastern Swords.

<u>Sword Type</u>	<u>Damage Type</u> (see text for explanation)			<u>Total</u>
	<u>None</u>	<u>Use</u>	<u>Severe</u>	
Early	12	23	1	36
Wilburton	4	17	4	25
Ewart Park	11.5	17.5	4	33
Late	4.5	6.5	8	19
Total	32	64	19	113

Ewart Park Swords

<u>Region</u>	<u>None</u>	<u>Use</u>	<u>Severe</u>	<u>Total</u>
East Anglia	6	31	35	72
Scotland	7	39	5	51
South East	11.5	17.5	4	33
West	1	4	0	5
Total	25.5	91.5	44	161

Wilburton Swords.

<u>Region</u>	<u>None</u>	<u>Use</u>	<u>Severe</u>	<u>Total</u>
East Anglia	2	5	8	15
South East	4	17	4	25
Scotland	0	1	1	2
Total	6	23	13	42

Table 4.3.1(i)

Spearheads

Regional Distribution of Blade Shape

<u>Blade Shape</u>	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
Barbed	2	1	6	17	26
Flame-shaped	14	14	3	0	31
Lanceolate	127	89	106	33	355
Ogival	12	10	14	2	38
Triangular	<u>14</u>	<u>9</u>	<u>11</u>	<u>1</u>	<u>35</u>
Total	169	123	140	53	485

Table 4.3.1(ii)

Basal-looped Spearheads

Regional Distribution of Blade Shape

<u>Blade Shape</u>	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
Flame-shaped	5	2	1	0	8
Lanceolate	5	8	10	2	25
Triangular	<u>14</u>	<u>8</u>	<u>10</u>	<u>1</u>	<u>33</u>
Total	24	18	21	3	66

Table 4.3.1(iii)

Dumpy Spearheads

Regional Distribution

<u>Blade Shape</u>	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
Lanceolate	10	0	19	0	29

Table 4.3.1(iv)**Spearheads with Openings (Lunate Openings)****Regional Distribution of Blade Shape**Region

<u>Blade Shape</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
Barbed	0	1	1	2	4
Flame-shaped	3	7	2	0	12
Lanceolate	2 (1)	2	4 (3)	5 (4)	13 (10)
Triangular	<u>0</u>	<u>1 (0)</u>	<u>1 (0)</u>	<u>0</u>	<u>2 (0)</u>
Total	5 (4)	11 (10)	8 (6)	7 (6)	31 (26)

Table 4.3.1(v)**Spearheads with Stepped Blades (Single Steps)****Regional Distribution of Blade Shape**Region

<u>Blade Shape</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
Flame-shaped	3	0	0	0	3
Lanceolate	25 (23)	16	16 (6)	4	61 (49)
Ogival	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total	28 (26)	17	16 (6)	4	65 (53)

Table 4.3.1(vi)**Spearheads with Fillets (Fillet Defined Midribs)****Regional Distribution of Blade Shape**Region

<u>Blade Shape</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
Flame-shaped	1 (0)	7 (4)	0	0	8 (4)
Lanceolate	8	13 (12)	7 (5)	9	37 (34)
Ogival	0	1	0	0	1
Triangular	<u>2 (0)</u>	<u>3 (0)</u>	<u>3 (0)</u>	<u>0</u>	<u>8 (0)</u>
Total	11 (9)	24 (19)	10 (7)	9	54 (39)

Table 4.3.1(vii)**Basal-looped Spearheads with Fillets (Channel & Fillet Defined Midribs)****Regional Distribution of Blade Shape**Region

<u>Blade Shape</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
Flame-shaped	0	1	0	0	1
Lanceolate	0	1	0	0	1
Triangular	<u>2</u>	<u>3</u>	<u>3 (2)</u>	<u>0</u>	<u>8 (7)</u>
Total	2	5	3 (2)	0	10 (9)

Table 4.3.1(viii)**Spearheads with Channels (Excluding Basal-looped)****Regional Distribution of Blade Shape**Region

<u>Blade Shape</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
Flame-shaped	0	3 (1)	0	0	3 (1)
Lanceolate	5 (1)	7 (3)	8 (2)	2 (0)	22 (6)
Triangular	<u>14 (0)</u>	<u>5 (0)</u>	<u>9 (0)</u>	<u>1 (0)</u>	<u>29 (0)</u>
Total	19 (1)	15 (4)	17 (2)	3 (0)	54 (7)

Table 4.3.1(ix)**Hollow-cast Spearheads****Regional Distribution of Blade Shape**Region

<u>Blade Shape</u>	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	<u>Total</u>
Barbed	2	0	5	5	12
Flame-shaped	4	2	0	0	6
Lanceolate	<u>58</u>	<u>34</u>	<u>18</u>	<u>1</u>	<u>111</u>
Total	64	36	23	6	129

Table 4.3.1(x)

Spearheads with Straight Bases (Excluding Basal-looped)

Regional Distribution of Blade Shape

<u>Blade Shape</u>	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
Flame-shaped	1	1 (0)	1	0	3 (2)
Lanceolate	4	2	4	1	11
Triangular	<u>11 (0)</u>	<u>4 (0)</u>	<u>9 (0)</u>	<u>1 (0)</u>	<u>25 (0)</u>
Total	16 (5)	7 (2)	14 (5)	2 (1)	39 (13)

Table 4.3.1(xi)

Spearheads

Regional Distribution of Midrib Shape

<u>Midrib Shape</u>	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
Angular	29	28	30	4	91
Rounded	126	91	106	31	354
No midrib	<u>13</u>	<u>3</u>	<u>4</u>	<u>15</u>	<u>35</u>
Total	168	122	140	50	480

Table 4.3.1(xii)

Spearheads

Distribution of Midrib Shape by Blade Shape

<u>Blade Shape</u>	<u>Midrib Shape</u>			<u>Total</u>
	<u>Angular</u>	<u>Rounded</u>	<u>No Midrib</u>	
Barbed	0	6	18	24
Flame-shaped	16	10	4	30
Lanceolate	59	281	13	353
Ogival	1	37	0	38
Triangular	<u>15</u>	<u>20</u>	<u>0</u>	<u>35</u>
Total	91	354	35	480

Table 4.3.1(xiii)**Spearheads****Regional Distribution of Types**

<u>Spearhead Type</u>	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
Basal-looped (bl)	24	18	21	3	66
Barbed (brb)	2	1	6	17	26
Flame-shaped Plain (fl)	3	3	0	0	6
Flame-shaped Complex (fic)	6	9	2	0	17
Lanceolate Plain (l)	48	36	46	14	144
Lanceolate Complex (lc)	64	45	31	16	156
Lanceolate Dumpy (ld)	10	0	19	1	30
Ogival (Watford type) (o)	12	10	14	2	38
Protected Openings (to)	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>2</u>
Total	169	123	140	53	485

Table 4.3.1(xiv)**Basal-looped Spearheads****Regional Distribution by Blade Shape & Characteristic Defined Type**

<u>Type</u>	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
Flame-shaped:					
Plain (fbl)	5	0	1	0	6
Channeled (figrbl)	0	1	0	0	1
Channel + Fillet (figrfbl)	0	1	0	0	1
Lanceolate:					
Plain (fbl)	1	3	5	1	10
Channeled (figrbl)	4	3	5	1	13
Channel + Fillet (figrfbl)	0	1	0	0	1
Channel + Step (figrstbl)	0	1	0	0	1
Triangular:					
Plain (fbl)	0	3	1	0	4
Channeled (figrbl)	13	3	7	1	24
Channel + Fillet (figrfbl)	<u>1</u>	<u>2</u>	<u>2</u>	<u>0</u>	<u>5</u>
Total	24	18	21	3	66

Table 4.3.1(xv)

**Flame-shaped Complex Pegged Spearheads
Regional Distribution by Characteristic Defined Type**

<u>Type</u>	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
Fillet + Opening (flfop)	0	3	0	0	3
Channel + Fillet (flgrf)	0	1	0	0	1
Hollow-cast (flh)	3	1	0	0	4
Hollow + Fillet + Opening (flhfop)	0	1	0	0	1
Hollow + Step + Opening (flhstop)	1	0	0	0	1
Opening (flop)	0	3	2	0	5
Step + opening (flstop)	<u>2</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>
Total	6	9	2	0	17

Table 4.3.1(xvi)

**Lanceolate Complex Pegged Spearheads
Regional Distribution by Characteristic Defined Type**

<u>Type</u>	<u>Region</u>				<u>Total</u>
	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>	
Fillet (lf)	3	4	3	7	17
Fillet + Opening (lfop)	0	1	0	2	3
Fillet + Step (lfst)	1	0	0	0	1
Fillet + Step + Opening (lfstop)	0	0	1	0	1
Channeled (lgr)	1	2	1	0	4
Channel + Fillet (lgrf)	0	0	1	0	1
Hollow-cast (lh)	31	18	6	1	56
Hollow + Fillet (lhf)	3	2	2	0	7
Hollow + Fillet + Step (lhfst)	1	3	0	0	4
Hollow + Opening (lhop)	1	0	0	0	1
Hollow + Step (lhst)	18	11	3	1	33
Hollow + Step + Opening (lhstop)	1	0	0	0	1
Multiple Step (lnst)	2	0	9	0	11
Opening (lop)	0	1	2	3	6
Straight-base (ls)	0	2	1	0	3
Stepped (lst)	2	1	1	2	6
Step + opening (lstop)	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>
Total	64	45	31	16	156

Table 4.3.1(xvii)

Plain Lanceolate Spearheads

Dimensions

Region

East Anglia Scotland South East
(excl. large) West

Length (mm):

Mean	148.1	190.9	257.6 (206.5)	191.6
Standard Deviation	45.5	50.2	109.2 (65.4)	35.3
Number	31	13	27 (20)	5

Maximum Width / Blade Length:

Mean	.351	.314	.263 (.290)	.280
Standard Deviation	.06	.03	.08 (.07)	.07
Number	26	13	22 (16)	3

Distance from Base to Point of Maximum Width / Blade Length:

Mean	.247	.282	.237 (.220)	.31
Standard Deviation	.05	.05	.05 (.05)	.08
Number	31	14	23 (17)	4

Socket Length / Blade Length

Mean	.37	.44	.38 (.40)	.49
Standard Deviation	.12	.14	.19 (.17)	.14
Number	31	13	25 (23)	5

Socket Wall Thickness (mm)

Mean	1.8	1.6	1.6 (1.7)	2.1
Standard Deviation	.48	.34	.41 (.36)	.44
Number	40	23	29 (22)	10

External Socket Diameter at Blade Base

Mean	20.1	20.3	19.7 (19.0)	19.2
Standard Deviation	2.73	2.36	2.10 (1.60)	1.37
Number	39	21	27 (20)	7

Table 4.3.1(xviii)**Hollow-cast Lanceolate Spearheads****Dimensions**RegionEast Anglia Scotland South East West

Length (mm):

Mean	163.33	245.4	228.8	
Standard Deviation	33.6	42.6	52.1	
Number	21	10	6	0

Maximum Width / Blade Length:

Mean	.306	.281	.238	
Standard Deviation	.07	.05	.02	
Number	25	11	5	0

Distance from Base to Point of Maximum Width / Blade Length:

Mean	.251	.321	.247	
Standard Deviation	.06	.06	.05	
Number	27	11	5	0

Socket Length / Blade Length

Mean	.26	.36	.33	
Standard Deviation	.12	.17	.16	
Number	27	12	6	0

Socket Wall Thickness (mm)

Mean	1.7	1.8	1.6	
Standard Deviation	.32	.74	.41	
Number	29	14	6	0

External Socket Diameter at Blade Base

Mean	21.4	22.1	21.4	
Standard Deviation	1.95	1.85	2.34	
Number	30	13	6	0

Table 4.3.1(xix)

Hollow-cast Stepped Lanceolate Spearheads

Dimensions

Region

East Anglia Scotland South East West

Length (mm):

Mean	214.1	251.4	215.0	
Standard Deviation	53.6	45.8	27.4	
Number	13	9	3	0

Maximum Width / Blade Length:

Mean	.292	.279	.238	
Standard Deviation	.07	.07	.06	
Number	10	9	3	0

Distance from Base to Point of Maximum Width / Blade Length:

Mean	.259	.309	.277	
Standard Deviation	.05	.05	.05	
Number	12	9	3	0

Socket Length / Blade Length

Mean	.32	.34	.31	
Standard Deviation	.08	.11	.09	
Number	14	11	3	0

Socket Wall Thickness (mm)

Mean	1.7	1.8	1.5	
Standard Deviation	.42	.36	.38	
Number	18	10	3	0

External Socket Diameter at Blade Base

Mean	20.6	22.3	18.9	
Standard Deviation	2.69	0.81	1.10	
Number	17	9	3	0

Table 4.3.1(xx)**Ogival Spearheads****Dimensions**RegionEast Anglia Scotland South East West**Length (mm):**

Mean	124.0	163.8	127.5	118.0
Standard Deviation	26.3	41.1	31.5	
Number	10	8	11	1

Maximum Width / Blade Length:

Mean	.407	.375	.355	.368
Standard Deviation	.08	.03	.03	
Number	11	8	9	1

Distance from Base to Point of Maximum Width / Blade Length:

Mean	.233	.231	.262	.172
Standard Deviation	.05	.08	.08	
Number	11	9	11	1

Socket Length / Blade Length

Mean	.51	.52	.47	.36
Standard Deviation	.17	.17	.17	
Number	11	10	12	1

Socket Wall Thickness (mm)

Mean	1.7	1.9	1.6	1.7
Standard Deviation	.51	.48	.39	0
Number	10	8	13	2

External Socket Diameter at Blade Base

Mean	17.3	17.8	17.2	17.7
Standard Deviation	1.49	1.83	1.83	5.23
Number	11	9	12	2

Table 4.3.1(xxi)**Barbed Spearheads****Dimensions****Region**

	<u>East Anglia</u>	<u>Scotland</u>	<u>South East</u>	<u>West</u>
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Length (mm):

Mean	275.0		265.7	145.0
Standard Deviation			7.2	
Number	1	0	3	3

Maximum Width / Blade Length:

Mean			.277	.601
Standard Deviation			.01	.05
Number	0	0	3	3

Distance from Base to Point of Maximum Width / Blade Length:

Mean			.344	.320
Standard Deviation			.04	.04
Number	0	0	2	2

Socket Length / Blade Length

Mean	.109		.11	.14
Standard Deviation			.00	.09
Number	1	0	3	4

Socket Wall Thickness (mm)

Mean	2.0		1.7	1.6
Standard Deviation	.28		.21	.65
Number	2	0	3	5

External Socket Diameter at Blade Base

Mean	21.8		21.2	22.9
Standard Deviation	0.74		0.70	2.57
Number	2	0	3	7

Table 4.3.3(i)

Casting Quality Data for Spearheads

<u>Spearhead Type</u>	<u>Quality</u>			<u>Total</u>
	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
Basal-looped (bl)	21	30	12	63
Barbed (brb)	3	5	7	15
Flame-shaped Plain (fl)	2	2	2	6
Flame-shaped Complex (flc)	8	7	1	16
Lanceolate Plain (l)	59	43	22	124
Lanceolate Complex (lc)	60	58	32	150
Lanceolate Dumpy (ld)	17	1	8	26
Ogival (Watford type) (o)	24	10	3	37
Protected Openings (to)	1	0	0	1
Total	195	156	87	438
<u>Region</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>Total</u>
East Anglia	69	53	38	160
Scotland	46	41	21	108
South East	72	45	15	132
West	8	17	13	38
Total	195	156	87	438

Table 4.3.4(i)

Tip Damage Data for Spearheads

<u>Region</u>	<u>Undamaged</u>	<u>Damaged</u>	<u>Missing</u>	<u>Total</u>
East Anglia	95	33	24	152
Scotland	62	21	23	106
South East	108	11	14	133
West	<u>11</u>	<u>6</u>	<u>21</u>	<u>38</u>
Total	276	71	82	429

<u>Spearhead Type</u>	<u>Undamaged</u>	<u>Damaged</u>	<u>Missing</u>	<u>Total</u>
Basal-looped (bl)	46	7	7	60
Barbed (brb)	8	2	7	17
Flame-shaped Plain (fl)	4	2	0	6
Flame-shaped Complex (fic)	10	5	2	17
Lanceolate Plain (l)	69	24	28	121
Lanceolate Complex (lc)	86	26	31	143
Lanceolate Dumpy (ld)	25	1	4	30
Ogival (Watford type) (o)	27	3	3	33
Protected Openings (to)	<u>1</u>	<u>1</u>	<u>0</u>	<u>2</u>
Total	276	71	82	429

Table 4.3.4(ii)

Socket Damage Data for Spearheads

	<u>Undamaged</u>	<u>Damaged</u>	<u>Missing</u>	<u>Total</u>
<u>Region</u>				
East Anglia	82	70	16	168
Scotland	40	61	24	125
South East	77	43	17	137
West	<u>15</u>	<u>18</u>	<u>20</u>	<u>53</u>
Total	214	192	77	483
<u>Spearhead Type</u>				
Basal-looped (bl)	29	33	4	66
Barbed (brb)	9	9	8	26
Flame-shaped Plain (fl)	3	3	0	6
Flame-shaped Complex (flc)	8	5	4	17
Lanceolate Plain (l)	49	60	33	142
Lanceolate Complex (lc)	70	60	26	156
Lanceolate Dumpy (ld)	20	9	1	30
Ogival (Watford type) (o)	24	13	1	38
Protected Openings (to)	<u>2</u>	<u>0</u>	<u>0</u>	<u>2</u>
Total	214	192	77	483

Table 5.2.2(i)

Weapons - Region and Context

Region

	<u>East Anglia</u>			<u>Scotland</u>			<u>South East</u> <u>Context</u>			<u>West</u>			<u>Total</u>		
	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>
Swords:	99	41	138	67	54	121	108	103	213	6	12	18	280	210	490
Spearheads:	73	108	181	109	29	138	77	74	151	18	45	63	277	256	533

Table 5.2.2(ii)

Swords - Typological Grouping and Context

Type

<u>Early</u>			<u>Wilburton</u>			<u>Ewart Park</u> <u>Context</u>			<u>Late</u>			<u>Total</u>		
<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>
5	39	44	7	43	50	160	52	212	11	21	32	185	153	338

Table 5.2.2(iii)

Spearheads - Typological Grouping and Context

Type

<u>Basal-looped</u>			<u>Barbed</u>			<u>Flame-shaped</u> <u>Context</u>			<u>Lanceolate (plain)</u>		
<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>
41	30	71	3	23	26	14	12	26	69	84	153
<u>Complex</u>			<u>Dumpy</u>			<u>Ogival</u> <u>Context</u>			<u>Total</u>		
<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>
83	74	157	25	5	30	27	11	38	262	239	501

Table 5.2.3.1(i)

Swords - Completeness Rating by Region and Context

<u>Rating</u>	<u>Region</u>												<u>Total</u>		
	<u>East Anglia</u>			<u>Scotland</u>			<u>South East</u>			<u>West</u>					
	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>			
1	2	3	5	15	10	25	1	42	43	1	2	3	19	57	76
2	3	2	5	12	2	14	1	10	11	1	0	1	17	14	31
3	0	3	3	7	2	9	1	6	7	1	1	2	9	12	21
4	1	0	1	10	2	12	1	6	7	0	0	0	12	8	20
5	2	1	3	4	1	5	4	12	16	0	0	0	10	14	24
6	3	6	9	2	2	4	2	6	8	0	0	0	7	14	21
7	38	7	45	6	22	28	21	10	31	2	4	6	67	43	110
8	24	8	32	2	10	12	72	1	73	1	5	6	99	24	123
9	26	11	37	9	3	12	5	10	15	0	0	0	40	24	64
<u>Total</u>	<u>99</u>	<u>41</u>	<u>140</u>	<u>67</u>	<u>54</u>	<u>121</u>	<u>108</u>	<u>103</u>	<u>211</u>	<u>6</u>	<u>12</u>	<u>18</u>	<u>280</u>	<u>210</u>	<u>490</u>

Table 5.2.3.1(ii)

Swords - Completeness Rating by Typological Grouping and Context

<u>Rating</u>	<u>Type</u>												<u>Total</u>		
	<u>Early</u>			<u>Wilburton</u>			<u>Ewart Park</u>			<u>Late</u>					
	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>	<u>Dry</u>	<u>Wet</u>	<u>Total</u>			
1	1	20	21	1	12	13	18	17	35	1	7	8	21	56	77
2	2	6	8	1	0	1	14	4	18	0	4	4	17	14	31
3	0	2	2	0	1	1	8	7	15	1	2	3	9	12	21
4	0	1	1	1	4	5	11	1	12	0	2	2	12	8	20
5	0	2	2	0	9	9	7	2	9	2	1	3	9	14	23
6	0	1	1	3	4	7	3	6	9	0	1	1	6	12	18
7	1	1	2	0	4	4	46	5	51	2	2	4	49	12	61
8	0	0	0	1	2	3	18	2	20	5	0	5	24	4	28
9	1	6	7	0	7	7	35	8	43	0	2	2	36	19	59
<u>Total</u>	<u>5</u>	<u>39</u>	<u>44</u>	<u>7</u>	<u>43</u>	<u>50</u>	<u>160</u>	<u>52</u>	<u>212</u>	<u>11</u>	<u>21</u>	<u>32</u>	<u>183</u>	<u>155</u>	<u>338</u>

Table 5.2.3.1(iii)

East Anglian Swords - Completeness Rating by Typological Grouping and Context

Rating	Type														
	Early			Wilburton			Ewart Park			Late			Total		
	Context														
	Dry Wet Total			Dry Wet Total			Dry Wet Total			Dry Wet Total			Dry Wet Total		
1	1	0	1	1	1	2	0	1	1	0	0	0	2	2	4
2	2	0	2	0	0	0	1	1	2	0	1	1	3	2	5
3	0	2	2	0	0	0	0	1	1	0	0	0	0	3	3
4	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1
5	0	0	0	0	1	1	2	0	2	0	0	0	2	1	3
6	0	0	0	3	4	7	0	2	2	0	0	0	3	6	9
7	0	0	0	0	2	2	37	1	38	0	0	0	37	3	40
8	0	0	0	0	2	2	5	0	5	2	0	2	7	2	9
9	0	1	1	0	5	5	26	5	31	0	0	0	26	11	37
Total	3	3	6	4	15	19	72	11	81	2	1	3	81	30	111

Table 5.2.3.1(iv)

South Eastern Swords - Completeness Rating by Typological Grouping and Context

Rating	Type														
	Early			Wilburton			Ewart Park			Late			Total		
	Context														
	Dry Wet Total			Dry Wet Total			Dry Wet Total			Dry Wet Total			Dry Wet Total		
1	0	19	19	0	9	9	1	9	10	0	5	5	1	42	43
2	0	6	6	0	0	0	1	2	3	0	2	2	1	10	11
3	0	0	0	0	1	1	1	3	4	0	2	2	1	6	7
4	0	1	1	1	4	5	0	0	0	0	1	1	1	6	7
5	0	2	2	0	8	8	3	1	4	1	1	2	4	12	16
6	0	1	1	0	0	0	1	2	3	0	1	1	1	4	5
7	0	1	1	0	2	2	5	1	6	2	2	4	7	6	13
8	0	0	0	1	0	1	10	0	10	2	0	2	13	0	13
9	1	5	6	0	2	2	1	1	2	0	2	2	2	10	12
Total	1	35	36	2	26	28	23	19	42	5	16	21	31	96	127

Table 5.2.3.1(v)

Ewart Park Swords - Completeness Rating by Region and Context

Rating	Region												Total		
	East Anglia			Scotland			South East			West					
	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total			
1	0	1	1	14	5	19	1	9	10	1	2	3	16	17	33
2	1	1	2	12	1	13	1	2	3	0	0	0	14	4	18
3	0	1	1	6	2	8	1	3	4	1	1	2	8	7	15
4	1	0	1	9	1	10	0	0	0	0	0	0	10	1	11
5	2	0	2	2	1	3	3	1	4	0	0	0	7	2	9
6	0	2	2	2	2	4	1	2	3	0	0	0	3	6	9
7	37	1	38	3	2	5	5	1	6	0	1	1	45	5	50
8	5	0	5	1	1	2	10	0	10	1	1	2	17	2	19
9	26	5	31	8	2	10	1	1	2	0	0	0	35	8	43
Total	72	11	83	57	17	74	23	19	42	3	5	8	155	52	207

Table 5.2.3.2(i)

Spears - Completeness Rating by Region and Context

Rating	Region						Total					
	East Anglia		Scotland		Context							
	Dry	Wet	Dry	Wet	Dry	Wet						
1	12	9	5	0	14	24	38	0	0	31	33	64
2	22	43	46	5	26	25	51	8	4	102	77	179
3	8	18	7	2	3	4	7	1	0	19	24	43
4	4	7	8	3	1	4	5	0	3	13	17	30
5	3	7	10	0	2	5	7	0	4	15	16	31
6	8	10	11	0	5	2	7	3	9	27	21	48
7	5	10	6	11	4	6	10	1	9	16	36	52
8	8	3	7	5	19	2	21	3	8	37	18	55
9	3	1	9	3	3	2	5	2	8	17	14	31
Total	73	108	109	29	77	74	151	18	45	277	256	533

Table 5.2.3.2(ii)

Spearheads - Completeness Rating by Typological Grouping and Context

Rating	Type										Total						
	Basal-Looped		Barbed		Flame-shaped		Lanceolate		Context								
	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet							
1	4	9	0	0	1	1	4	11	8	8	16	9	6	3	32	33	65
2	17	12	1	3	6	4	10	15	45	22	67	11	12	5	107	77	184
3	7	2	0	2	1	1	2	6	9	3	6	2	4	2	21	24	45
4	2	1	0	4	1	3	4	2	5	3	4	0	0	4	12	17	29
5	2	1	0	2	2	1	3	10	6	2	6	0	0	0	16	16	32
6	4	0	1	2	0	1	1	12	7	7	9	1	1	1	26	20	46
7	1	2	1	5	1	1	2	8	10	6	12	0	1	1	18	31	49
8	0	0	0	1	0	0	0	3	3	3	6	2	0	1	9	7	16
9	4	3	0	4	2	0	2	9	3	12	4	0	0	0	21	14	35
Total	41	30	3	23	14	12	26	69	84	153	83	74	25	5	262	239	501

Table 5.2.3.2(iii)

East Anglian Spearheads - Completeness Rating by Typological Grouping and Context

Rating	Type										Total										
	Basal-Looped	Barbed	Flame-shaped		Lanceolate		Complex		Dumpy	Ogival											
			Dry	Wet	Dry	Wet	Dry	Wet				Dry	Wet								
	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total									
1	1	2	3	1	1	2	1	1	2	3	3	6	2	1	3	4	1	5	12	9	21
2	6	5	11	0	0	0	3	18	21	9	16	25	2	0	2	1	2	3	22	43	65
3	3	1	4	0	1	1	3	5	8	1	6	7	1	2	3	0	2	2	8	18	26
4	1	0	1	0	0	0	1	3	4	1	3	4	0	0	0	1	0	1	4	7	11
5	1	0	1	0	0	0	1	3	4	1	3	4	0	0	0	0	0	0	3	7	10
6	1	0	1	0	0	0	2	3	5	3	6	9	1	0	1	1	0	1	8	10	18
7	1	1	2	0	0	0	2	3	5	1	5	6	0	0	0	0	0	0	5	9	14
8	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1
9	2	0	2	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	3	1	4
Total	16	9	25	1	1	2	13	36	49	20	43	63	7	3	10	7	5	12	66	104	170

Table 5.2.3.2(iv)

Scottish Spearheads - Completeness Rating by Typological Grouping and Context

Rating	Type										Total										
	Basal-Looped	Barbed	Flame-shaped		Lanceolate		Complex		Dumpy	Ogival											
			Dry	Wet	Dry	Wet	Dry	Wet				Dry	Wet								
	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total			
1	2	0	2	0	0	0	1	0	1	2	0	2	0	0	0	0	0	0	5	0	5
2	8	0	8	4	1	5	7	1	8	21	1	22	0	0	0	6	2	8	46	5	51
3	4	0	4	0	0	0	2	2	4	1	0	1	0	0	0	0	0	0	7	2	9
4	1	0	1	1	1	2	1	0	1	2	1	3	0	0	0	2	0	2	7	3	10
5	1	0	1	0	0	0	7	0	7	1	0	1	0	0	0	0	0	0	10	0	10
6	2	0	2	0	0	0	5	0	5	3	0	3	0	0	0	0	0	0	10	0	10
7	0	0	0	1	1	2	3	5	8	1	5	6	0	0	0	0	0	0	5	11	16
8	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	2	2
9	1	1	2	2	0	2	4	1	5	2	1	3	0	0	0	0	0	0	9	3	12
Total	19	1	20	9	3	12	30	10	40	33	9	42	0	0	0	8	2	10	99	26	125

Table 5.2.3.2(v)

South Eastern Spearheads - Completeness Rating by Typological Grouping and Context

Rating	Type										Total							
	<u>Basal-Looped</u>	<u>Barbed</u>	<u>Flame-shaped</u>	<u>Lanceolate</u>		<u>Complex</u>		<u>Dumpy</u>	<u>Ogival</u>	<u>Total</u>								
				<u>Dry</u>	<u>Wet</u>	<u>Dry</u>	<u>Wet</u>					<u>Dry</u>	<u>Wet</u>					
1	0	0	0	2	10	12	3	5	8	7	0	7	2	2	4	14	24	38
2	1	1	0	2	9	11	11	5	16	8	1	9	3	1	4	26	25	51
3	0	0	0	0	2	2	0	0	0	1	0	1	2	0	2	3	4	7
4	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	4	5
5	0	0	0	2	3	5	0	1	1	0	0	0	0	0	0	2	5	7
6	0	1	0	4	0	4	0	1	1	0	0	0	0	0	0	5	2	7
7	0	0	0	3	0	3	0	0	0	1	0	1	1	0	1	5	3	8
8	0	0	0	3	1	4	2	1	3	1	1	2	1	0	1	7	3	10
9	0	0	0	2	0	2	1	0	1	0	0	0	0	0	0	3	2	5
Total	1	2	0	18	27	45	17	13	30	18	2	20	10	3	13	66	71	137

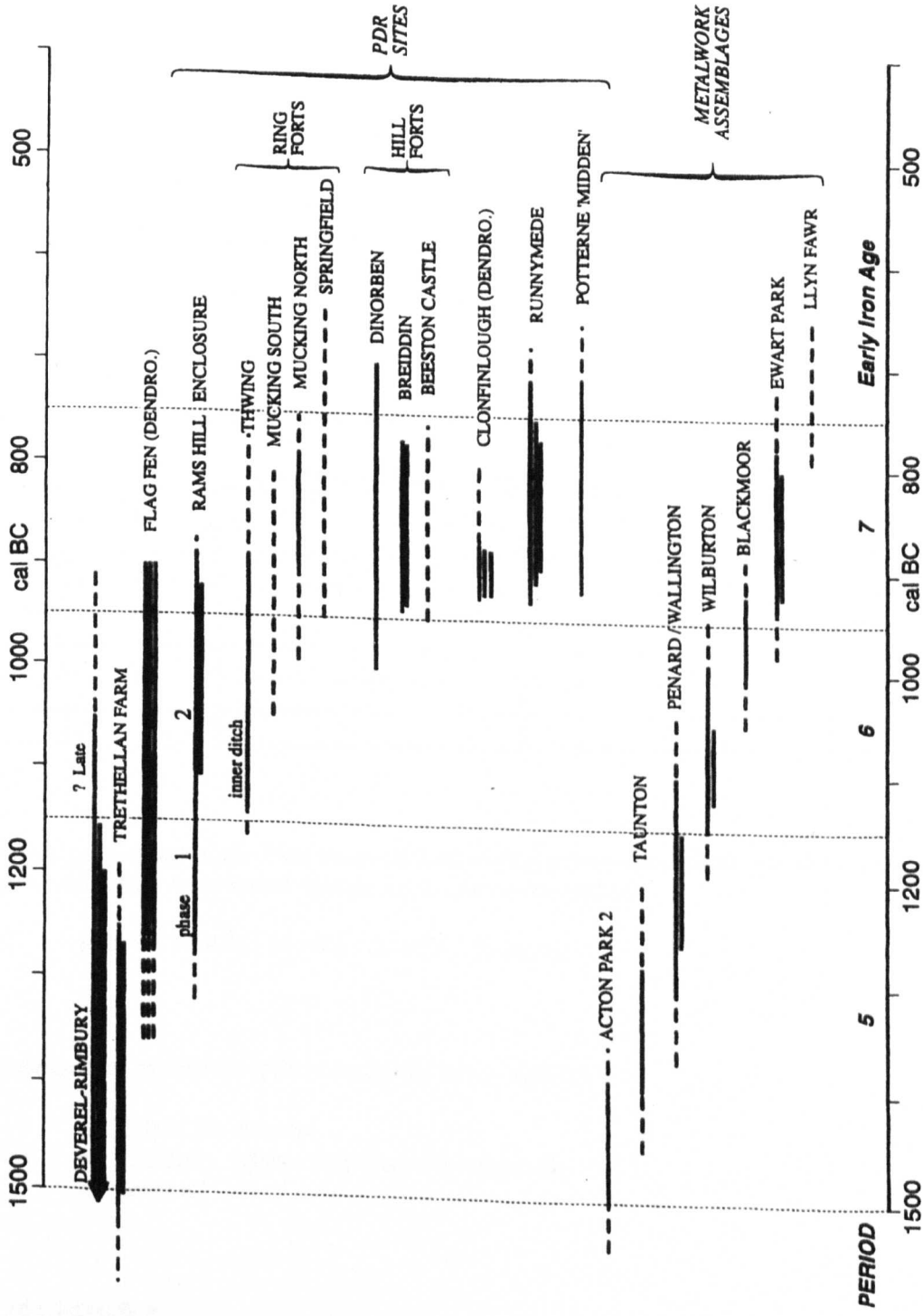
Table 5.2.3.2(vi)

Western Spearheads - Completeness Rating by Typological Grouping and Context

Rating	Type										Total							
	<u>Basal-Looped</u>	<u>Barbed</u>	<u>Flame-shaped</u>	<u>Lanceolate</u>		<u>Complex</u>		<u>Dumpy</u>	<u>Ogival</u>	<u>Total</u>								
				<u>Dry</u>	<u>Wet</u>	<u>Dry</u>	<u>Wet</u>					<u>Dry</u>	<u>Wet</u>					
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	2	0	2	4	4	3	0	3	0	1	1	1	0	1	6	6	12
3	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
5	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4	4
6	0	1	0	0	4	4	1	2	3	0	0	0	0	1	1	1	9	10
7	0	4	0	0	2	2	1	2	3	0	0	0	0	0	0	1	8	9
8	0	1	0	0	1	1	1	1	2	0	0	0	0	0	0	1	3	4
9	0	4	0	0	2	2	1	2	3	0	0	0	0	0	0	1	9	10
Total	0	17	0	3	11	14	7	9	16	0	1	1	1	1	2	11	42	53

Figure 1.2 - Chronological Division of Later Bronze Age

(Needham 1997, 125)



The chronologies and periodisation of major cultural complexes and selected sites between 1500 and 600 cal BC.

Figure 1.6.1 - Museum Questionnaire

S D Bridgford - 60 Leamington Street, Sheffield, S10 1LW
Museum Questionnaire - October 1994.

1 - Does the collection contain any British Bronze Age weaponry:

Yes / No (please circle that which applies)

2 - What types and numbers of weapons are held (please enter number or, if estimated, tick appropriate box):

Approximate Numbers Held

Type of Weapon	None	0 - 5	6 - 10	11 - 20	21 - 50	Over 50
Daggers / Rapiers						
Swords						
Spears / Javelins						
Arrows						
Shields						
Other						
Total						

3 - Approximately what percentage of the total weapons held have a provenance showing at the very least the name of the county in which they were found (please circle that which applies):

0-20% / 20-40% / 40-60% / 60-80% / 80-100%

4 - Could the weapons held be examined (please circle that which applies):

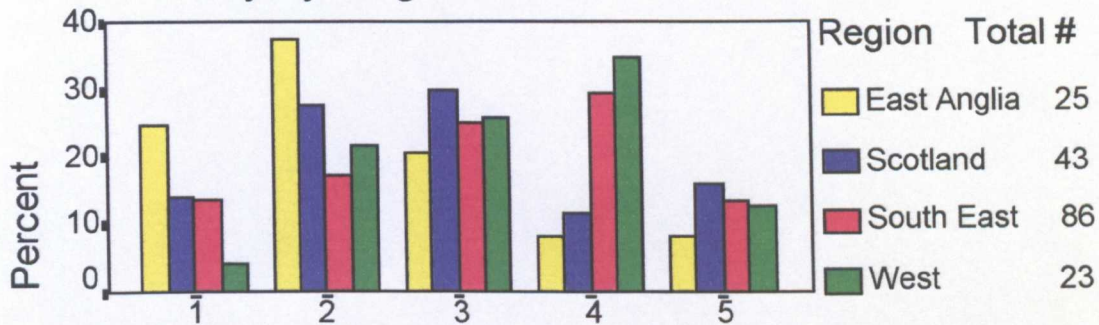
- a) Only at the museum
- b) Externally, subject to appropriate safeguards
- c) Not at all

5 - Who should be contacted for:

	Name	Title	Telephone No
Permission to examine artefacts			
Information about artefacts			

Figure 2.3.1(i)
All Samples (excluding burnt)

Porosity by Region

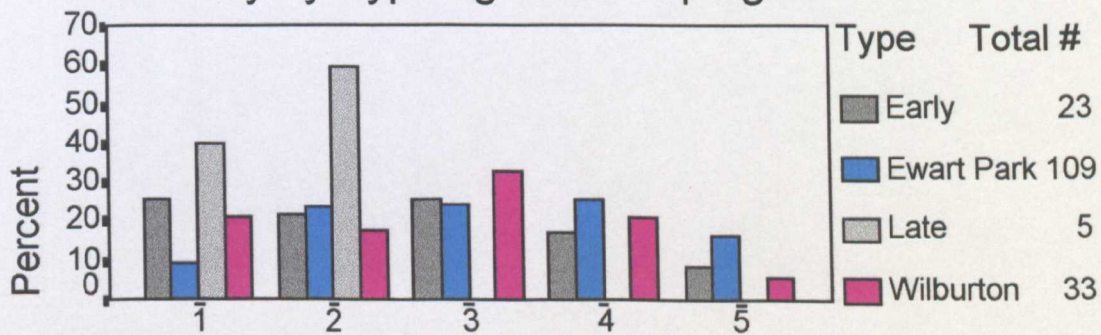


Porosity

Porosity increases with rating number

Figure 2.3.1(ii)
All Samples (excluding burnt)

Porosity by Typological Grouping

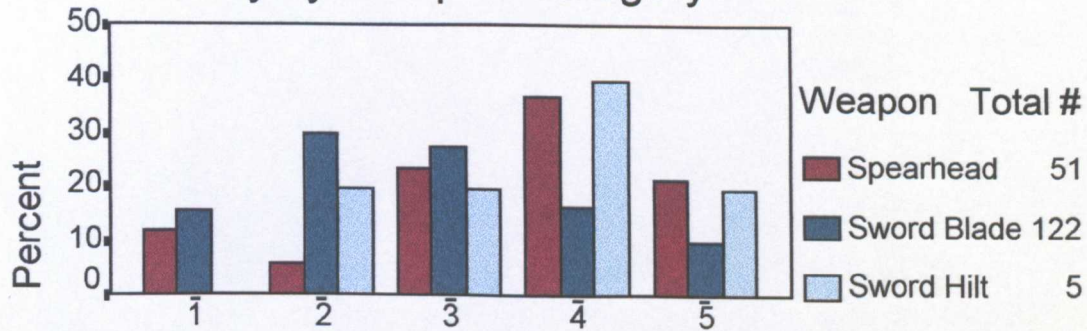


Porosity

Porosity increases with rating number

Figure 2.3.1(iii)
All Samples (excluding burnt)

Porosity by Weapon Category

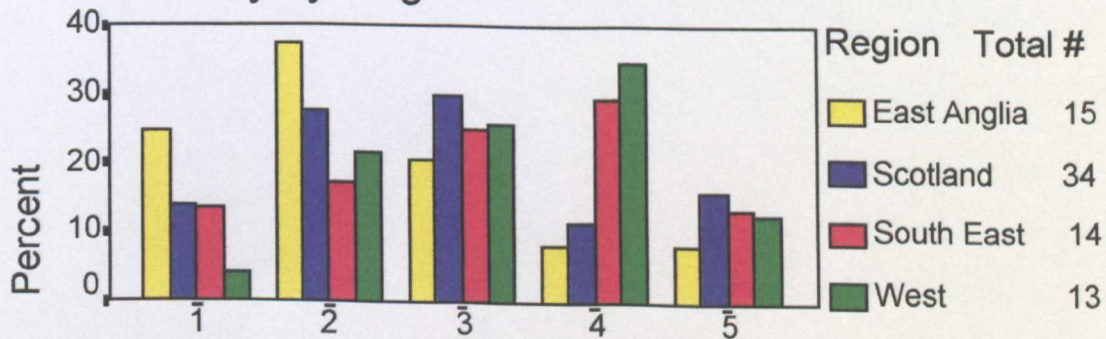


Porosity

Porosity increases with rating number

Figure 2.3.1(iv)
Ewart Park Swords (excluding burnt)

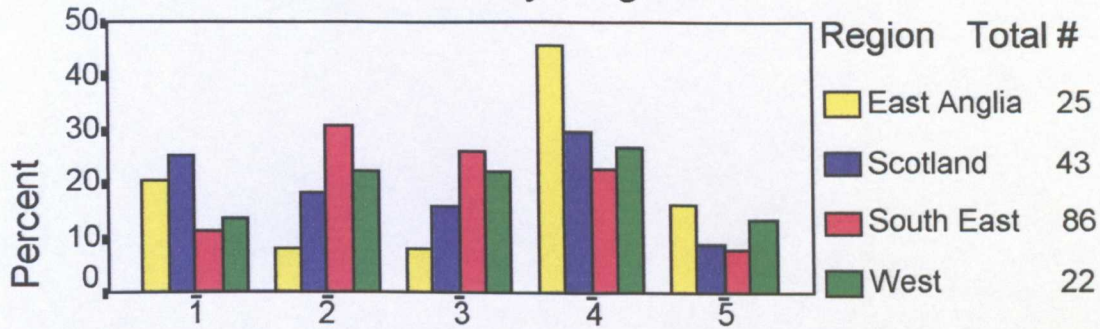
Porosity by Region



Porosity

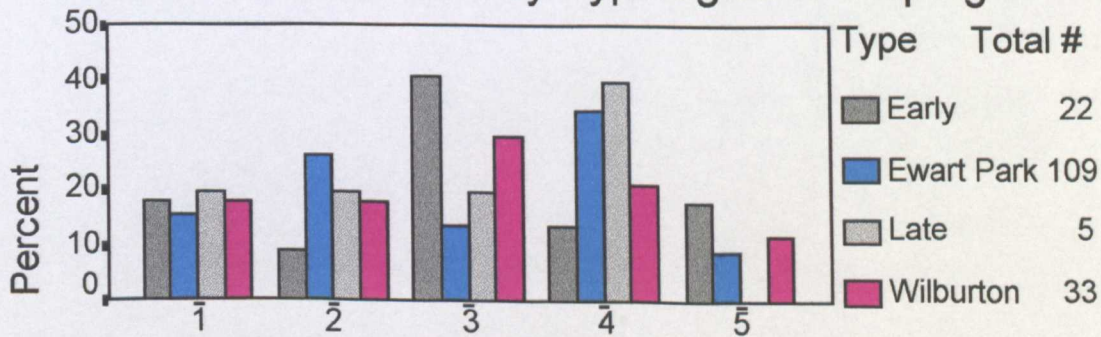
Porosity increases with rating number

Figure 2.3.2(i)
 All Samples (excluding burnt)
 Inclusion Distortion by Region



Inclusion Distortion
 Distortion increases with rating number

Figure 2.3.2(ii)
 All Samples (excluding burnt)
 Inclusion Distortion by Typological Grouping

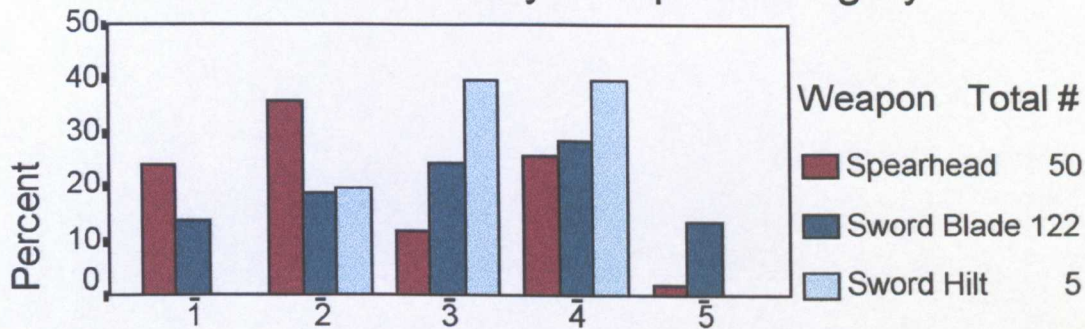


Inclusion Distortion
 Distortion increases with rating number

Figure 2.3.2(iii)

All Samples (excluding burnt)

Inclusion Distortion by Weapon Category



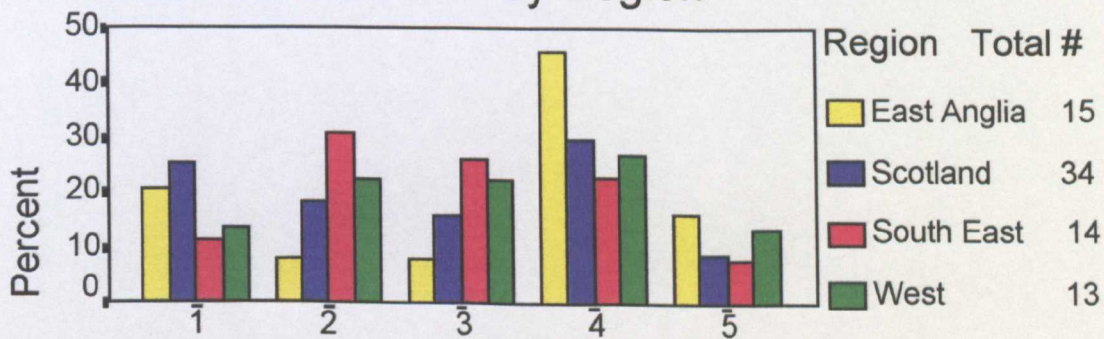
Inclusion Distortion

Distortion increases with rating number

Figure 2.3.2(iv)

Ewart Park Swords (excluding burnt)

Inclusion Distortion by Region



Inclusion Distortion

Distortion increases with rating number

Figure 2.3.3(i)
 All Samples (excluding burnt)
 Corrosion by Region

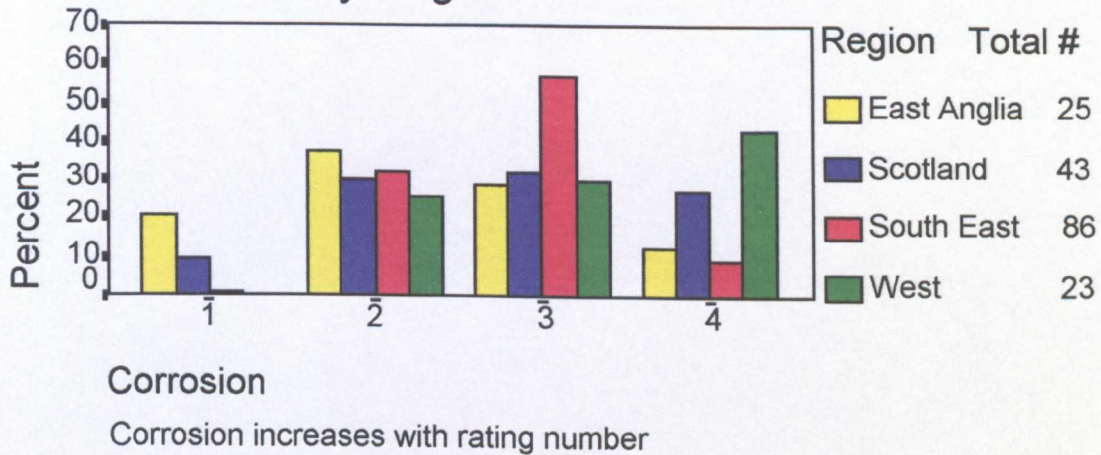


Figure 2.3.3(ii)
 All Samples (excluding burnt)
 Corrosion by Typological Grouping

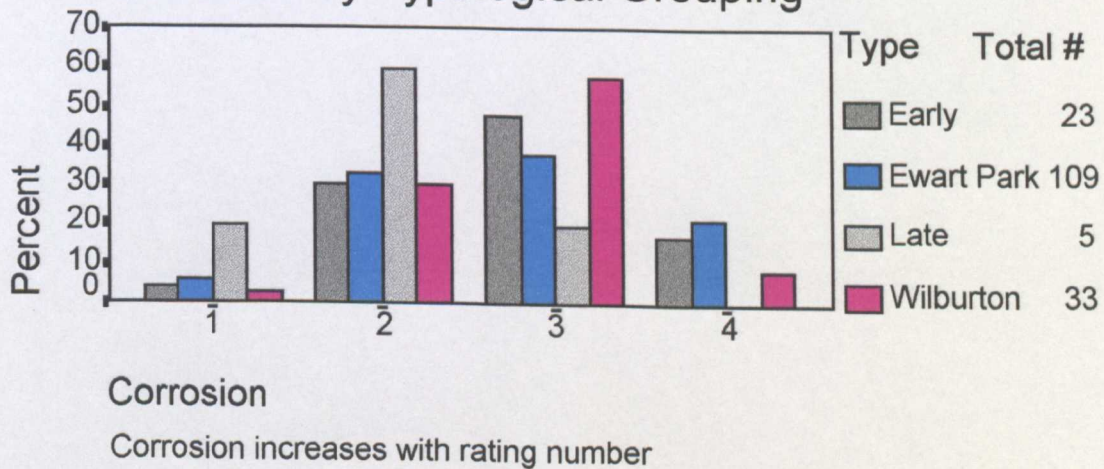
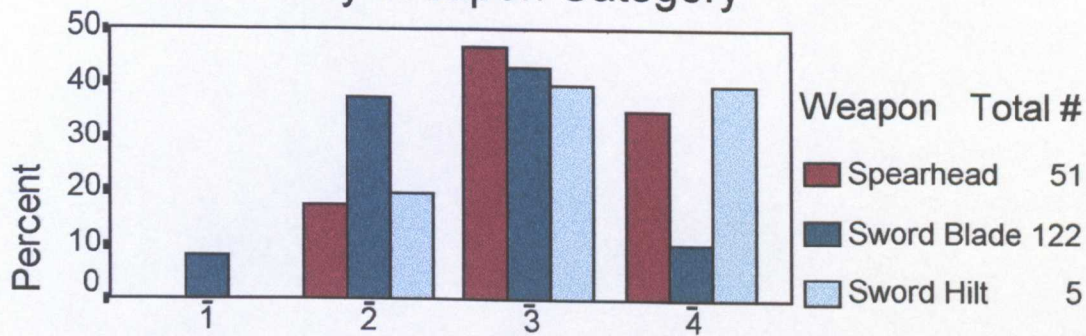
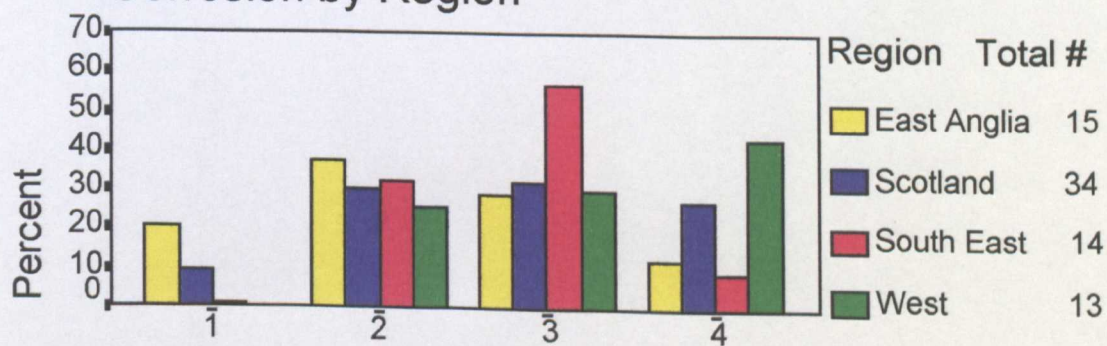


Figure 2.3.3(iii)
 All Samples (excluding burnt)
 Corrosion by Weapon Category



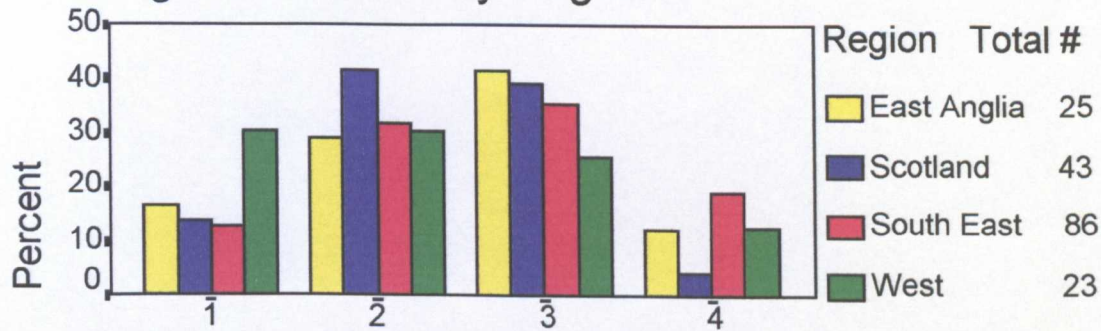
Corrosion
 Corrosion increases with rating number

Figure 2.3.3(iv)
 Ewart Park Swords (excluding burnt)
 Corrosion by Region



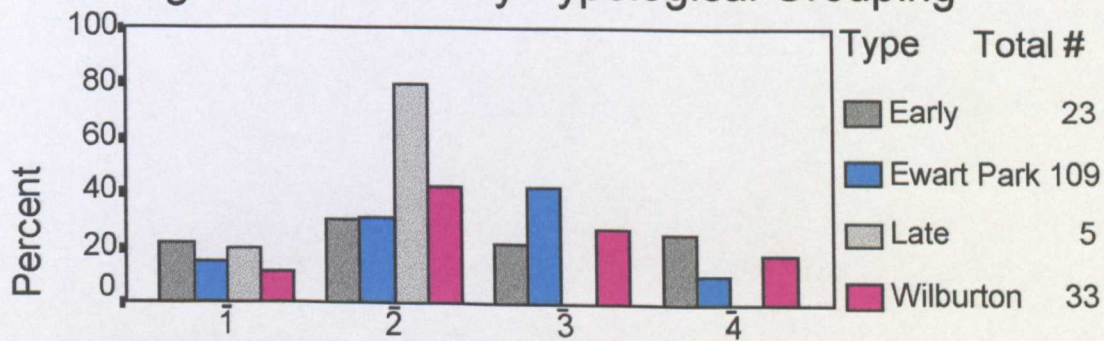
Corrosion
 Corrosion increases with rating number

Figure 2.3.4(i)
 All Samples (excluding burnt)
 High Tin Phases by Region



High Tin Phases
 Amount of delta/alpha+delta increases with rating number

Figure 2.3.4(ii)
 All Samples (excluding burnt)
 High Tin Phases by Typological Grouping

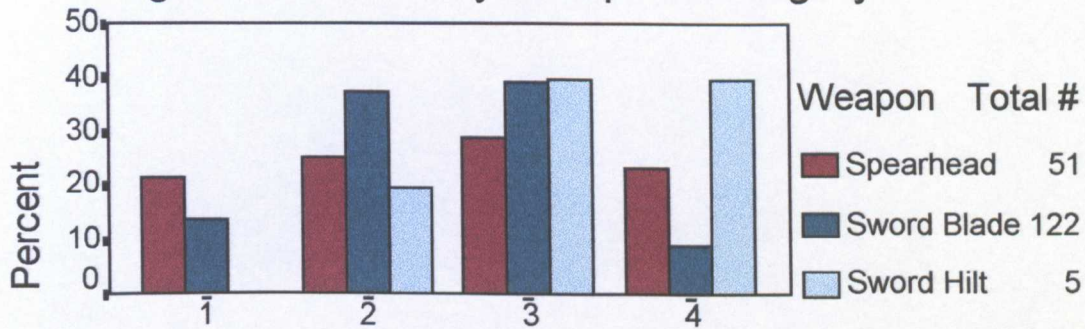


High Tin Phases
 Amount of delta/alpha+delta increases with rating number

Figure 2.3.4(iii)

All Samples (excluding burnt)

High Tin Phases by Weapon Category



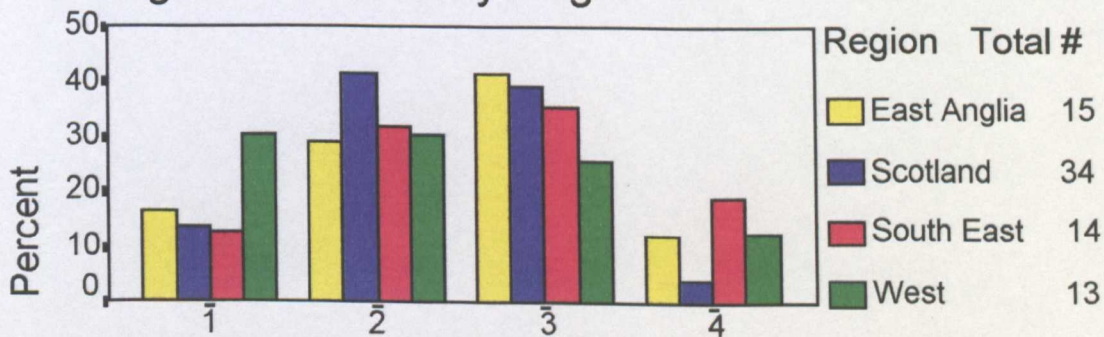
High Tin Phases

Amount of delta/alpha+delta increases with rating number

Figure 2.3.4(iv)

Ewart Park Swords (excluding burnt)

High Tin Phases by Region



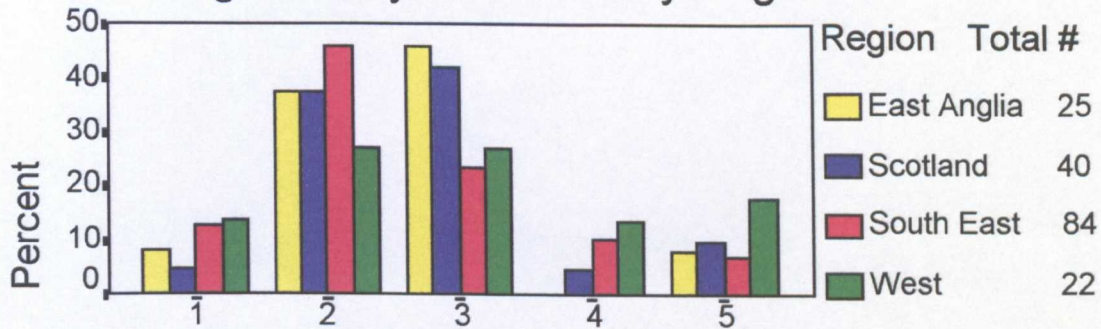
High Tin Phases

Amount of delta/alpha+delta increases with rating number

Figure 2.3.5(i)

All Samples (excluding burnt)

Coring & Recrystallisation by Region



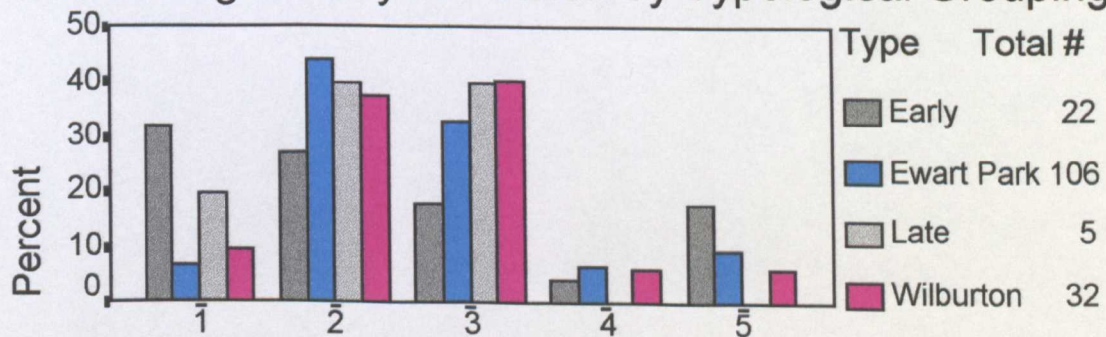
Coring & Recrystallisation

Coring increases and recrystallisation decreases with rating number

Figure 2.3.5(ii)

All Samples (excluding burnt)

Coring & Recrystallisation by Typological Grouping



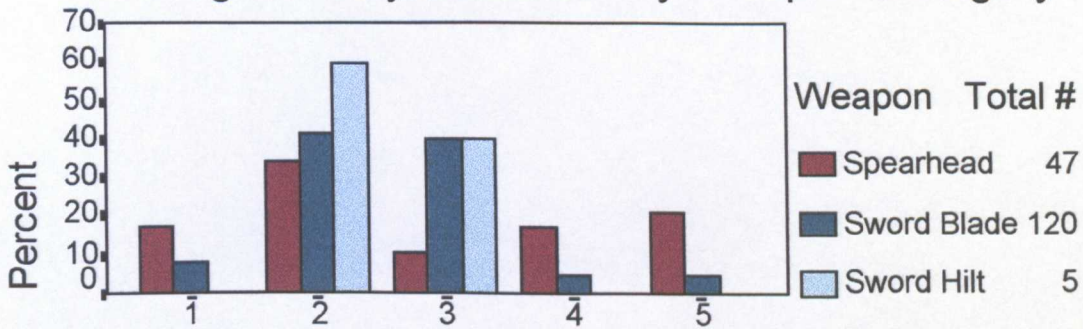
Coring & Recrystallisation

Coring increases and Recrystallisation decreases with rating number

Figure 2.3.5(iii)

All Samples (excluding burnt)

Coring & Recrystallisation by Weapon Category



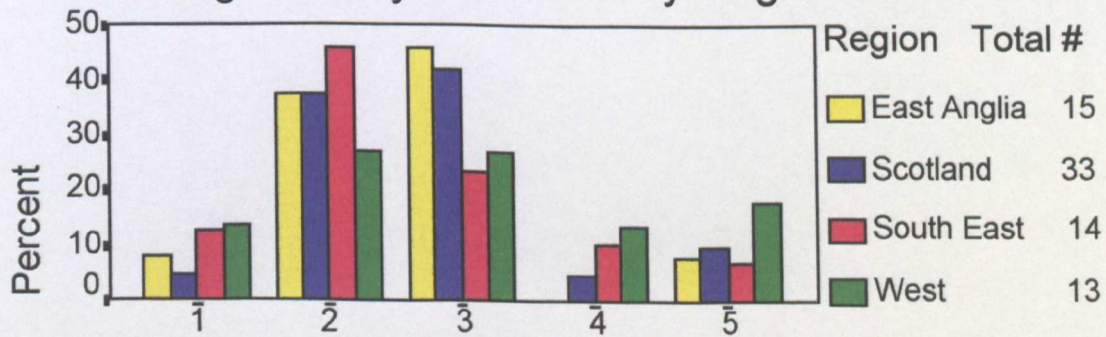
Coring & Recrystallisation

Coring increases and recrystallisation decreases with rating number

Figure 2.3.5(iv)

Ewart Park Swords (excluding burnt)

Coring & Recrystallisation by Region



Coring & Recrystallisation

Coring increases and recrystallisation decreases with rating number

Figure 2.3.6(i)
 All Samples (excluding burnt)
 Grain Distortion by Region

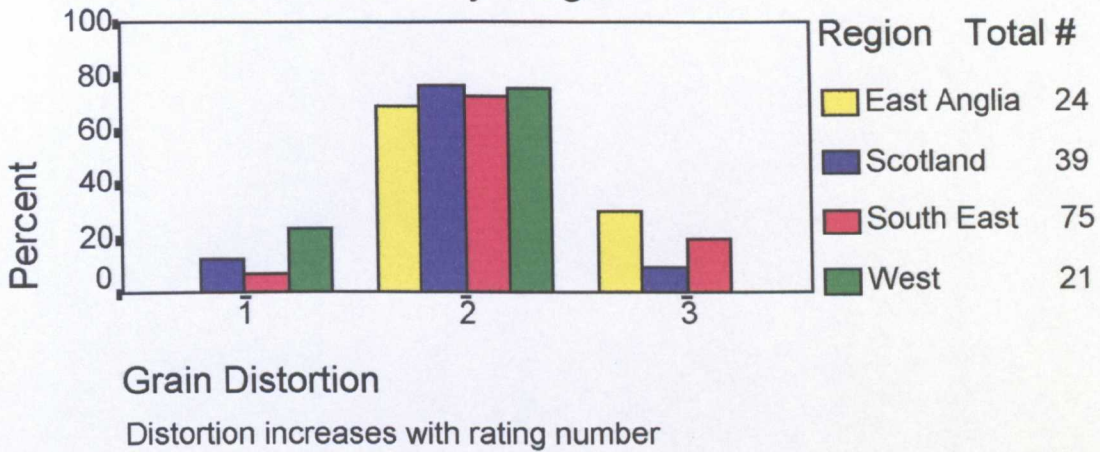


Figure 2.3.6(ii)
 All Samples (excluding burnt)
 Grain Distortion by Typological Grouping

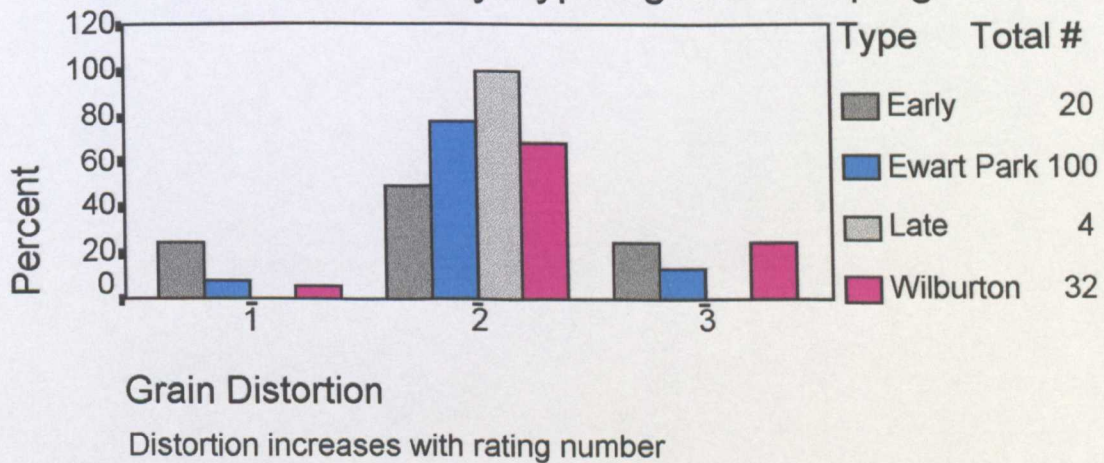
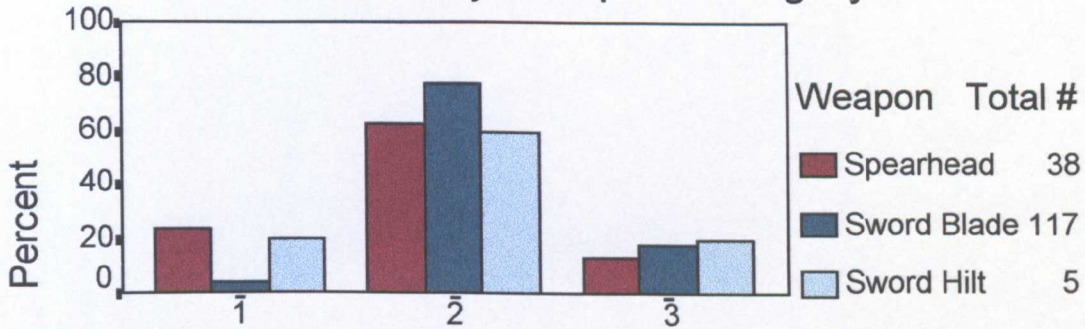
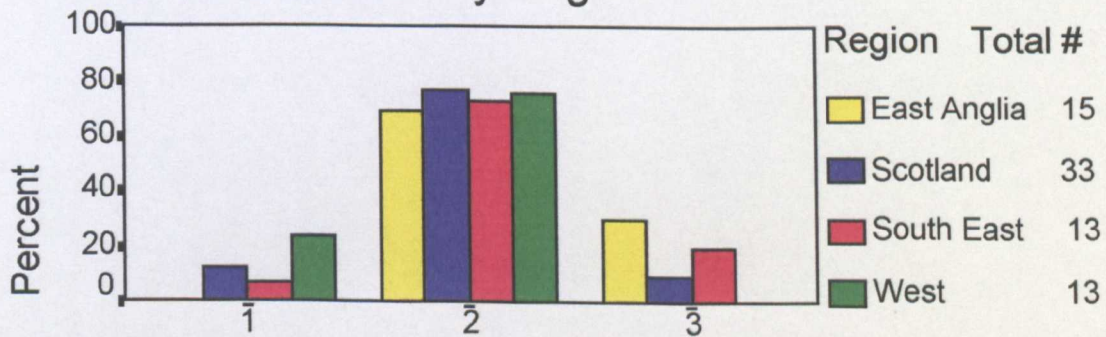


Figure 2.3.6(iii)
 All Samples (excluding burnt)
 Grain Distortion by Weapon Category



Grain Distortion
 Distortion increases with rating number

Figure 2.3.6(iv)
 Ewart Park Swords (excluding burnt)
 Grain Distortion by Region



Grain Distortion
 Distortion increases with rating number

Figure 2.3.7(i)

All Samples (excluding burnt)

Grain Size by Region

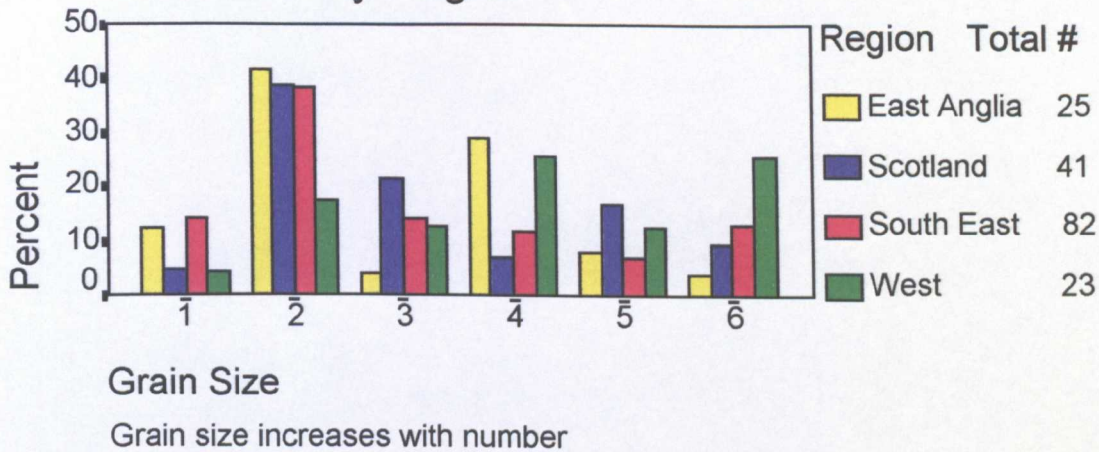


Figure 2.3.7(ii)

All Samples (excluding burnt)

Grain Size by Typological Grouping

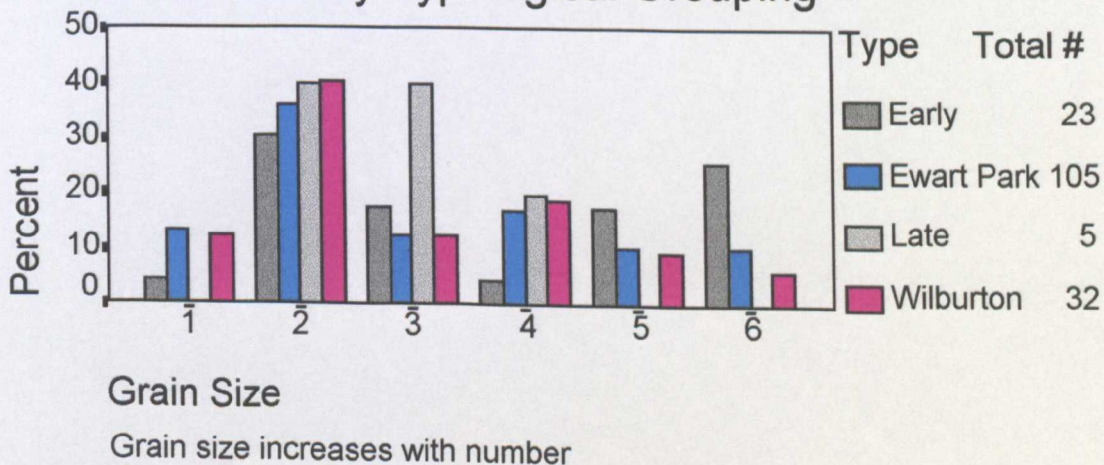
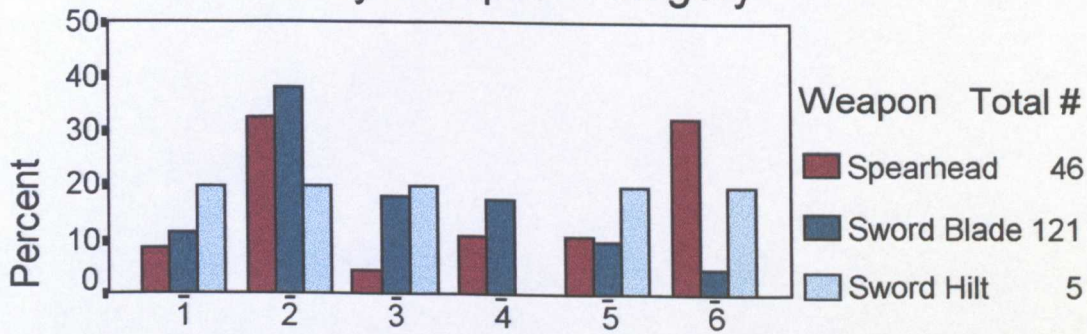
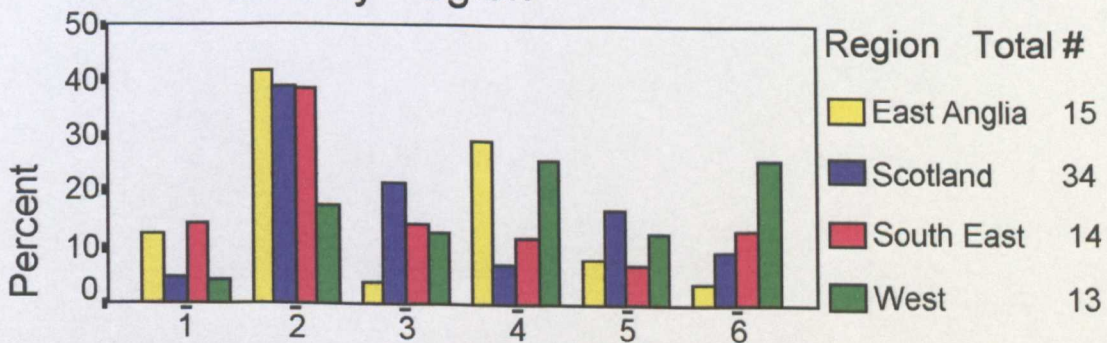


Figure 2.3.7(iii)
 All Samples (excluding burnt)
 Grain Size by Weapon Category



Grain Size
 Grain size increases with rating number

Figure 2.3.7(iv)
 Ewart Park Swords (excluding burnt)
 Grain Size by Region



Grain Size
 Grain size increases with number

Figure 2.3.8(i)
All Samples (excluding burnt)

Hardness by Region

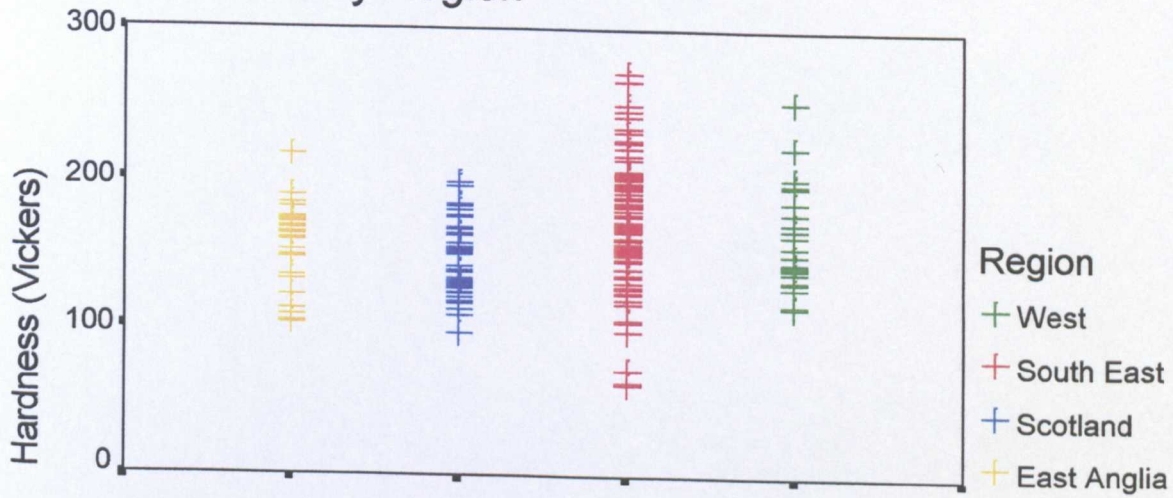


Figure 2.3.8(ii)
All Samples (excluding burnt)

Hardness by Typological Grouping

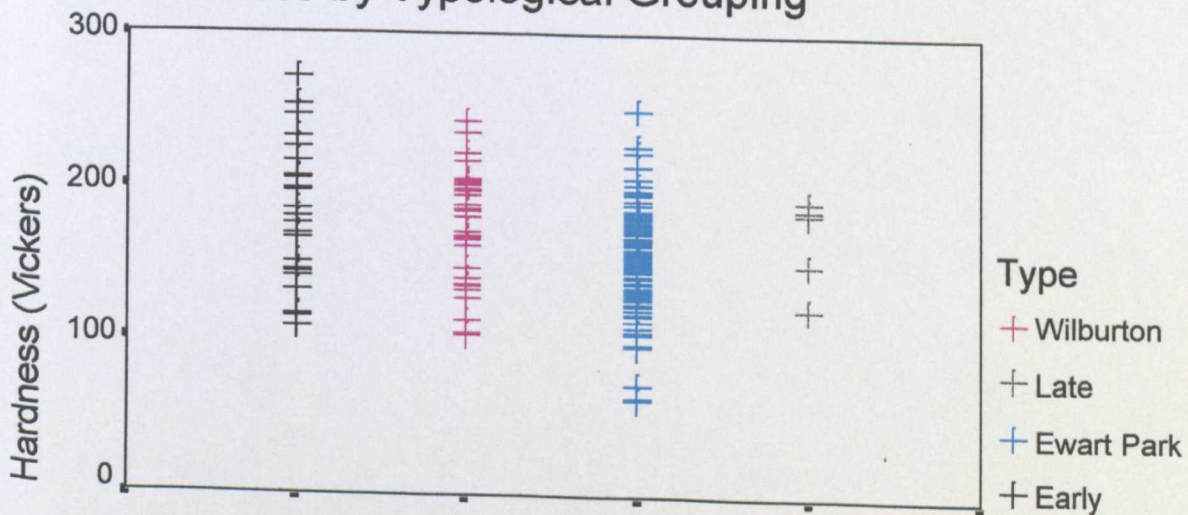


Figure 2.3.8(iii)

All Samples (excluding burnt)

Hardness by Weapon Category

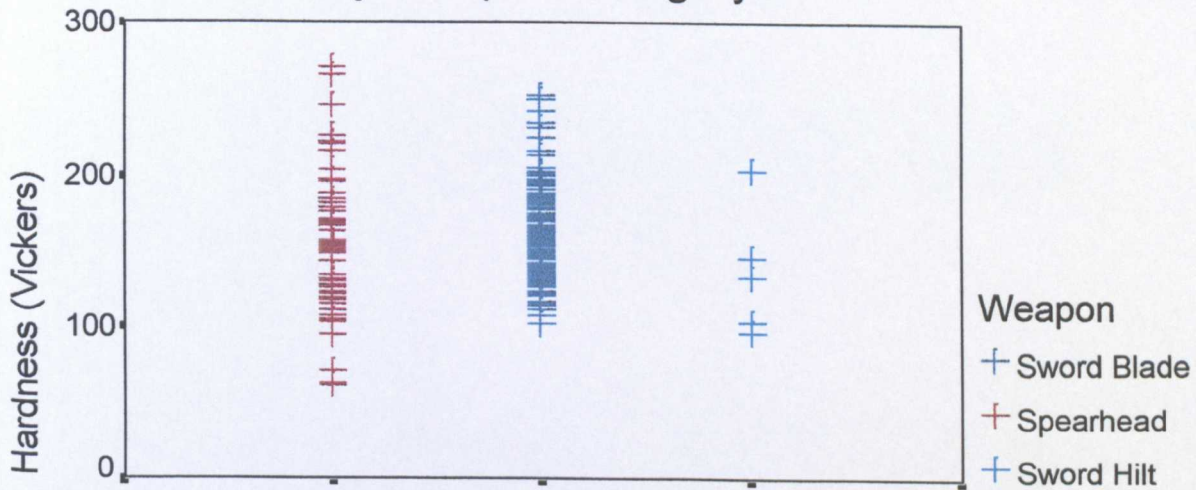


Figure 2.3.8(iv)

Ewart Park Sword Samples (excluding burnt)

Hardness by Region

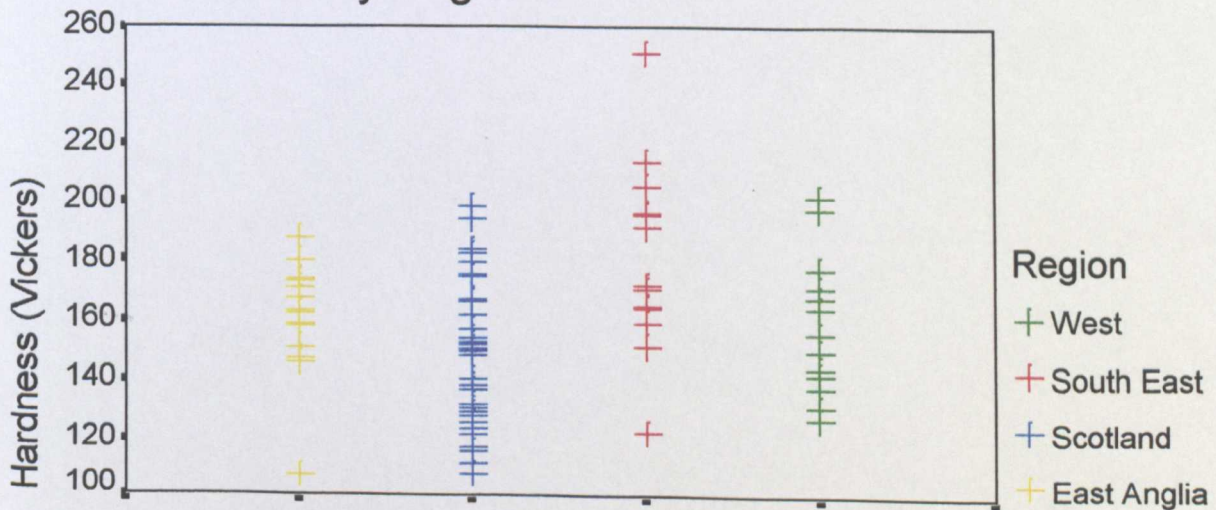


Figure 2.3.8(v) - All Samples (excluding burnt)
Hardness and Grain Distortion

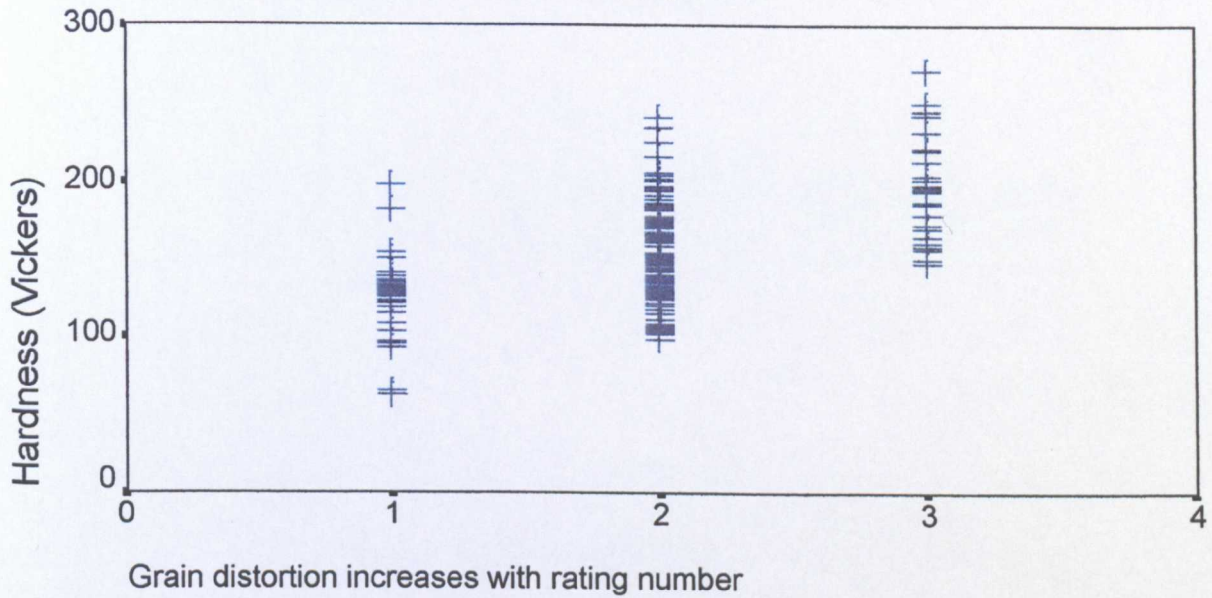


Figure 2.3.8(vi) - All Samples
Histogram of Hardness Values

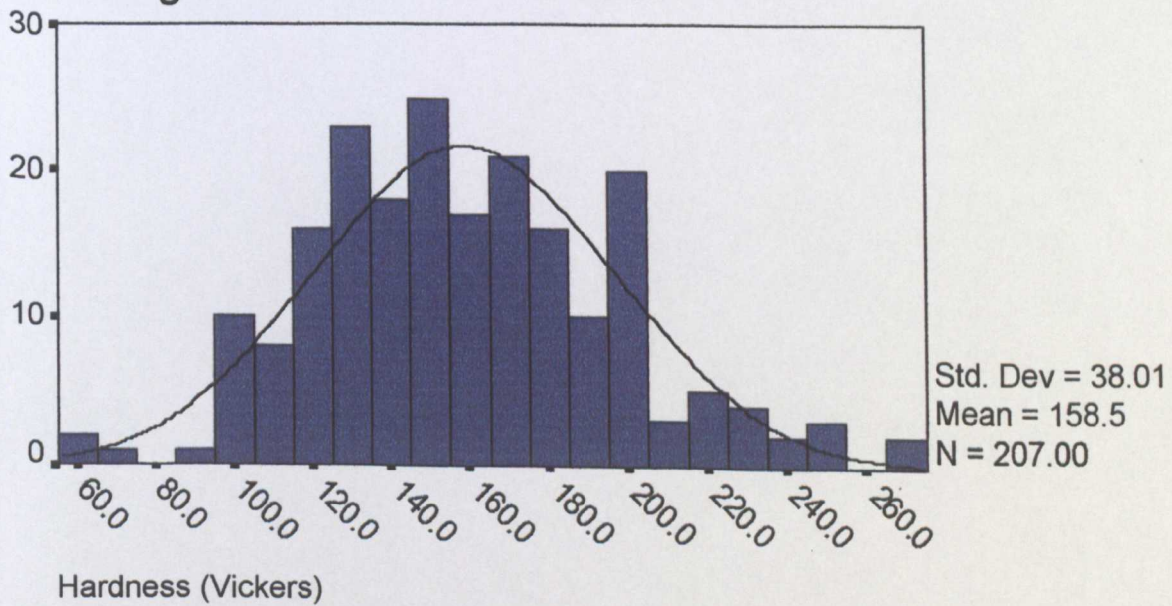


Figure 2.6.1.1(i)
Trace Element Content

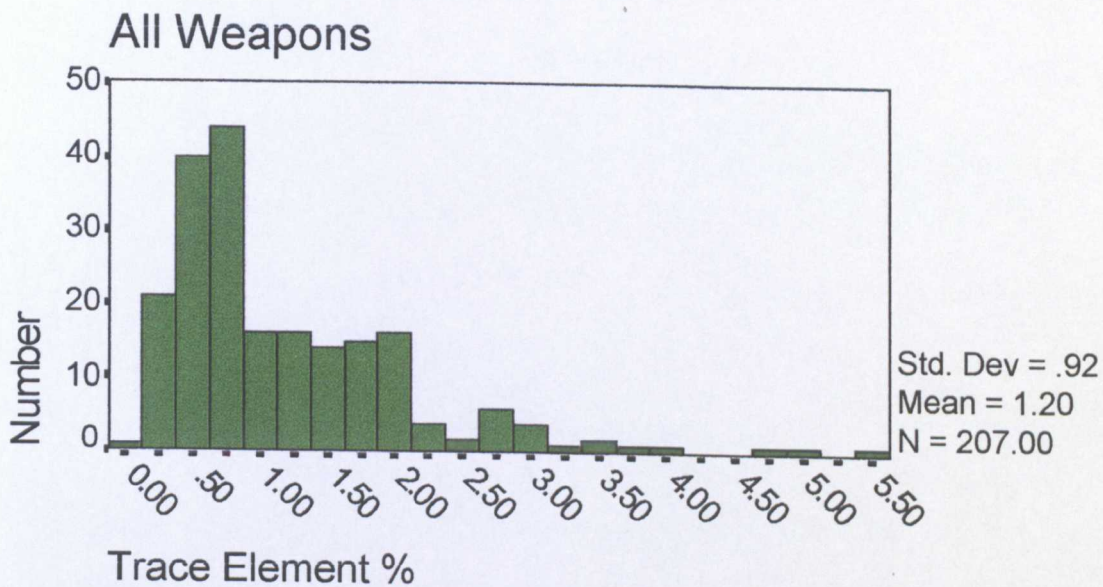


Figure 2.6.1.1(ii)
Trace Elements by Typological Grouping

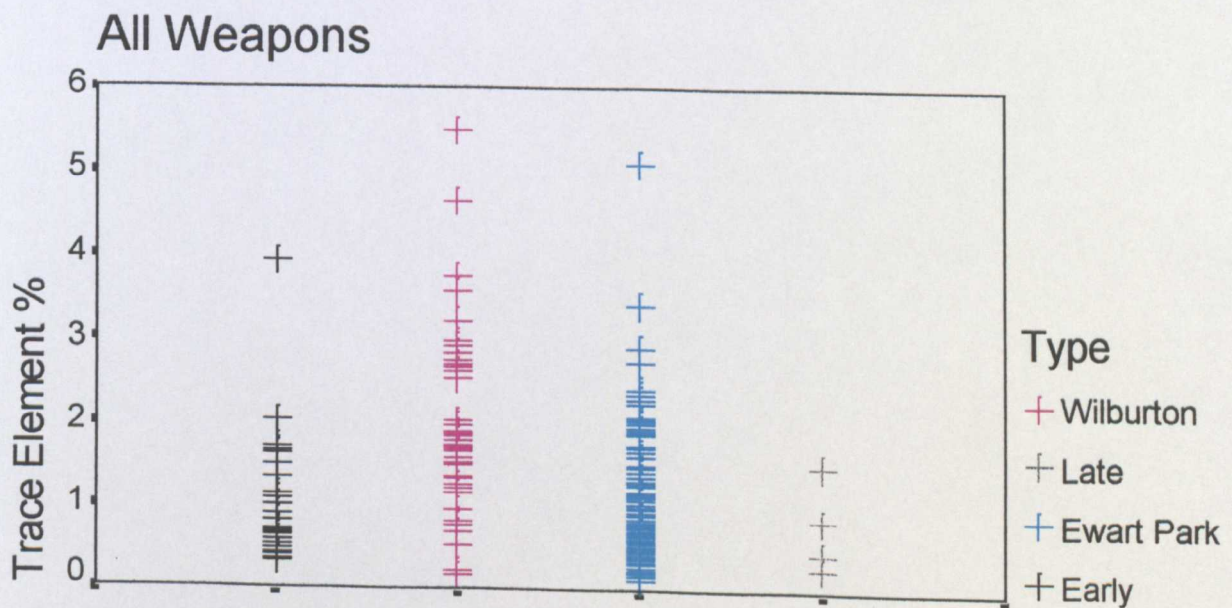


Figure 2.6.1.1(iii)

Trace Elements by Typological Grouping

South Eastern Weapons



Figure 2.6.1.1(iv)

Total Trace Elements by Region

All Weapons

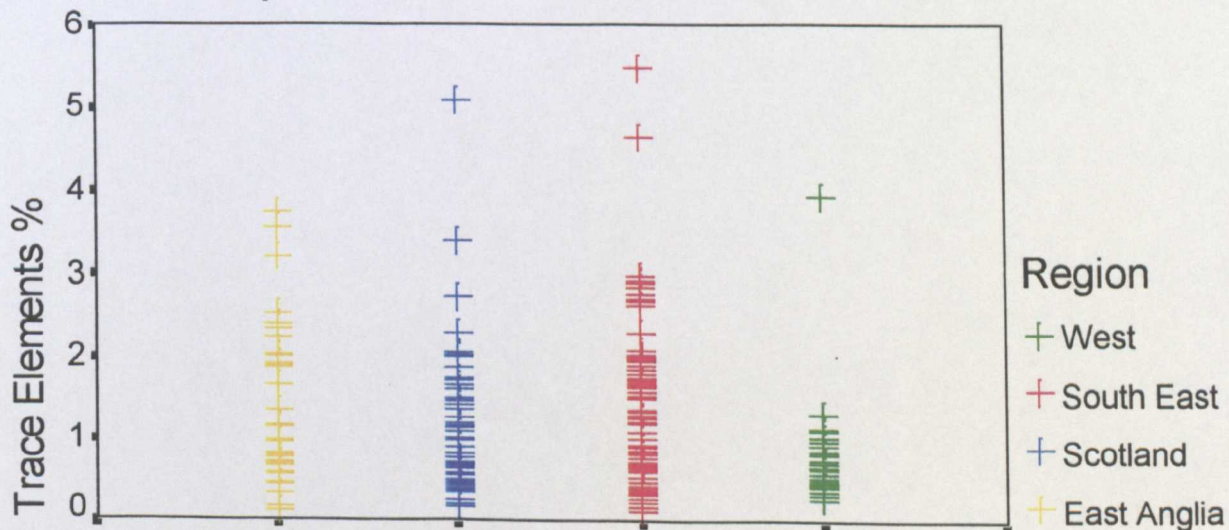


Figure 2.6.1.1(v)

Total Trace Elements by Region

Ewart Park Weapons

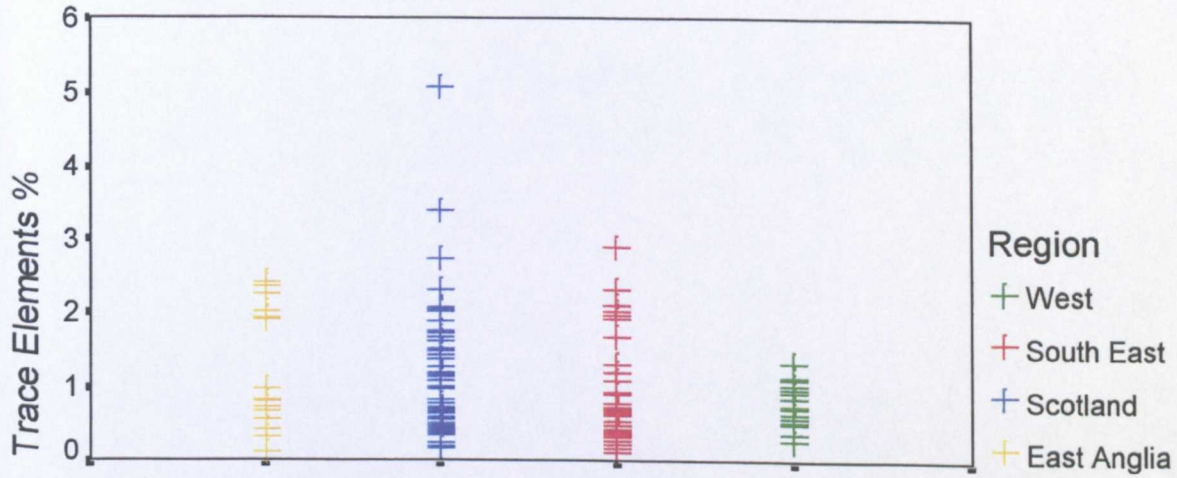


Figure 2.6.1.1(vi): All Weapons

Trace Elements - Weapon Category & Type



Figure 2.6.1.1(vii): All Weapons

Trace Elements - Weapon Category & Region

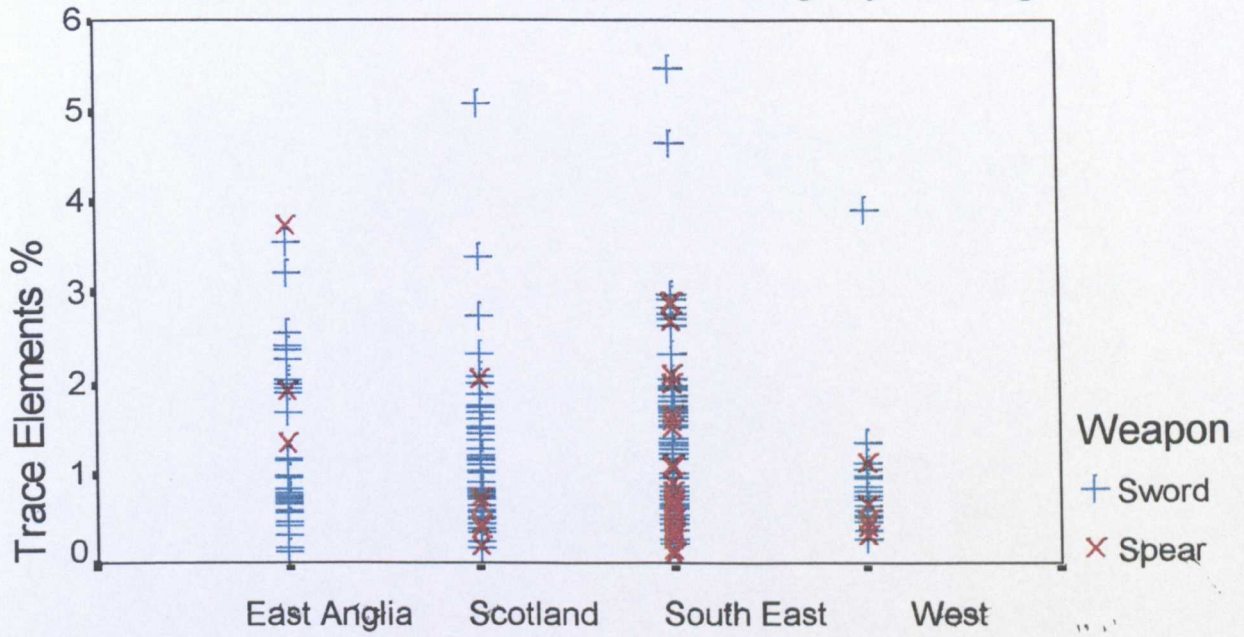


Figure 2.6.1.2(i)

Compositional Groups by Type

All Weapons

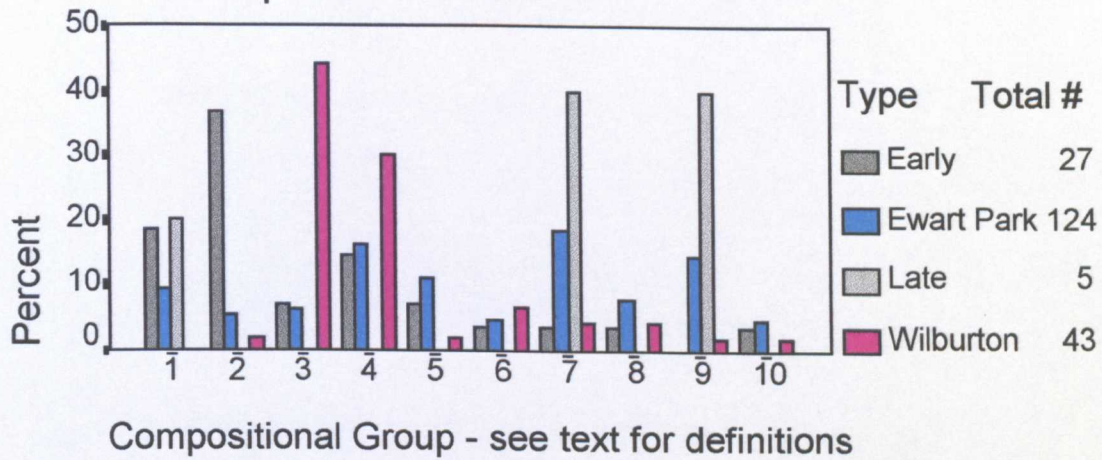


Figure 2.6.1.2(ii)

Compositional Groups by Type

South Eastern Weapons

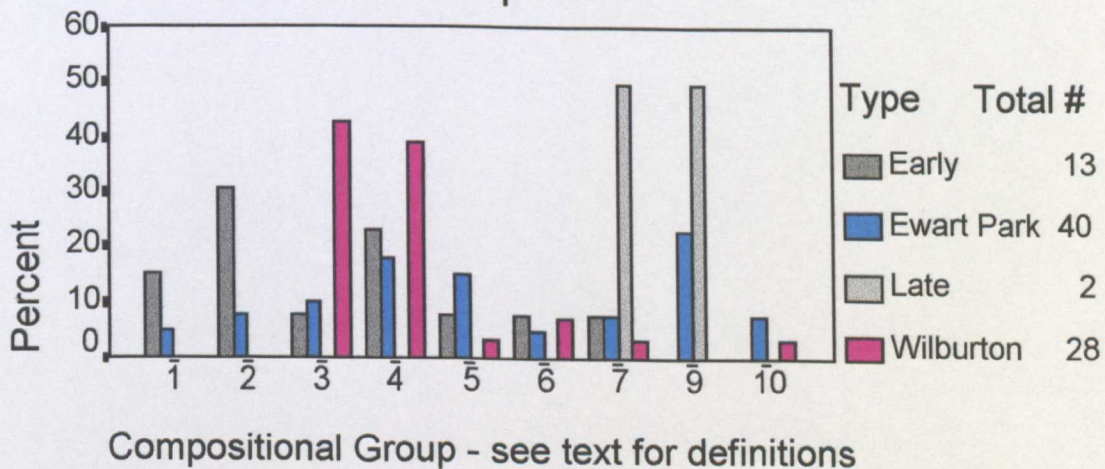


Figure 2.6.1.2(iii)

Compositional Groups by Region

All Weapons

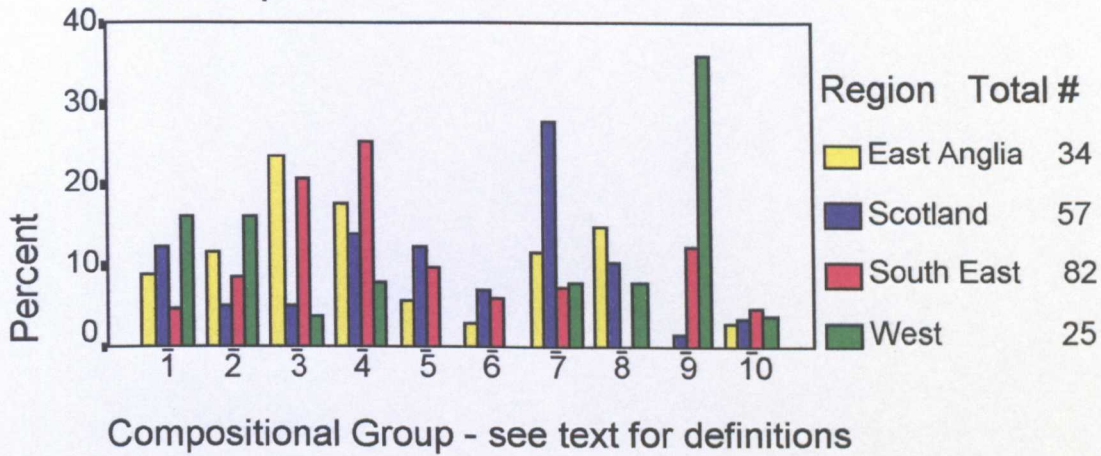


Figure 2.6.1.2(iv)

Compositional Groups by Region

Ewart Park Weapons

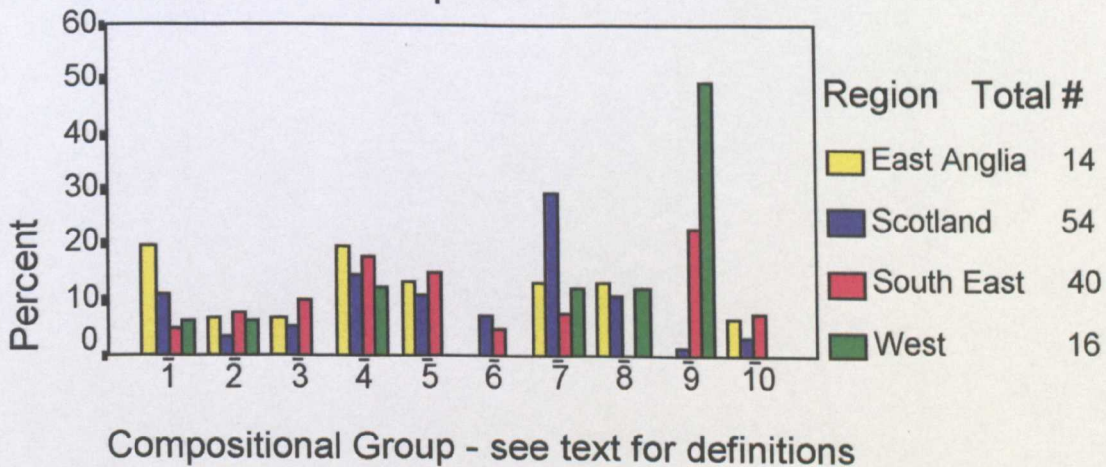


Figure 2.6.2.1(i)

Tin Content

All Samples

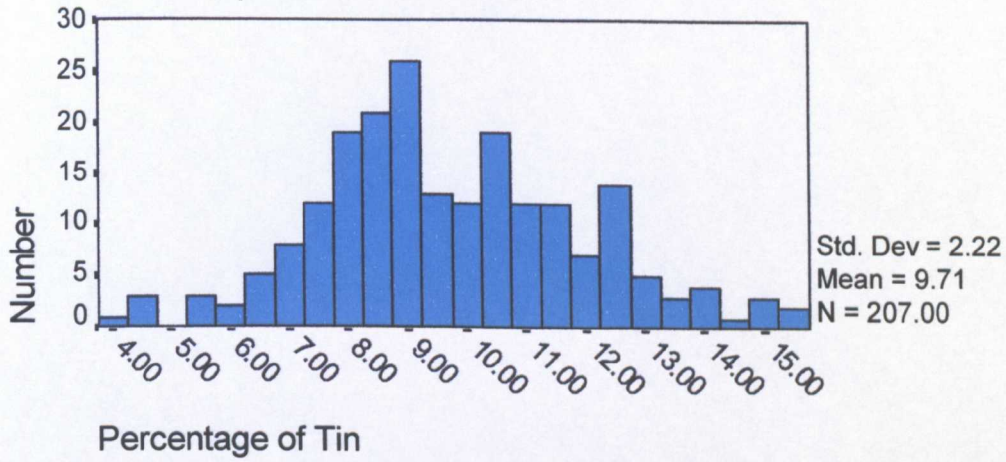


Figure 2.6.2.1(ii)

Tin Content by Typological Grouping

All Weapons

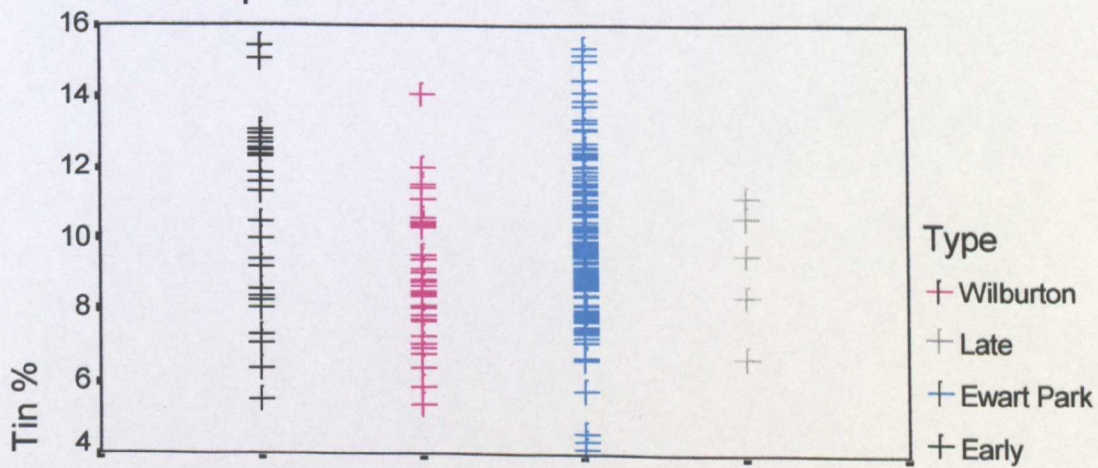


Figure 2.6.2.1(iii)

Tin Content by Typological Grouping

South Eastern Weapons

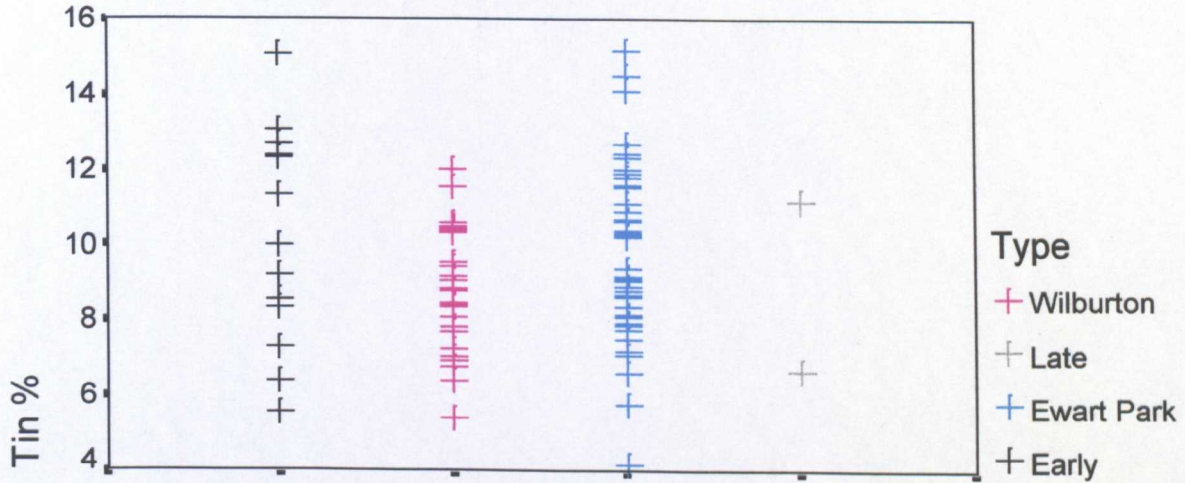


Figure 2.6.2.1(iv)

Tin Content by Region

All Weapons

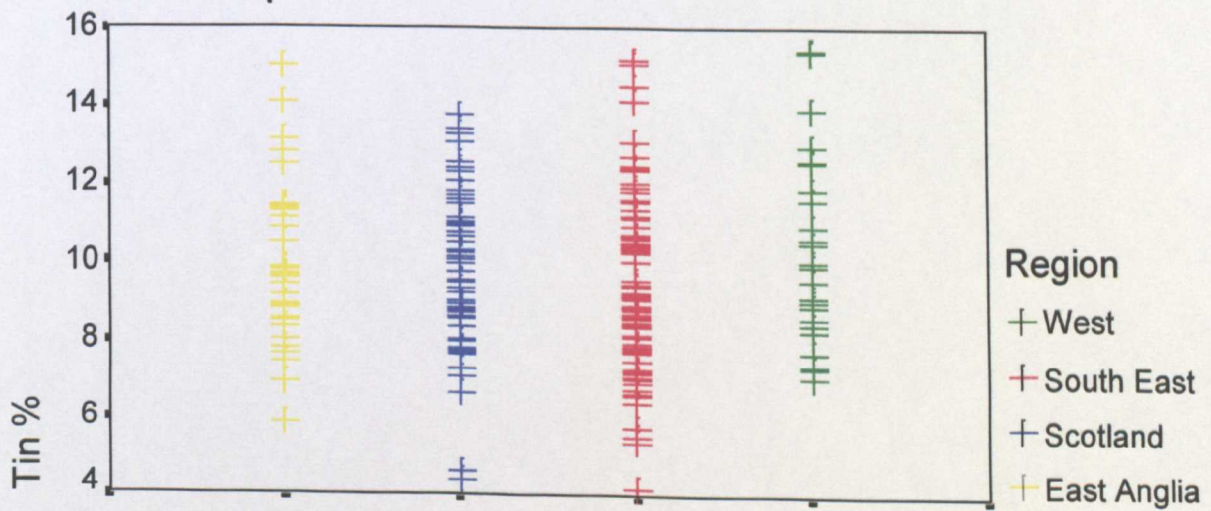


Figure 2.6.2.1(v)
Tin Content by Region

Ewart Park Weapons

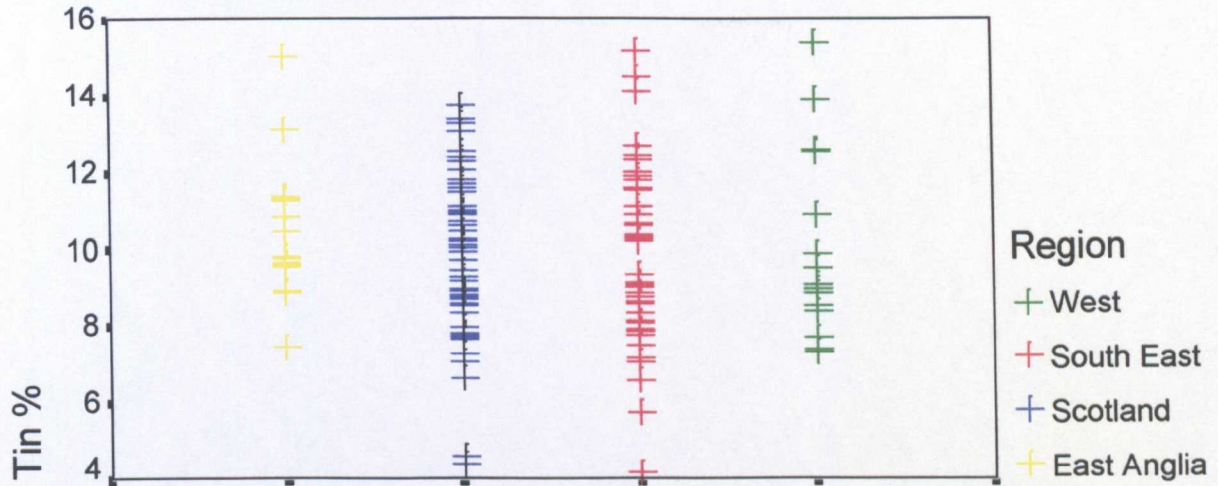


Figure 2.6.2.1(vi)
Tin Content by Weapon Category & Type

All Weapons

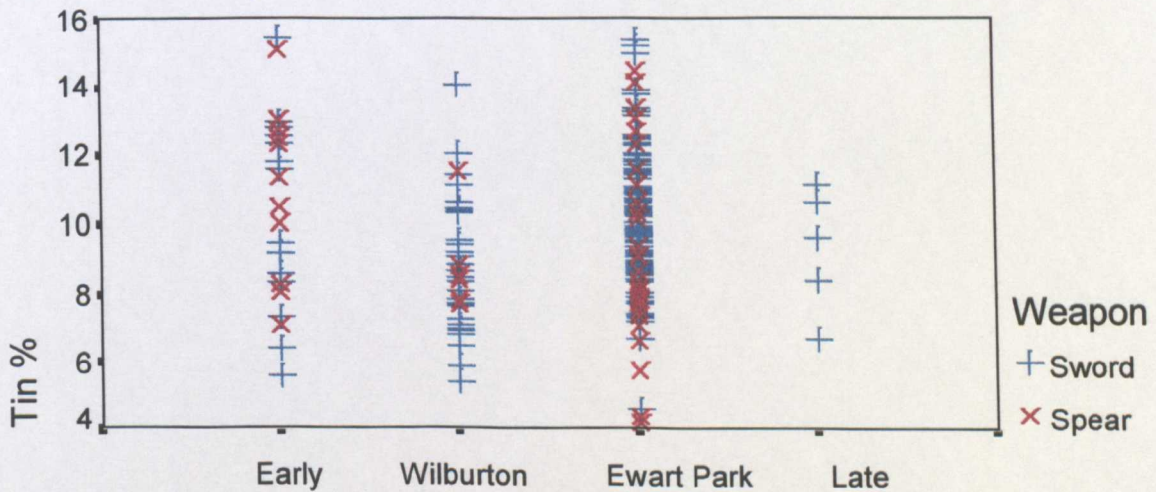


Figure 2.6.2.1(vii)

Tin Content by Weapon Category & Region

All Weapons

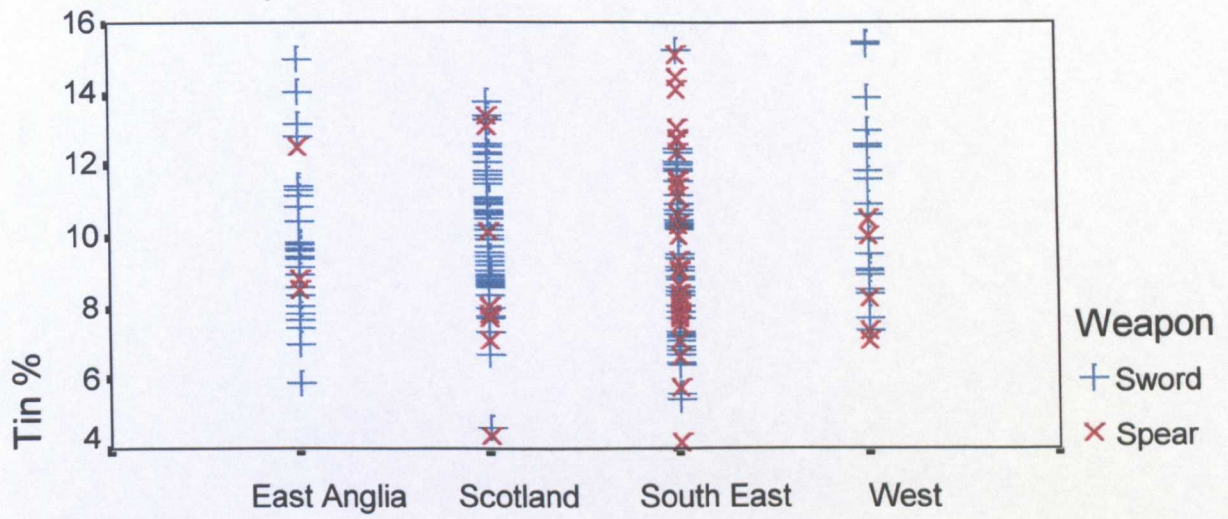


Figure 2.6.2.2(i)

Lead Content

All Samples

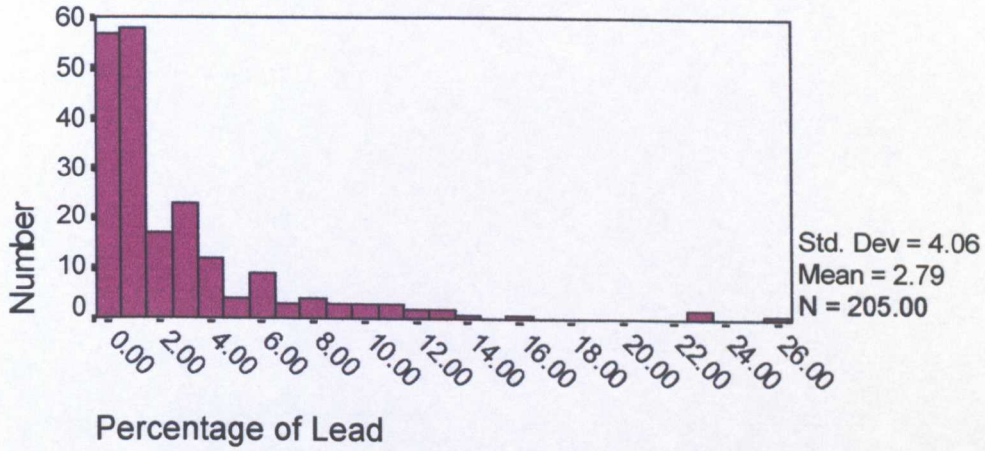


Figure 2.6.2.2(ii)

Lead Content by Typological Grouping

All Weapons

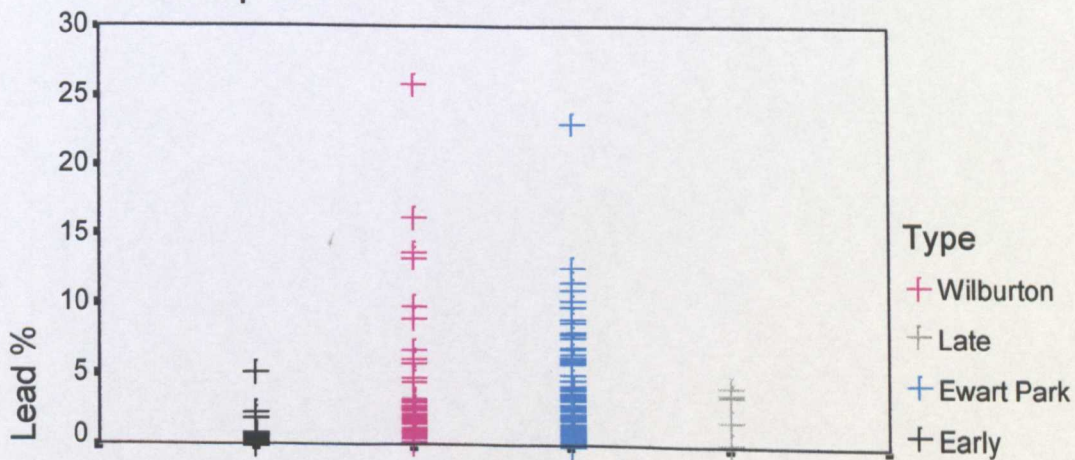


Figure 2.6.2.2(iii)

Lead Content by Typological Grouping

South Eastern Weapons

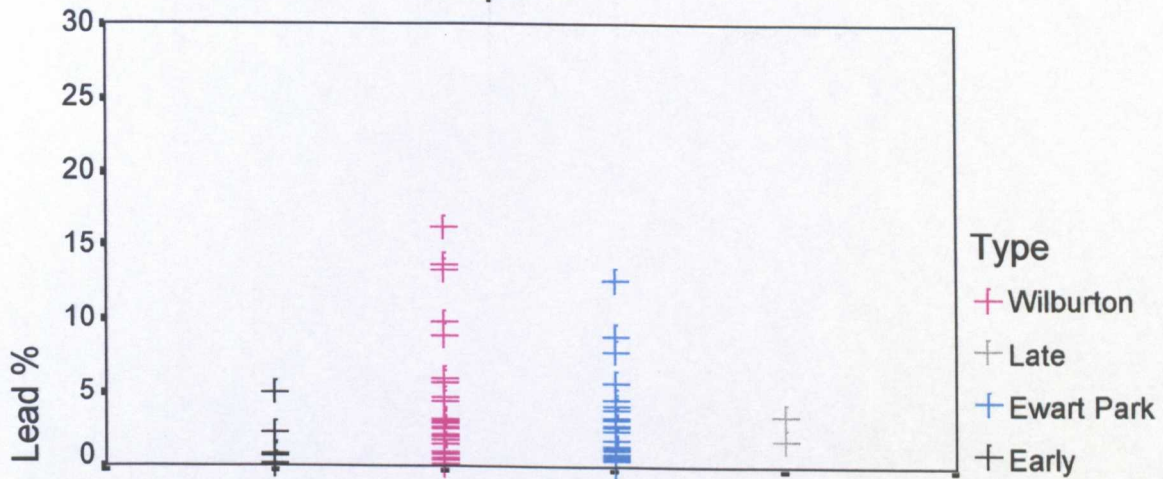


Figure 2.6.2.2(iv)

Lead Content by Region

All Weapons

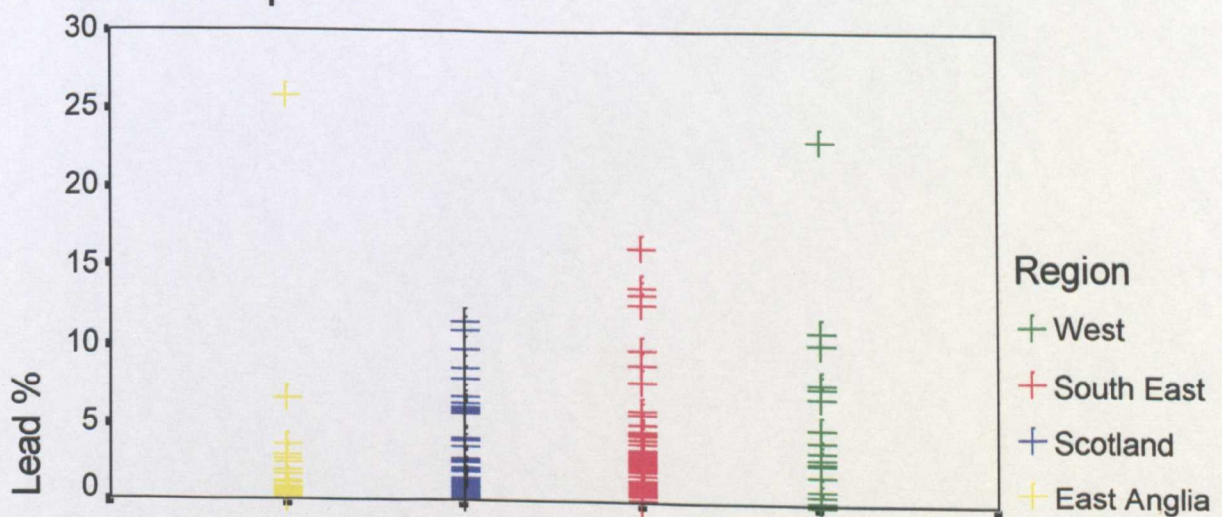


Figure 2.6.2.2(v)
Lead Content by Region

Ewart Park Weapons

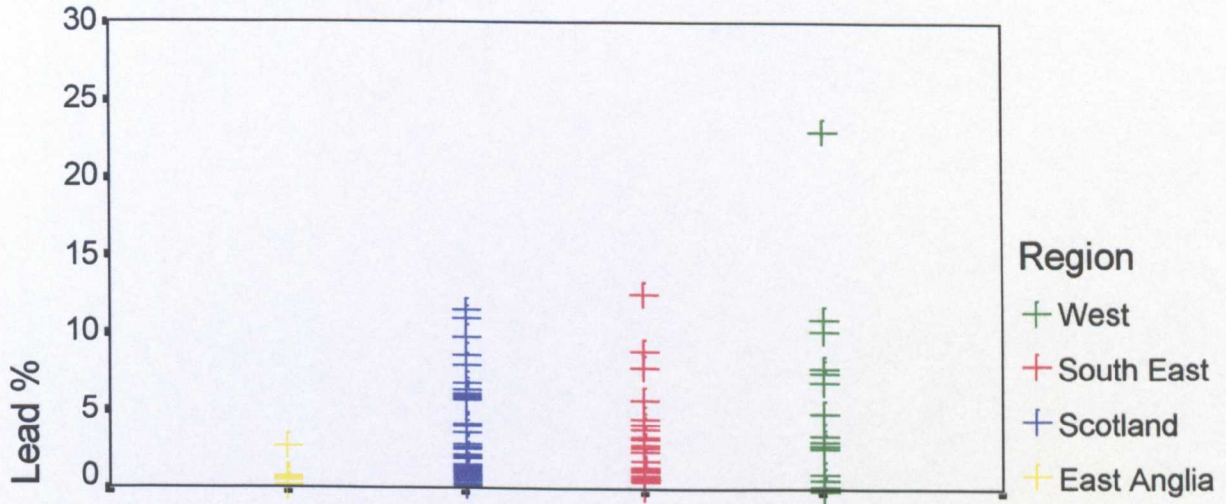


Figure 2.6.2.2(vi)
Lead Content by Weapon Category & Type

All Weapons

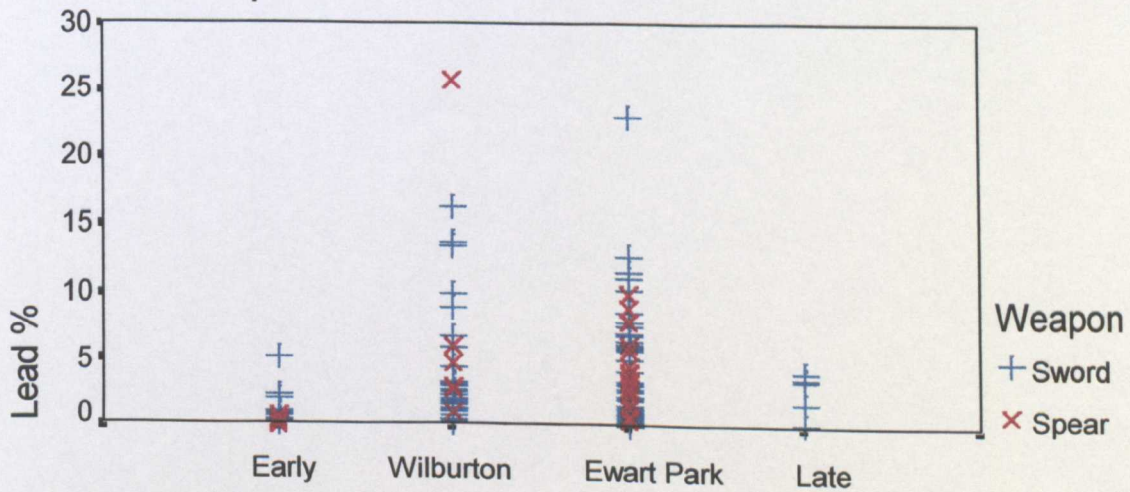
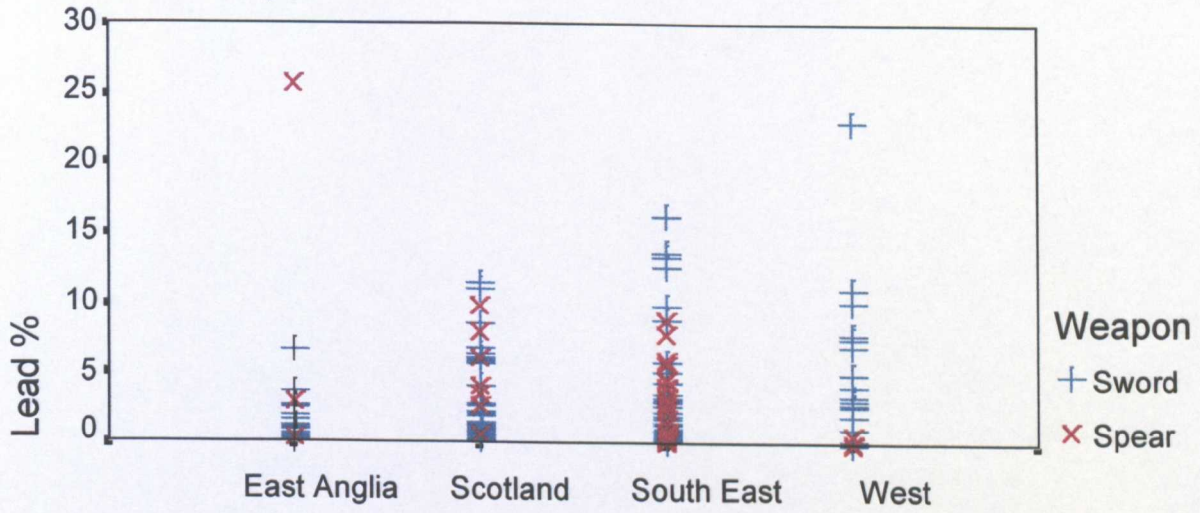


Figure 2.6.2.2(vii)

Lead Content by Weapon Category & Region

All Weapons



Figures 2.6.3(i)-(vi): Twice Sampled Weapons Comparisons of Compositions

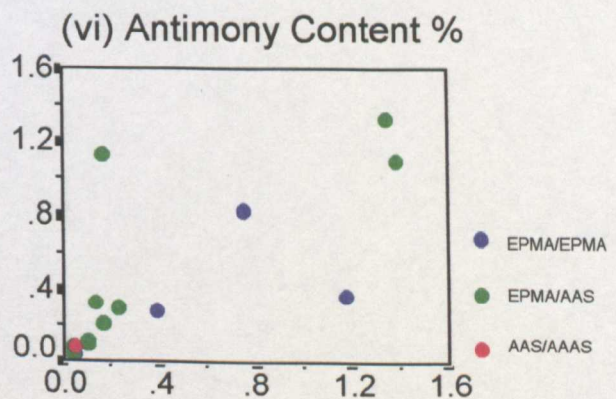
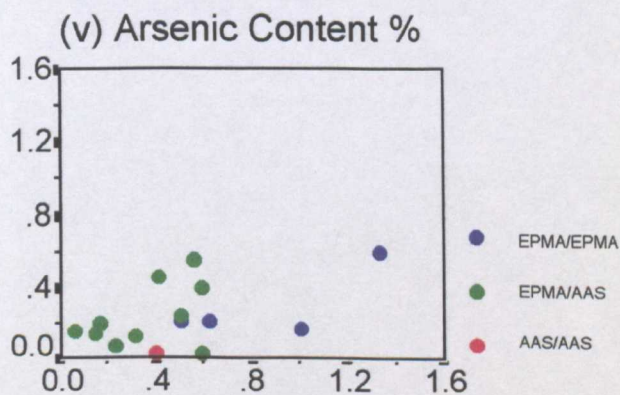
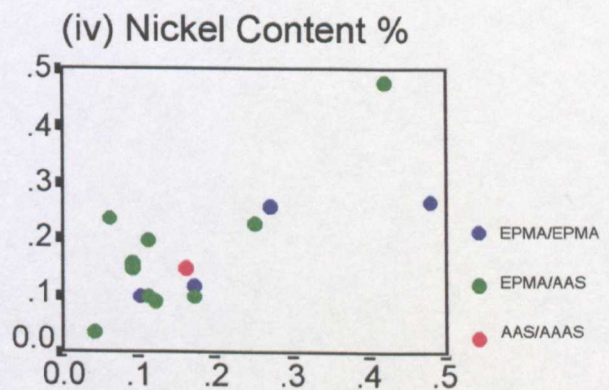
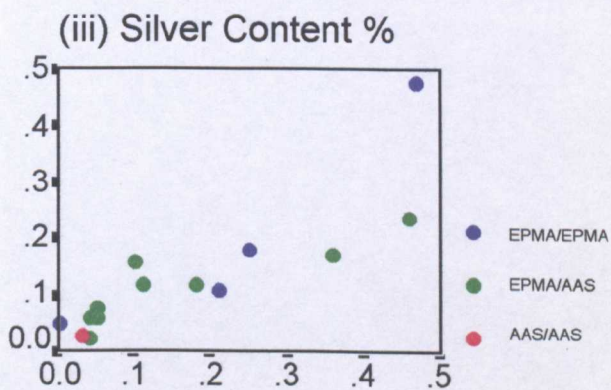
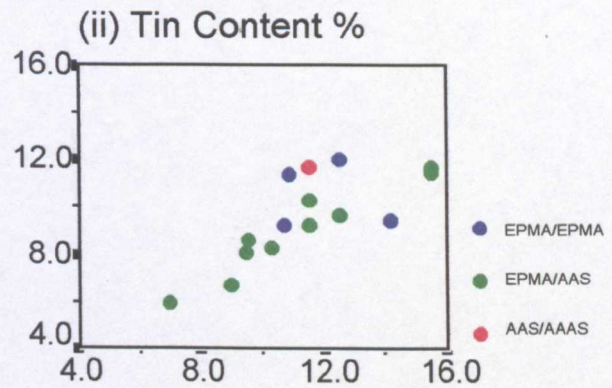
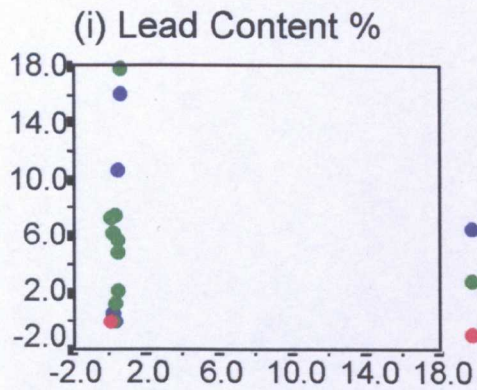


Figure 3.1(i): Casting Alloy - Certificate of Analysis

BROOKSIDE METAL COMPANY

Sue Bridgford

BROOKSIDE METAL COMPANY LIMITED, BILSTON LANE, WILLENHALL, WEST MIDLANDS, WV13 2QE.
TELEPHONE: (01902) 366666 FAX: (01902) 636671

Date: 6.11.96

CERTIFICATE OF ANALYSIS

Customer's Name: PANGOLIN ADDITIONS LTD
Customer's Address: UNIT 86,
CHALFORD INDUSTRIAL ESTATE,
CHALFORD, GLOS. GL6 8NT.

Our Contract No. 017383
Customer's Order No.
Material: TIN BRONZE INGOTS
Specification: GB CU SN 10 DIN 17656/1973

Colour:
Batch Number/s: A 8568

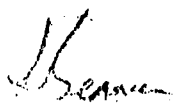
Analysis:

Copper	BAL
Tin	9.78
Lead	0.30
Zinc	0.33
Iron	0.01
Nickel	0.06
Antimony	0.02
Phos	0.02
Sulphur	0.01
Arsenic	0.01
Aluminium	<0.005
Silicon	<0.005
Manganese	<0.01

100.00%

CERTIFIED THAT THE SUPPLIES DETAILED HEREON HAVE BEEN INSPECTED AND TESTED IN ACCORDANCE WITH THE CONDITIONS AND REQUIREMENTS OF THE CONTRACT PURCHASE ORDER AND, UNLESS OTHERWISE NOTED BELOW, CONFORMS IN ALL RESPECTS TO THE SPECIFICATION/S RELEVANT THERETO.

Signature



D Barnett



Position:

Technical Manager



ANALYSIS OF EXPERIMENTAL BRONZE BLADE EDGES

Figure 3.1(ii)

Sample	Object	Part	Fe	Co	Ni	Cu	Zn	As	Sb	Sn	Ag	Bi	Pb	Au	S
R1426/1	Sample 2		0.02	0.00	0.10	87.56	0.23	0.00	0.01	11.54	0.03	0.00	0.31	0.00	0.19
R1426/2			0.00	0.02	0.07	87.39	0.29	0.45	0.00	11.57	0.02	0.01	0.18	0.00	0.00
R1426/3			0.00	0.03	0.05	88.05	0.25	0.45	0.01	11.11	0.00	0.00	0.00	0.02	0.03
R1427/1	Sample 3		0.02	0.00	0.06	85.19	0.28	1.02	0.00	12.86	0.00	0.00	0.55	0.00	0.02
R1427/2			0.00	0.01	0.08	88.34	0.31	1.68	0.00	9.35	0.02	0.03	0.19	0.00	0.00
R1427/3			0.00	0.02	0.04	87.06	0.26	0.24	0.00	12.01	0.08	0.00	0.28	0.00	0.00
R1428/1	Sample 4		0.00	0.03	0.05	90.13	0.35	0.00	0.00	9.05	0.24	0.01	0.15	0.00	0.00
R1428/2			0.00	0.03	0.06	90.90	0.25	0.00	0.00	8.66	0.03	0.00	0.06	0.00	0.00
R1428/3			0.00	0.03	0.07	88.08	0.24	0.17	0.02	10.77	0.06	0.00	0.53	0.02	0.01
R1429/1	Sample 5		0.01	0.01	0.05	88.88	0.11	0.00	0.00	10.63	0.06	0.00	0.25	0.00	0.00
R1429/2			0.00	0.02	0.06	85.69	0.01	0.00	0.00	13.78	0.06	0.04	0.32	0.00	0.01
R1429/3			0.00	0.03	0.06	88.41	0.04	1.42	0.00	9.88	0.05	0.00	0.11	0.00	0.00
R1430/1	Sample 7		0.00	0.01	0.05	89.60	0.07	0.00	0.02	10.20	0.03	0.00	0.04	0.00	0.00
R1430/2			0.01	0.01	0.06	89.49	0.11	0.00	0.00	10.19	0.04	0.00	0.08	0.00	0.00
R1430/3			0.03	0.00	0.07	85.48	0.13	2.10	0.00	11.44	0.07	0.05	0.60	0.02	0.02
R1431/1	Sample F		0.00	0.01	0.05	86.58	0.17	0.00	0.00	12.45	0.07	0.00	0.65	0.00	0.02
R1431/2			0.00	0.02	0.06	90.46	0.25	0.00	0.00	9.16	0.02	0.00	0.05	0.00	0.00
R1431/3			0.00	0.03	0.03	84.88	0.12	0.00	0.00	14.69	0.07	0.00	0.16	0.00	0.03
R1432/1	Sample C		0.00	0.02	0.04	86.07	0.23	0.00	0.00	12.03	0.03	0.07	1.49	0.00	0.01
R1432/2			0.00	0.00	0.05	88.58	0.23	0.19	0.00	10.68	0.00	0.00	0.18	0.07	0.00
R1432/3			0.01	0.00	0.07	88.87	0.22	0.39	0.00	10.11	0.05	0.00	0.16	0.10	0.01
R1433/1	Sample N		0.00	0.01	0.04	89.42	0.25	0.00	0.00	10.10	0.02	0.00	0.16	0.00	0.01
R1433/2			0.01	0.00	0.05	87.26	0.23	1.58	0.00	10.69	0.03	0.00	0.13	0.00	0.00
R1433/3			0.01	0.02	0.06	87.98	0.21	0.98	0.00	10.53	0.04	0.01	0.15	0.00	0.00
R1426/Mean	Sample 2		0.01	0.02	0.07	87.67	0.26	0.30	0.01	11.41	0.02	0.00	0.17	0.01	0.07
R1427/Mean	Sample 3		0.01	0.01	0.06	86.86	0.28	0.98	0.00	11.41	0.03	0.01	0.34	0.00	0.01
R1428/Mean	Sample 4		0.00	0.03	0.06	89.71	0.28	0.06	0.01	9.49	0.11	0.00	0.25	0.01	0.00
R1429/Mean	Sample 5		0.00	0.02	0.06	87.66	0.05	0.47	0.00	11.43	0.06	0.01	0.23	0.00	0.00
R1430/Mean	Sample 7		0.01	0.01	0.06	88.19	0.10	0.70	0.01	10.61	0.05	0.02	0.24	0.01	0.01
R1431/Mean	Sample F		0.00	0.02	0.05	87.30	0.18	0.00	0.00	12.10	0.05	0.00	0.29	0.00	0.02
R1432/Mean	Sample C		0.00	0.01	0.05	87.84	0.23	0.20	0.00	10.94	0.03	0.02	0.61	0.06	0.01
R1433/Mean	Sample N		0.01	0.01	0.05	88.22	0.23	0.85	0.00	10.44	0.03	0.00	0.14	0.00	0.00
Overall mean			0.01	0.01	0.06	87.93	0.20	0.45	0.00	10.98	0.05	0.01	0.28	0.01	0.01

Figure 4.2.1(i)

Swords - Hilt Length by Typological Grouping

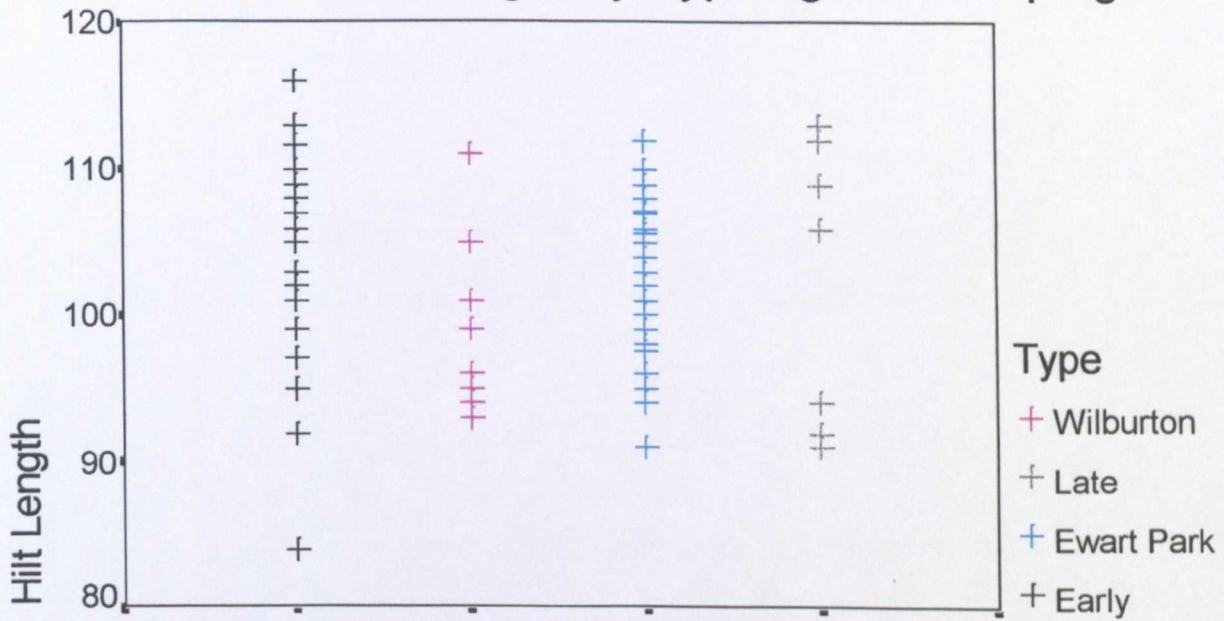


Figure 4.2.1(ii)

Swords - Shoulder Width by Typological Grouping

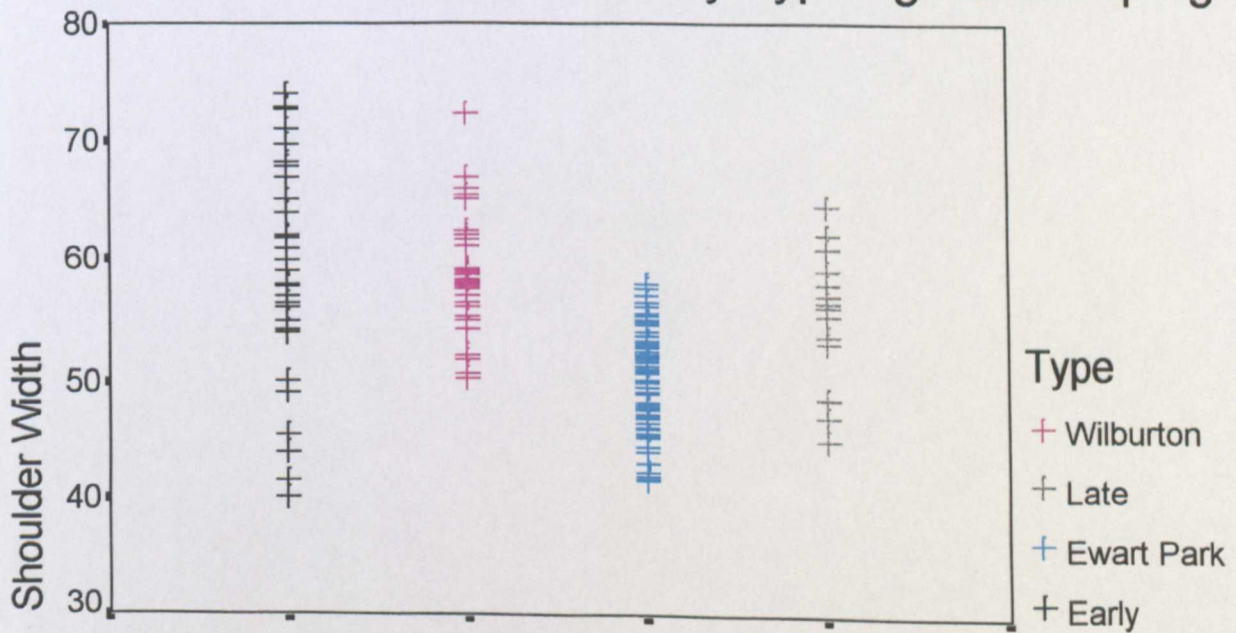


Figure 4.2.1(iii)

Swords - Blade Length by Typological Grouping

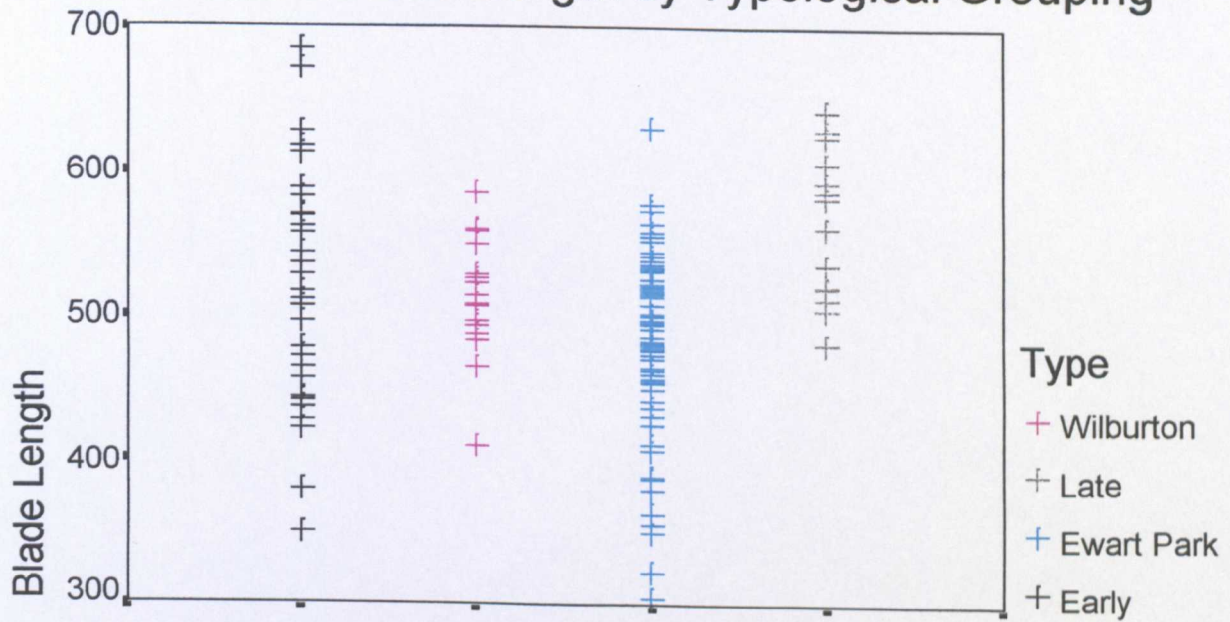


Figure 4.2.1(iv)

Swords - Blade Width by Typological Grouping

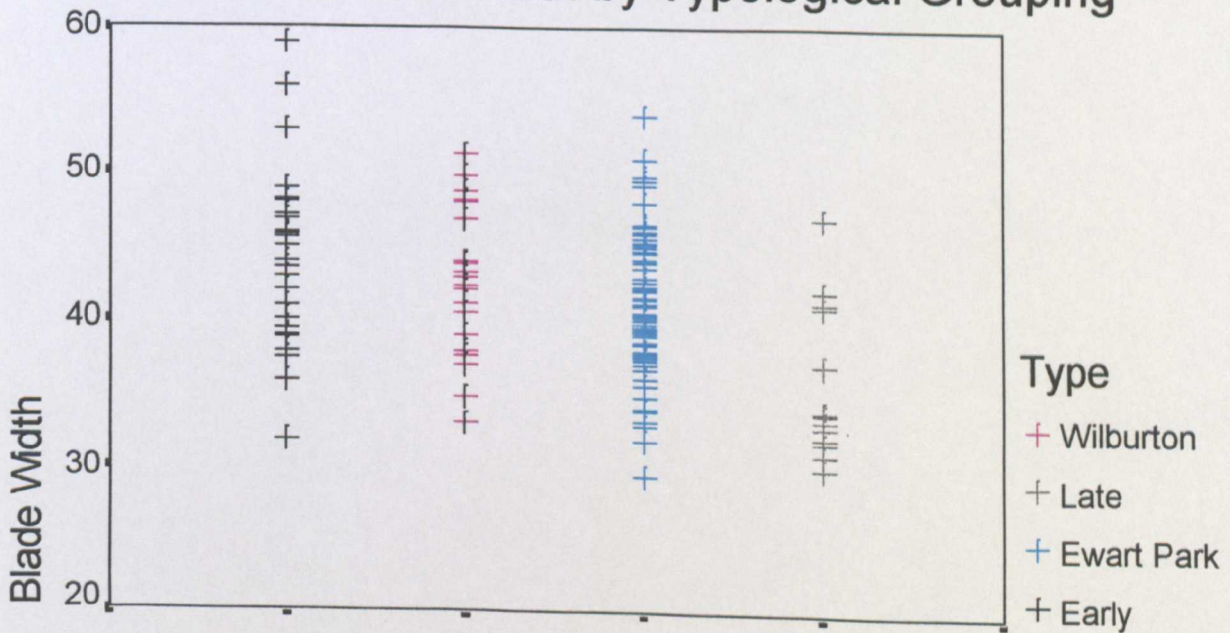


Figure 4.2.1(v)

Swords - Blade Thickness by Typological Grouping

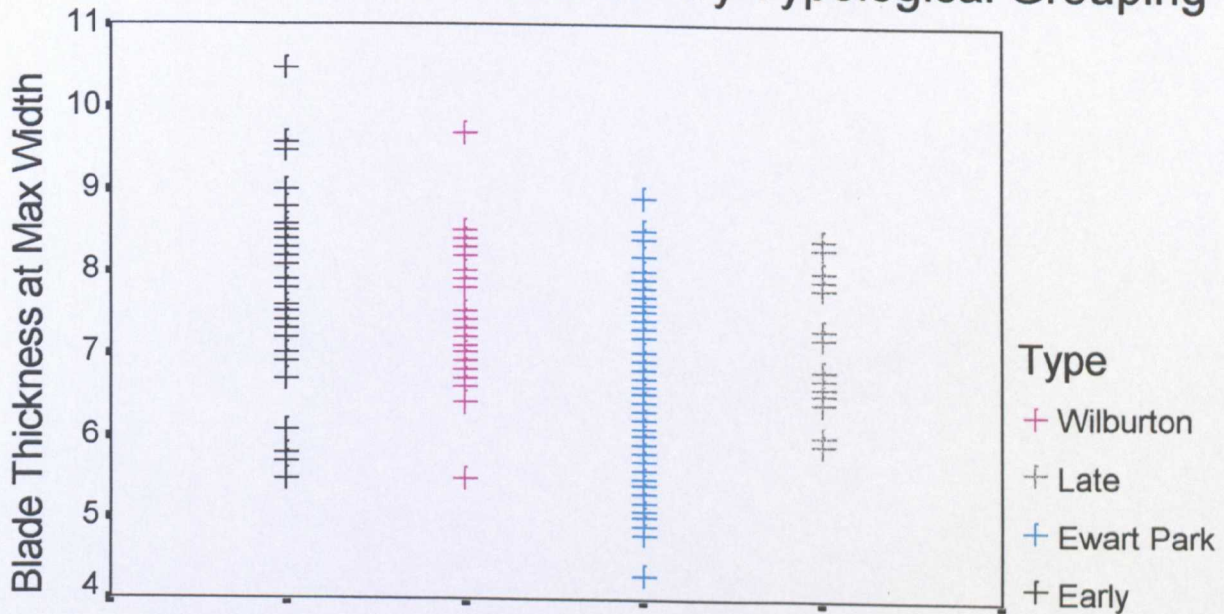


Figure 4.2.1(vi)

Swords - Shoulder Width / Hilt Length by Type

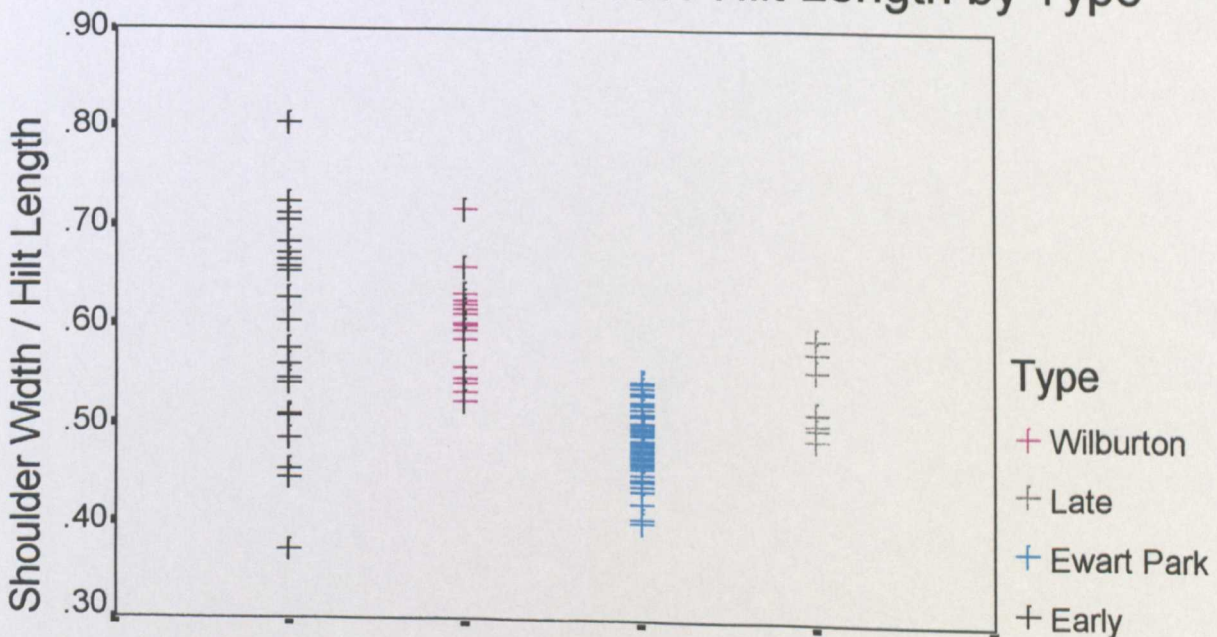


Figure 4.2.1(vii)

Swords - Blade Thickness / Blade Width by Type

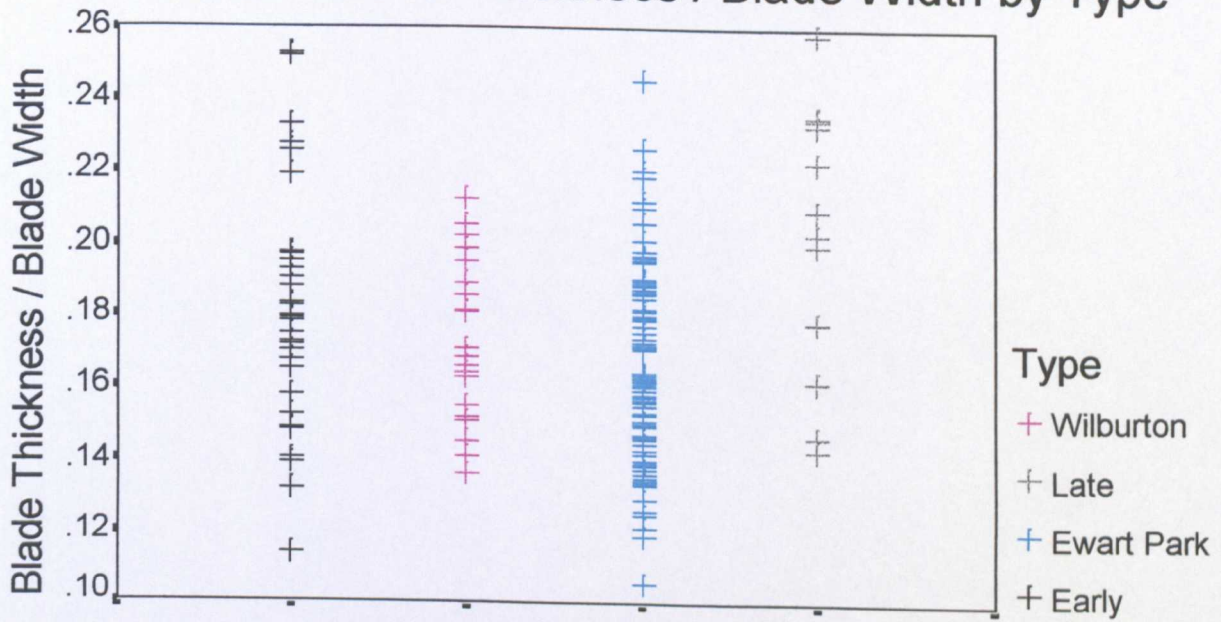


Figure 4.2.1(viii)

Swords - Shoulder Width / Blade Width

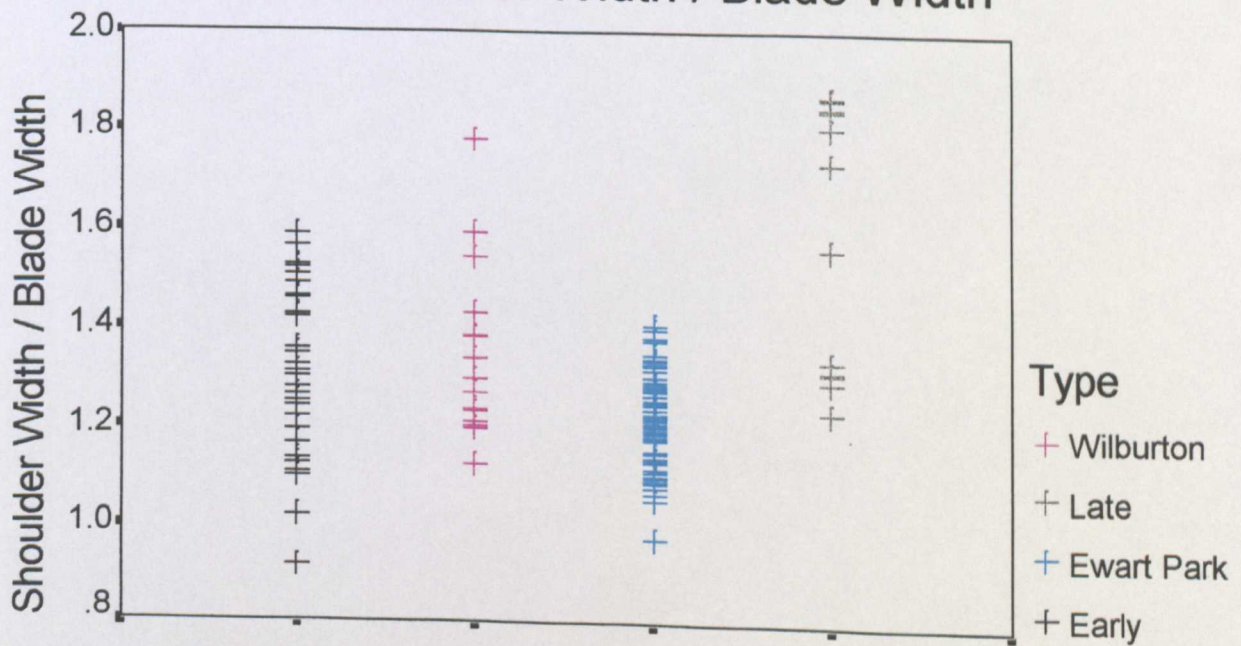


Figure 4.2.1(ix)

Swords - Hilt Length / Blade Length by Type

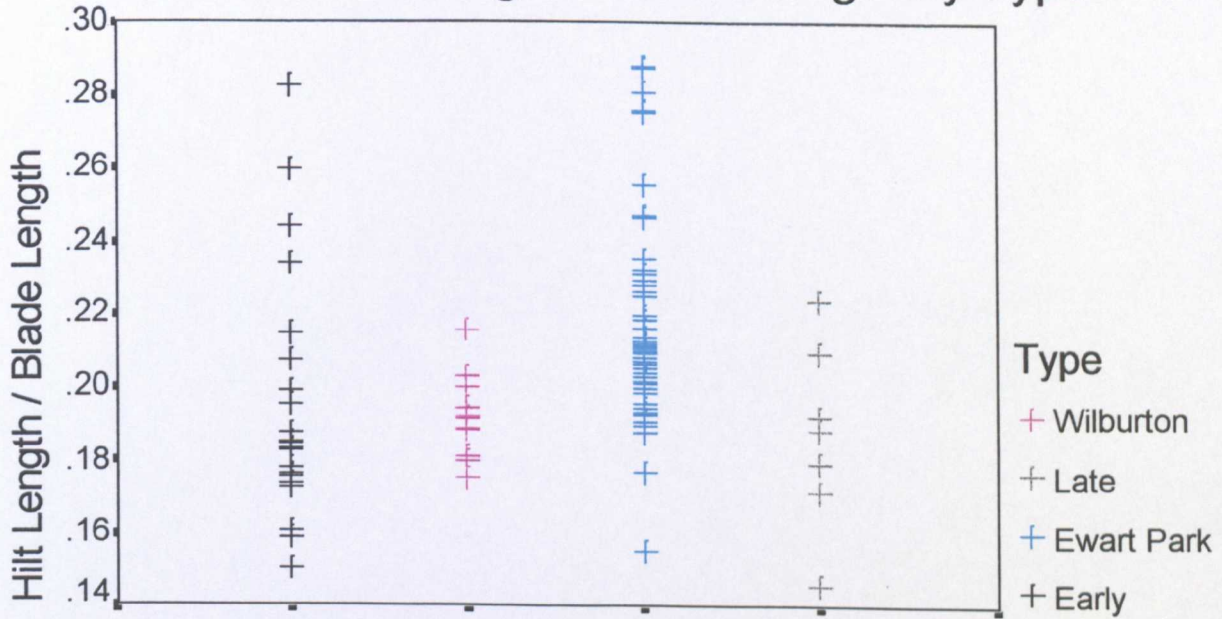


Figure 4.2.1(x) - Ewart Park Swords

Hilt Length by Region

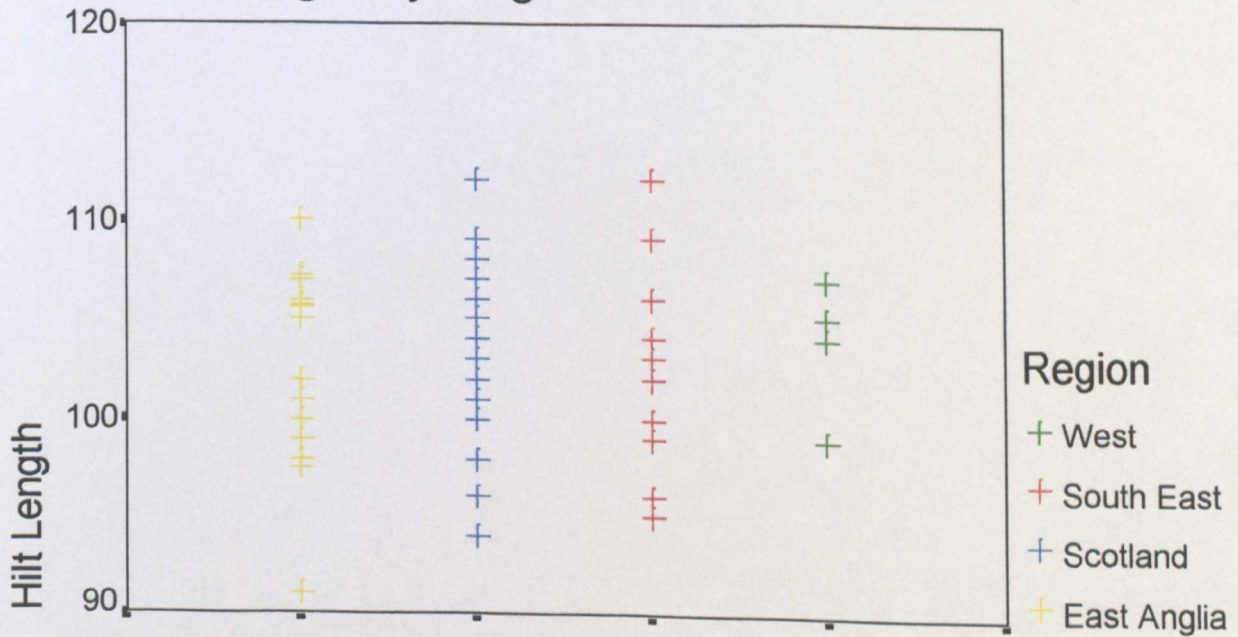


Figure 4.2.1(xi) - Ewart Park Swords

Shoulder Width by Region

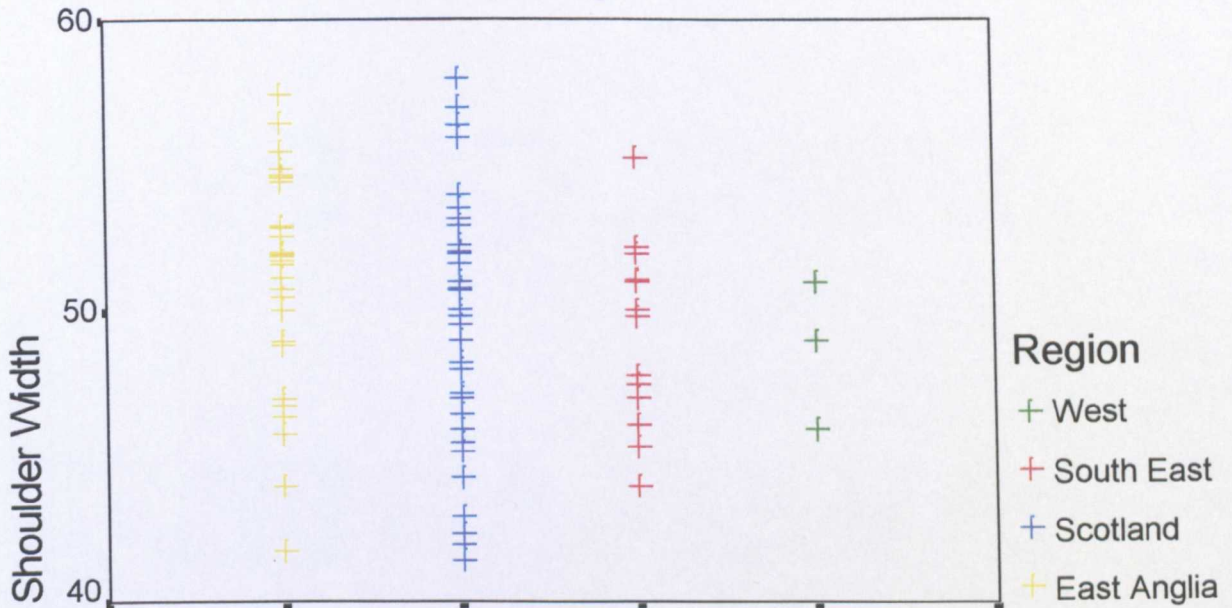


Figure 4.2.1(xii) - Ewart Park Swords

Blade Length by Region

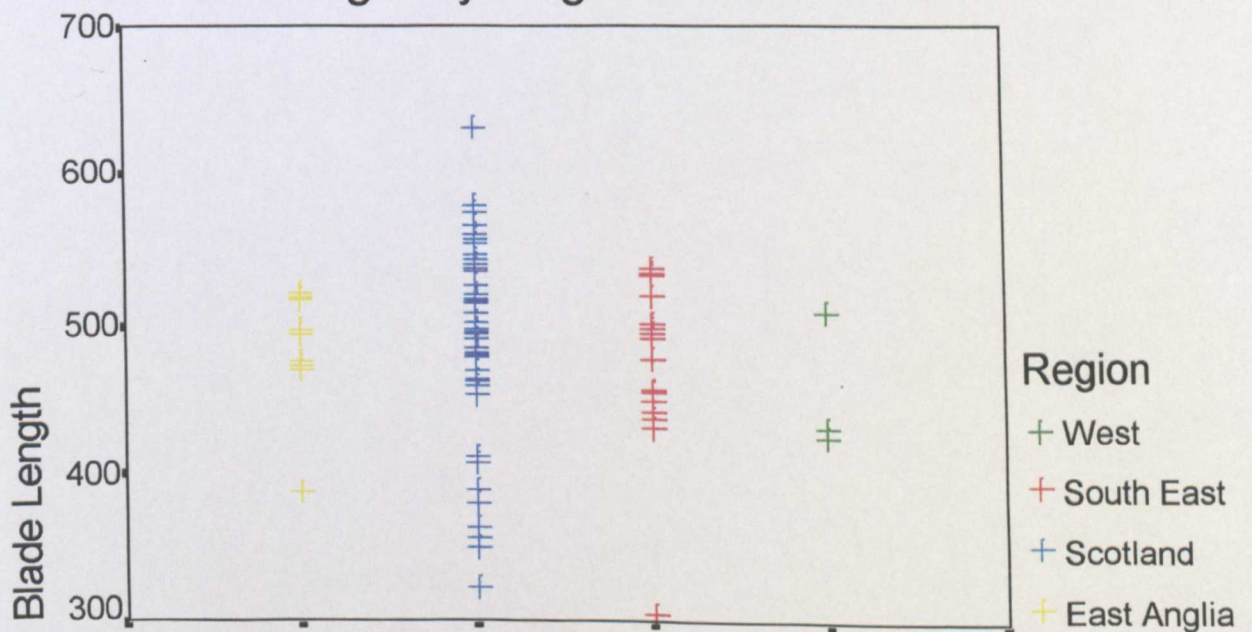


Figure 4.2.1(xiii) - Ewart Park Swords

Blade Width by Region

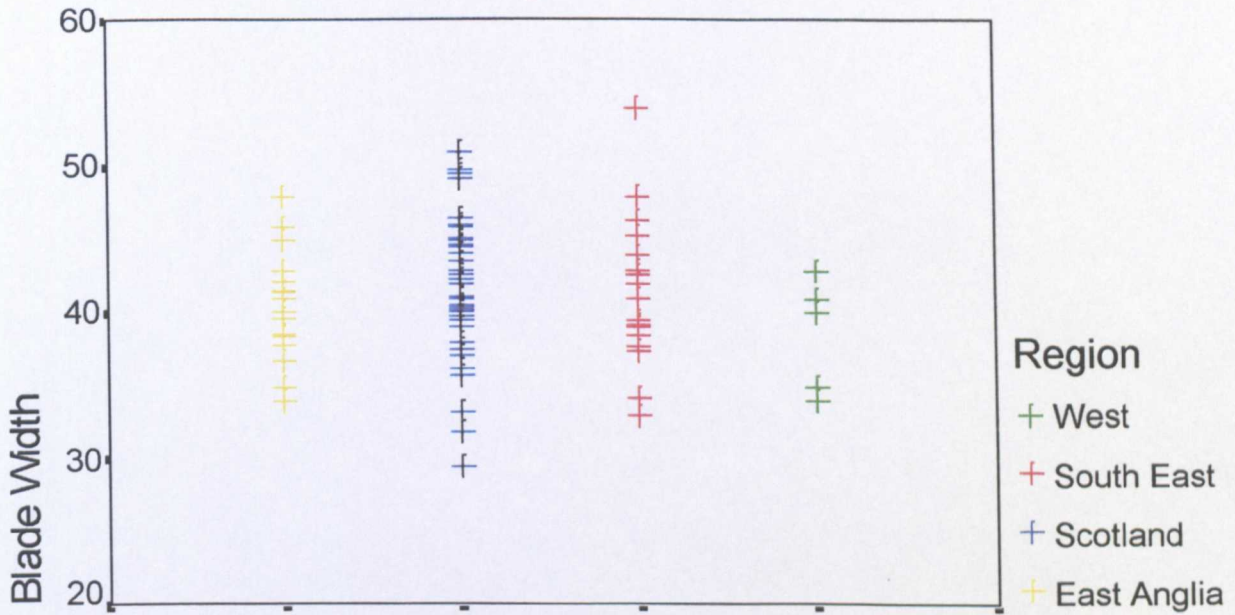


Figure 4.2.1(xiv) - Ewart Park Swords

Blade Thickness by Region

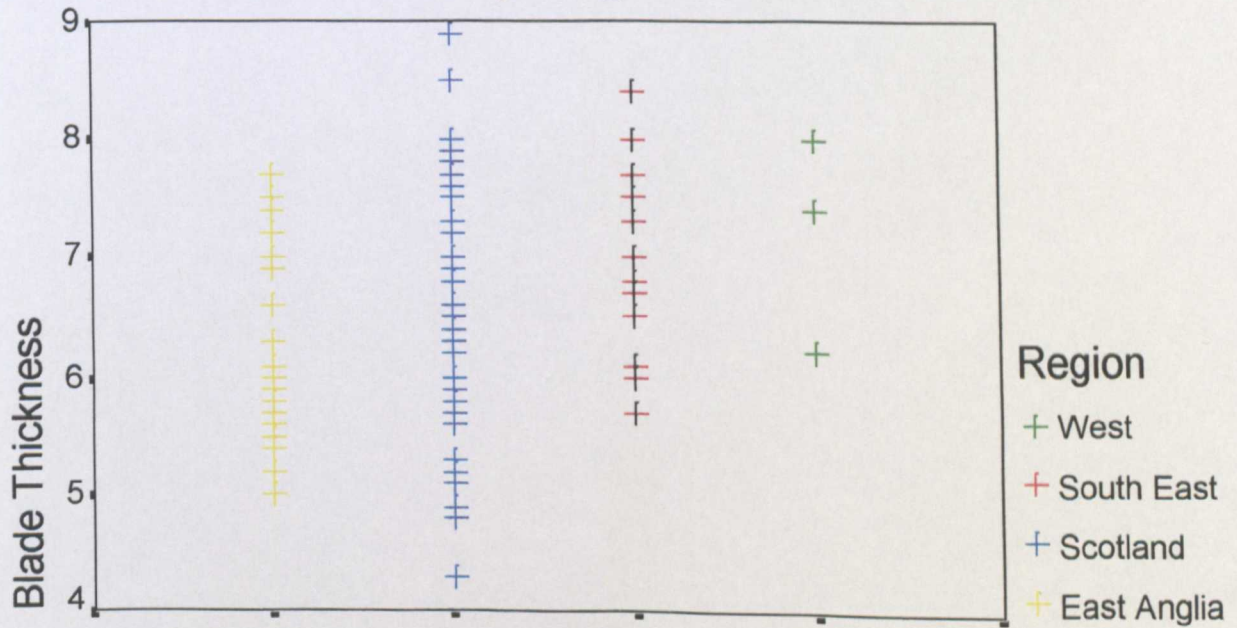


Figure 4.2.1 (xv) - Ewart Park Swords

Shoulder Width / Hilt Length by Region

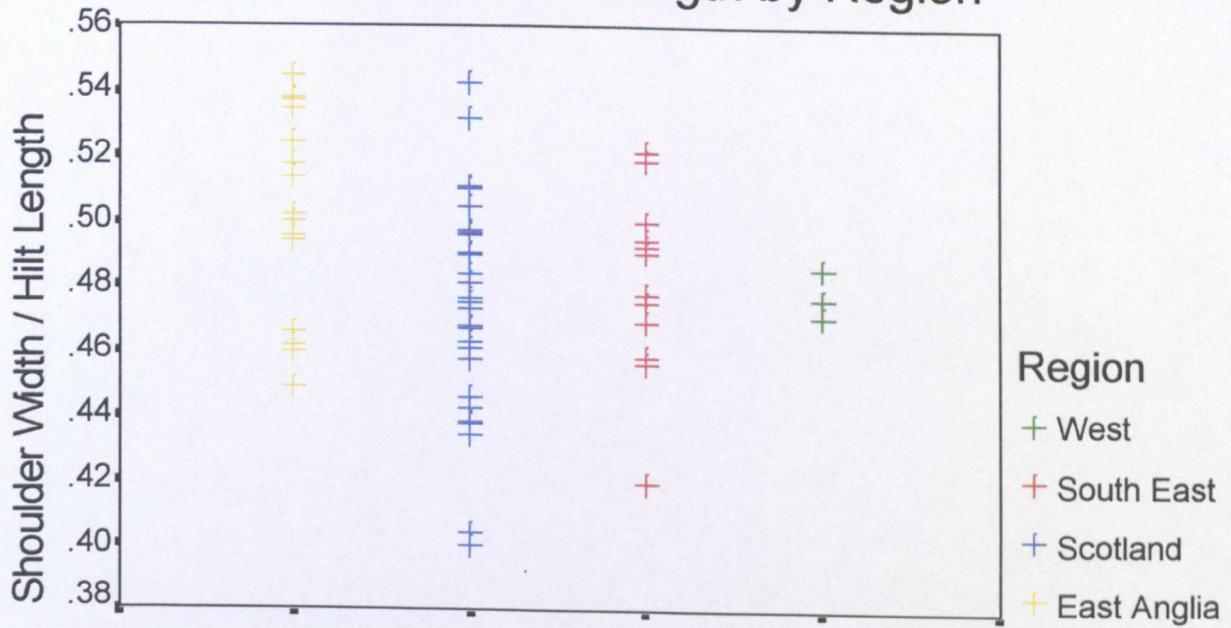


Figure 4.2.1(xvi) - Ewart Park Swords

Blade Thickness / Blade Width by Region

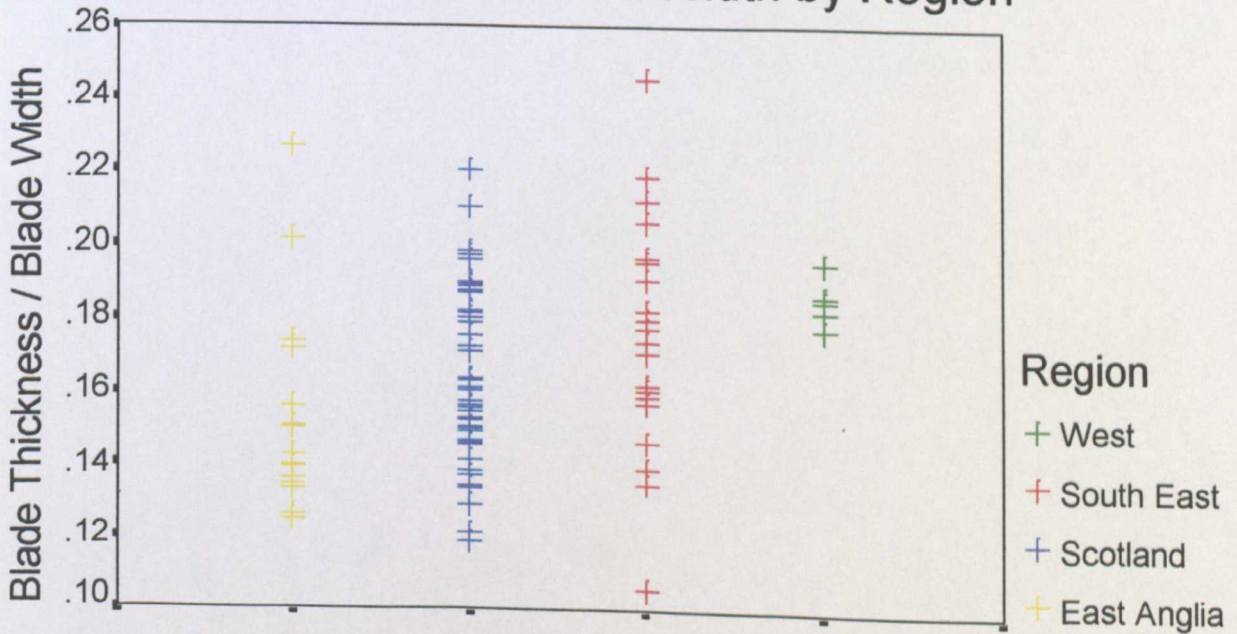


Figure 4.2.2(i)

Swords - Balance by Typological Grouping

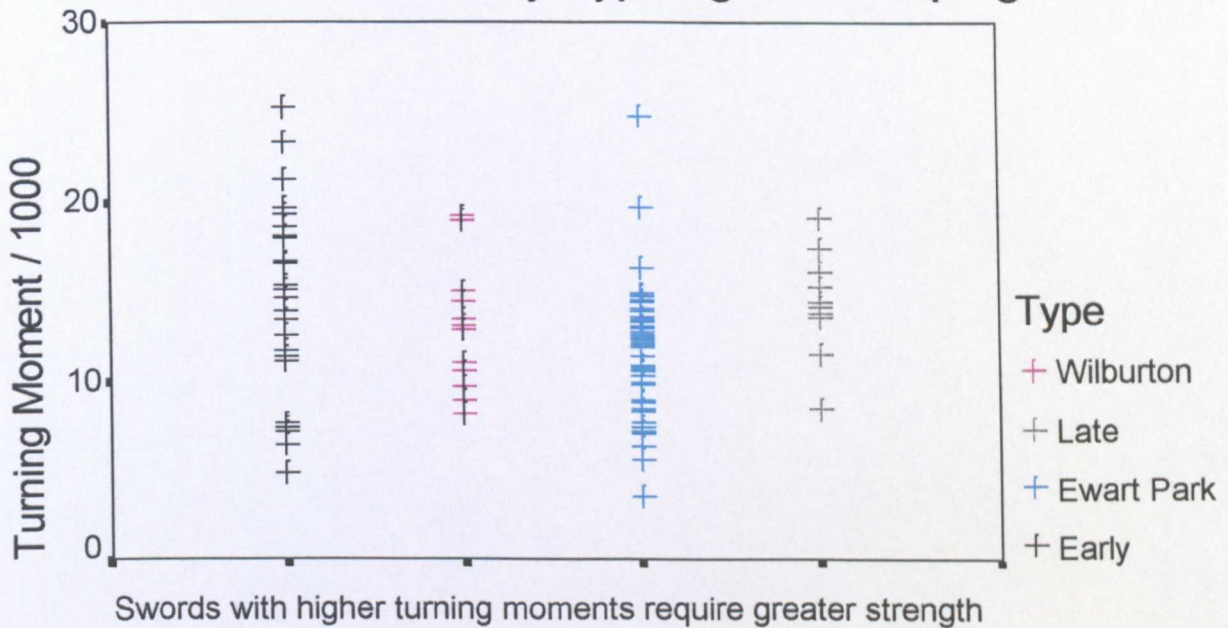


Figure 4.2.2(ii) - Ewart Park Swords

Balance Index by Region

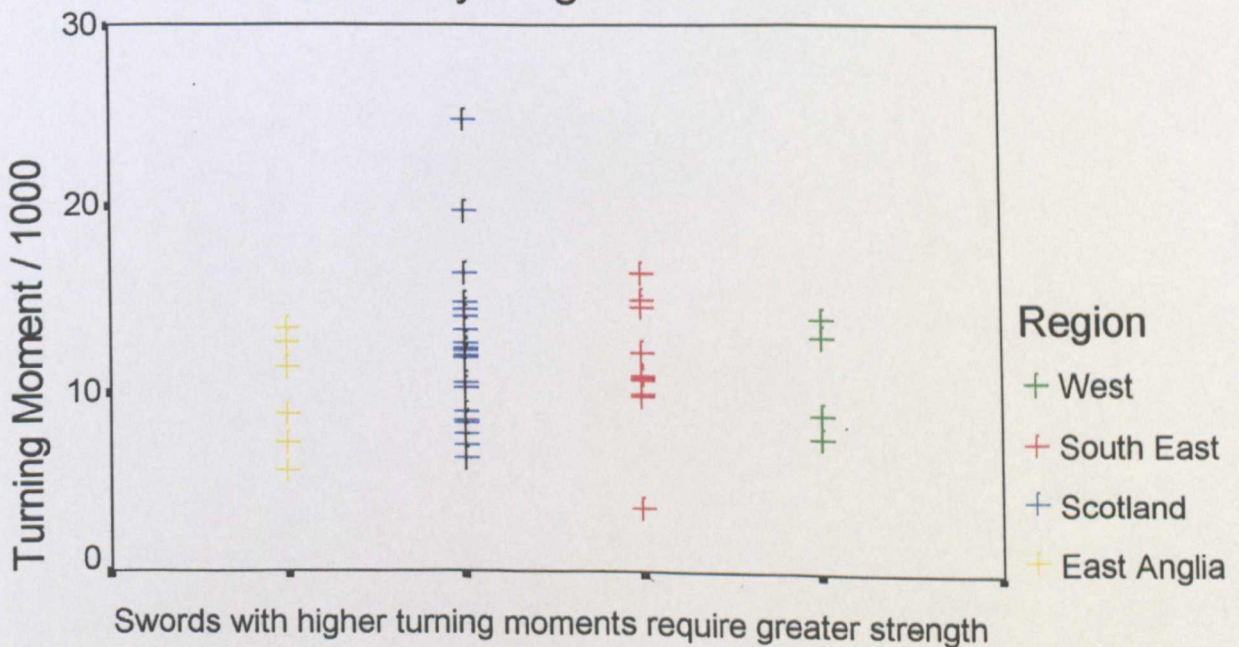


Figure 4.2.3(i)

Swords - Casting Quality by Type

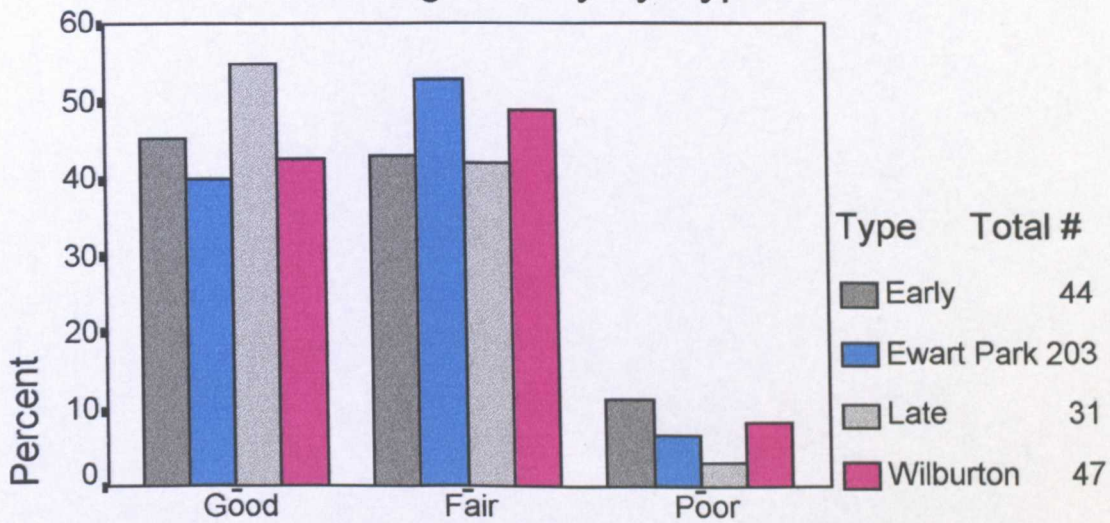


Figure 4.2.3(ii)

Swords - Casting Quality by Region

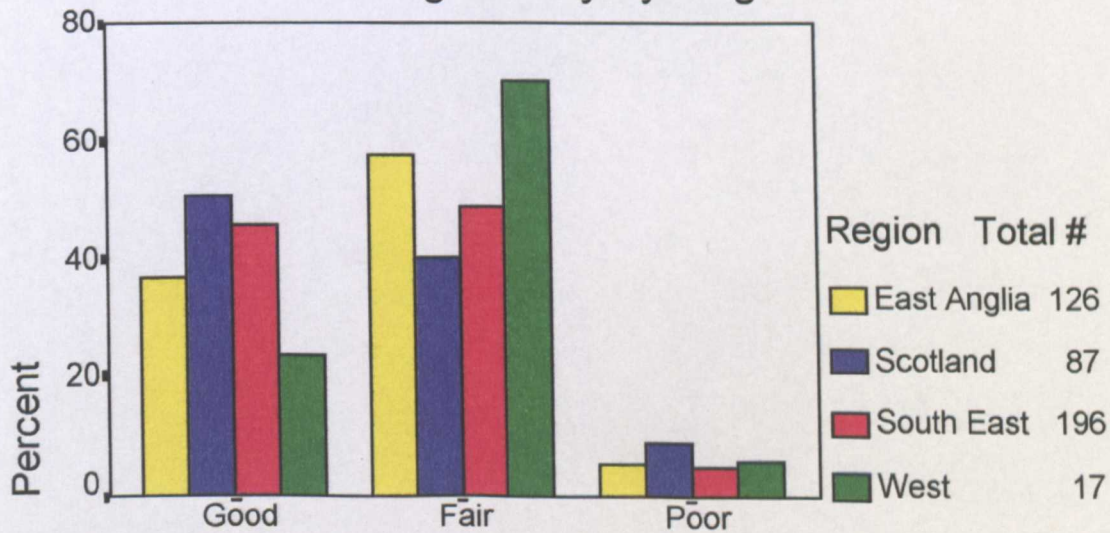


Figure 4.2.3(iii)

Swords - Edge Fineness by Type

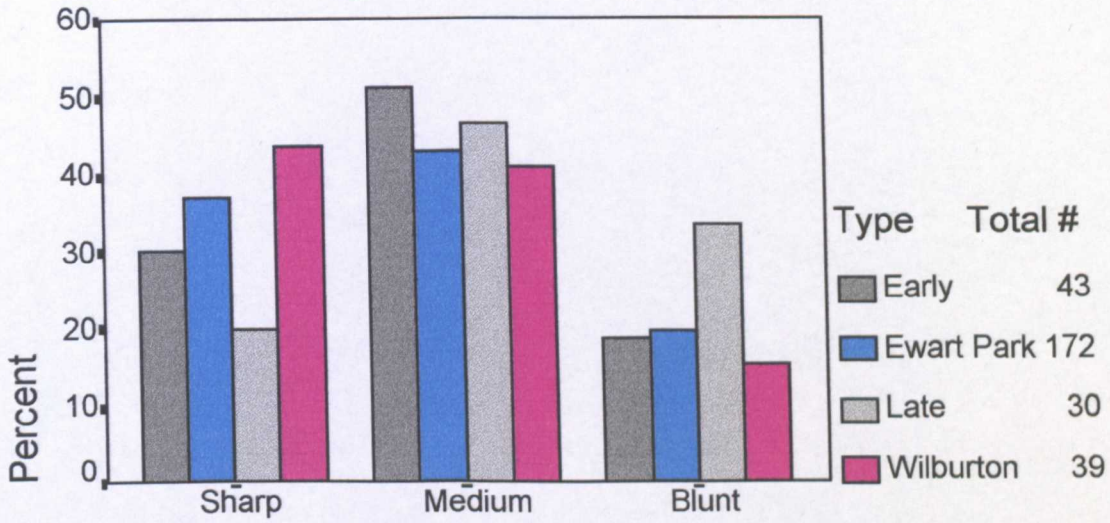


Figure 4.2.3(iv)

Swords - Edge Fineness by Region

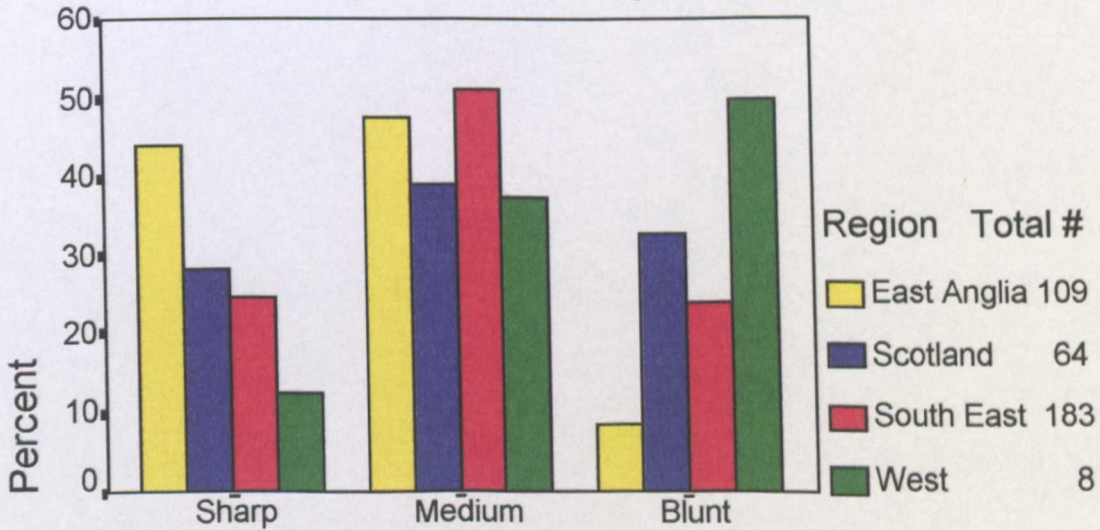
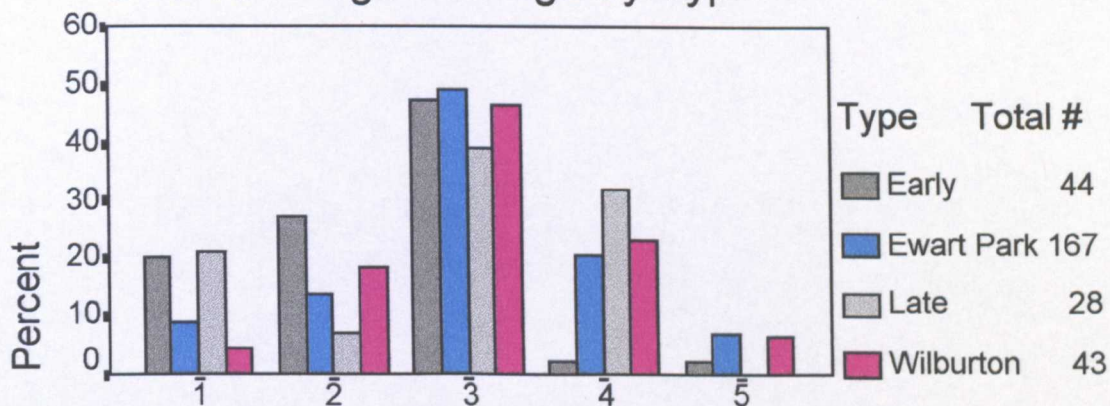


Figure 4.2.4(i)

Swords - Edge Damage by Type

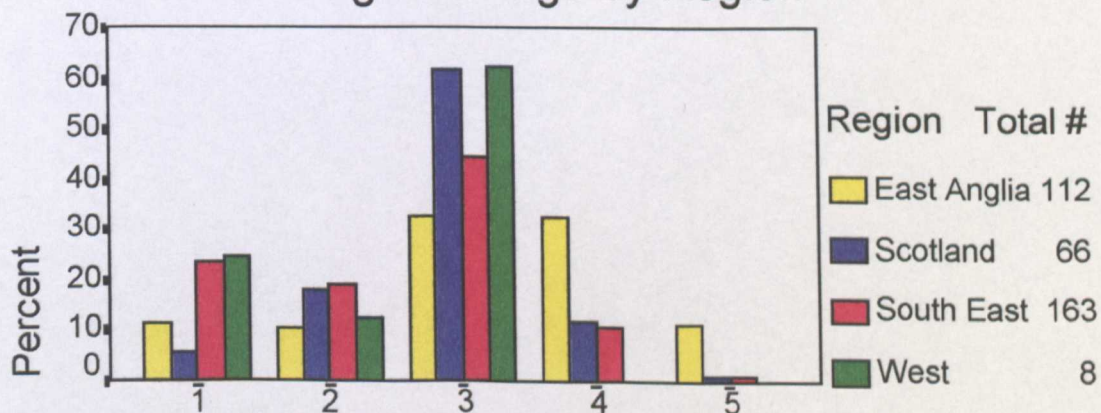


Edge Damage

Damage increases with number

Figure 4.2.4(ii)

Swords - Edge Damage by Region



Edge Damage

Damage increases with number

Figure 4.3.1(i): Spearheads
Blade Shape Distribution

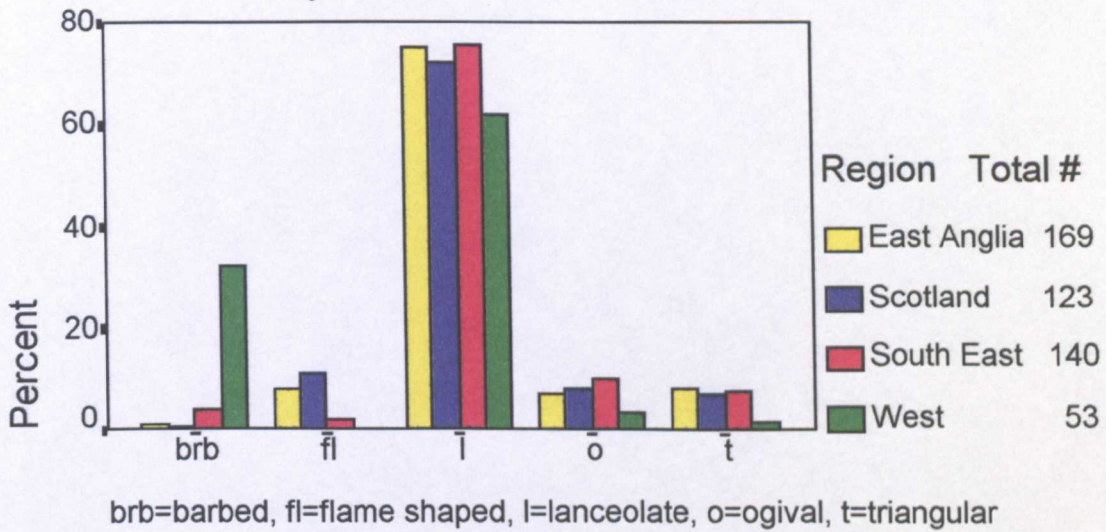


Figure 4.3.1(ii): Spearheads
Distribution of Types

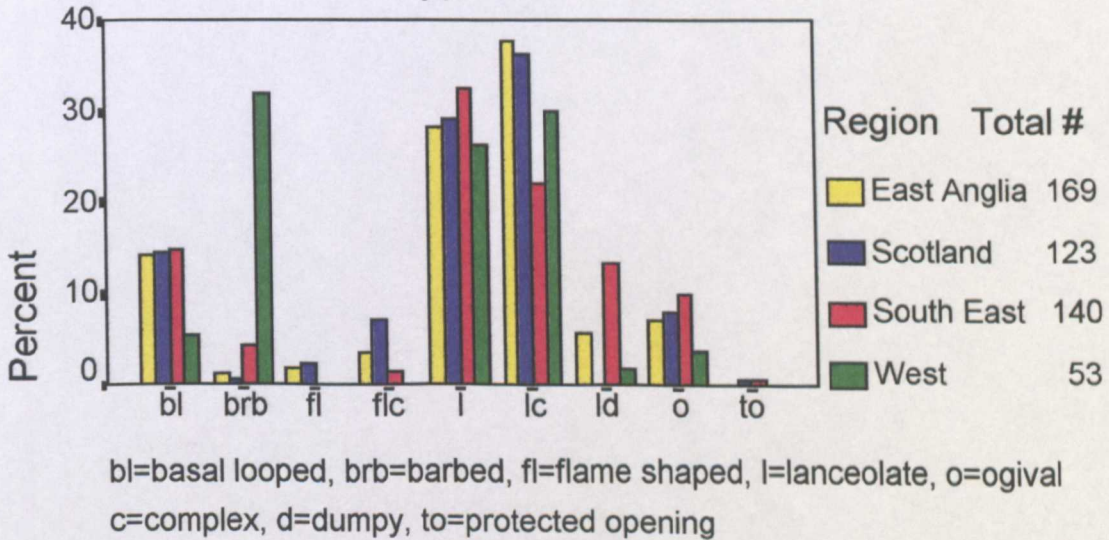


Figure 4.3.1(iii): Basal-looped Spearheads
Blade Shape Distribution

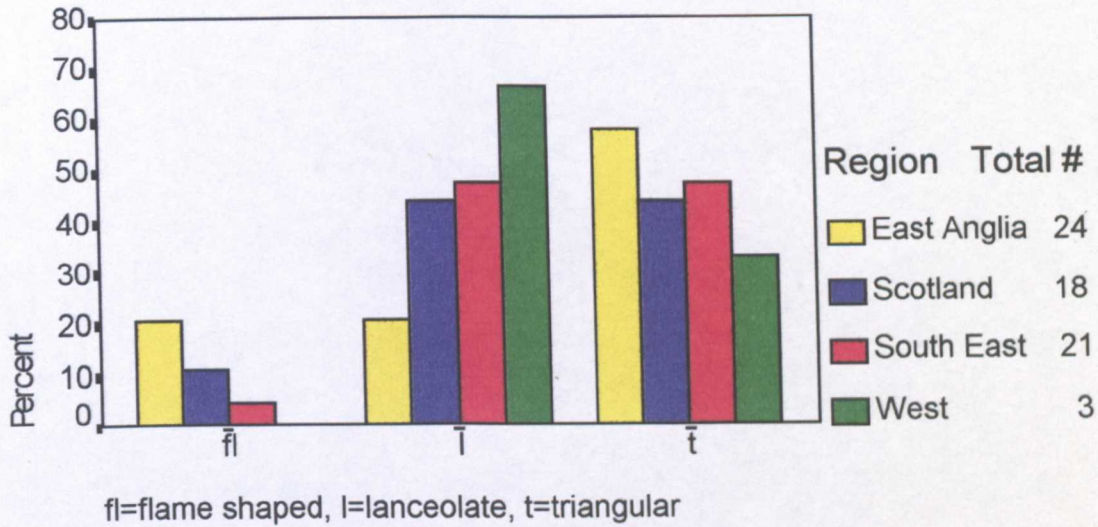
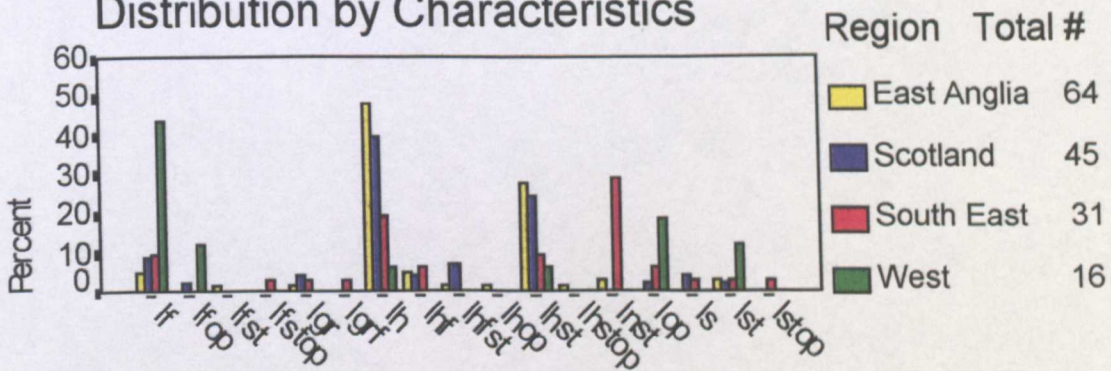


Figure 4.3.1(iv): Complex Spearheads
Lanceolate Blades

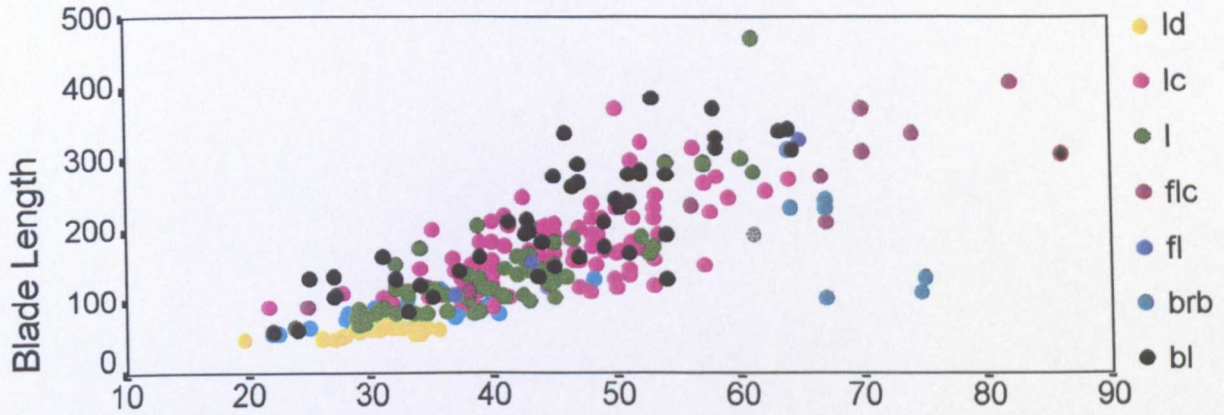
Distribution by Characteristics



l=lanceolate, f=fillet defined, op=blade openings, st=single step
gr=blade channel, h=hollow cast, nst=multiple steps, s=straight base

Figure 4.3.1(v)

Spearhead Groups - Dimensions

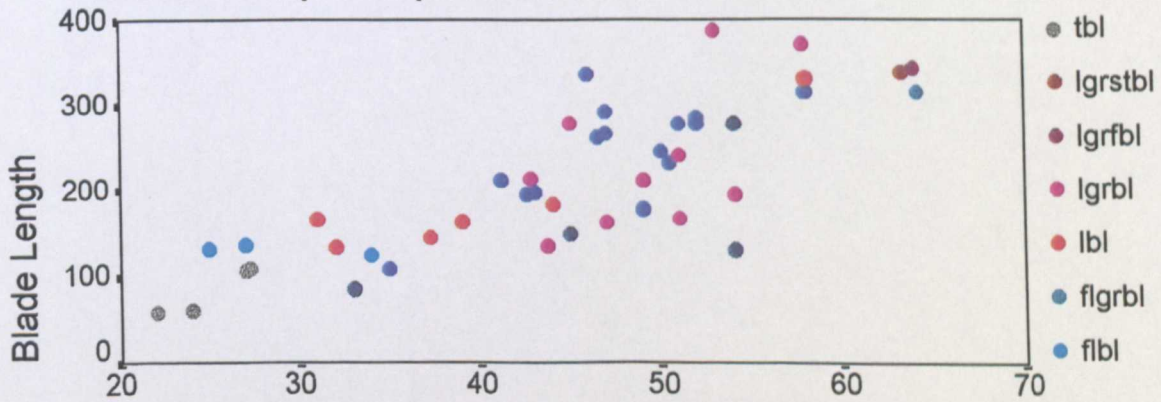


Maximum Width Blade

bl=basal looped, brb=barbed, fl=flame shaped, l=lanceolate, o=ogival
c=complex, d=dumpy, to=protected opening

Figure 4.3.1(vi):

Basal-looped Spearheads - Dimensions

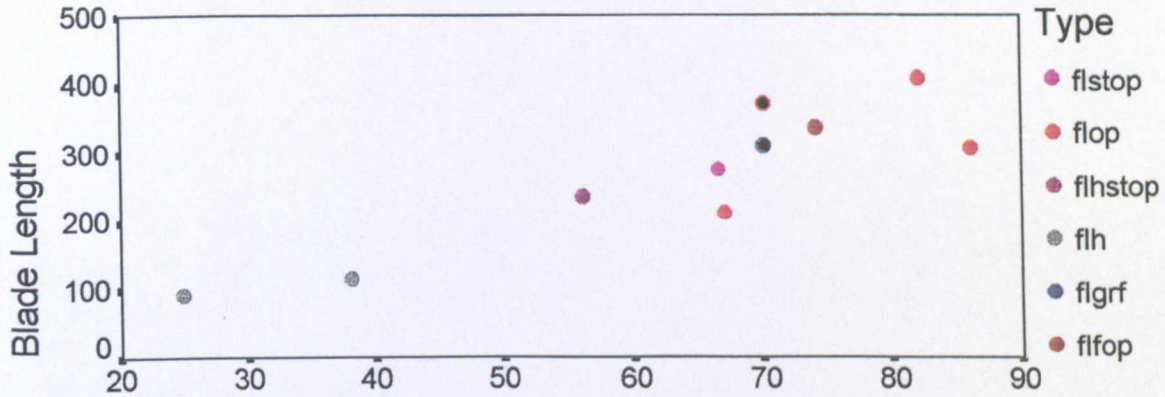


Maximum Width Blade

bl=basal-looped, fl=flame shaped, l=lanceolate, t=triangular
f=filleted, gr=channeled, st=single step

Figure 4.3.1(vii):

Complex Flame-shaped Spearheads - Dimensions

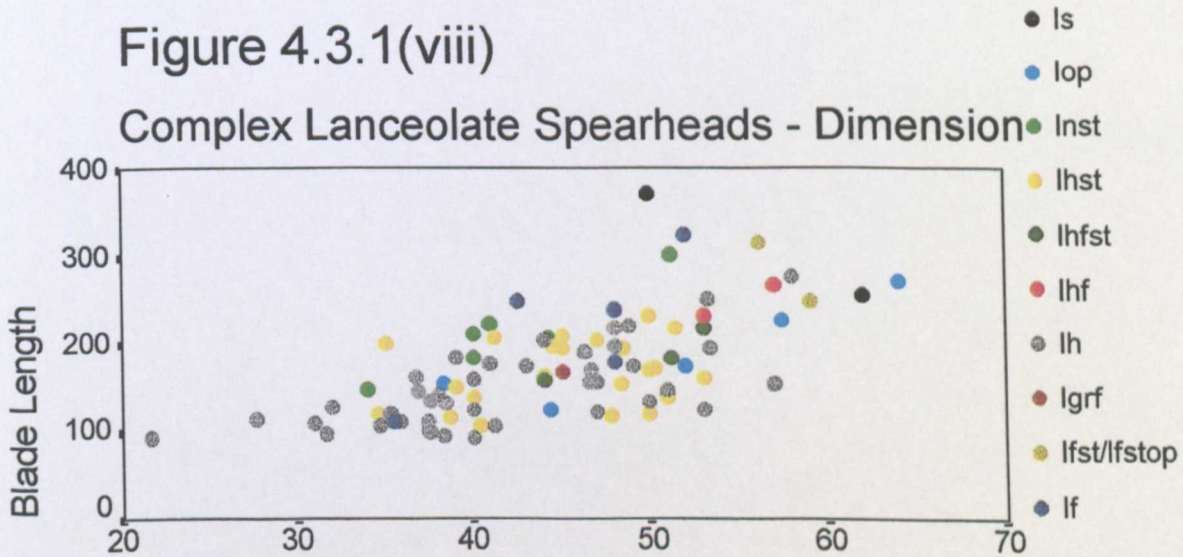


Maximum Width Blade

fl=flame-shaped, h=hollow cast, f=filleted, gr=channeled, st= single step
op=blade opening

Figure 4.3.1(viii)

Complex Lanceolate Spearheads - Dimension



Maximum Width Blade

l=lanceolate, h=hollow cast, f=filleted, gr=channeled, st=single step
nst= multiple steps, op=blade openings, s=straight based

Figure 4.3.1(ix):

Plain Lanceolate Spearheads - Dimensions

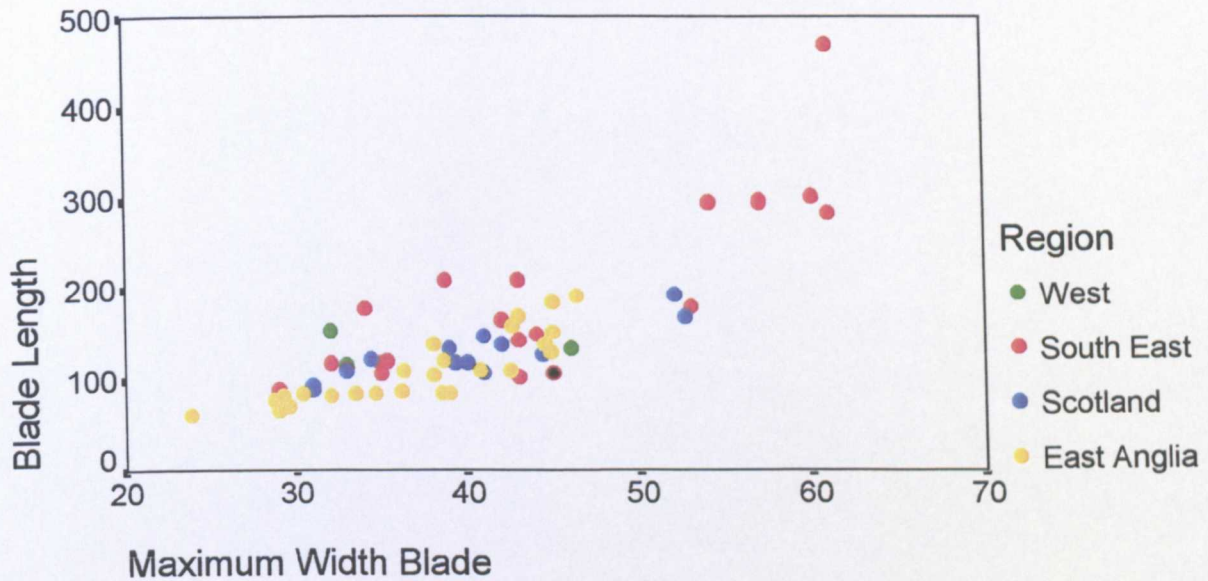


Figure 4.3.1(x)

Plain Lanceolate Blades - Blade Shape Dimensions

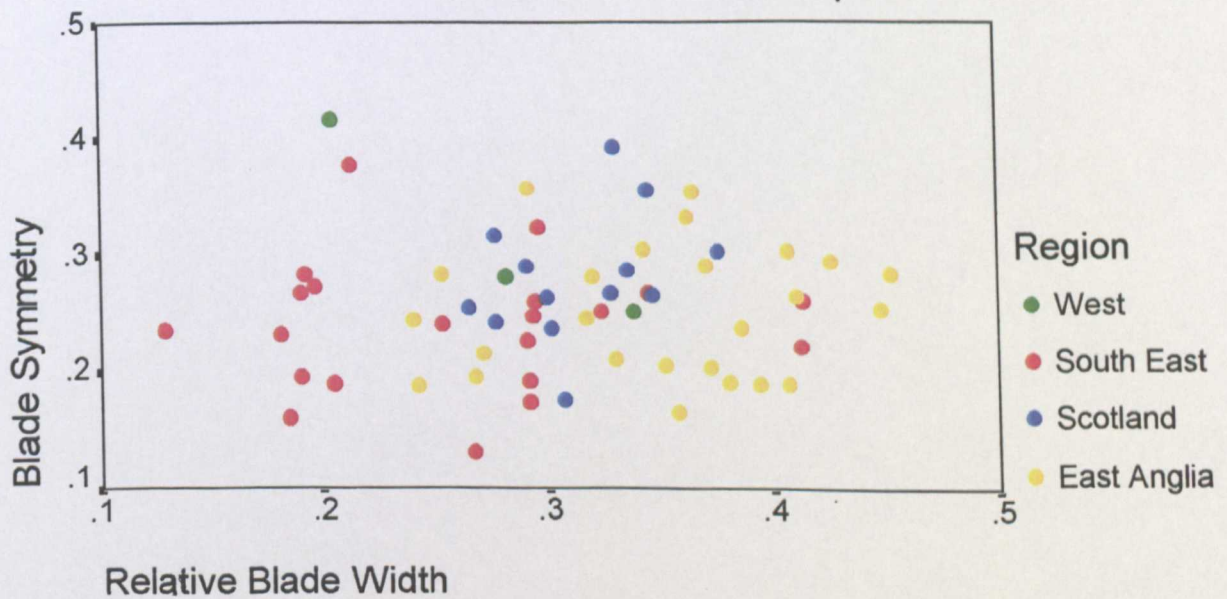


Figure 4.3.3(i)

Spearheads - Casting Quality by Region

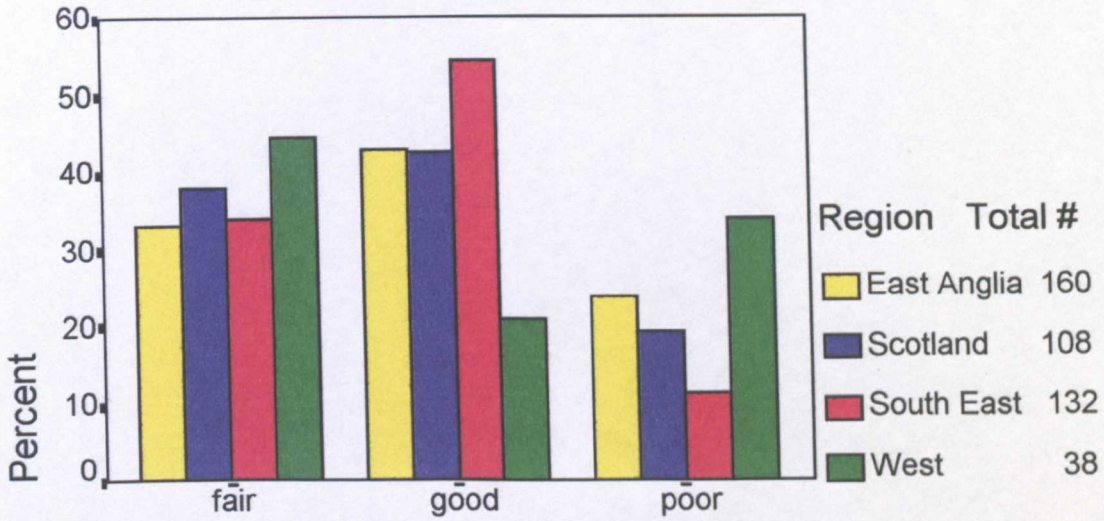
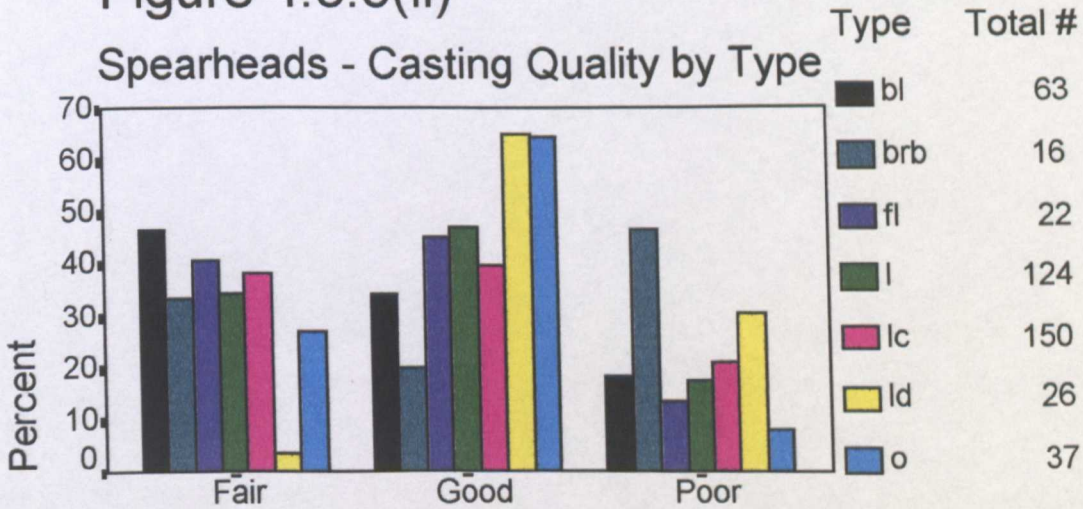


Figure 4.3.3(ii)

Spearheads - Casting Quality by Type



bl=basal-looped, brb=barbed, fl= flame-shaped, l=plain lanceolate
 lc= complex lanceolate, ld= dumpy, o=ogival

Figure 4.3.4(i)

Spearheads - Tip Damage by Region

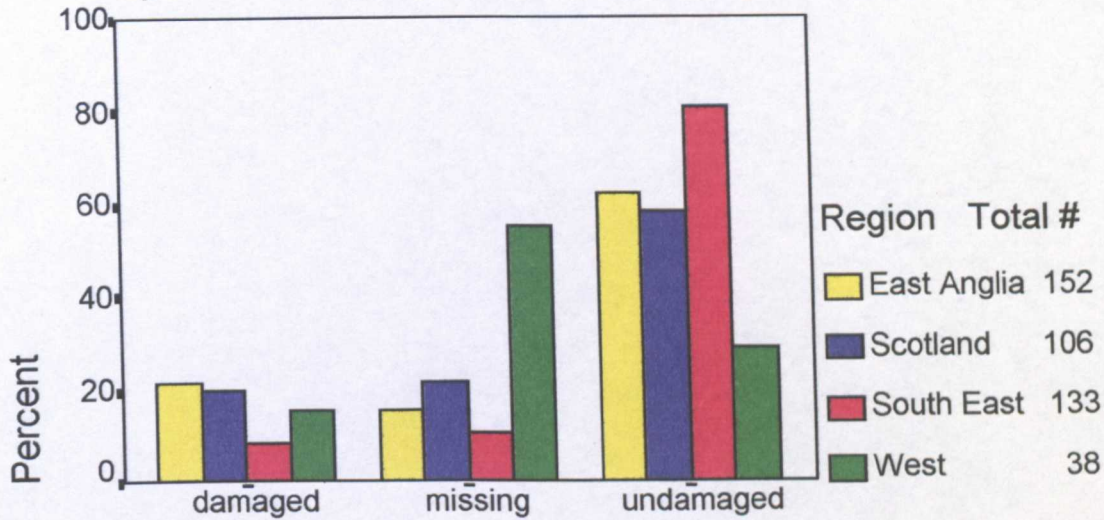
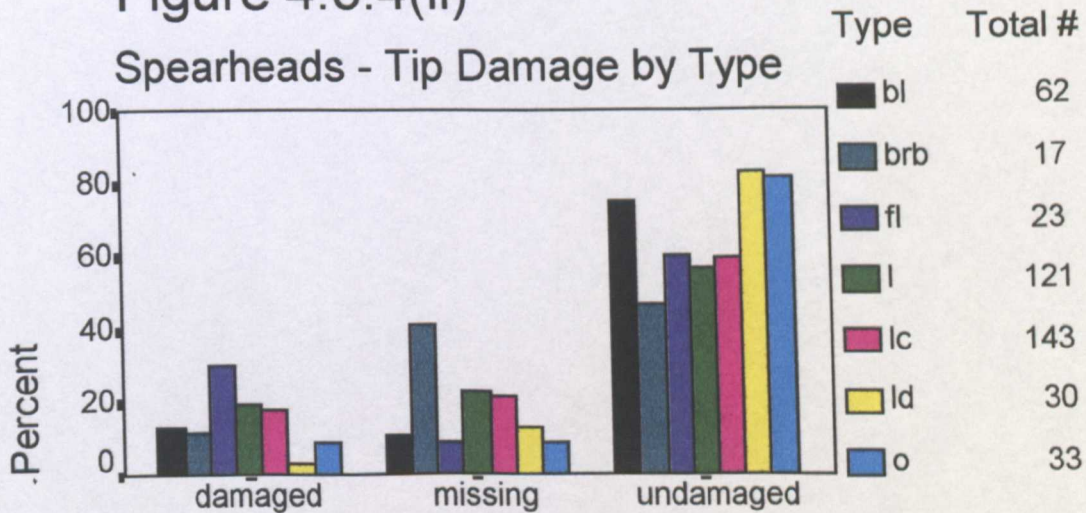


Figure 4.3.4(ii)

Spearheads - Tip Damage by Type



bl=basal-looped, brb=barbed, fl= flame-shaped, l=plain lanceolate

lc= complex lanceolate, ld= dumpy, o=ogival

Figure 4.3.4(iii)

Spears - Socket Damage by Region

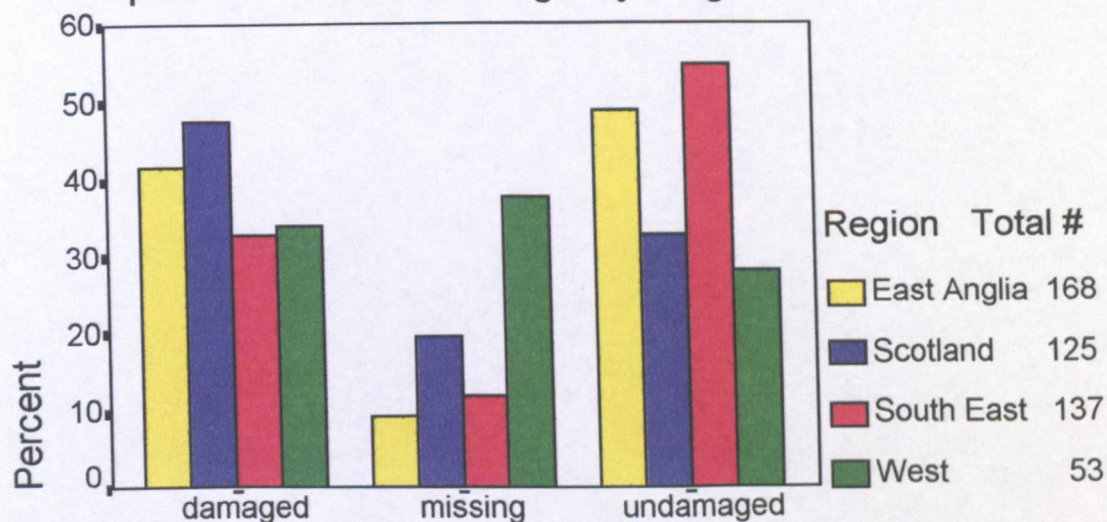
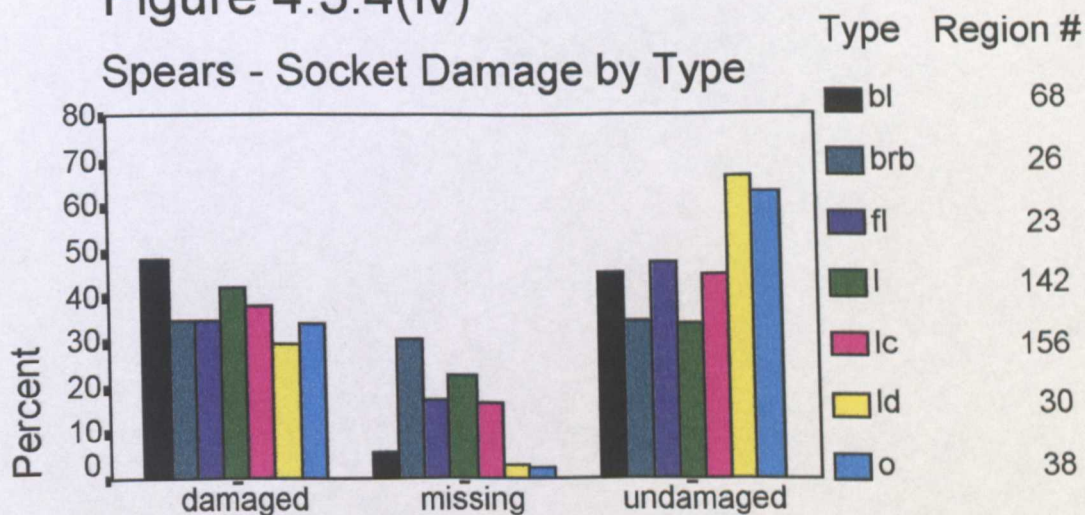


Figure 4.3.4(iv)

Spears - Socket Damage by Type



bl=basal-looped, brb=barbed, fl= flame-shaped, l=plain lanceolate

lc= complex lanceolate, ld= dumpy, o=ogival

Figure 5.2.2(i)

Swords - Region and Context

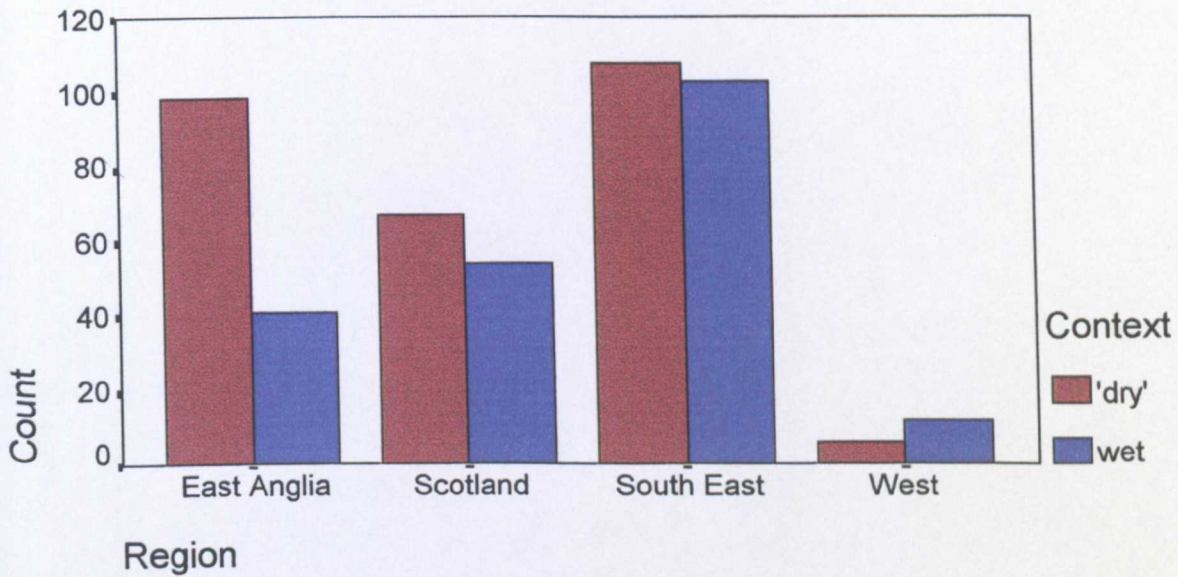


Figure 5.2.2(ii)

Swords - Typological Grouping and Context

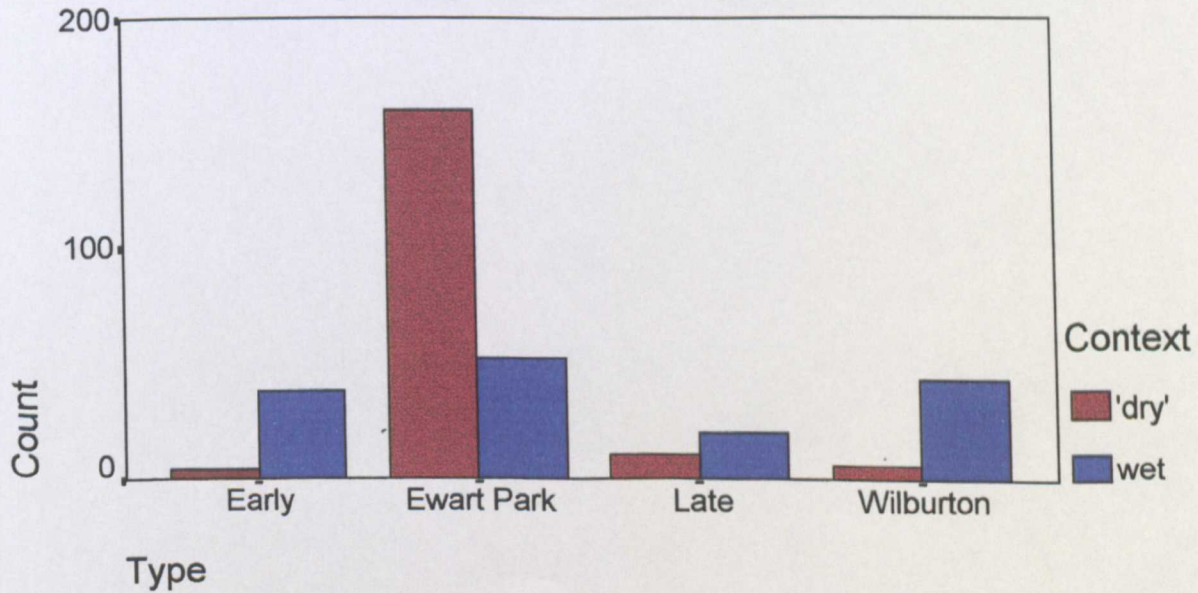


Figure 5.2.2(iii)

Spearheads - Region and Context

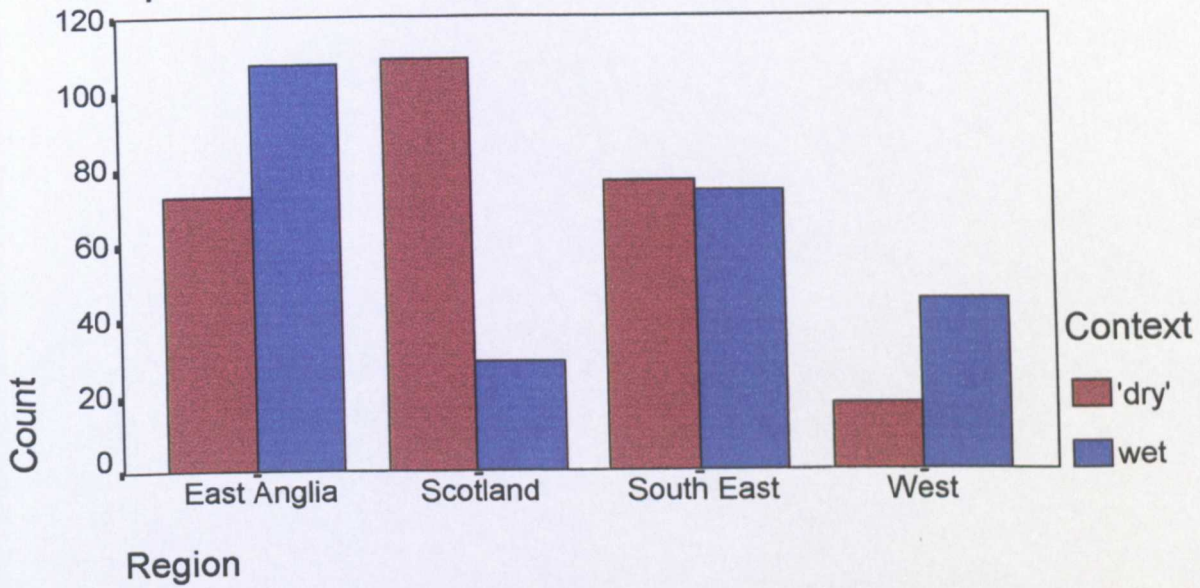
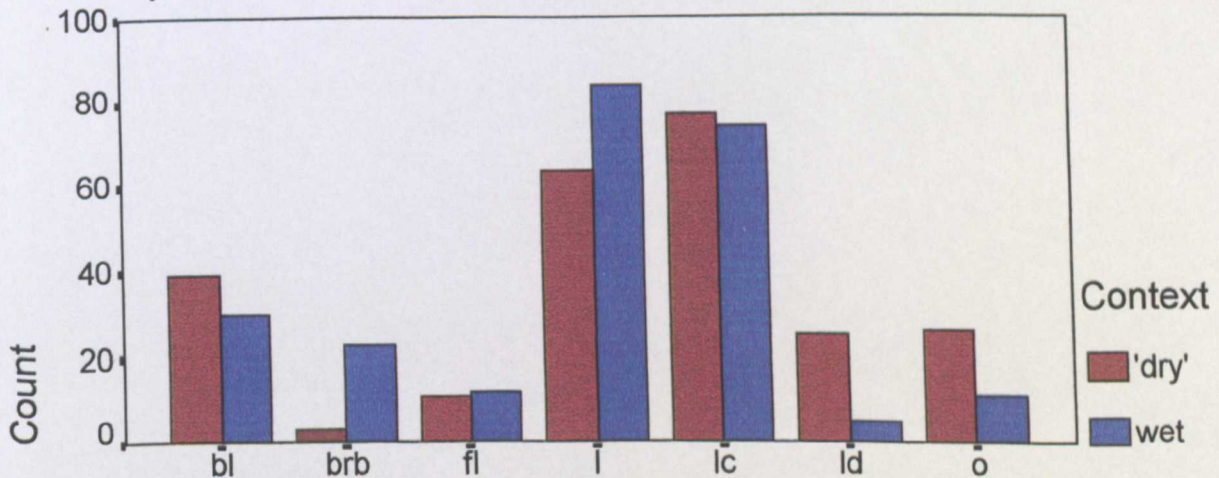


Figure 5.2.2(iv)

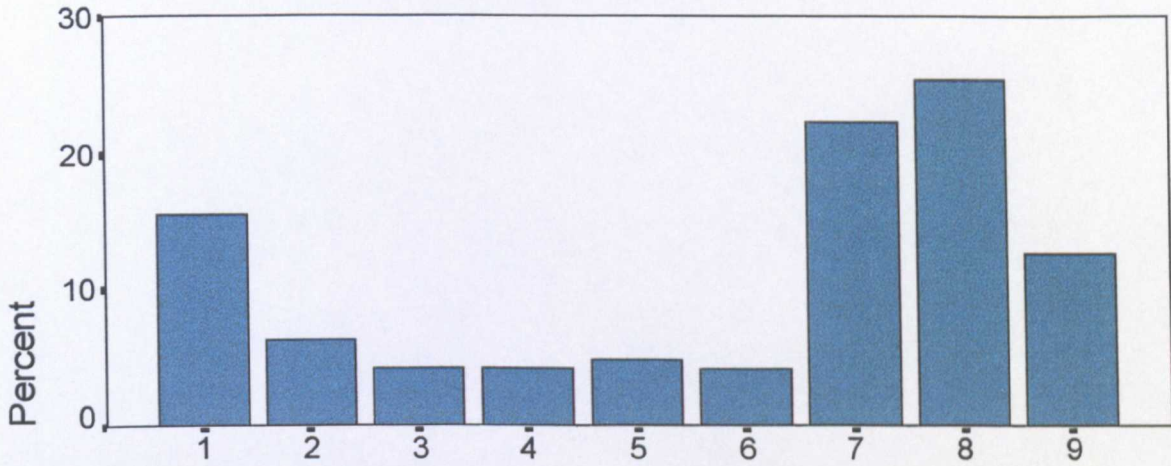
Spearheads - Typological Grouping and Context



bl=basal-looped, brb=barbed, fl=flame-shaped, l=plain lanceolate
 lc=complex lanceolate, ld= dumpy, o=ogival

Figure 5.2.3(i)

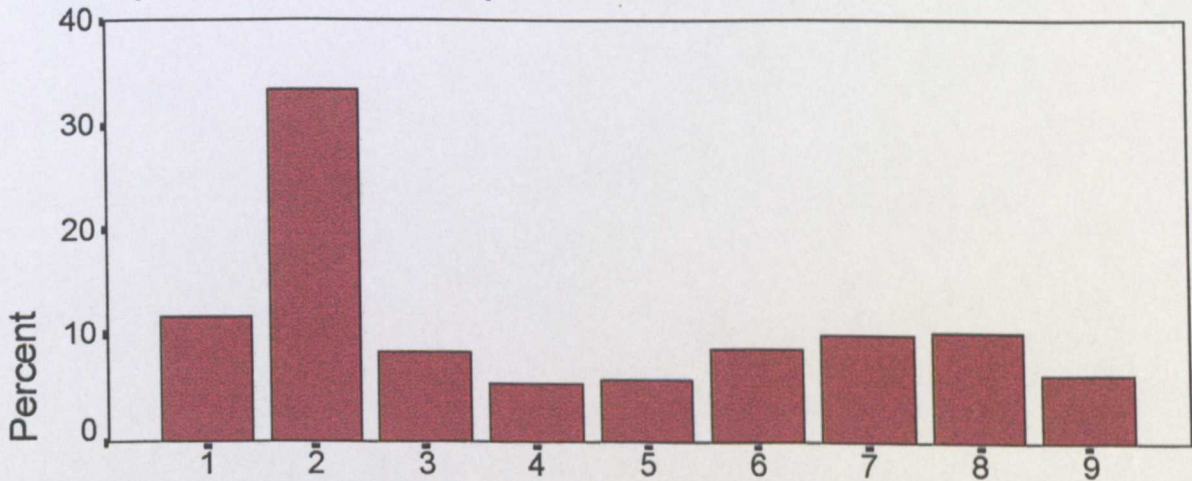
Swords - Completeness



1=complete, 2=slight damage, 3=nearly complete.....8=fragment<100mm
9=broken but more than 1 piece present

Figure 5.2.3(ii)

Spearheads - Completeness



1=complete, 2=some damage, 3= damaged, 4=socket broken, 5=socket gone
6=socket+tip gone, 7=piece, 8=fragment, 9=multiple pieces

Figure 5.2.3.1(i)

Swords - Completeness by Region

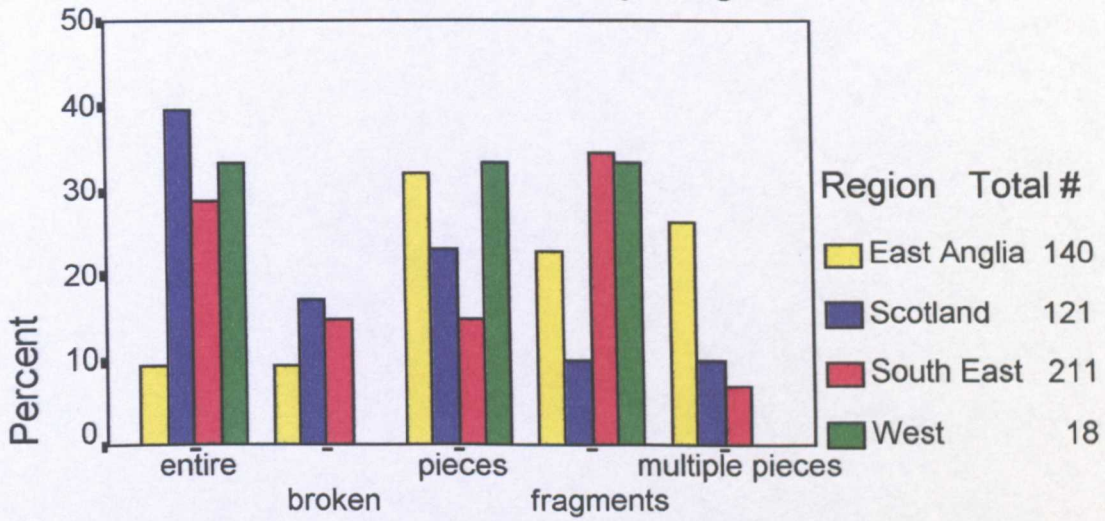


Figure 5.2.3.1(ii)

Swords - Completeness by Type

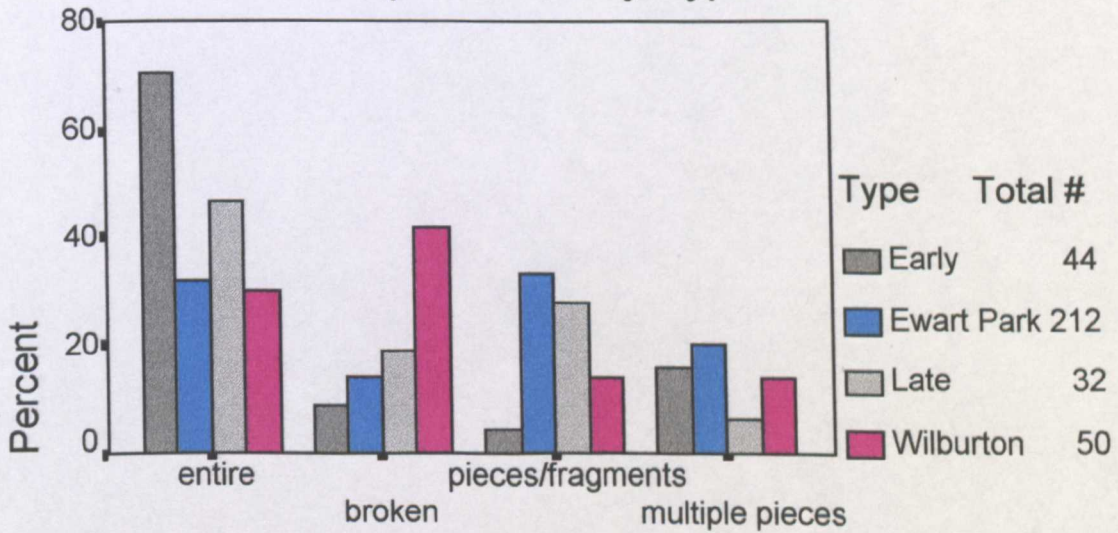


Figure 5.2.3.1(iii)

East Anglian Swords - Completeness by Type

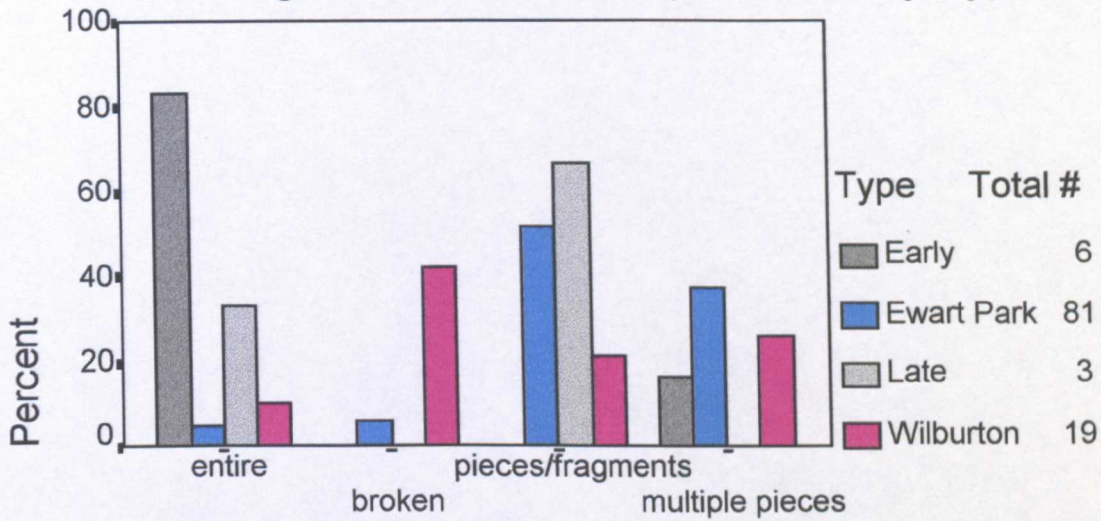


Figure 5.2.3.1(iv)

South Eastern Swords - Completeness by Type

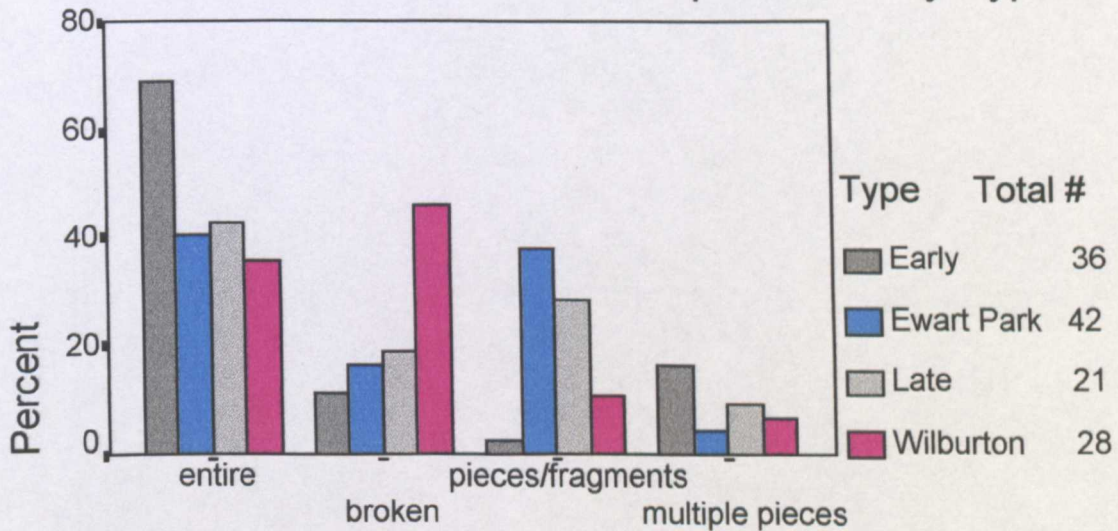


Figure 5.2.3.1(v)

Ewart Park Swords - Completeness by Region

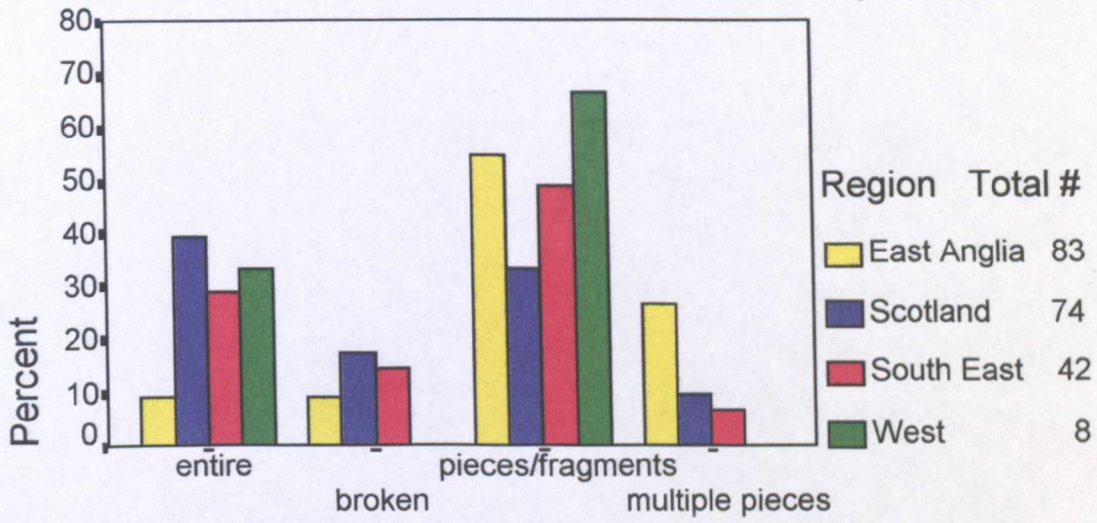


Figure 5.2.3.2(i)

Spears - Completeness by Region

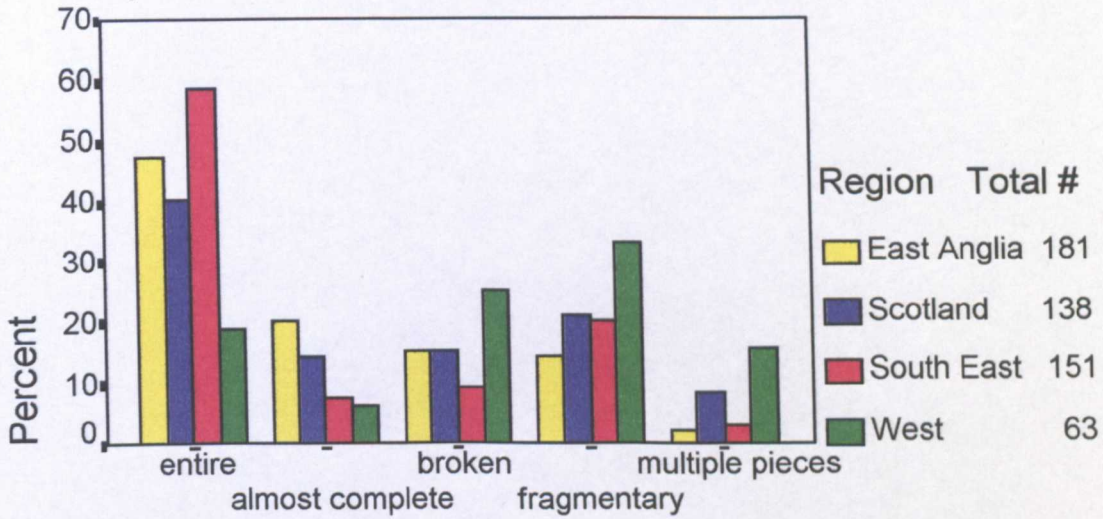
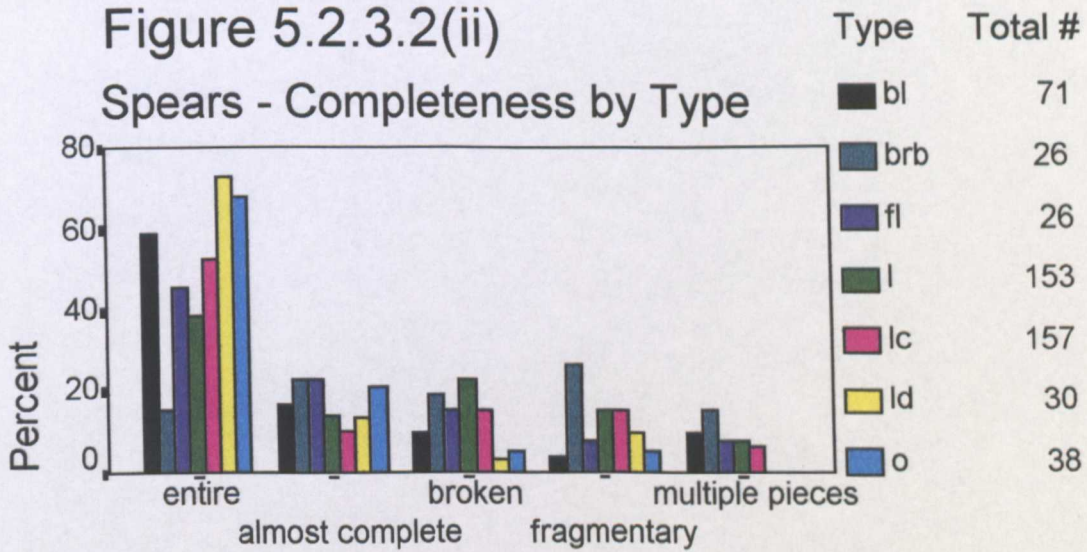


Figure 5.2.3.2(ii)

Spears - Completeness by Type

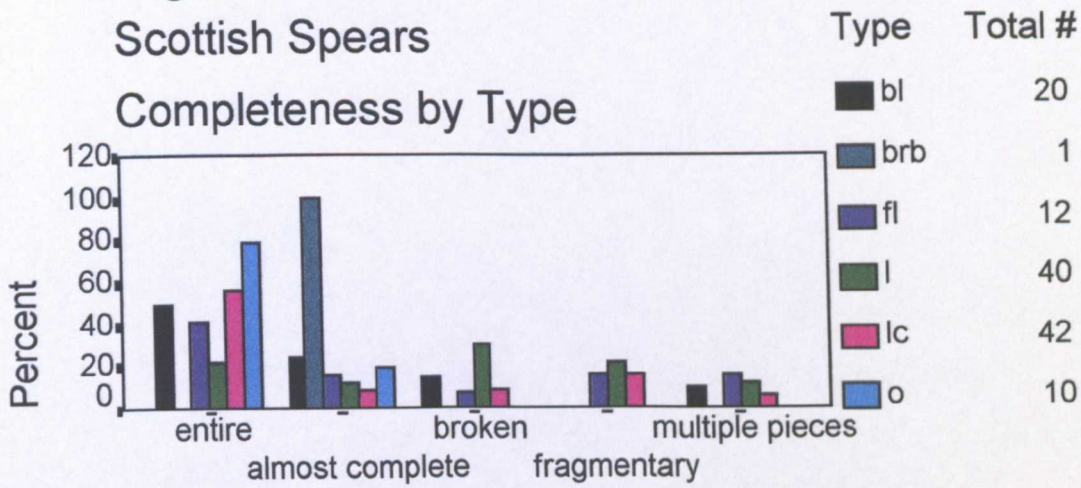


bl=basal looped, brb=barbed, fl=flame-shaped, l=plain lanceolate
 lc=complex lanceolate, ld=dumpy lanceolate, o=ogival

Figure 5.2.3.2(iii)

Scottish Spears

Completeness by Type

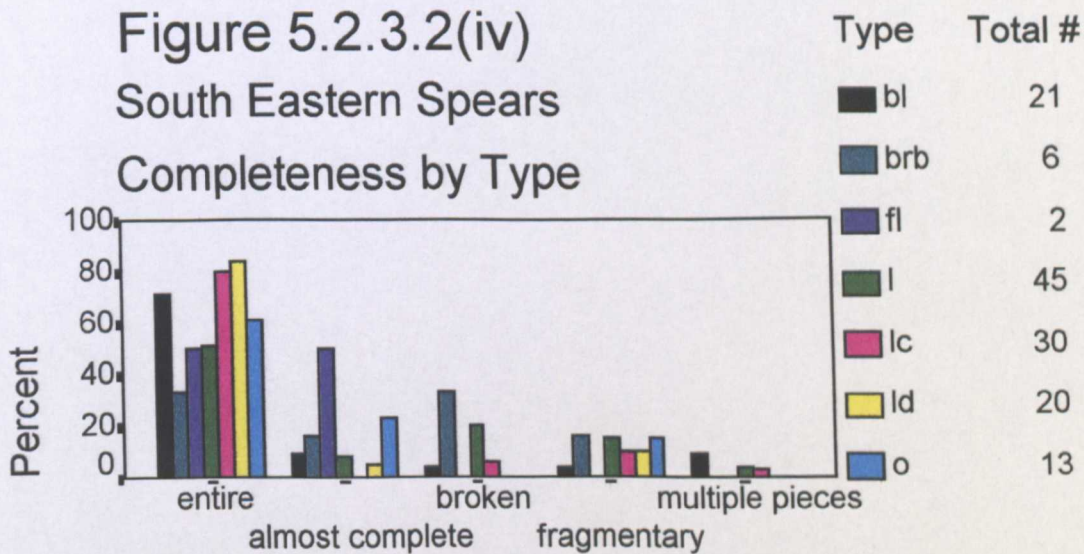


bl=basal looped, brb=barbed, fl=flame-shaped, l=plain lanceolate
 lc=complex lanceolate, ld=dumpy lanceolate, o=ogival

Figure 5.2.3.2(iv)

South Eastern Spears

Completeness by Type



bl=basal looped, brb=barbed, fl=flame-shaped, l=plain lanceolate
 lc=complex lanceolate, ld=dumpy lanceolate, o=ogival

Figure 5.2.3.2(v)
 Plain Lanceolate Spears
 Completeness by Region

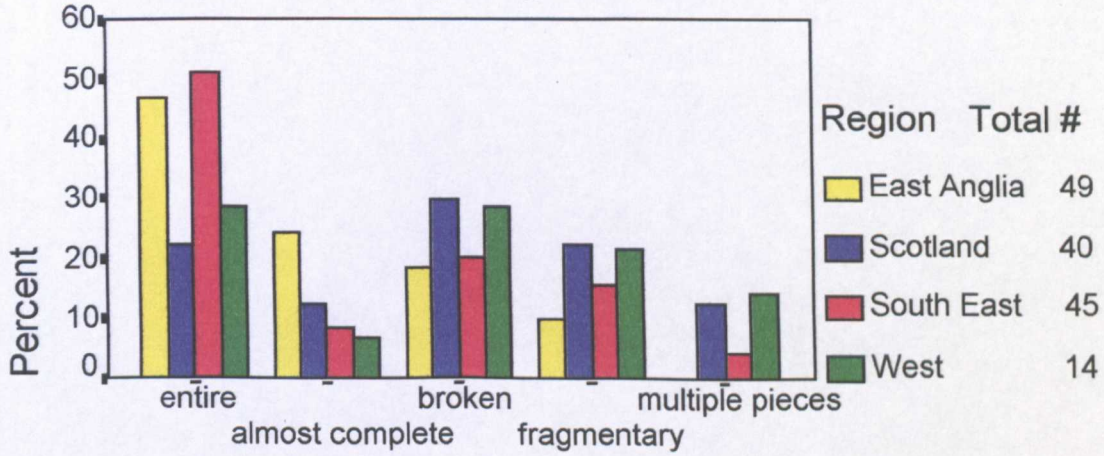


Figure 5.2.3.2(vi)
 Complex Lanceolate Spears
 Completeness by Region

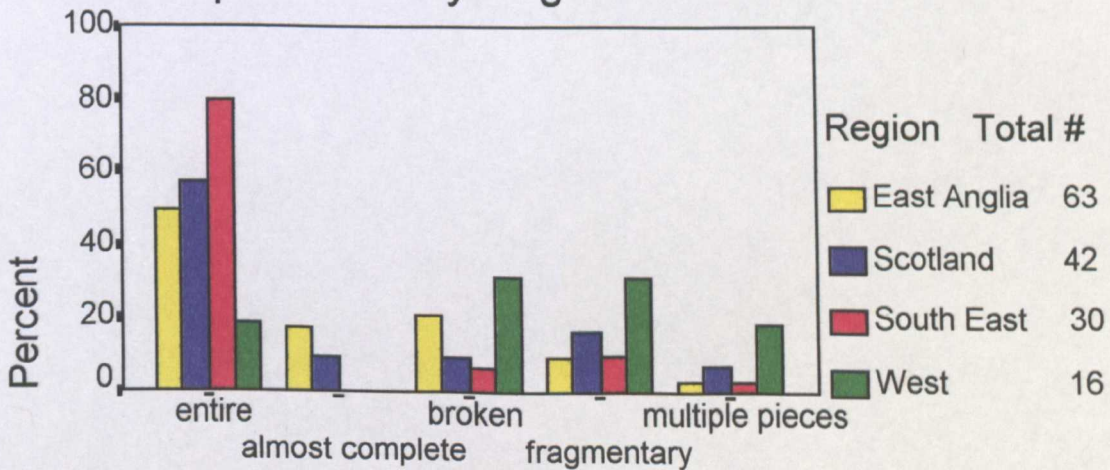


Figure 5.2.4.1(i)

Wet Context Swords

Completeness by Region

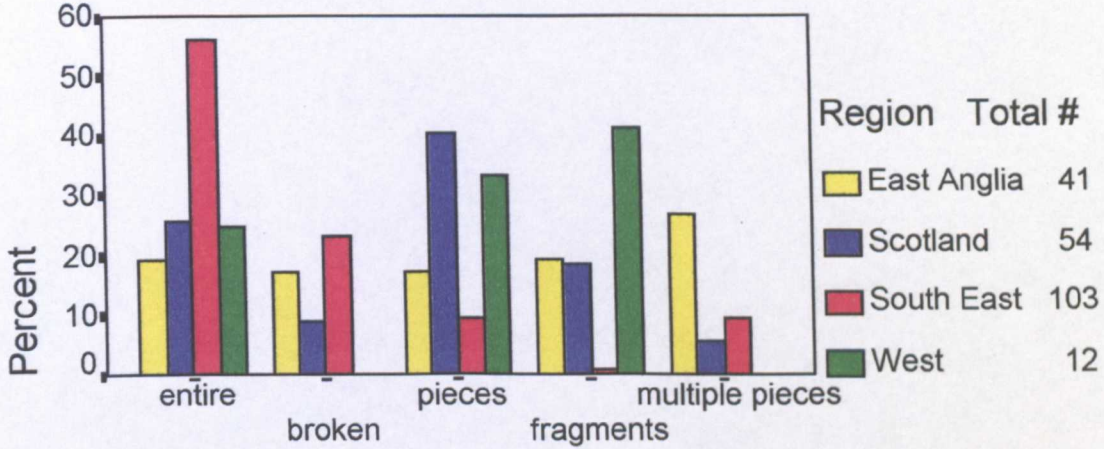


Figure 5.2.4.1(ii)

'Dry' Context Swords

Completeness by Region

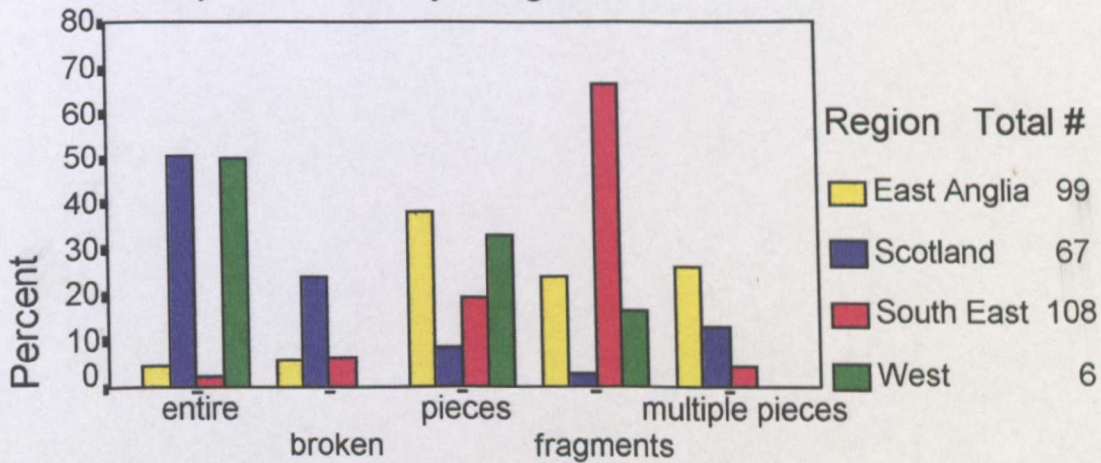


Figure 5.2.4.1(iii)

East Anglian Swords - Completeness and Context

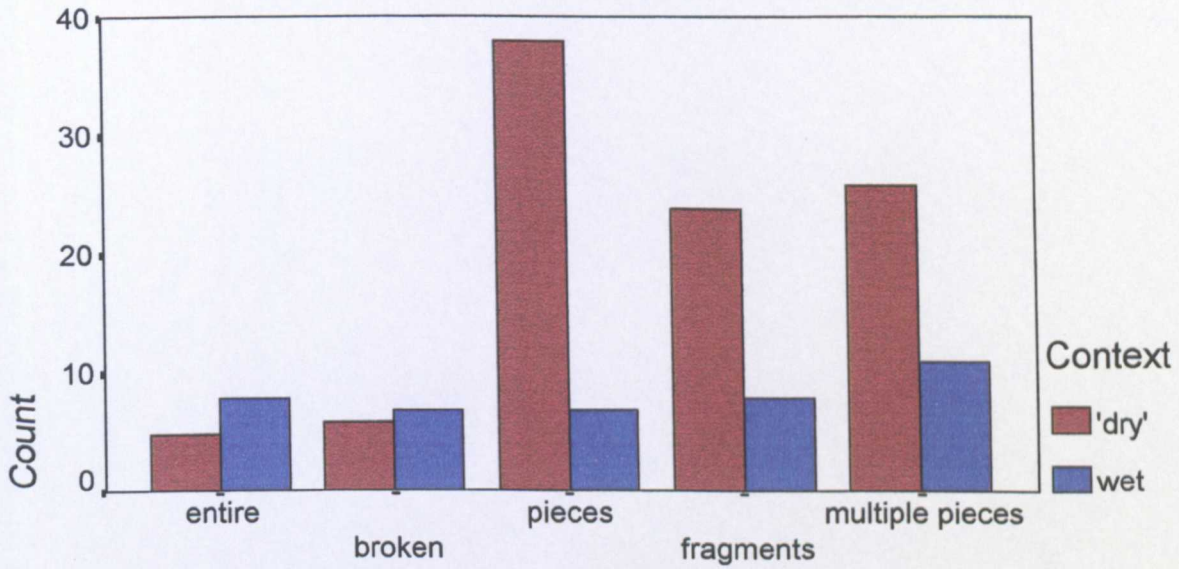


Figure 5.2.4.1(iv)

Scottish Swords - Completeness and Context

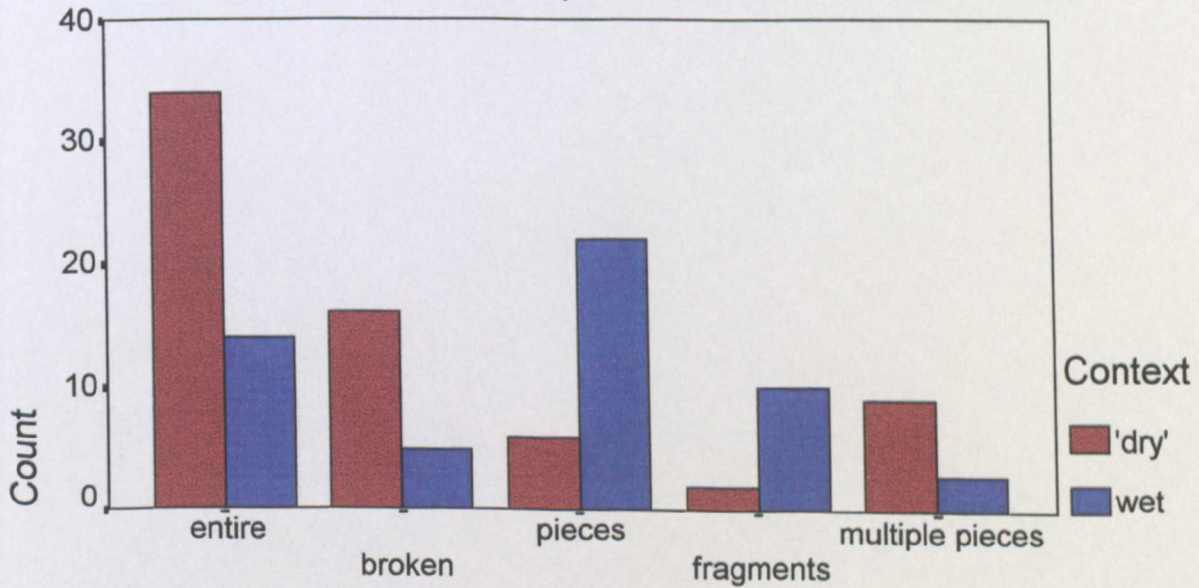


Figure 5.2.4.1(v)

South Eastern Swords - Completeness and Context

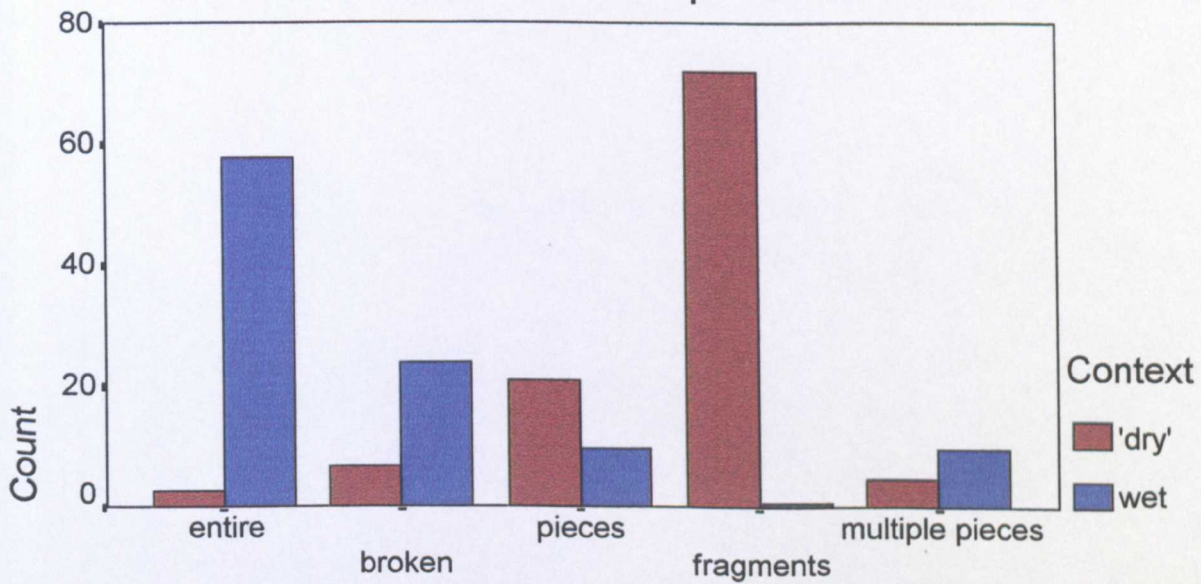


Figure 5.2.4.1(vi)

Ewart Park Swords - Completeness and Context

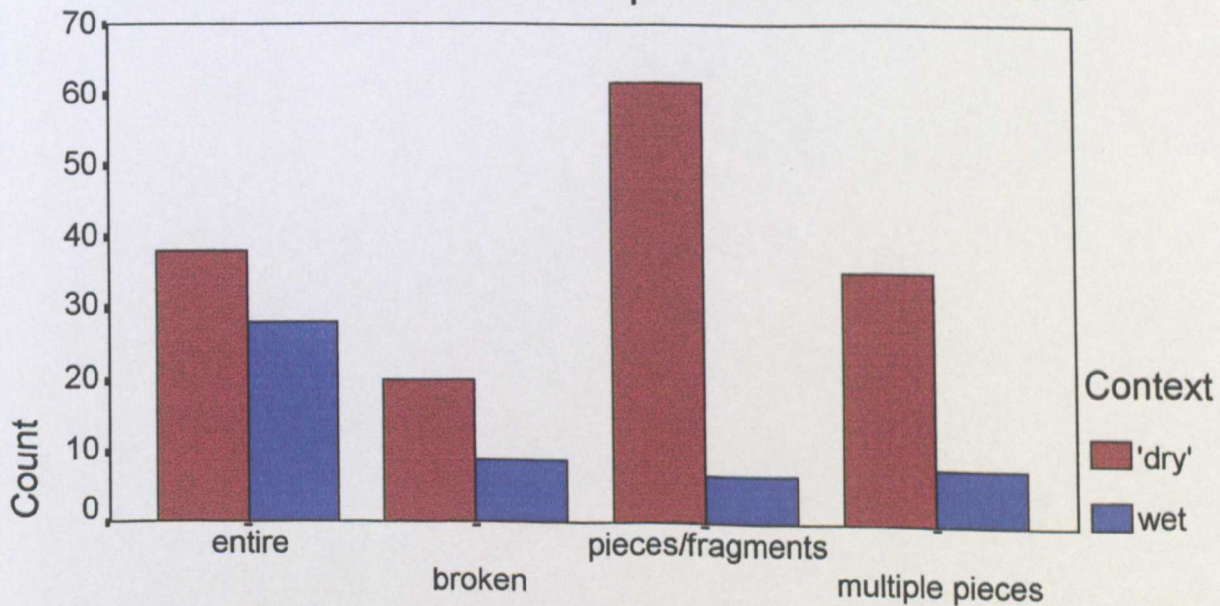


Figure 5.2.4.2(i)
Wet Context Spears
Completeness by Region

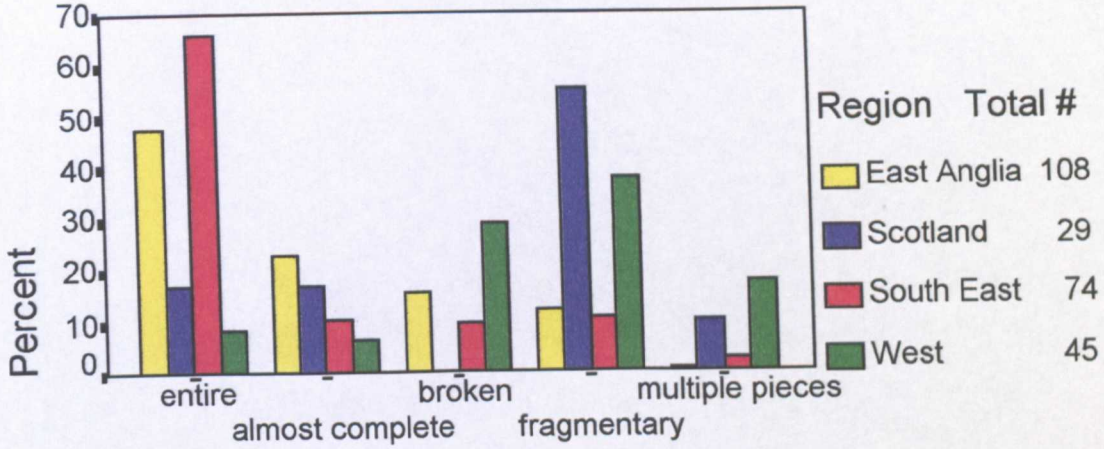


Figure 5.2.4.2(ii)
'Dry' Context Spears
Completeness by Region

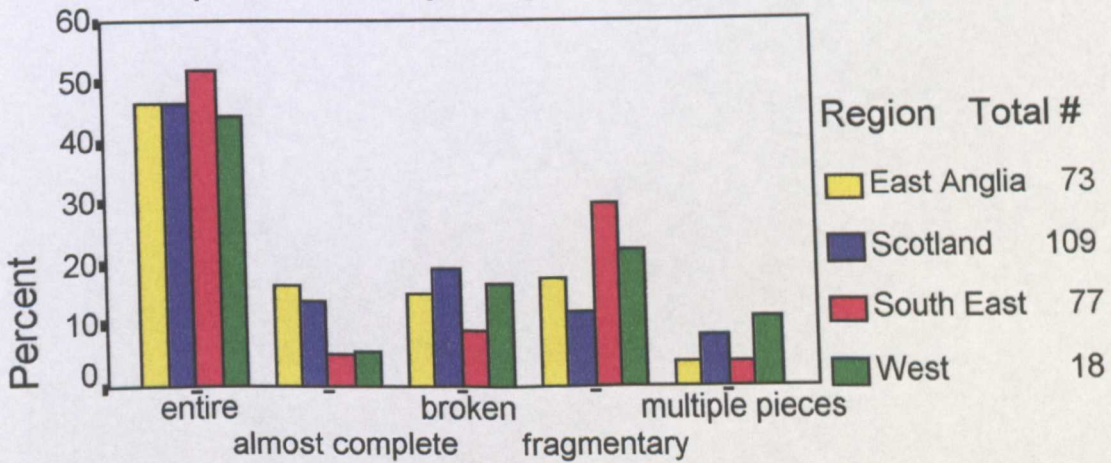


Figure 5.2.4.2(iii)

East Anglian Spears - Completeness and Context

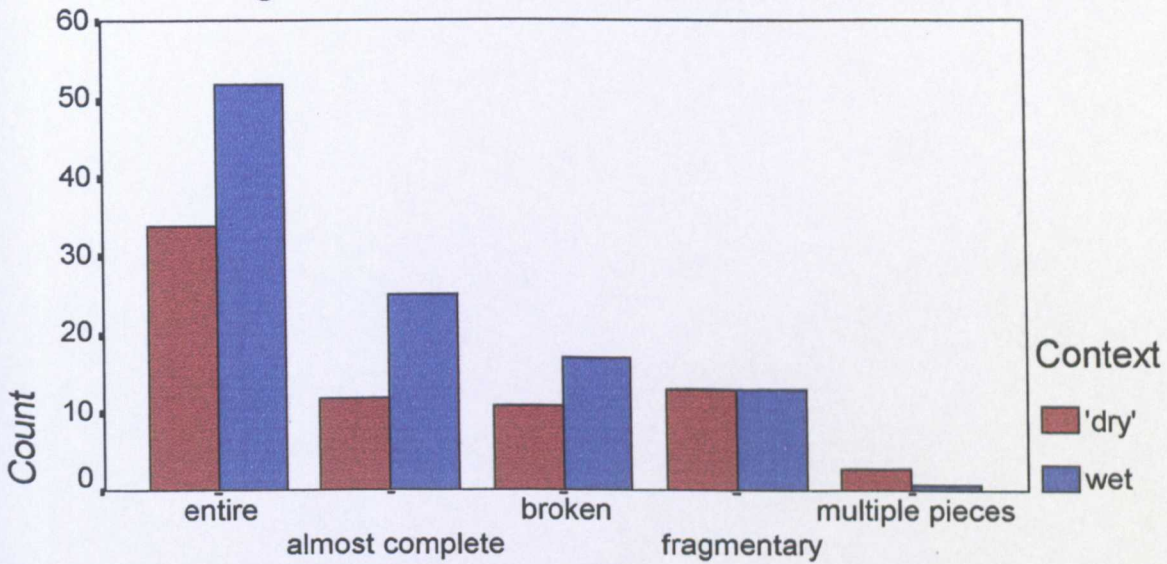


Figure 5.2.4.2(iv)

Scottish Spears - Completeness and Context

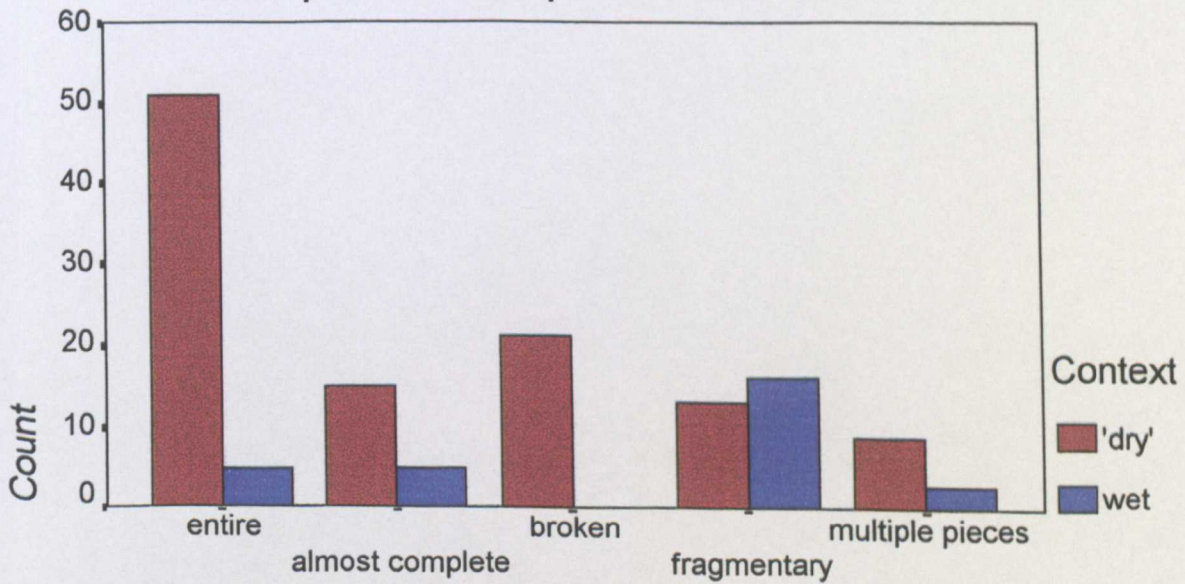


Figure 5.2.4.2(v)

South Eastern Spears - Completeness and Context

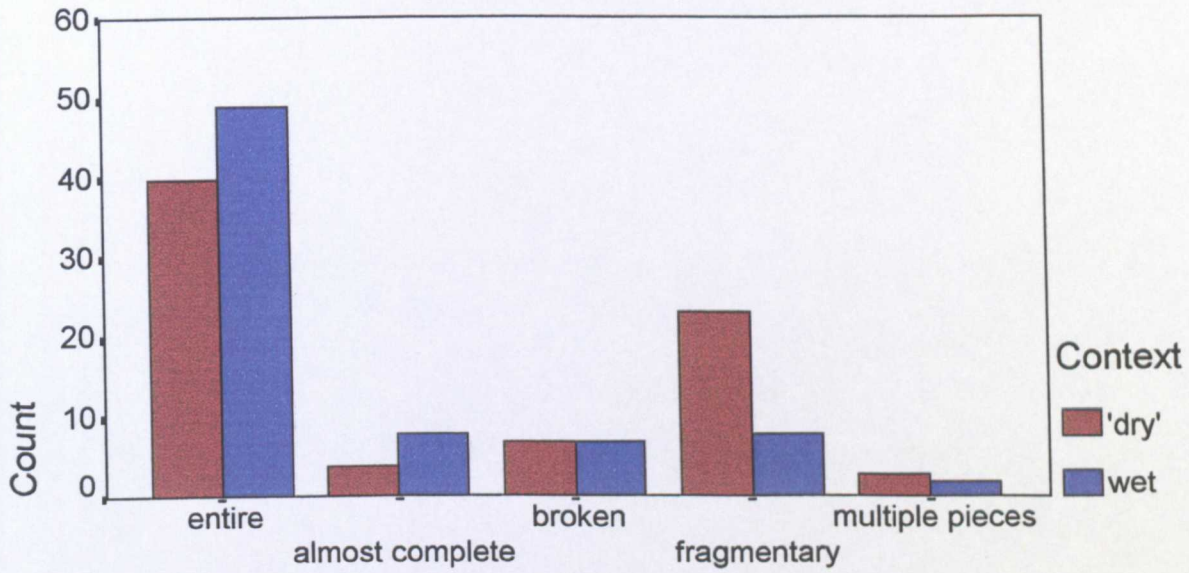


Figure 5.2.4.2(vi)

Western Spears - Completeness and Context

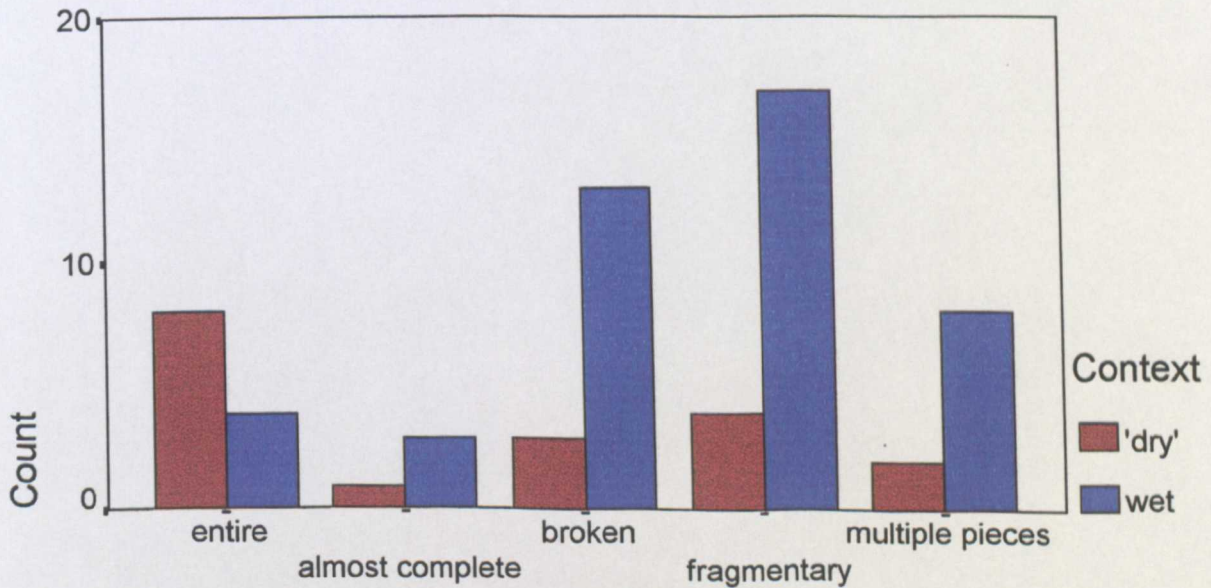


Figure 5.2.4.2(vii)

Plain Lanceolate Spears - Completeness and Context

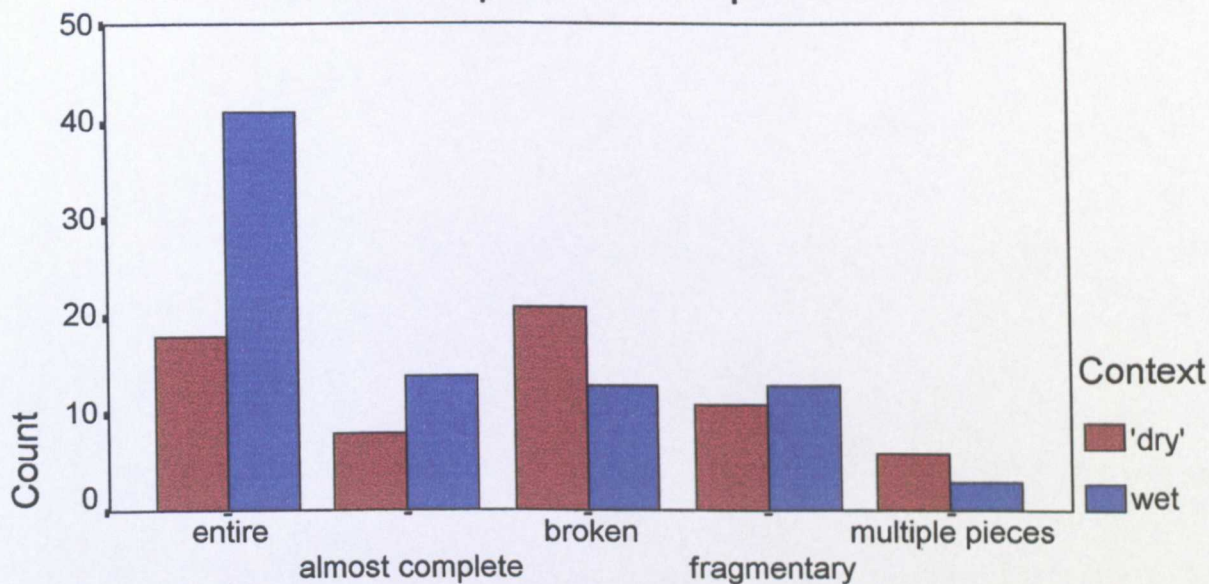


Figure 5.2.4.2(viii)

Complex Lanceolate Spears - Completeness & Context

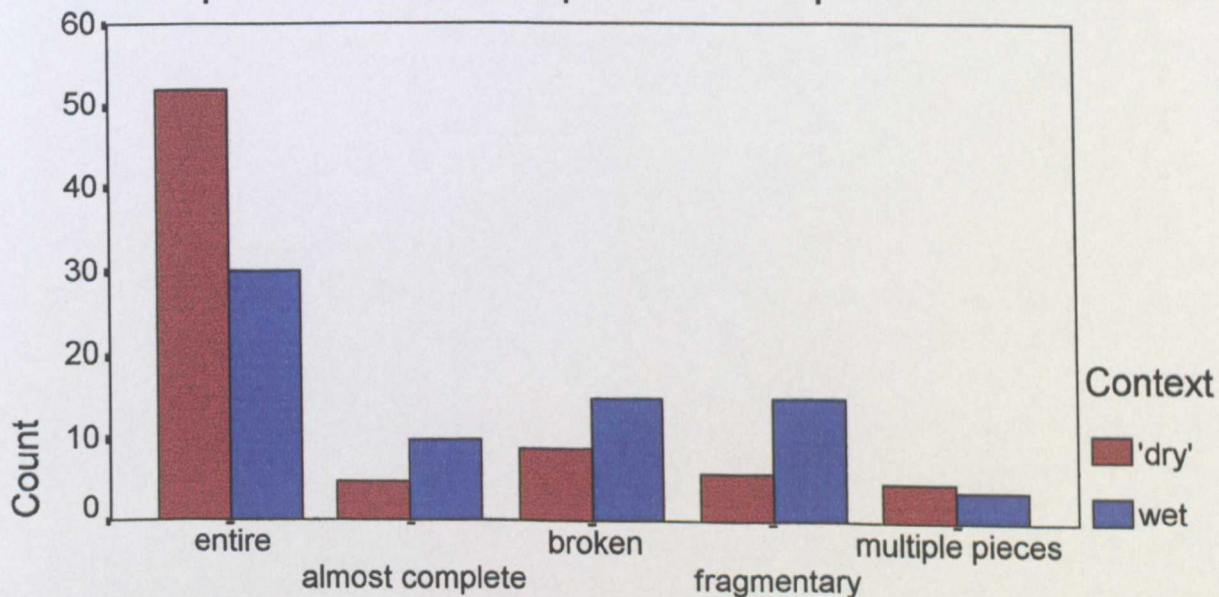
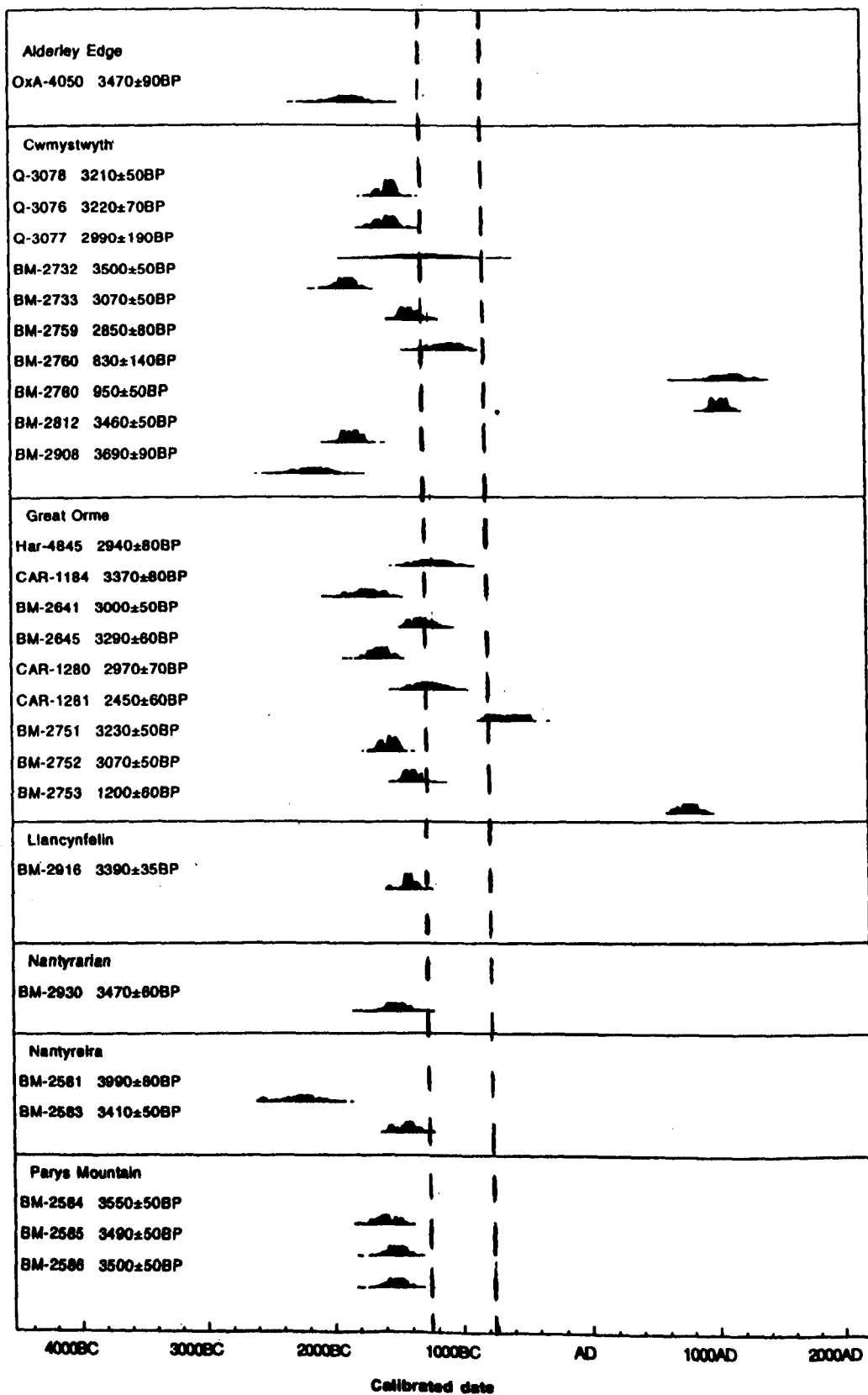


Figure 6.1(i): Bronze Age Mines - Radiocarbon Dates

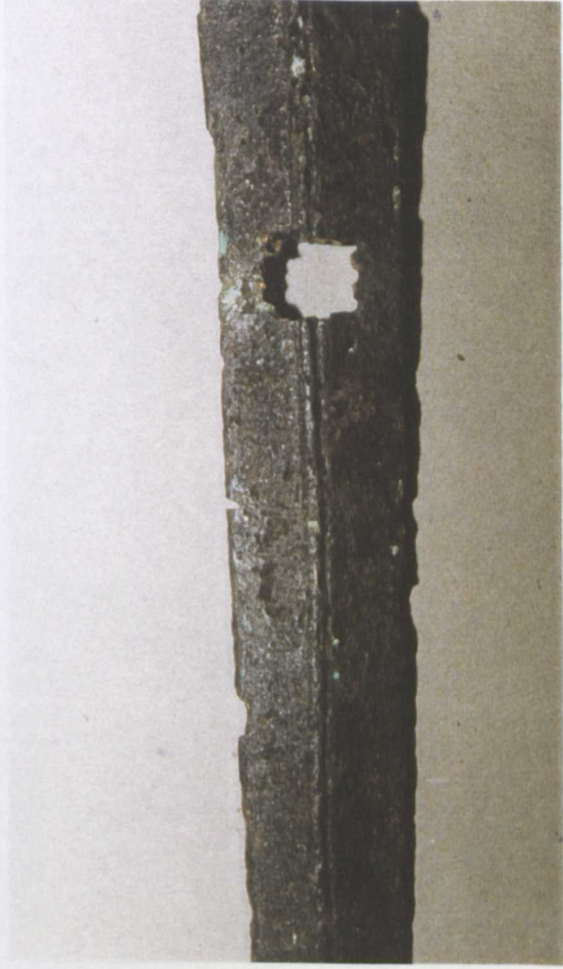


Calibrated age ranges for the early British mines expressed as probability distributions.

Figure 6.3.3: Location of Bronze Age 'Forts'



Plate 2.1: Metallurgical Samples



Top Left: National Museum of Scotland DL 4. Top Right: Cambridge Museum of Archaeology Z 4242. Bottom: Palestinian daggers. Scale (1.4:1)

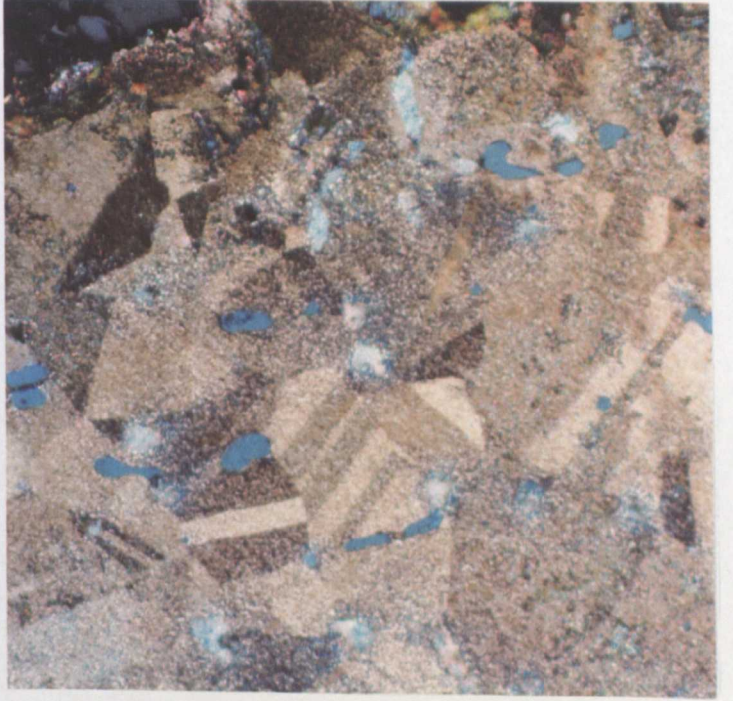
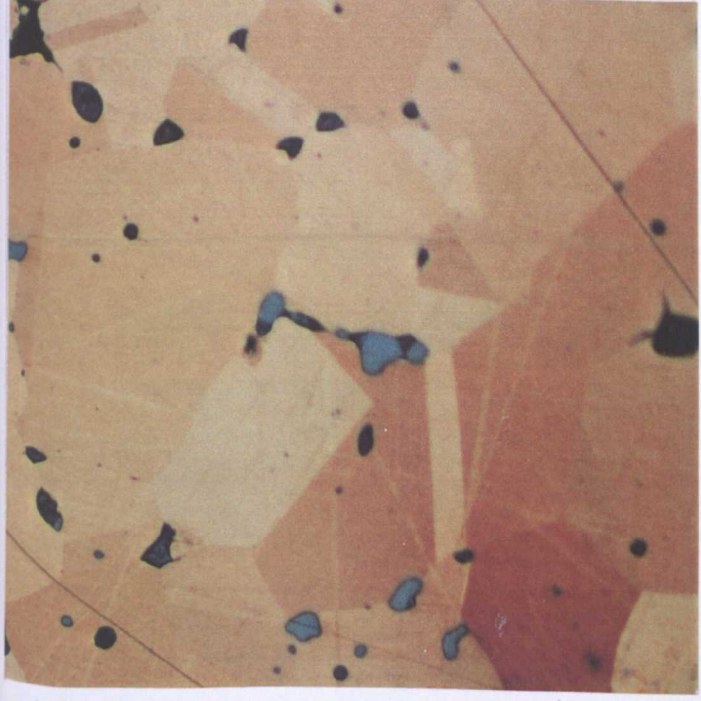


Plate 2.3:

Burnt Microstructures

Top: Cam 15 (Wilburton, Cambs)
Ed 24 & Ed 20 (Duddingston)

Bottom: LM 143 (No Provenance)
Cam 20 (Litlington, Cambs)

Scale 400:1

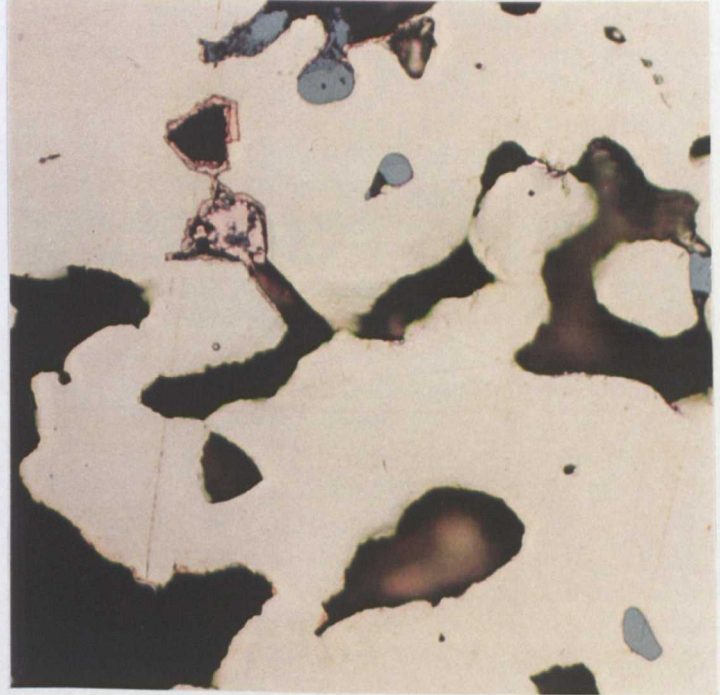
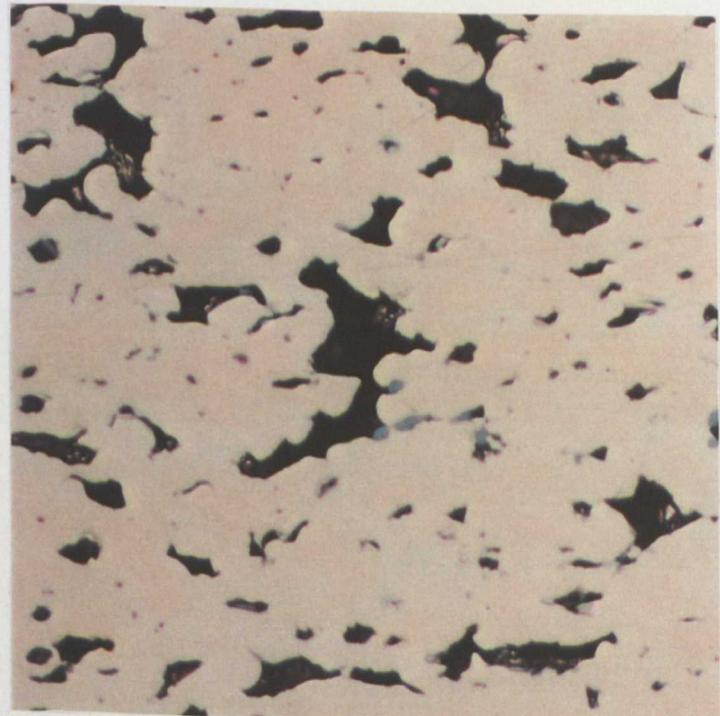
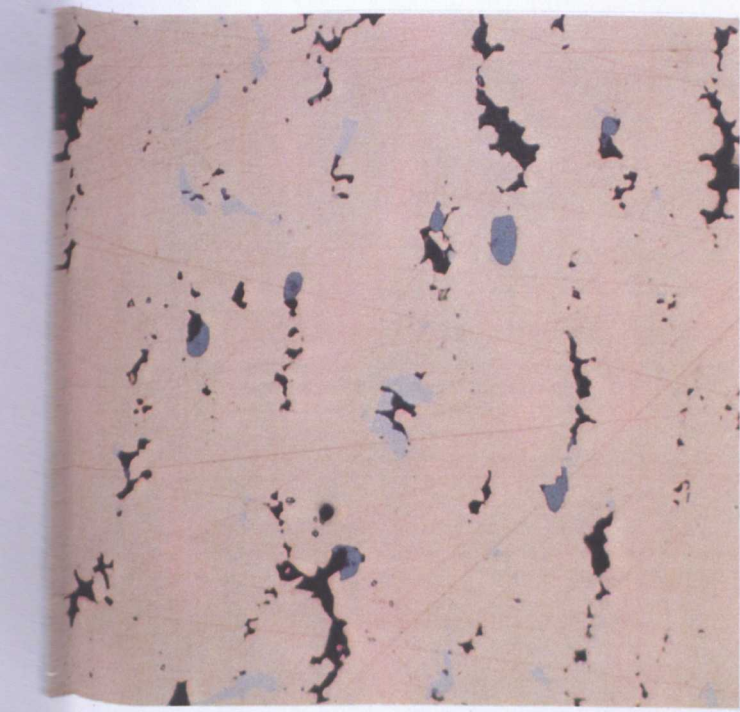
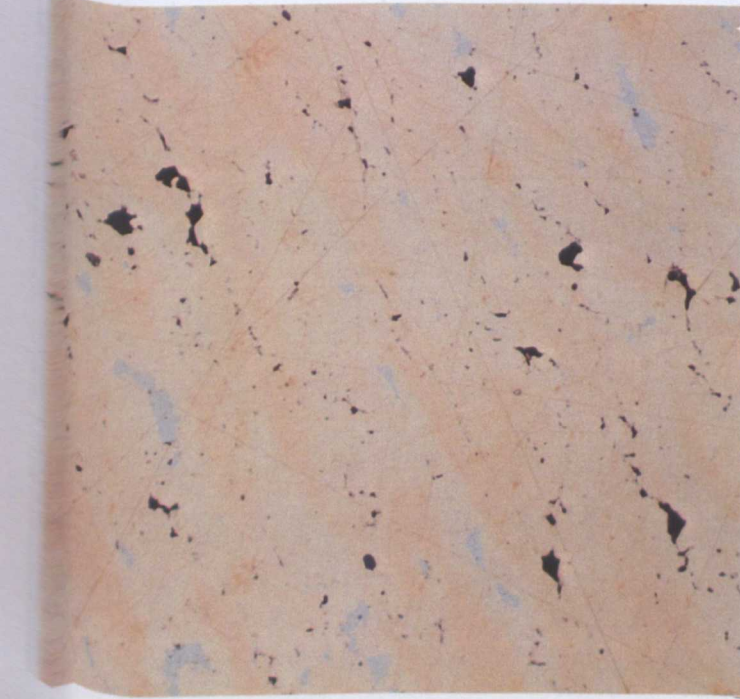
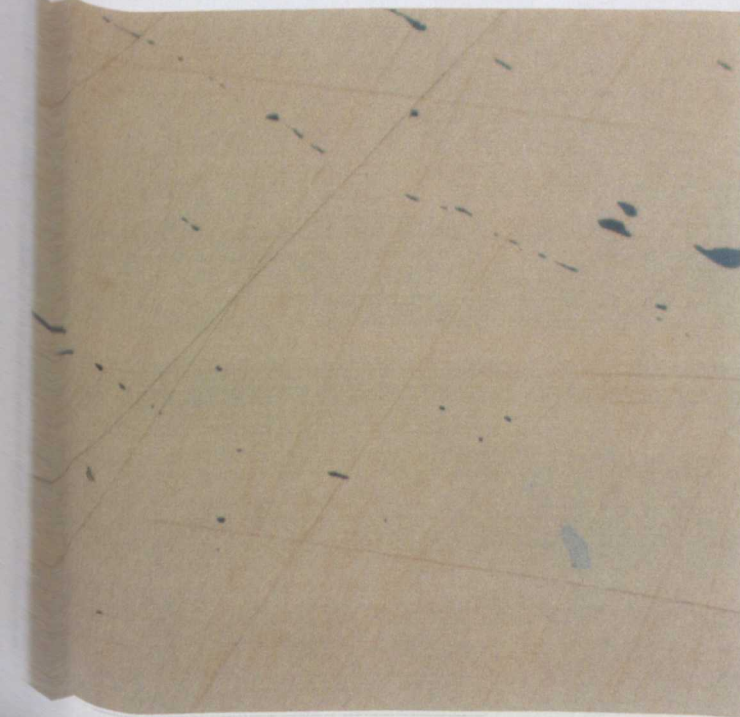


Plate 2.3.1:

Porosity

- Top:** 1 No porosity (Cam 23)
2 Slight porosity (BM 18)
3 Medium porosity (BM 9)

- Bottom:** 4 Substantial porosity (Cam 5)
5 Severe porosity (Cam 14)

Scale 400:1

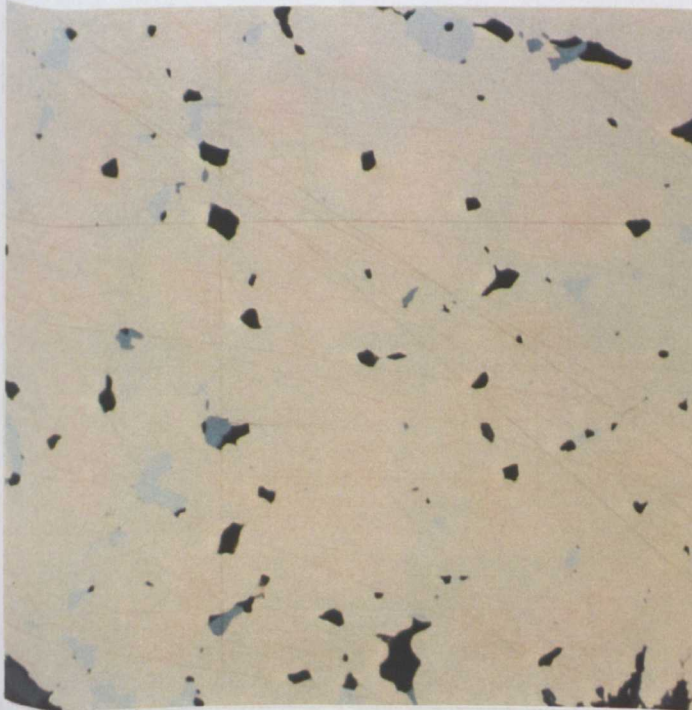
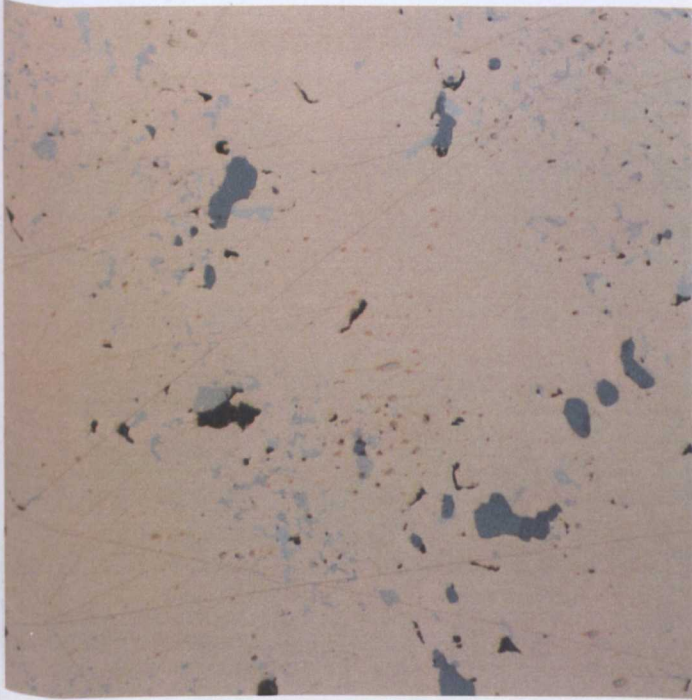


Plate 2.3.2:

Inclusion Distortion

- Top:** 1 No distortion (Cam 22)
2 Slight distortion (Wr 1)
3 Medium distortion (BM 6)
- Bottom:** 4 Substantial distortion (Cam 16)
5 Severe distortion (Cam 21)

Scale 400:1

Plate 2.3.3 (i):

Corrosion - Normal & Polarised

Top: Cam 15 - normal lighting
Cam 15 - polarised lighting

Bottom: BM 2 - normal lighting
BM 2 - polarised lighting

Scale 400:1

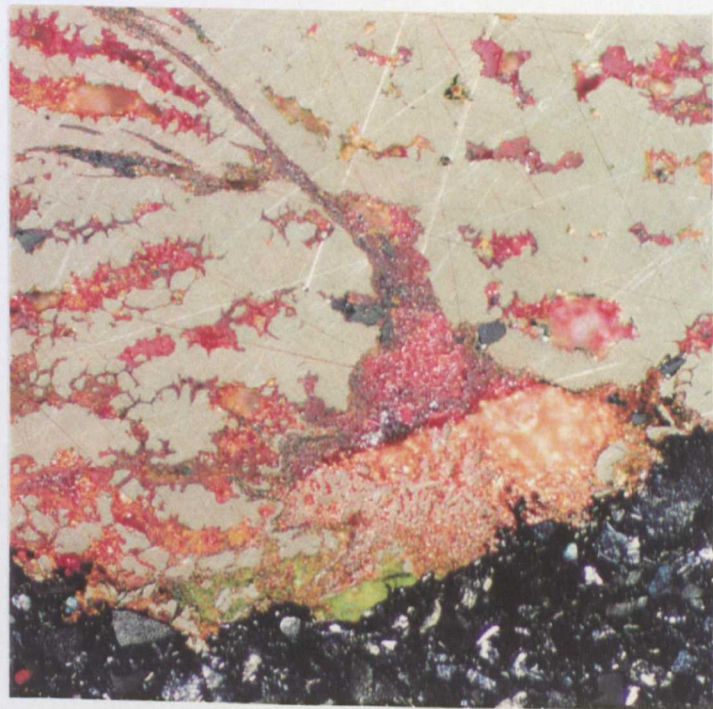
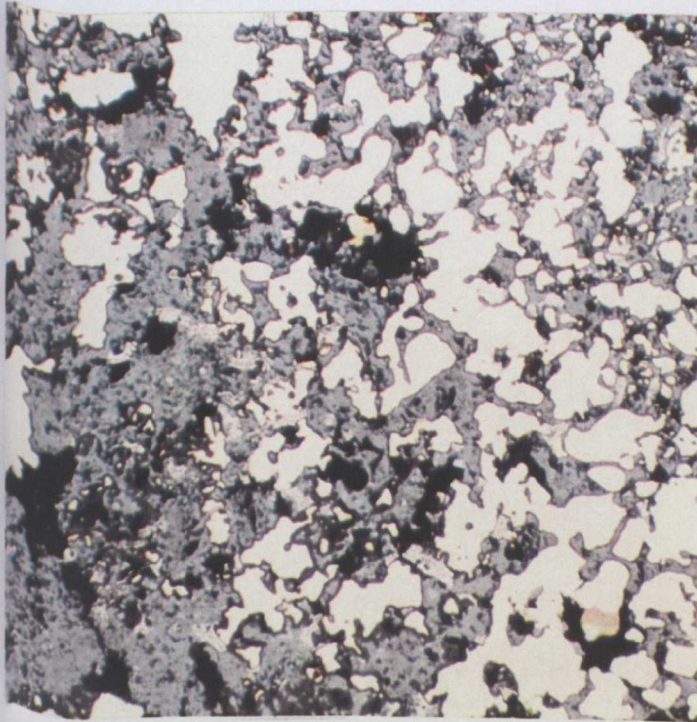
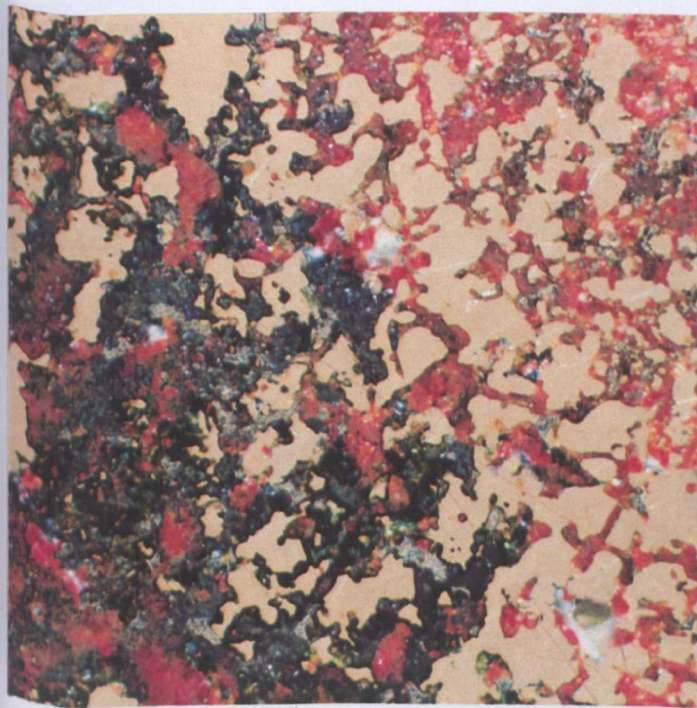
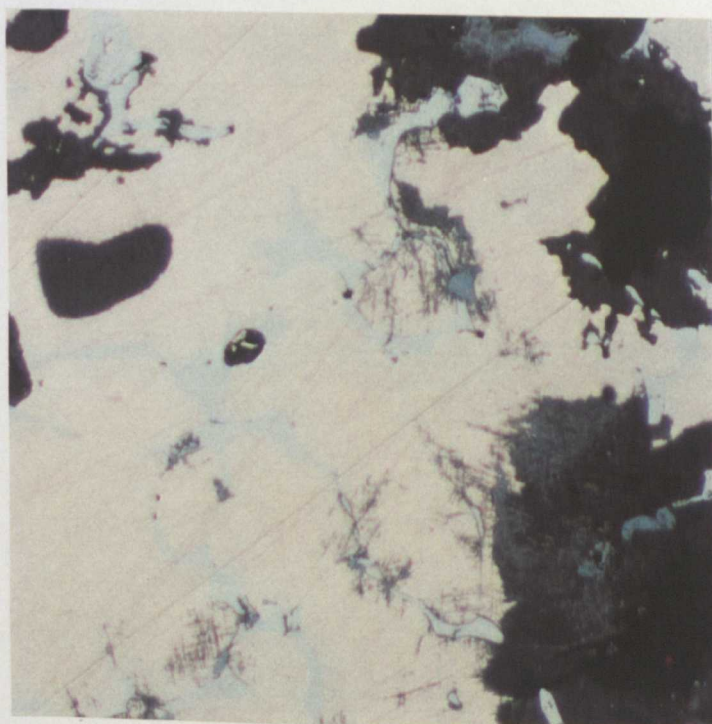
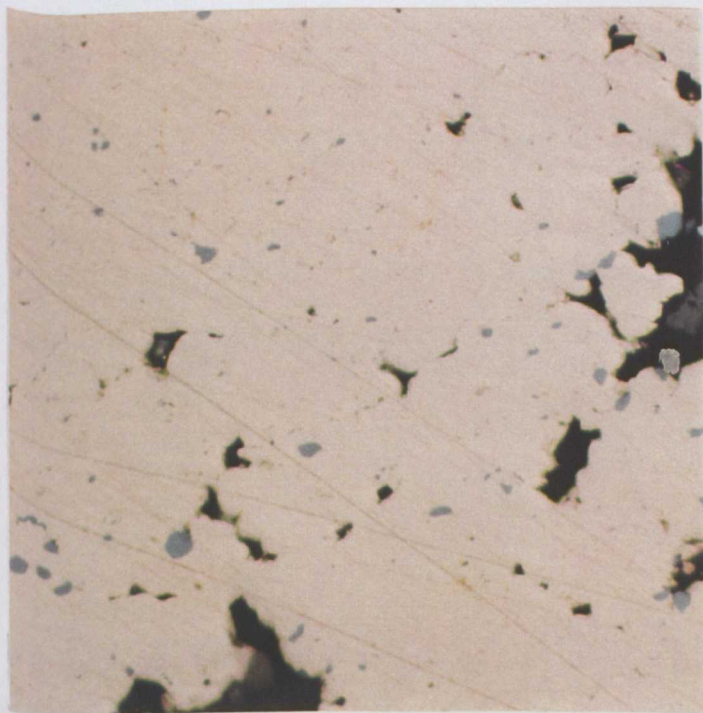
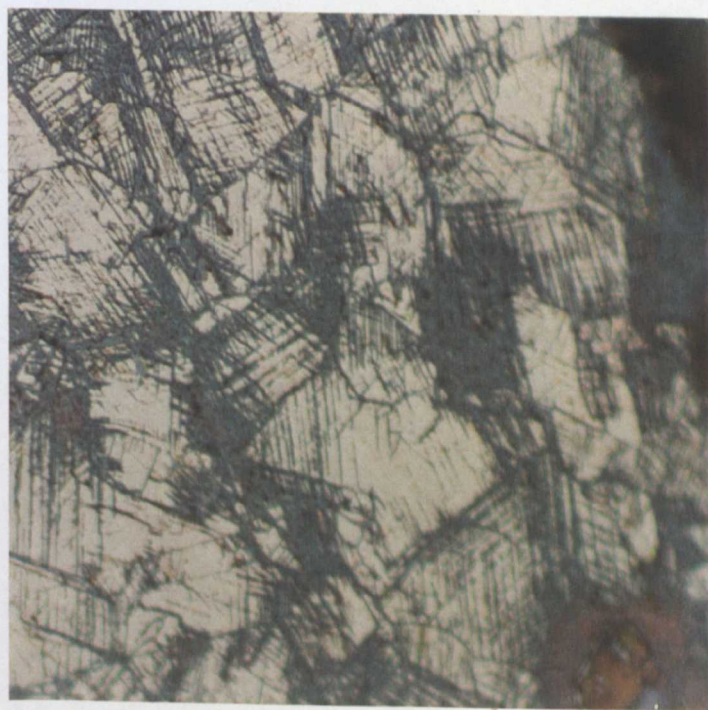


Plate 2.3.3 (ii):

Corrosion

- Top:** 1 No corrosion (Cam11)
2 Slight corrosion (Sel 19)
- Bottom:** 3 Substantial corrosion (LM 78)
4 Severe corrosion (Ex 26)

Scale 400:1



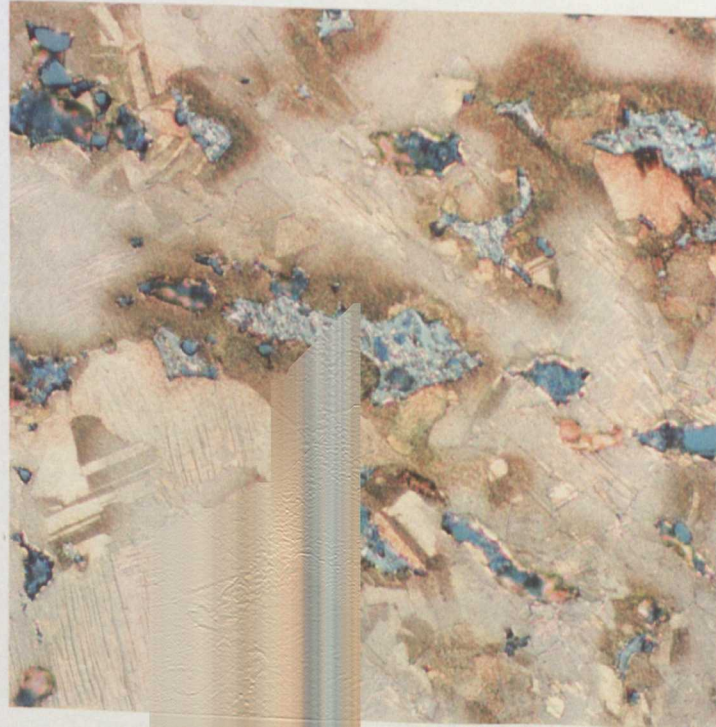
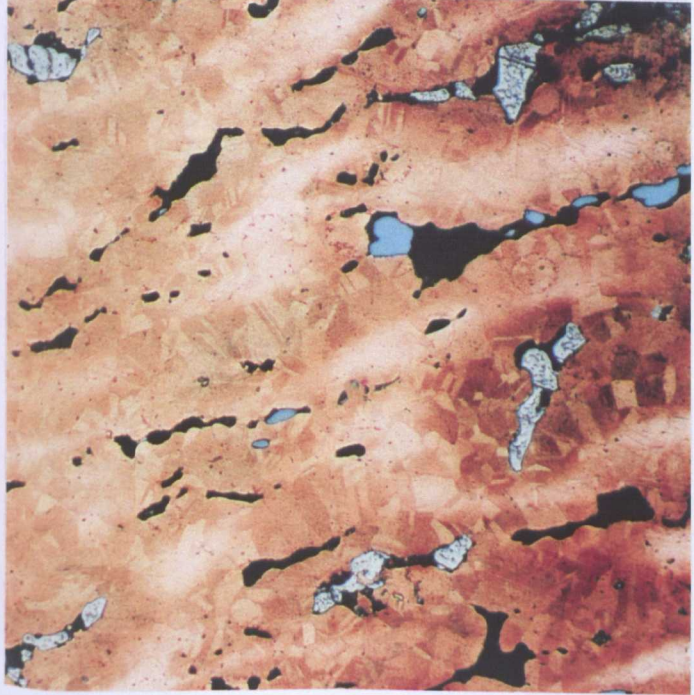
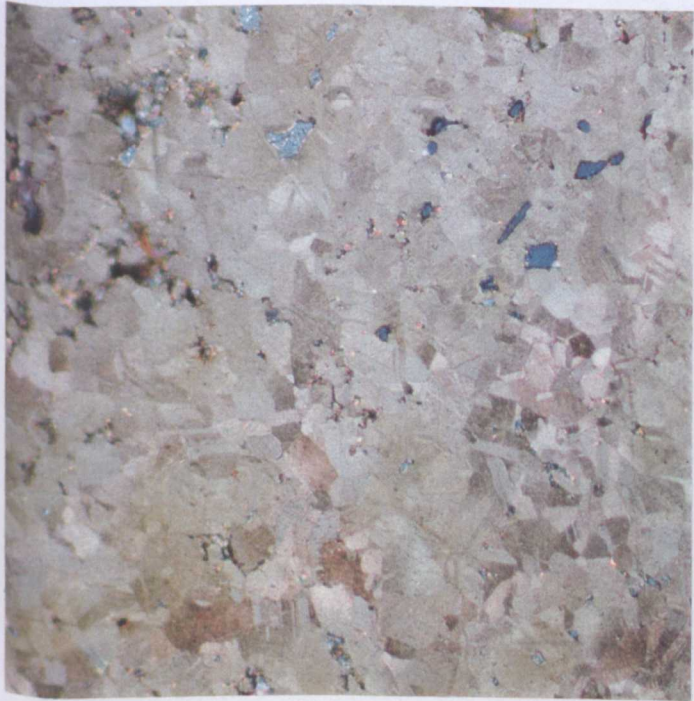
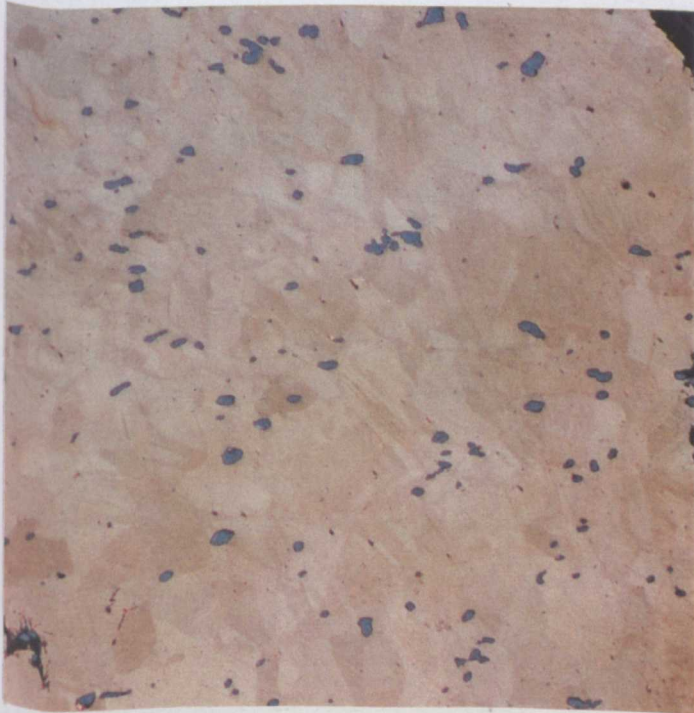


Plate 2.3.4:

High Tin: δ phase δ & $\alpha+\delta$ eutectoid

- Top:**
- 1 None (Tr 21)
 - 2 Slight (Sel 26)
 - 3 Medium (BM 10)

Bottom:

- 4 Substantial (Cam 5)
- 4 Substantial (NMS 20) unetched

Scale 400:1

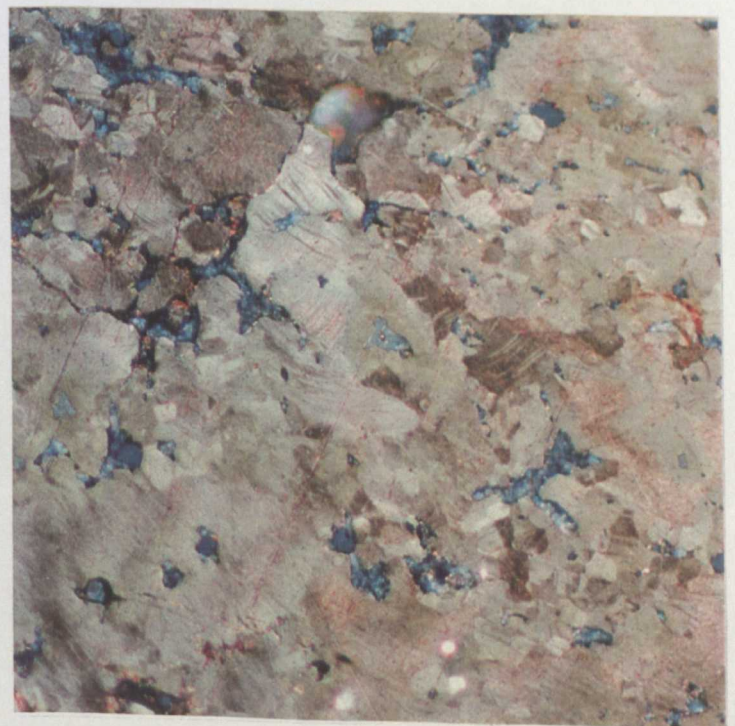
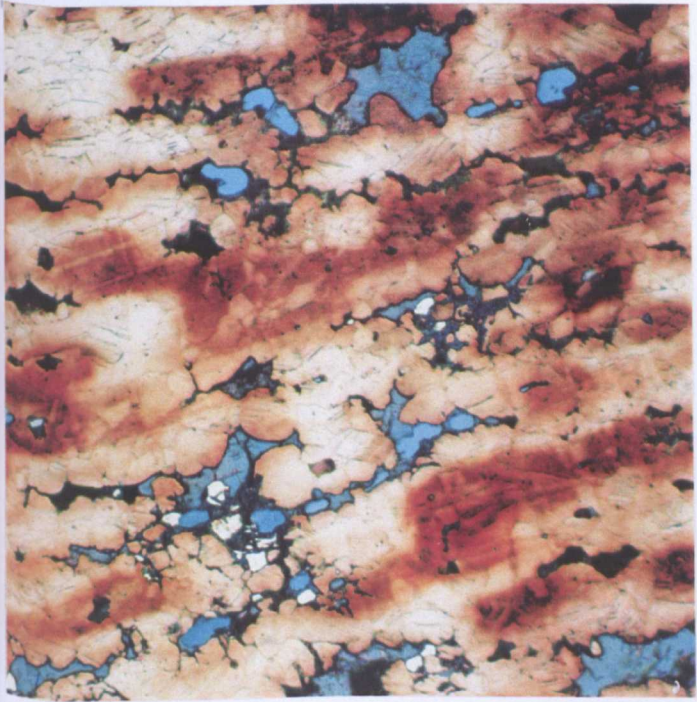
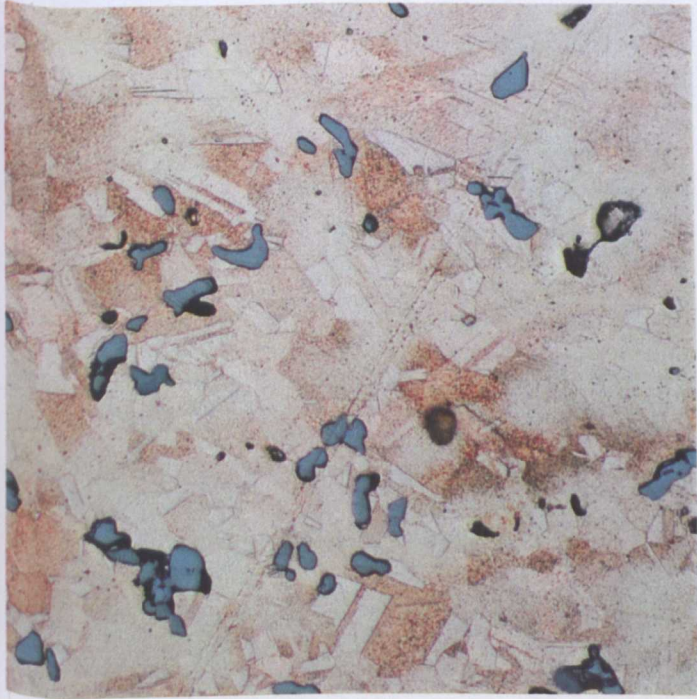


Plate 2.3.5:

Coring and Recrystallisation

- Top:**
- 1 Fully recrystallised - no coring (Tr 19)
 - 2 Fully recrystallised - slight coring (LM 75)
 - 3 Fully recrystallised - heavy coring (LM 57)

- Bottom:**
- 4 Partially recrystallised - cored (LM 175)
 - 5 No recrystallisation - cored (LM 159)

Scale 400:1

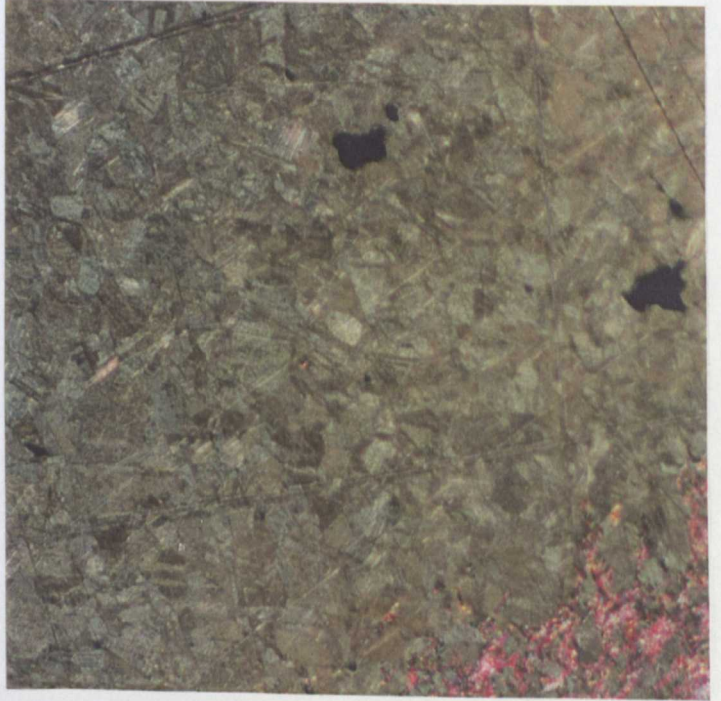
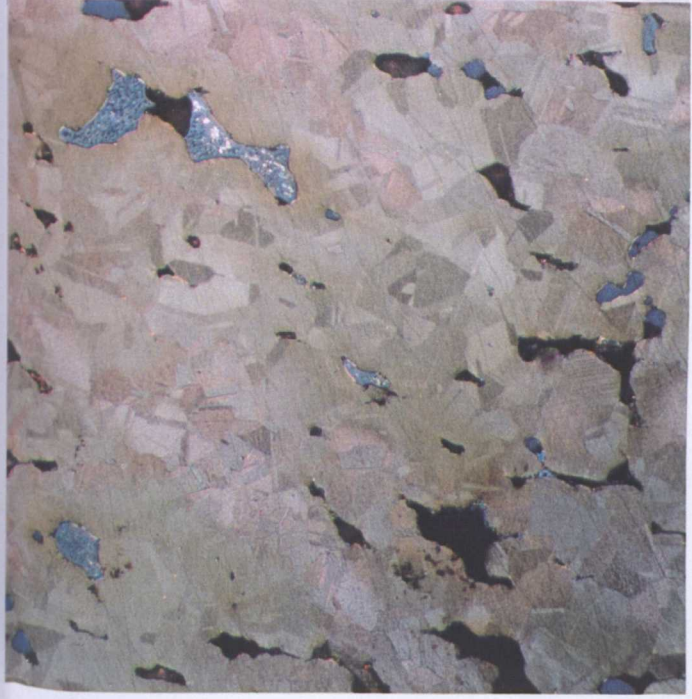
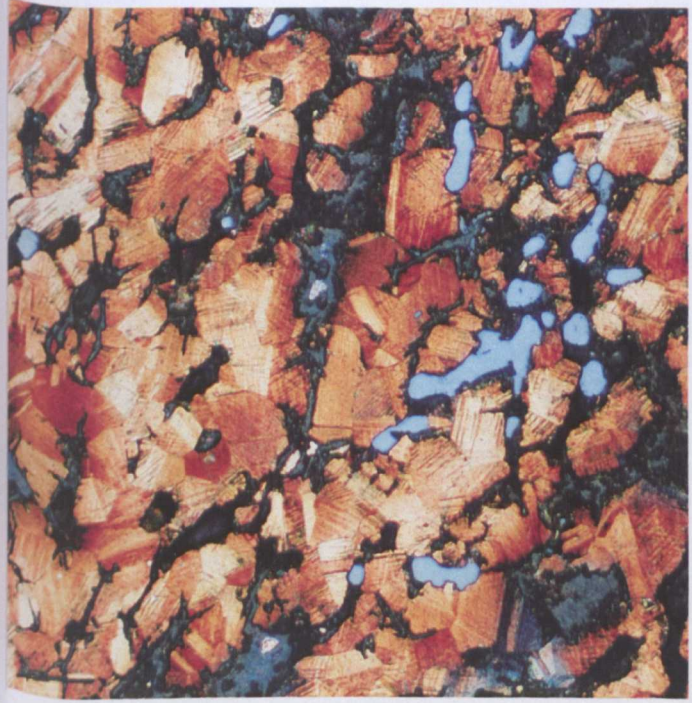


Plate 2.3.6:

Grain Distortion & Hardness

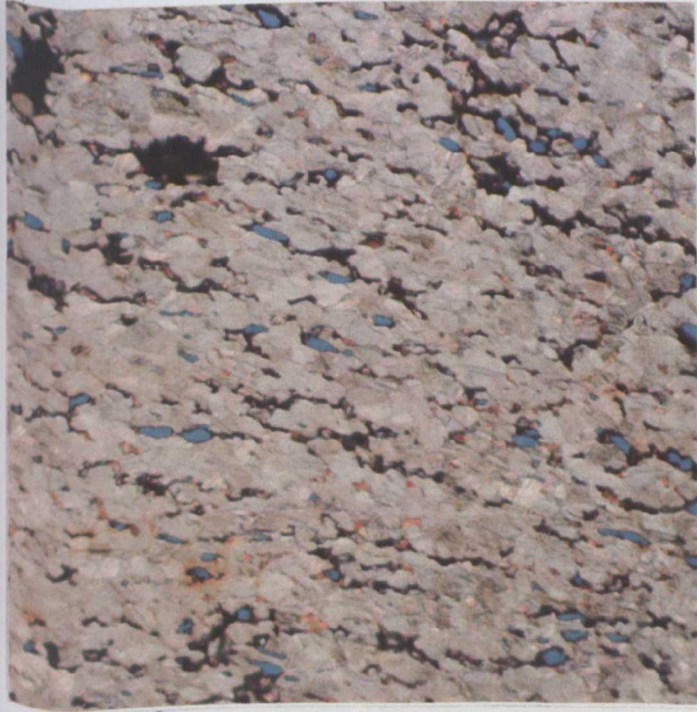
Top:

- Rating 1, no distortion - 96.6 HV (Cam 24)
- Rating 2, medium distortion - 131.5 HV (NMW 143)
- Rating 2, medium distortion - 149.8 HV (BM 7)

Bottom:

- Rating 3, severe distortion - 169.8 HV (LM 158)
- Rating 3, severe distortion - 198.0 HV (LM 156)

Scale 400:1



Top: Grain Size Groups a, b & c (Cam 1, NMS 15 & LM 165):

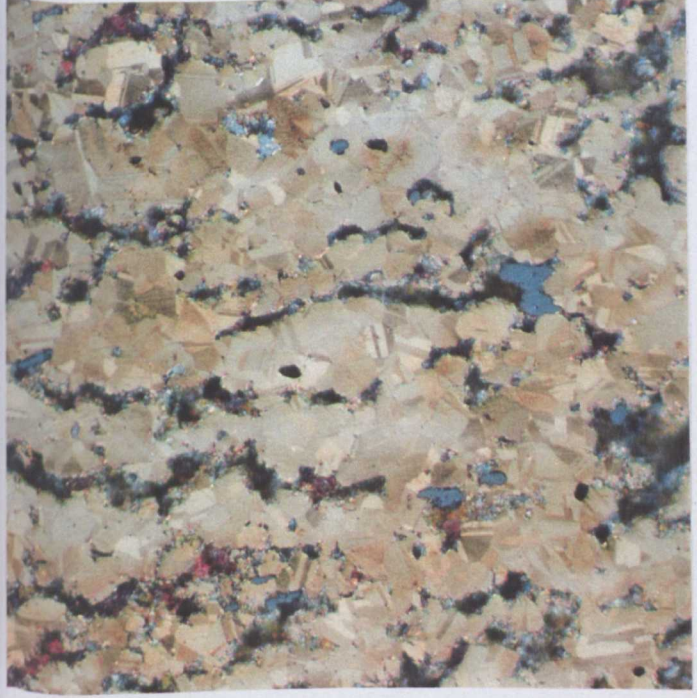


Plate 2.3 7: Grain Sizes



Bottom: Grain Size Groups d, e & f (WR 1, LM 135, Ex 28)

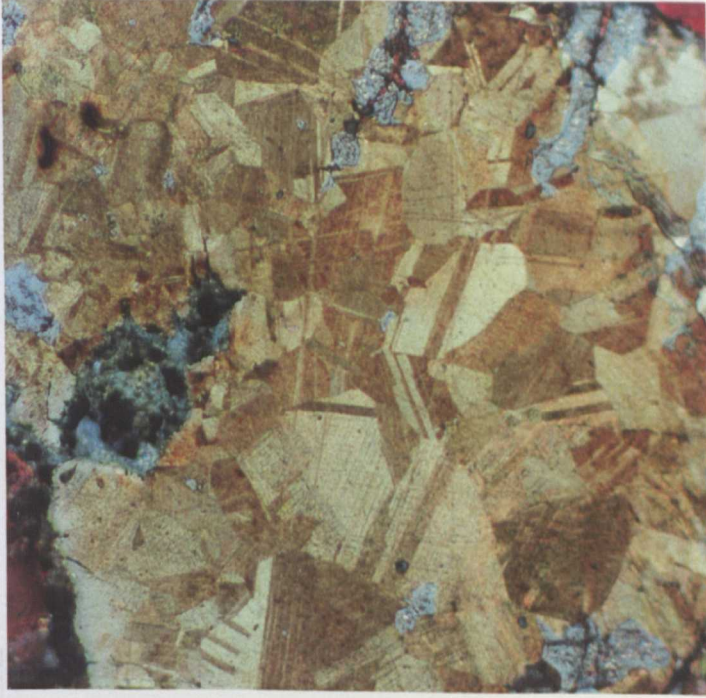
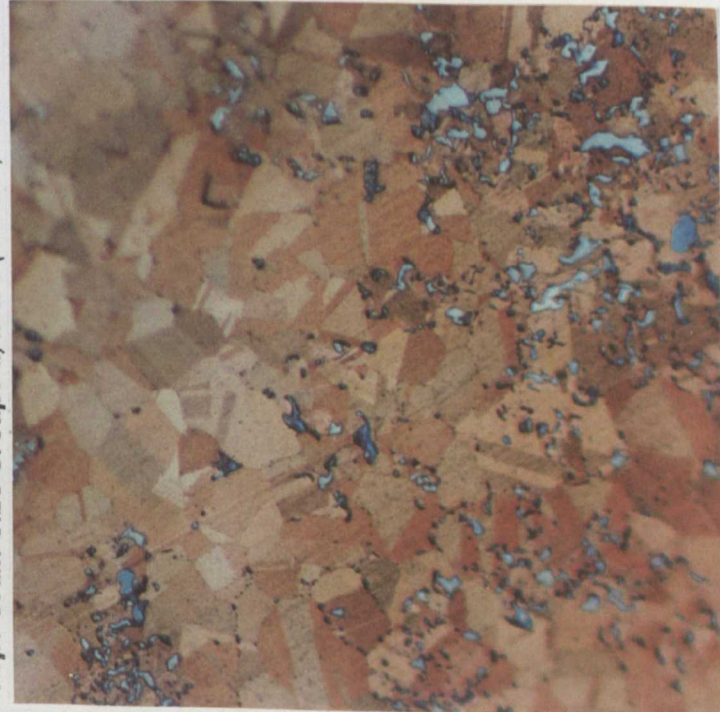


Plate 2.5.1

Blackmoor Hoard: British Museum 1891 5-14 35, Sample BM 20



Scale 50: 1

1mm

Plate 2.5.2

Gilmonby Hoard: Sample Gil 76



Scale 50: 1

1mm

Plate 2.5.3

Gilmonby Hoard: Sample Gil 81.



Scale 50: 1

1mm

Plate 2.5.4

Royal Armouries G06



Scale 50: 1

1mm

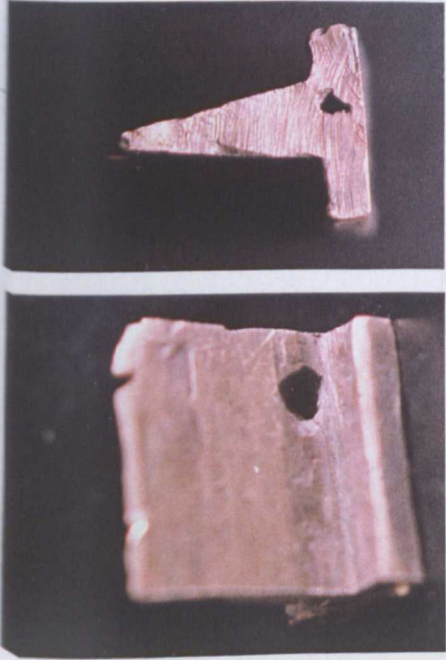
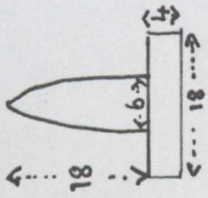


Plate 3.1(i)-(iv):

*Top Left: (i) Scale diagram of cross section
 Top Centre: (ii) Shrinkage porosity at end of section
 Bottom Left: (iii) Unworked section as delivered
 Right: (iv) Edge hammering with copper hammer*



Plate 3.1.1(i)-(iv):

Top Left: (i) Anvil arrangement

Bottom Left: (ii) Bowing of section after hammering

Top Right: (iii) Wet grinding edge with rotating wheel

Bottom Right: (iv) Edge deformation of high lead section



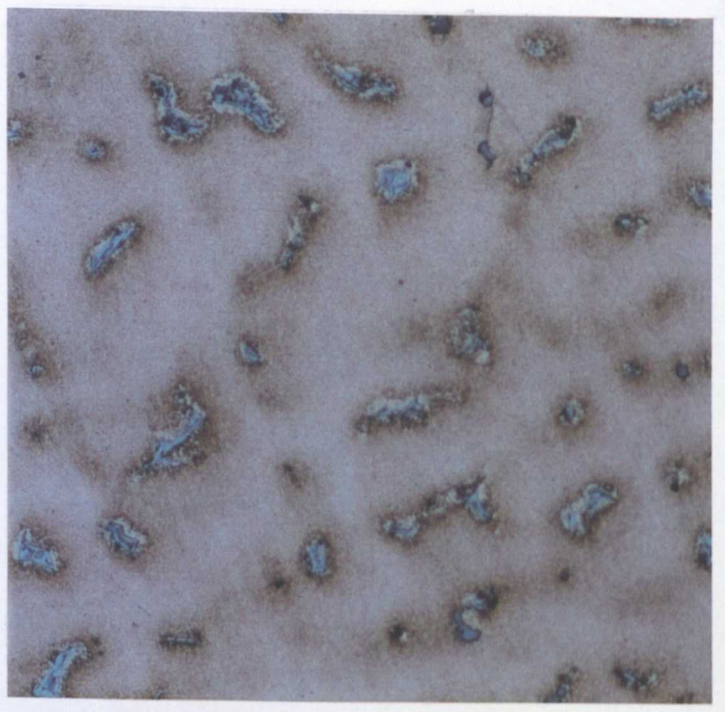


Plate 3.1.1(v)-(ix)

Microstructures

Top:

(v) Section 1: Recrystallised distorted (400:1)

(vi) Section 1: Unrecrystallised area (50:1)

(vii) Section 1: Unrecrystallised area (400:1)

Bottom:

(viii) Section 7: As cast microstructure (50:1)

(ix) Section 7: As cast microstructure (400:1)

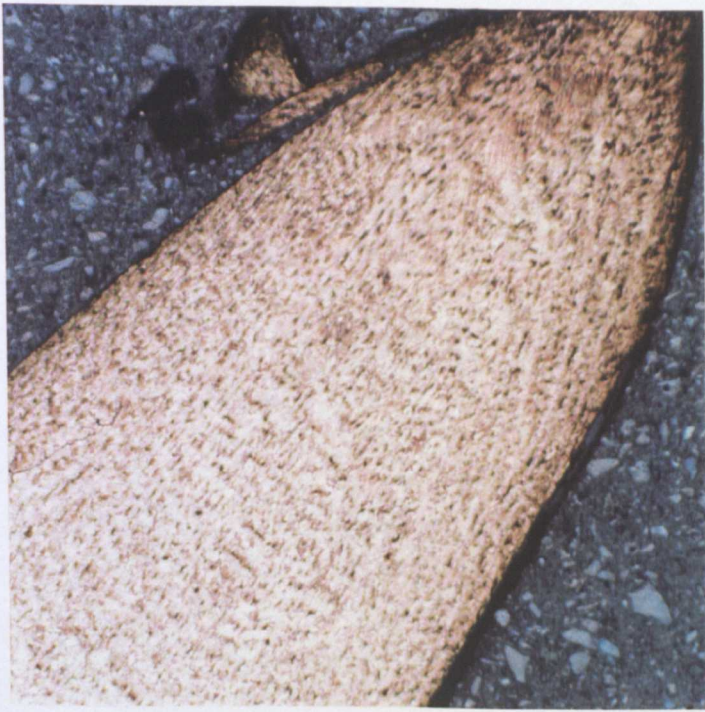


Plate 3.1.2(i)-(vi):

*Left (i) & (ii): Crack in Section 2 (5.8:1)
Centre (iii) & (iv): Copper hammer distorted by use
Right (v) & (vi): Section 2: Recrystallised distorted microstructure (400:1) & (50:1)*

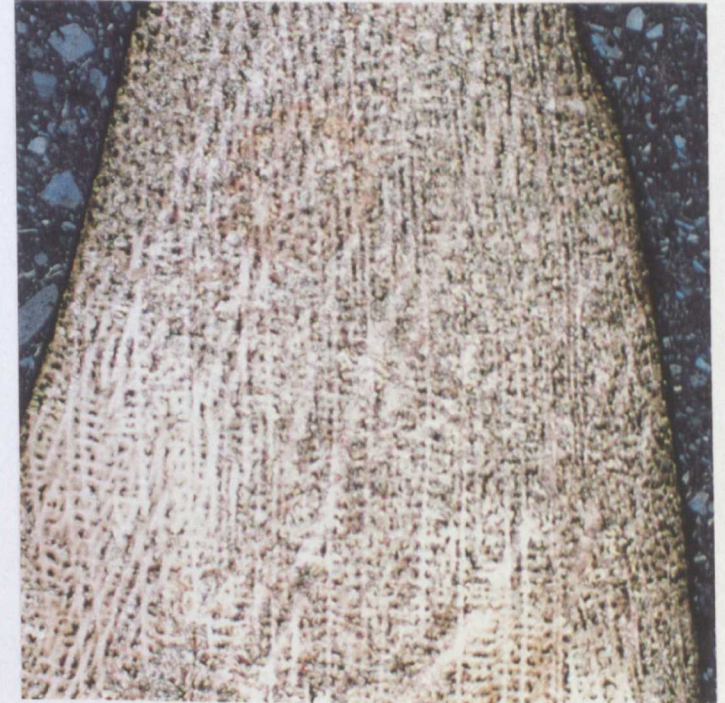
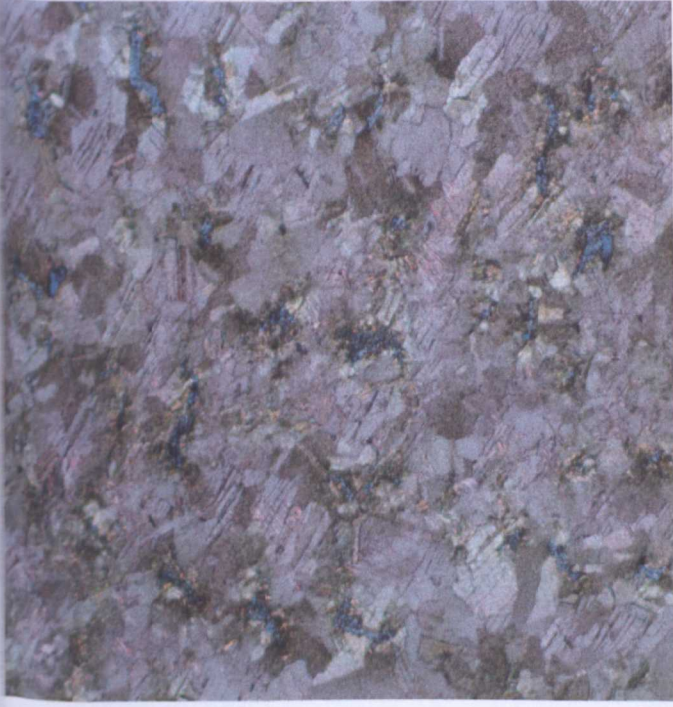


Plate 3.1.3(i)-(v):

Top: (i) Cut from unsharpened blade

Top - Microstructures

(ii) Section 6: Recrystallised distorted (50:1)

(iii) Section 6: Recrystallised distorted (400:1)

Bottom - Microstructures

(iv) Section 4: Recrystallised (50:1)

(v) Section 4: Recrystallised (400:1)



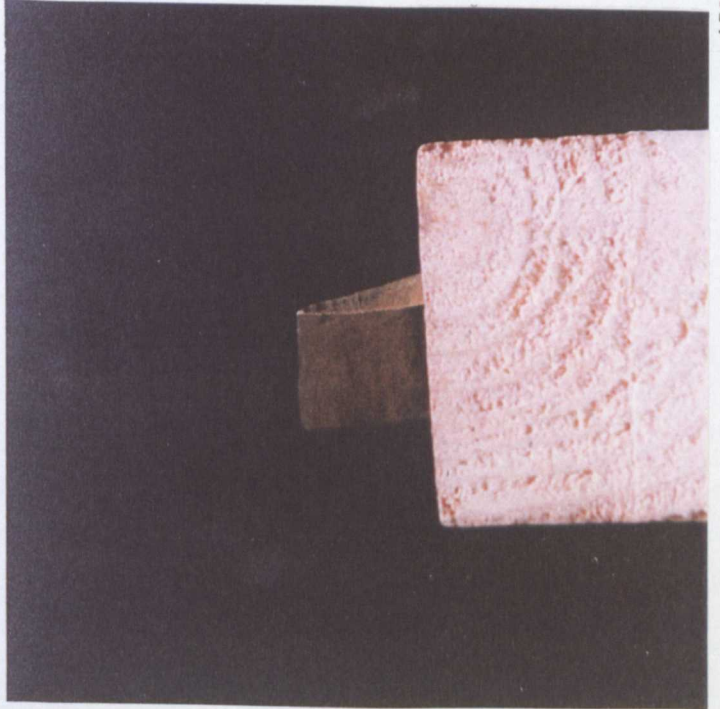
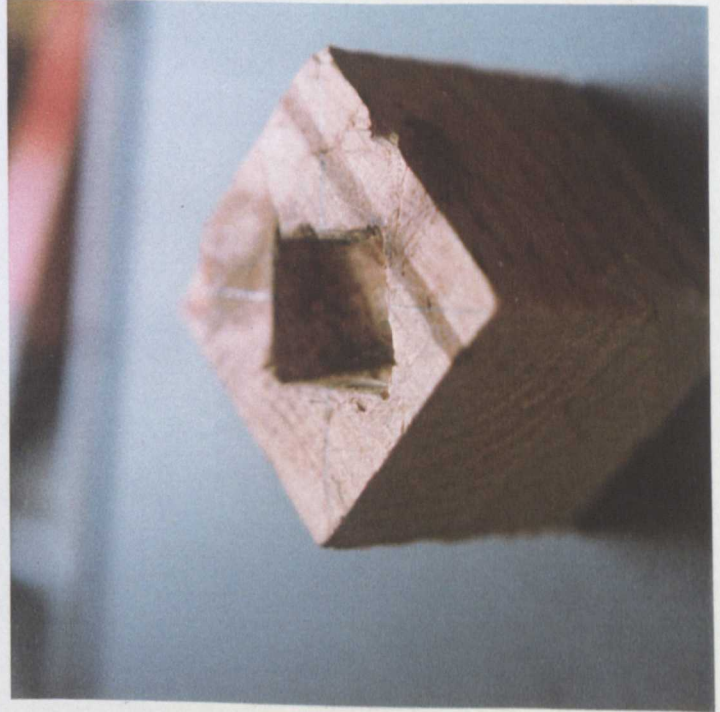
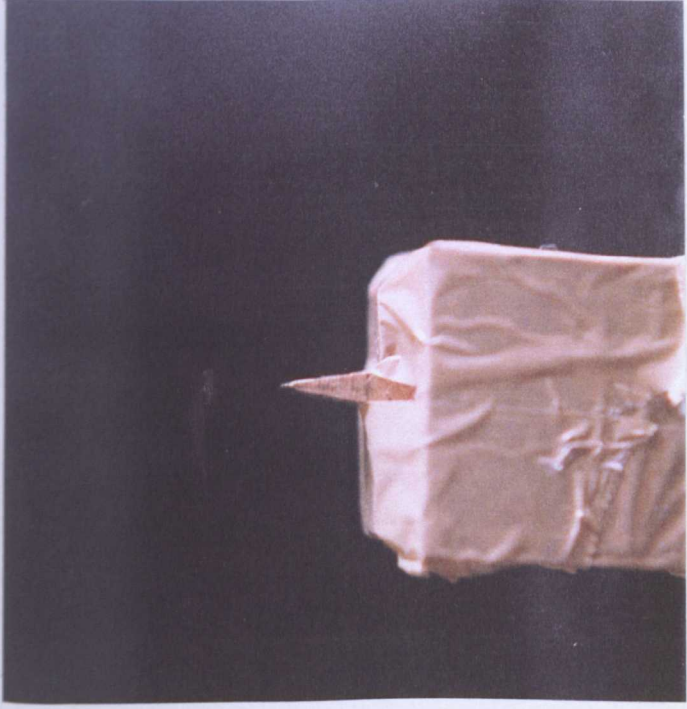
Plate 3.2(i)-(v):

Top:

- (i) *Balanced Impact Machine*
- (ii) *Vertical segment, mounted in block (from above)*
- (iii) *Vertical segment mounted in block (edge on)*

Bottom:

- (iv) *Block cut for angled impact*
- (v) *Angled segment set into block*



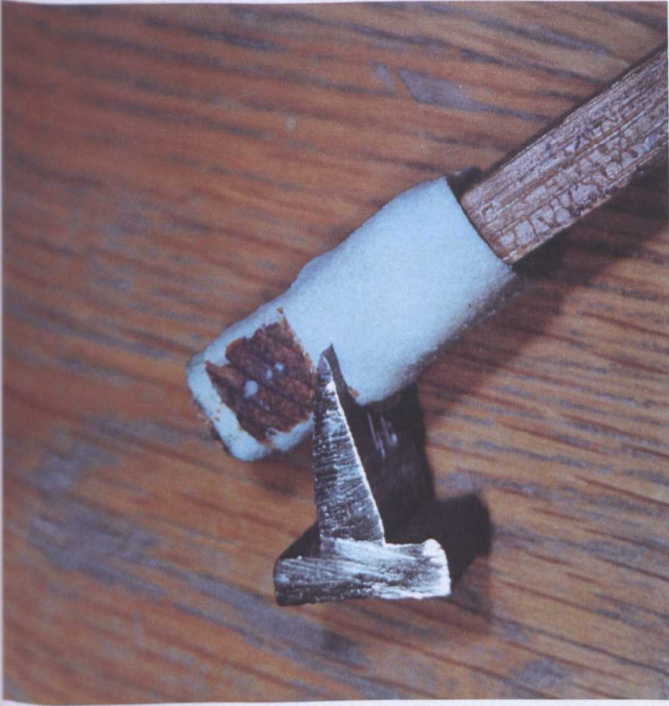


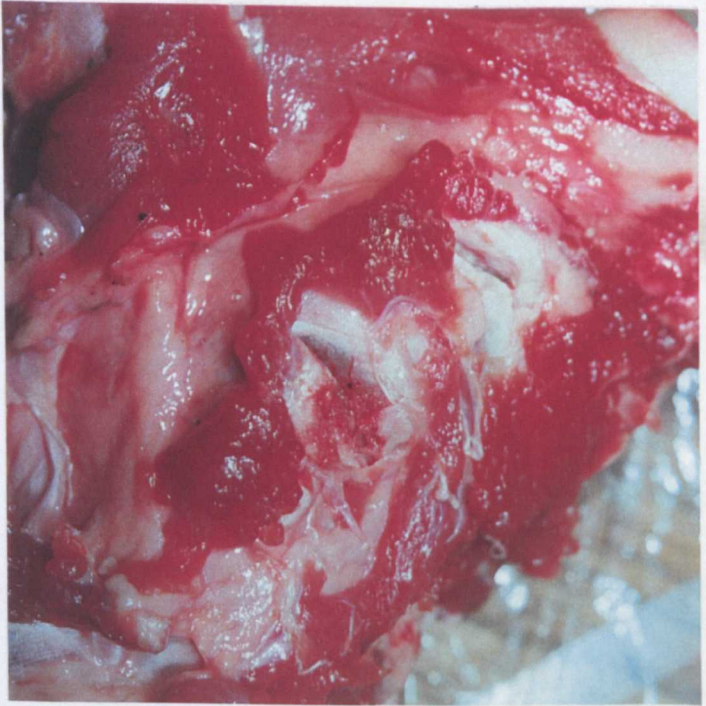
Plate 3.3(vii)-(xii):

Top:

- (vii) Double impact - edge on and from rear (5.8:1)
- (viii) Scores from impact on high lead section - from above
- (ix) Segment embedded in hide wrapped wood

Bottom:

- (x) Experimentally cast socketed axe
- (xi) Edge of axe after impacts with sword edge segments
- (xii) Lamb joint after impacts with sword edge segments





(i) **Bowed** (bowed)



(ii) **Chipped** (bowed and chipped)



(iii) **Notched** (notched)



(iv) **Nicked** (notched, nicked and torn)



(v) **Scored** (notched, scored and slightly torn)



(vi) **Torn** (notched and torn)



Segment 1.2 (hard)



Segment 2.1 (hard)





Segment 1.6 (hard)



Segment 6.1 (medium)

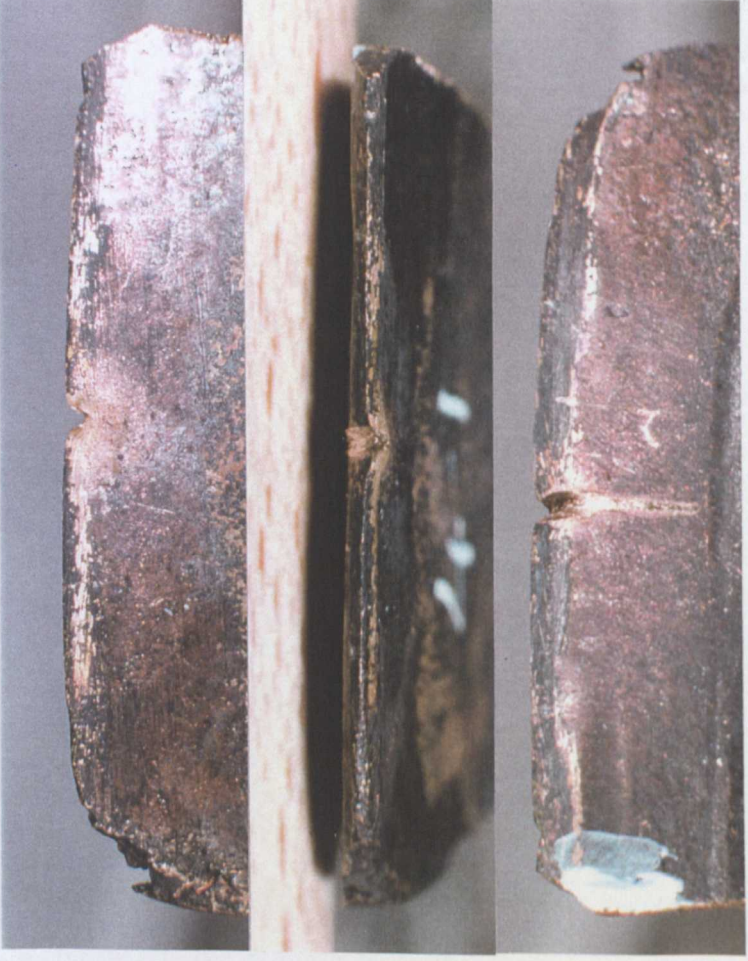




Segment 1.4 (hard)



Segment 4.1 (soft)



Scale 4.9:1

Plate 3.3(xvi) - Impact Number 4



Segment 5.2 (medium)



Segment 2.5 (hard)





Segment 6.5 (medium)



Segment 5.6 (medium)



Plate 3.3(xviii) - Impact Number 6



Segment 4.5 (soft)



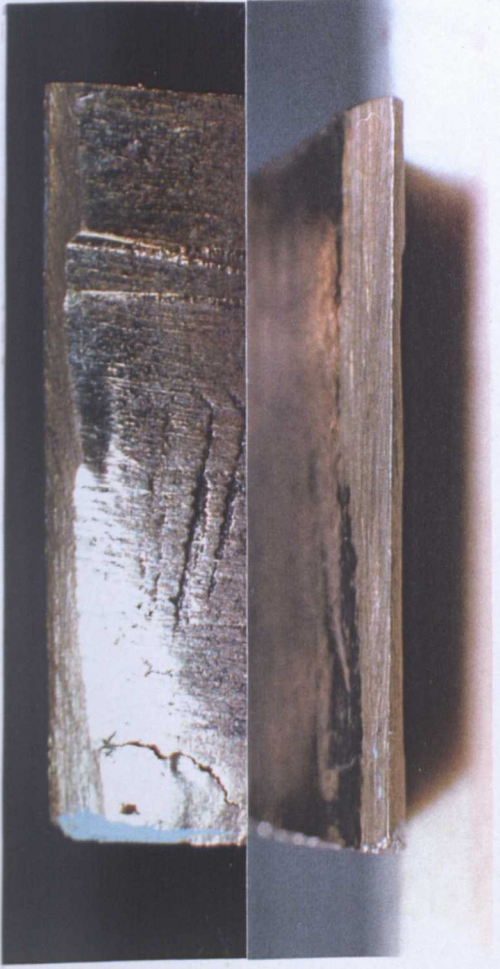
Segment 5.4 (medium)



Scale 4.9:1



Segment 3.2 (soft)



Segment 2.3 (hard)



Scale 4.9:1



Plate 3.3(xx) - Impact Number 8



Segment 6.3 (medium)

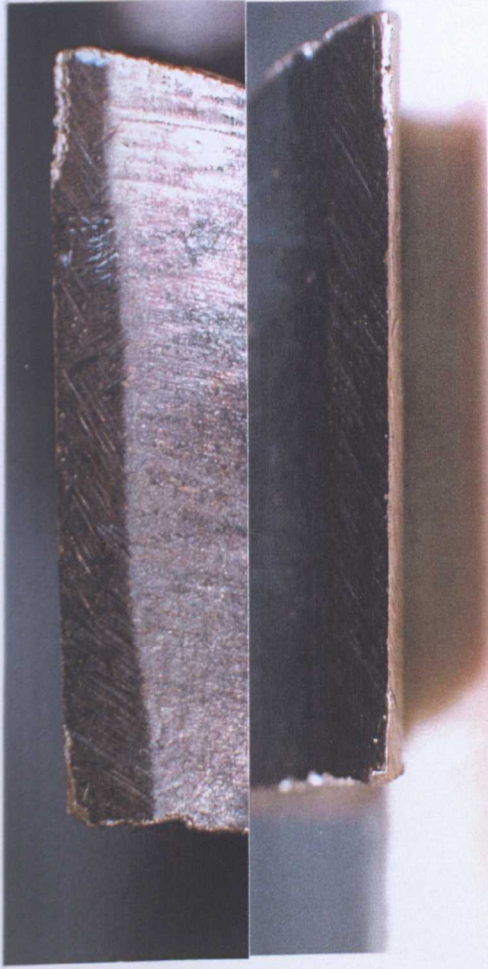


Segment 3.6 (soft)





Segment 4.3 (soft)



Segment 3.4 (soft)

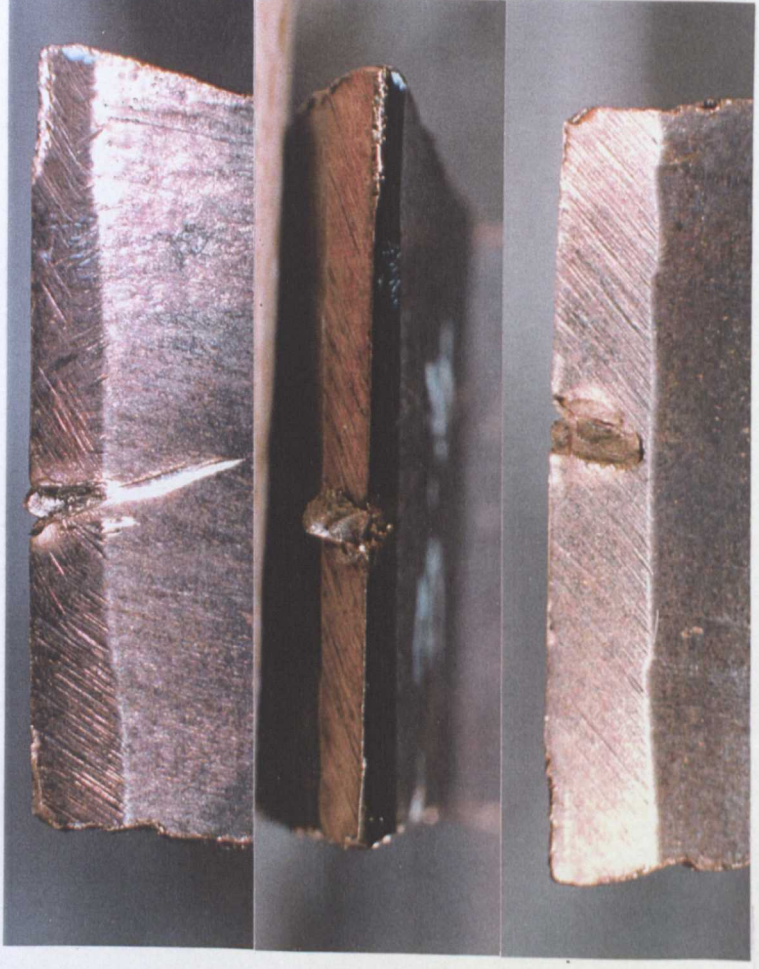


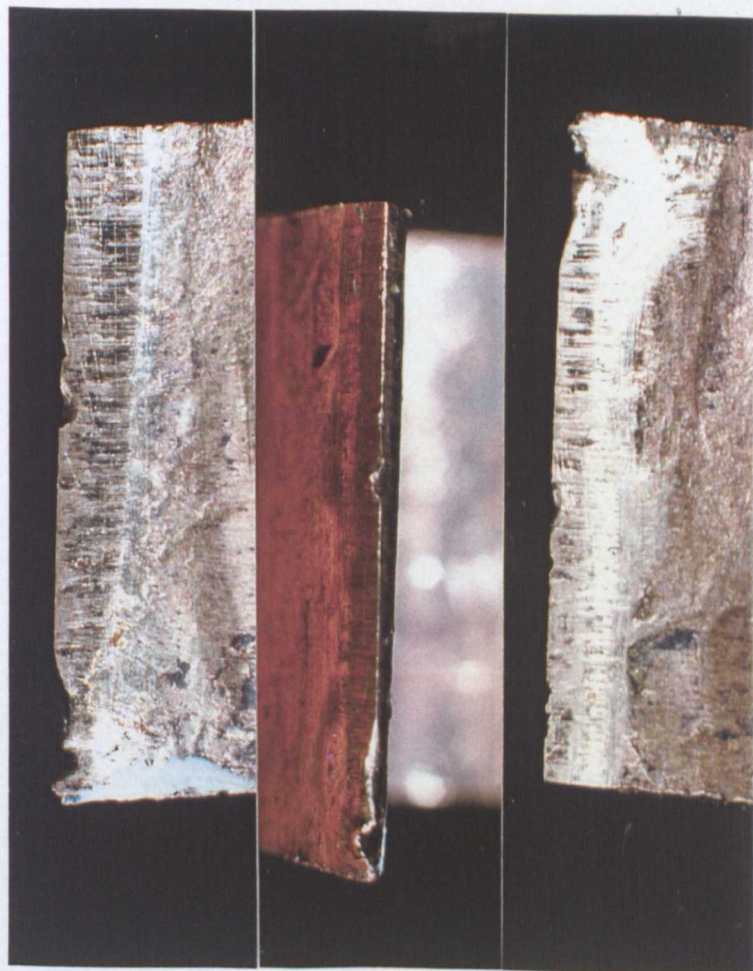
Plate 3.3(xxii) - Impact Number 10

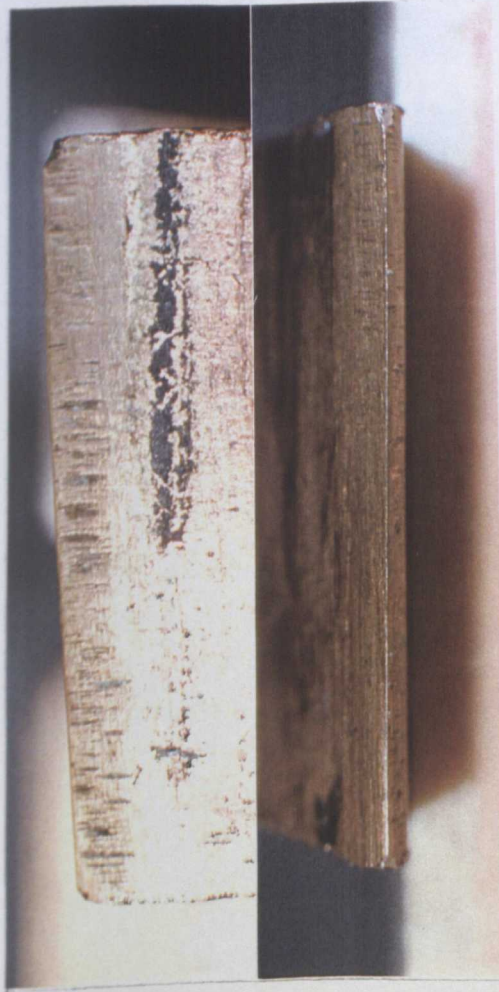


Segment 2.2 (hard)



Segment 1.1 (hard)





Segment 1.5 (hard)



Segment 5.1 (medium)



Scale 4.9:1

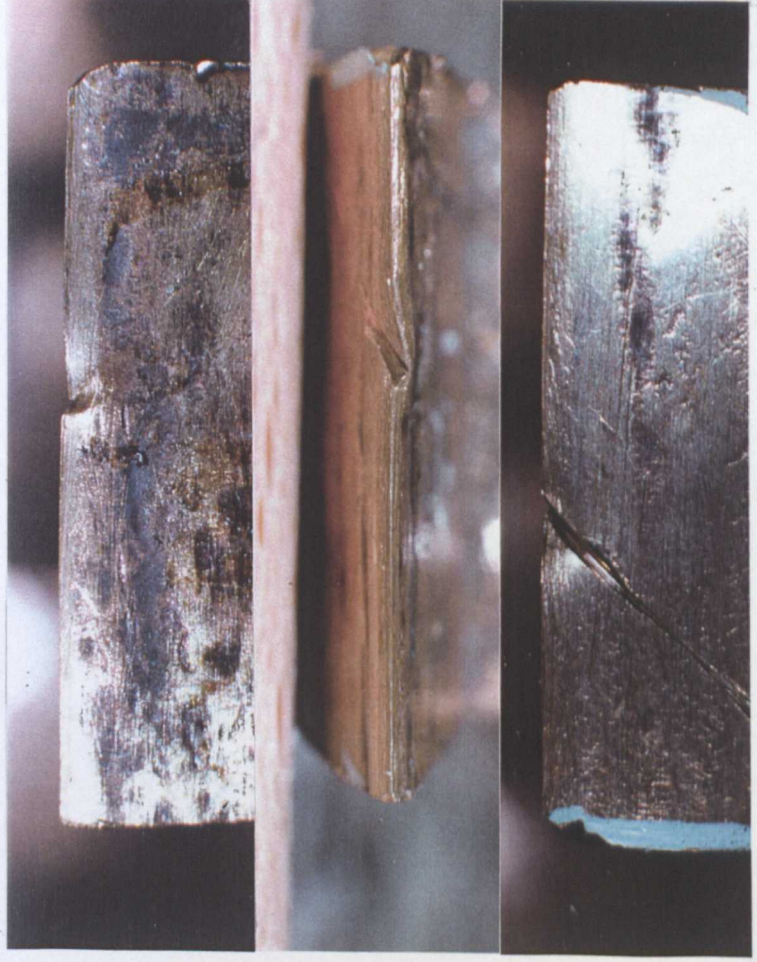
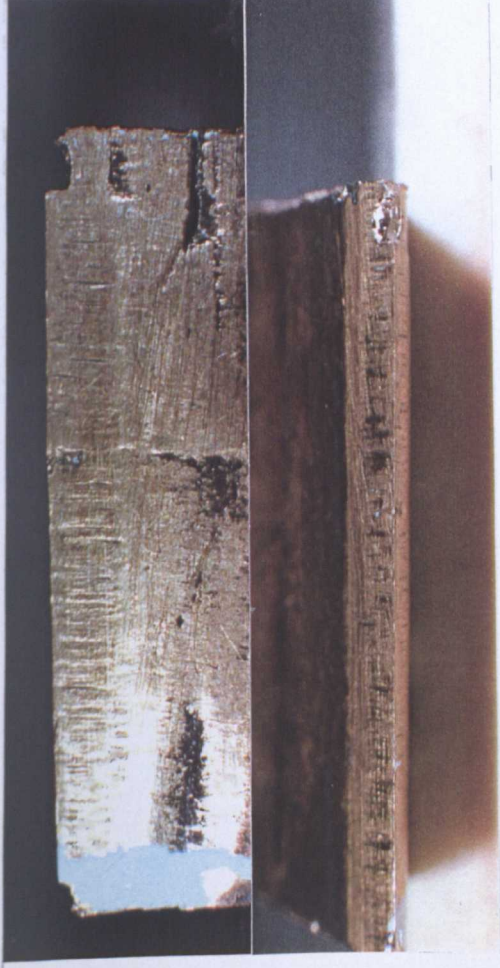


Plate 3.3(xxiv) - Impact Number 12



Segment 3.1 (soft)



Segment 1.3 (hard)





Segment 6.6 (medium)



Segment 5.5 (medium)

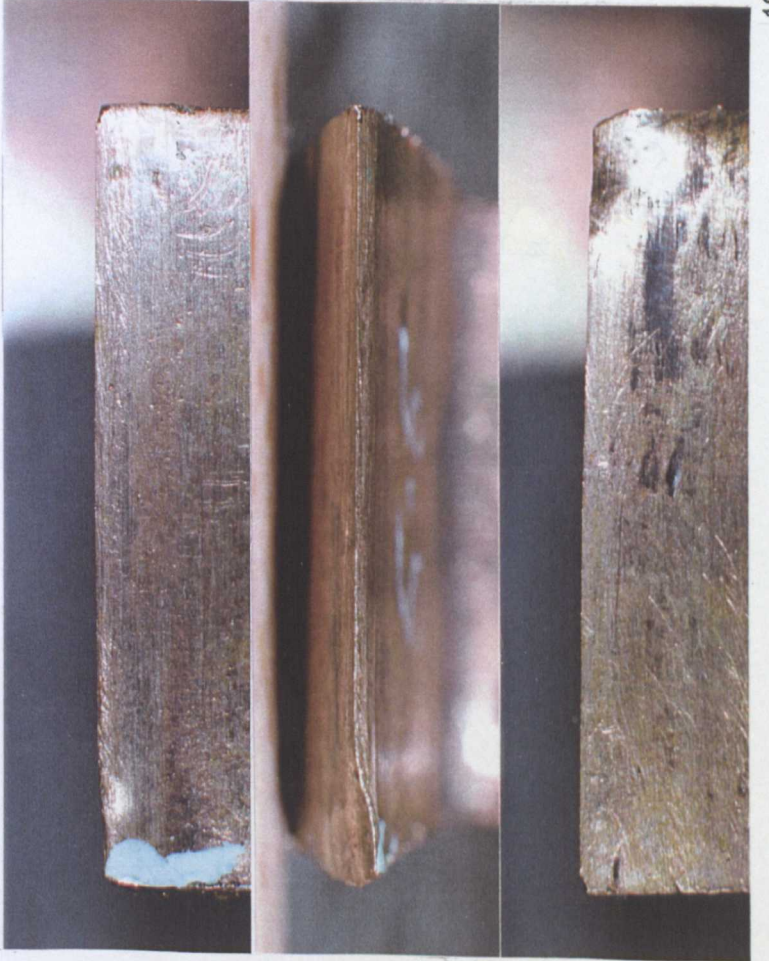
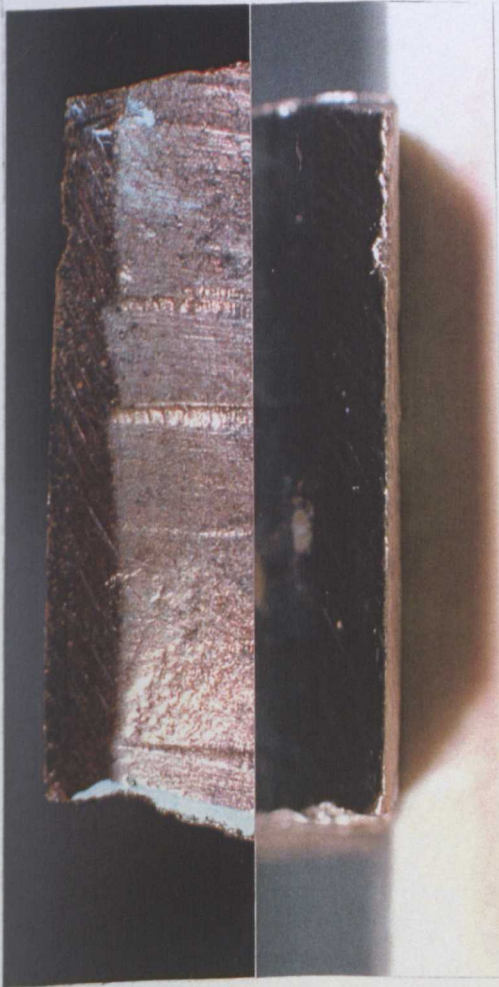
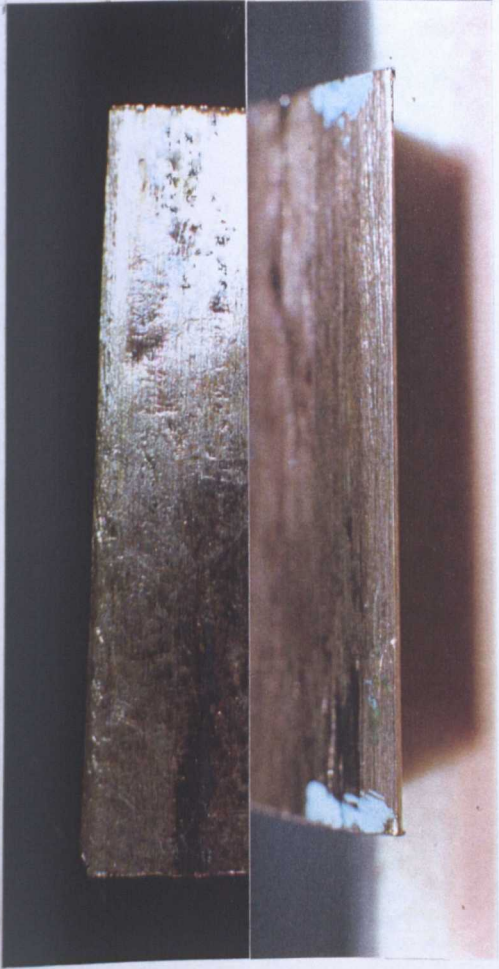


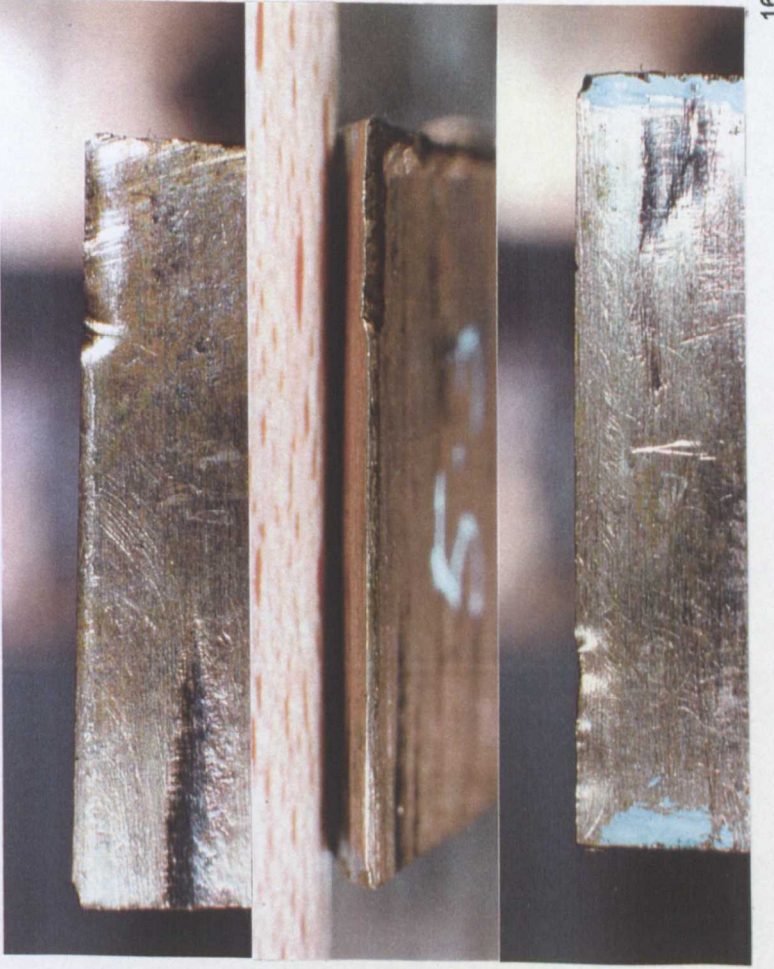
Plate 3.3(xxvi) - Impact Number 14



Segment 3.5 (soft)



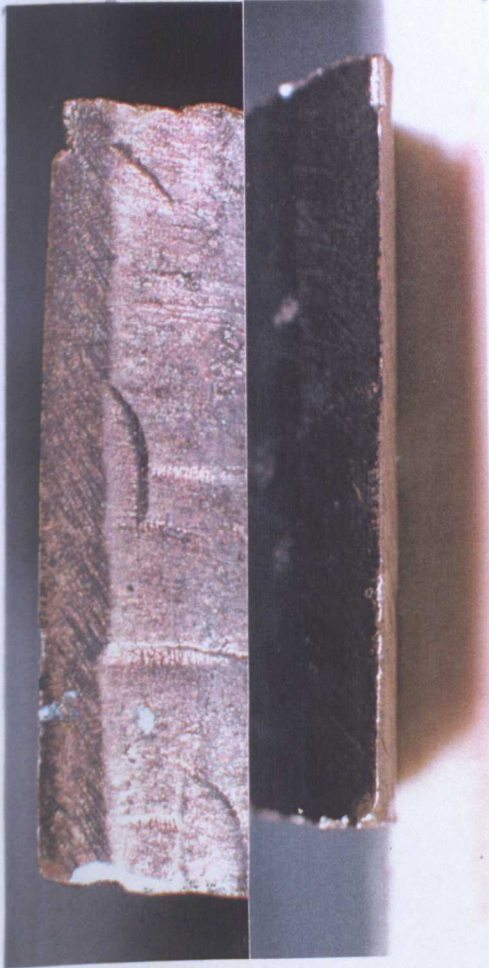
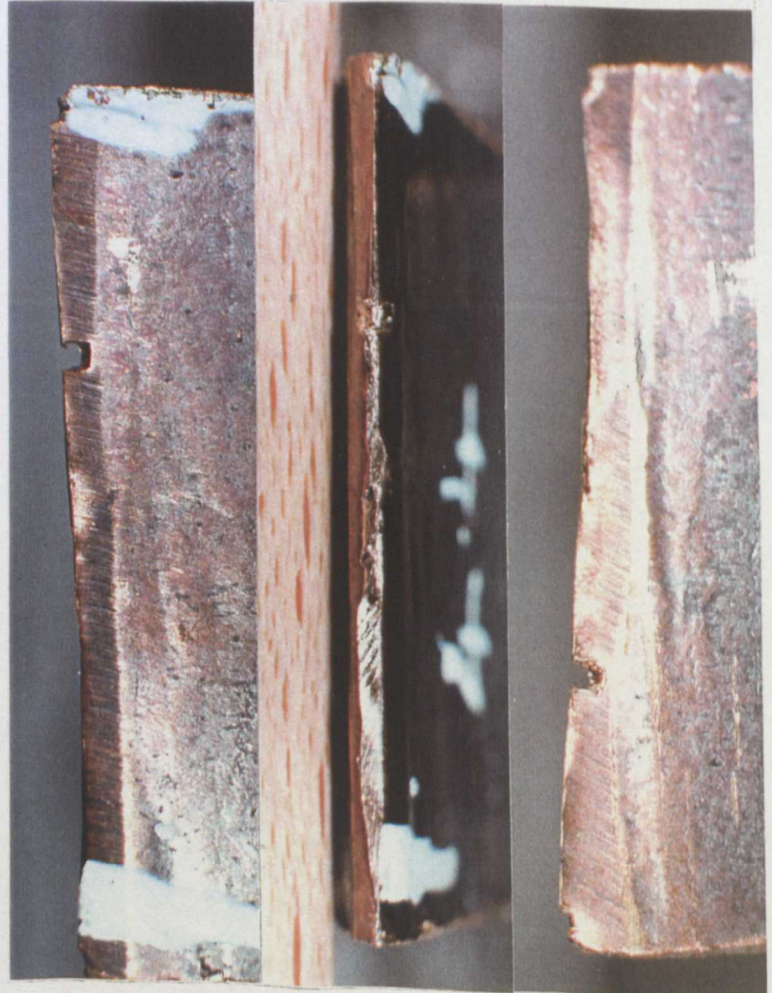
Segment 5.3 (medium)



Scale 4.9:1



Segment 4.4 (soft)



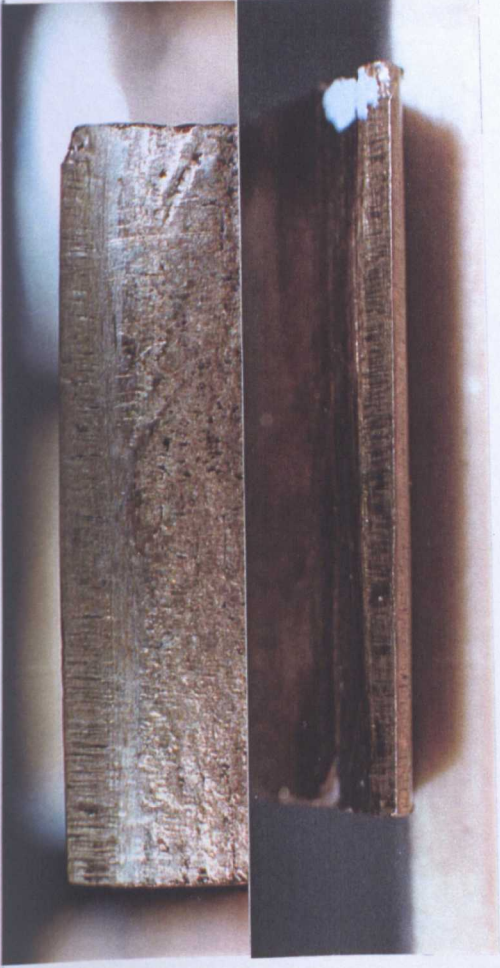
Segment 3.3 (soft)



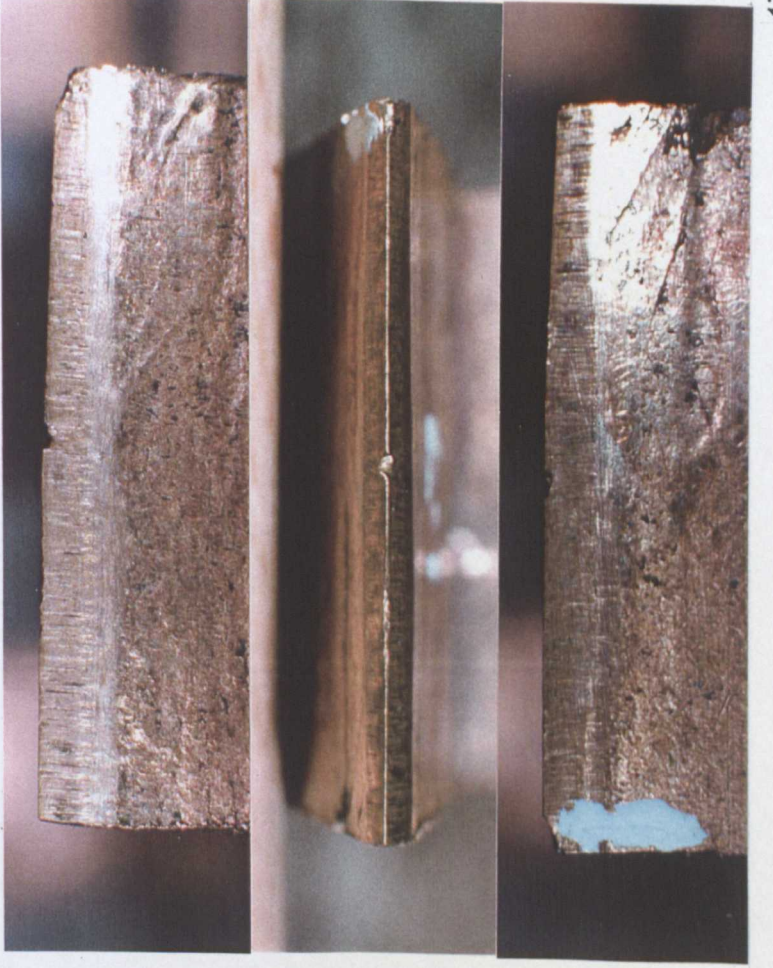
Plate 3.3(xxviii) - Impact Number 16



Segment 4.7 (soft)



Segment 1.7 (hard)





Segment 6.7 (medium)



Segment 2.7 (hard)

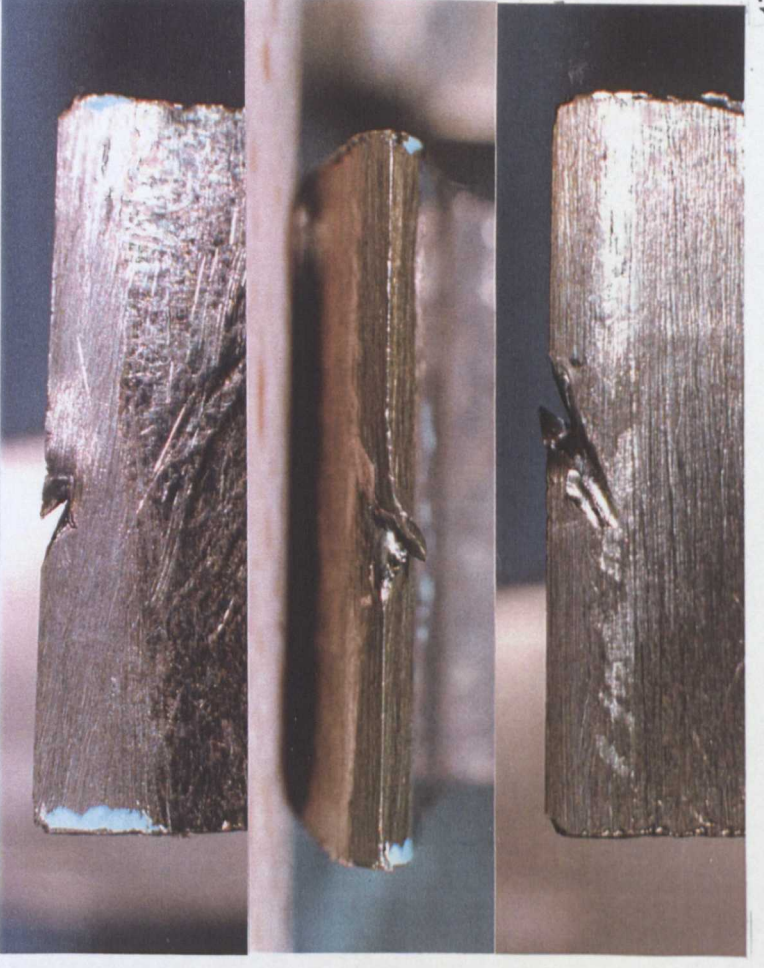
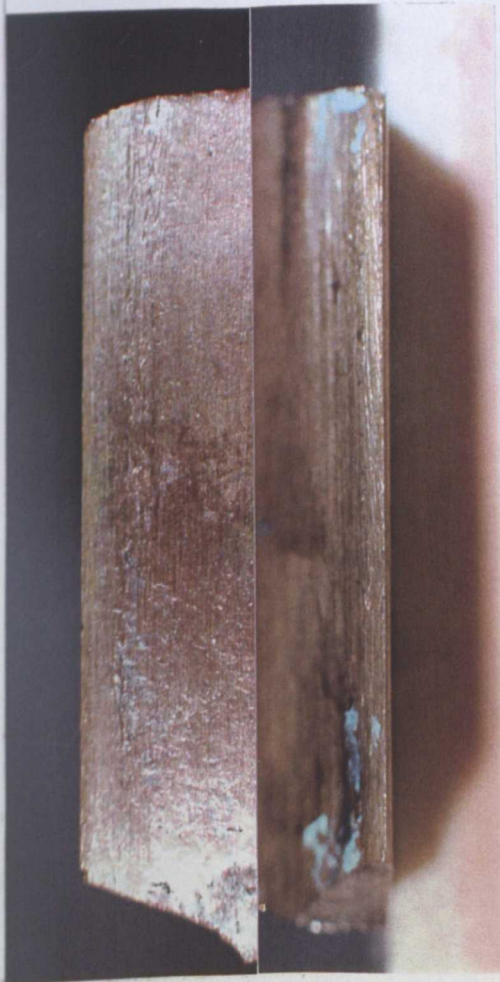
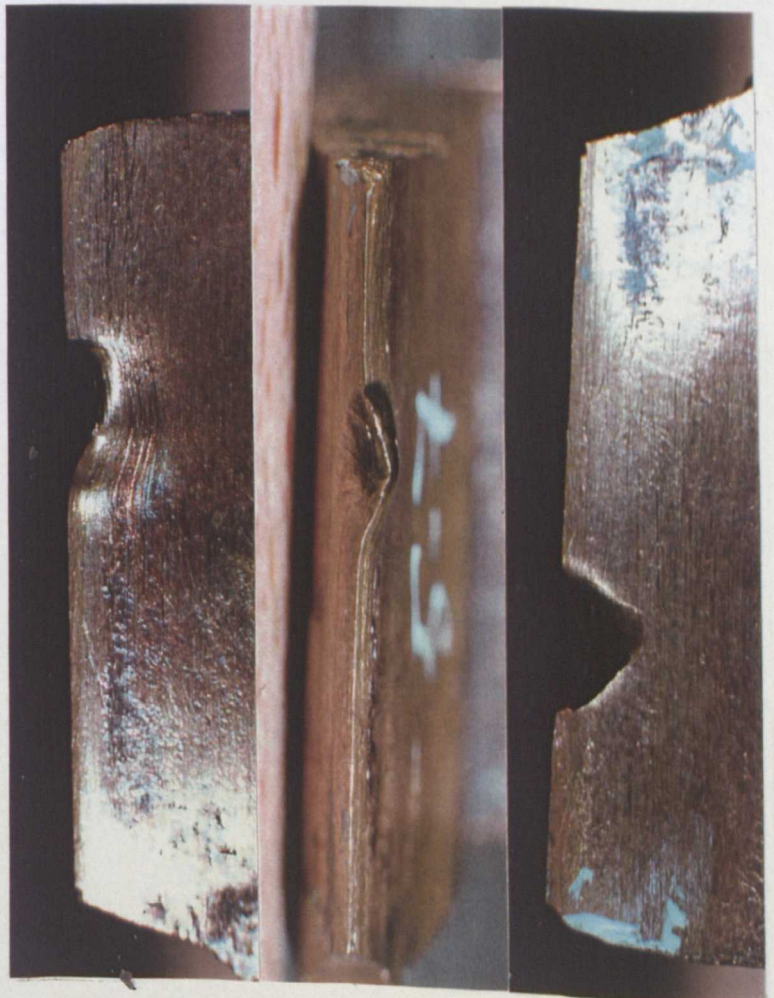


Plate 3.3(xxx) - Impact Number 18



Segment 5.7 (medium)



Segment 4.2 (soft)



Plate 3.3(xxxi) - Impact Numbers 19 & 20



Segment 1.8 (hard)



Segment 5.8 (medium)



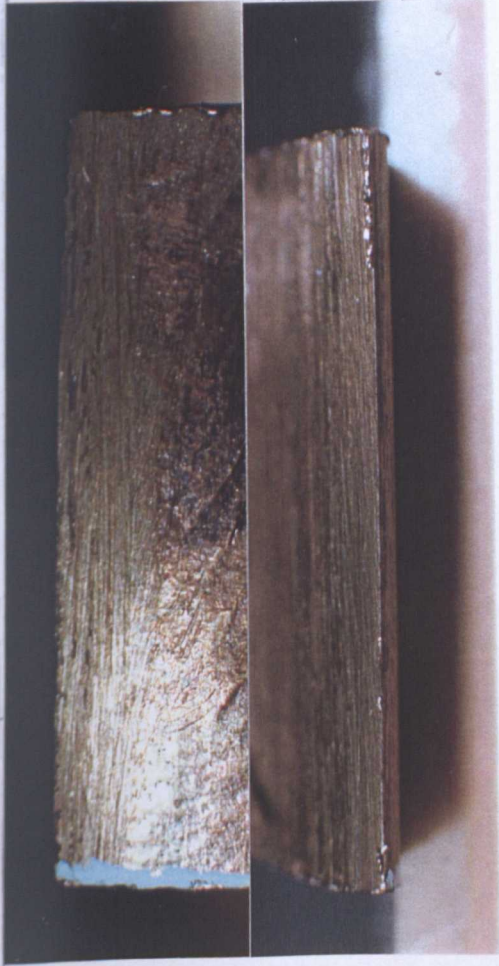
Scale 4.9:1



Plate 3.3(xxxii) - Impact Numbers 21 & 22



Segment 3.8 (soft)



Segment 2.8 (hard)



Scale 4.9:1



Segment 4.8 (soft)



Segment 6.8 (medium)



Scale 4.9:1

Plate 3.3(xxxiv) - Impact Numbers 25 & 26



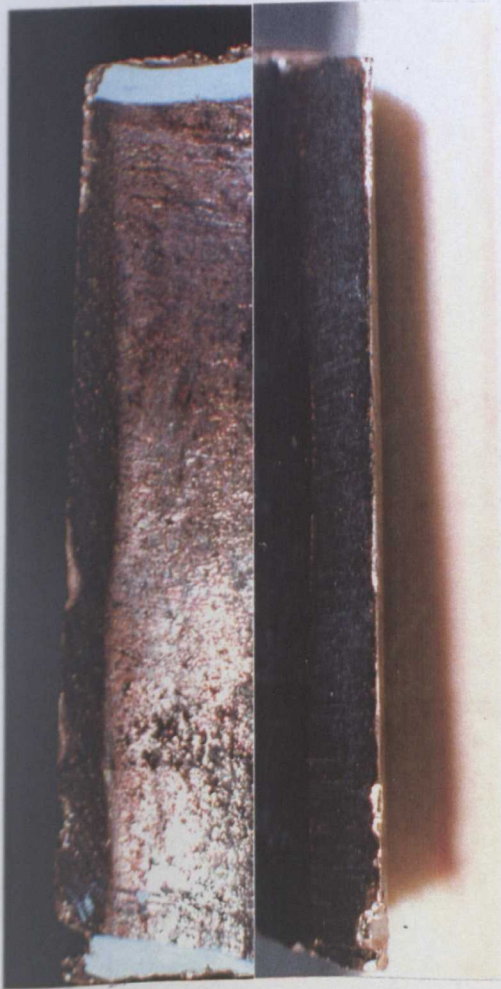
Segment 2.6 (hard)



Segment 2.9 (hard)



Plate 3.3(xxxv) - Impact Numbers 27 & 28



Segment 3.9 (soft)



Segment 4.9 (soft)



Plate 3.3(xxxvi) - Impact Numbers 29 & 30



Segment 5.9 (medium)



Segment 6.9 (medium)

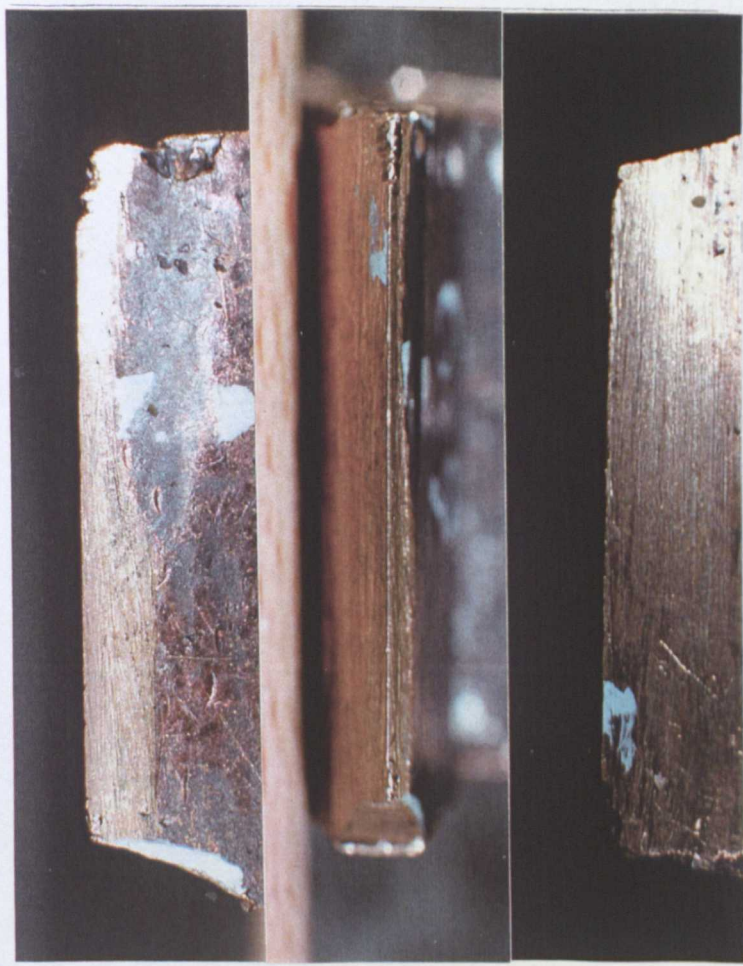
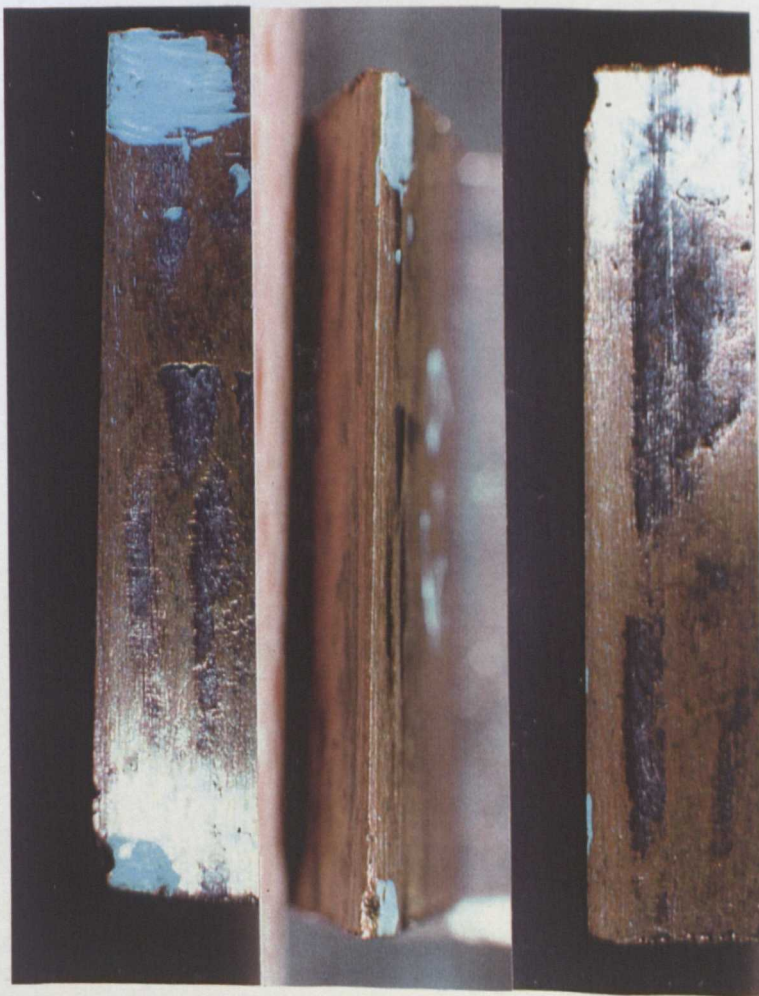


Plate 3.3(xxxvii) - Impact Numbers 31 & 32



Segment 1.10 (hard)

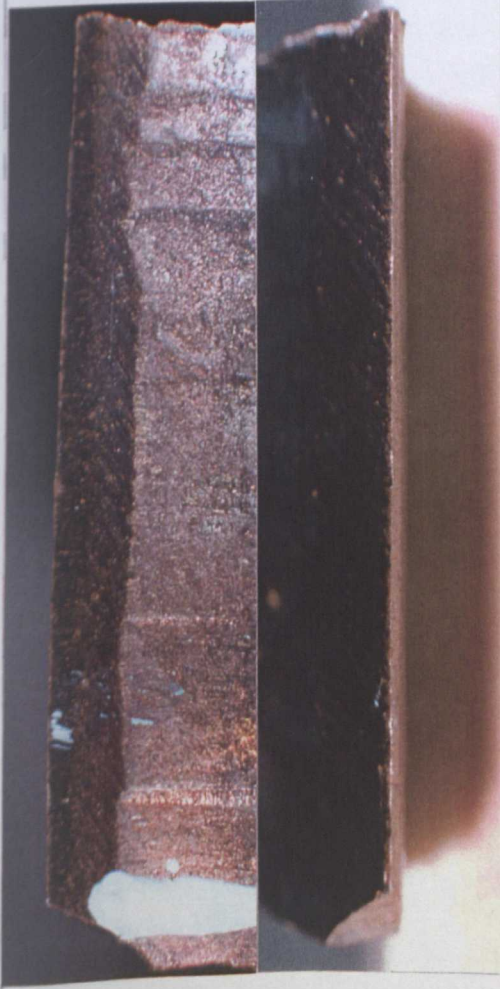


Segment 1.9 (hard)



Scale 4.9:1

Plate 3.3(xxxviii) - Impact Numbers 33 & 34



Segment 3.7 (soft)



Segment 6.4 (medium)



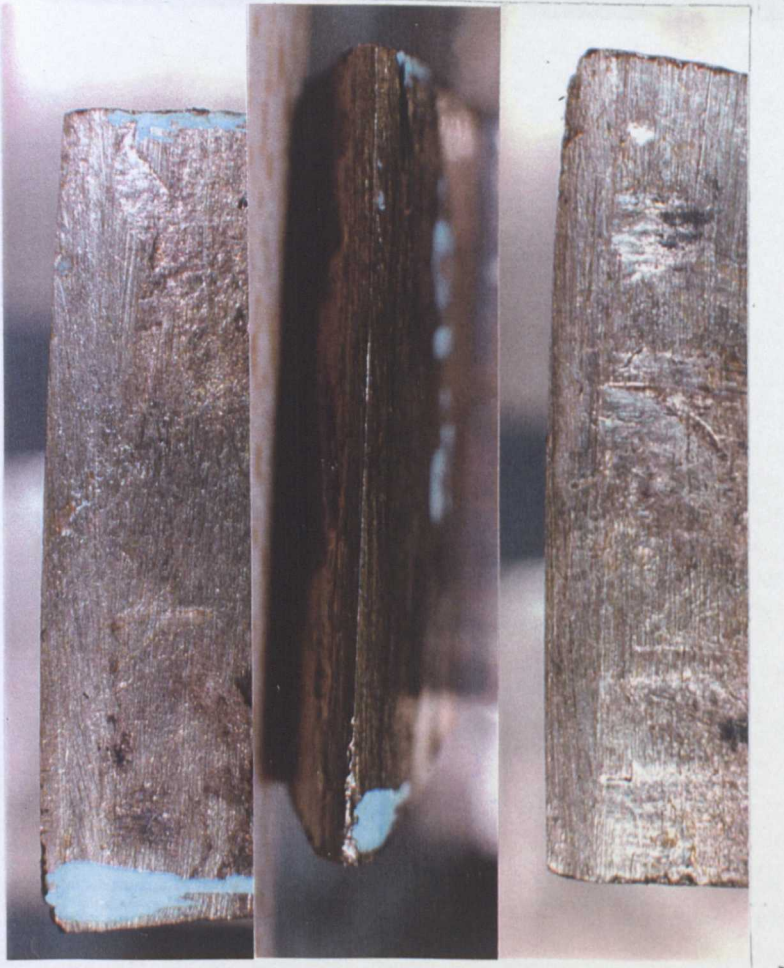
Plate 3.3(xxxix) - Impact Numbers 35 & 36



Segment 2.4 (hard)



Segment 2.10(hard)

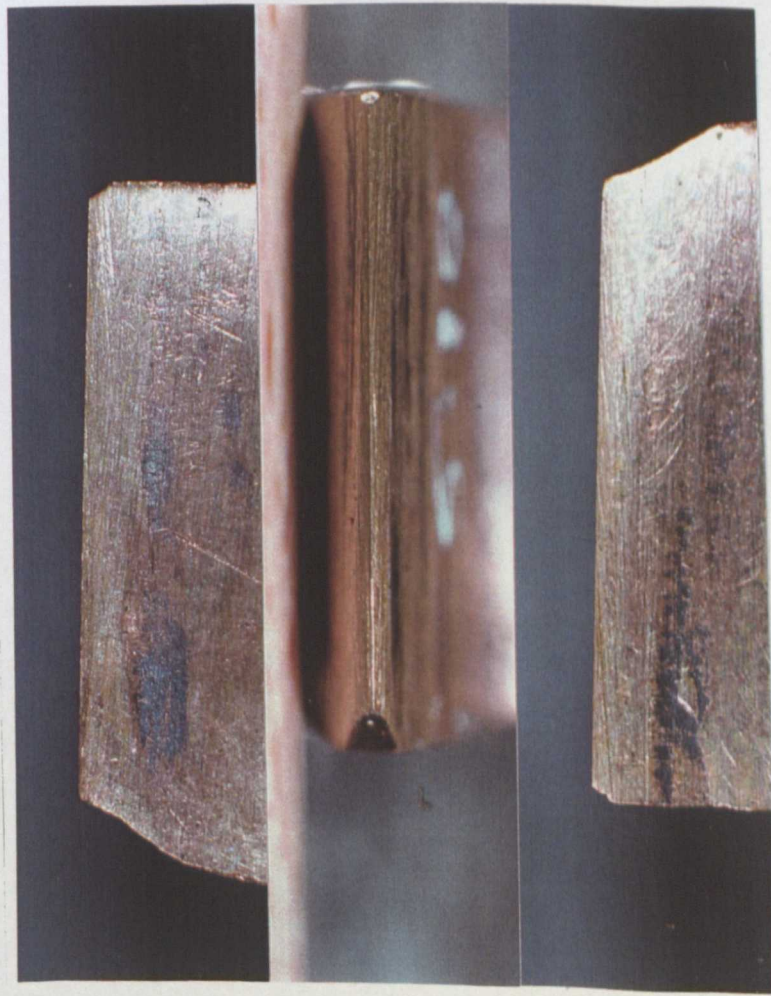


Scale 4.9:1

Plate 3.3(xl) - Impact Numbers 37 & 38



Segment 5.10 (medium)



Scale 4.9:1



Segment 6.10 (medium)





Segment 4.10 (soft)



Segment 3.10 (soft)

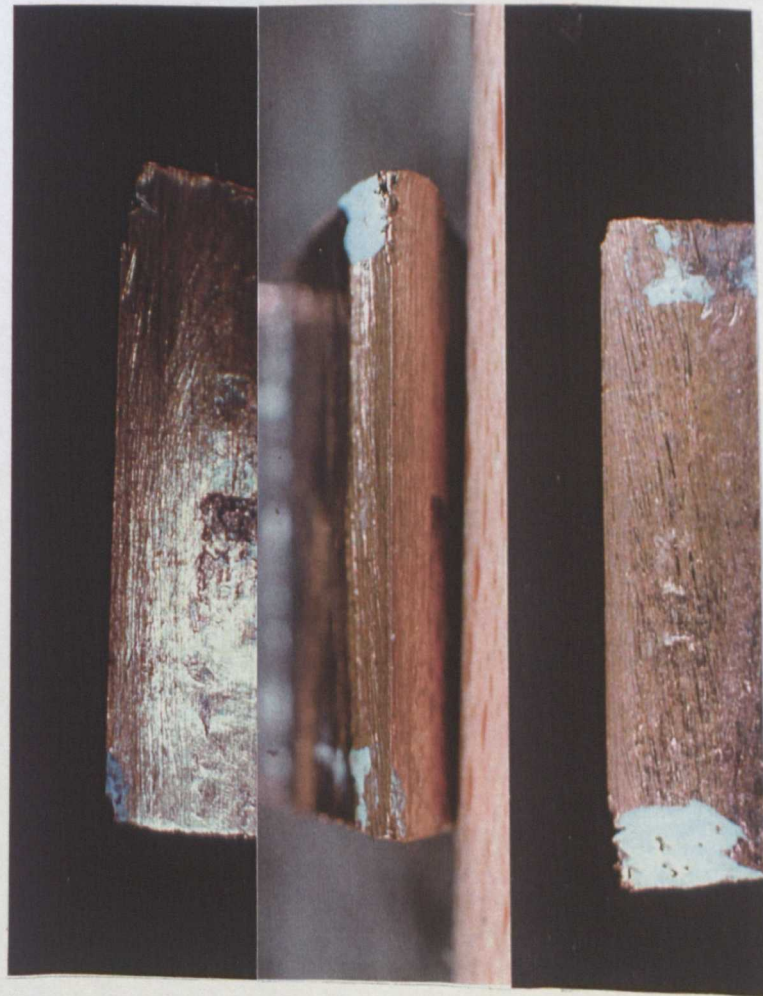




Segment 6.2 (medium)



Segment 4.6 (soft)



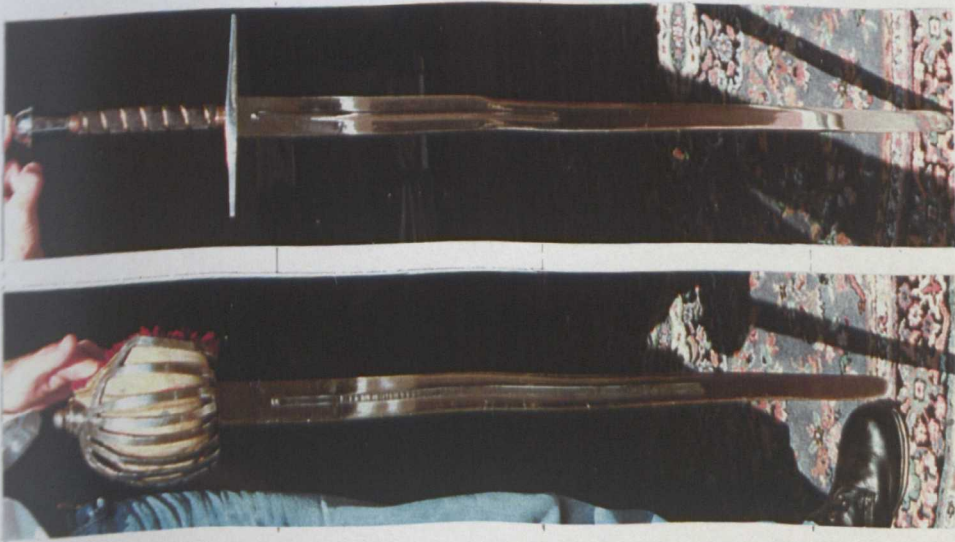


Plate 3.4: Impact Damage from Sword Fighting



Top Left: (i) & (ii) Mild steel blunt swords

Top Centre: (iii)-(iv) Single impacts

Centre: (v) 1 minor + 1 major impact

Bottom Centre: (vi)-(vii) Single Impacts

Top Right: (viii)-(ix) Double impacts

Bottom Right: (x)-(xii) Sliding impacts

Plate 4.1.3: Manufacture



(i) Clay mould for Ewart Park sword (Springfield Lyons)



(ii) Clay mould for fillet defined spearhead (Sandy Lane, Glos)



(iii) Surface porosity (NMS DQ 306)

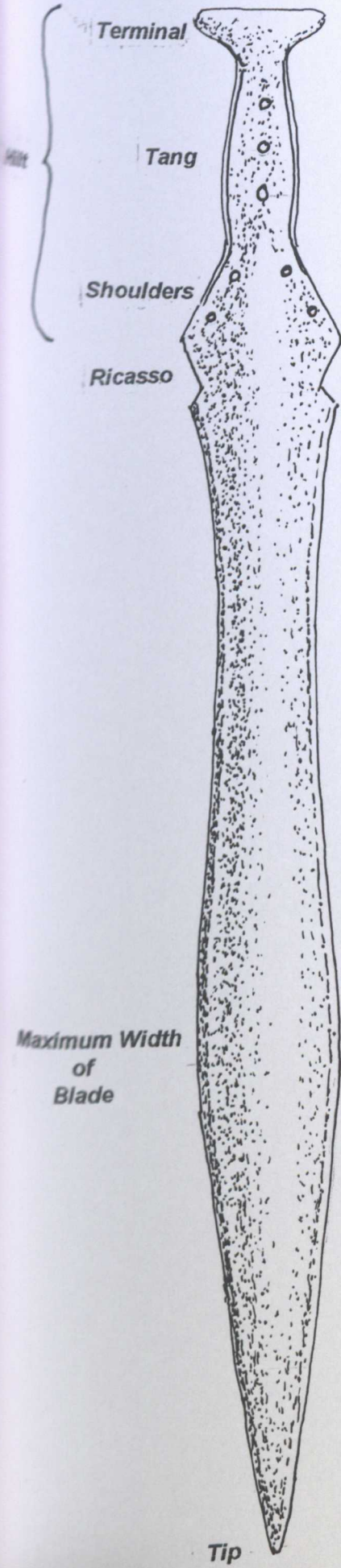


(iv) Cast on hilt (Hunterian Museum)

Plate 4.2.1 Sword Features and Types

Type: Ewart Park

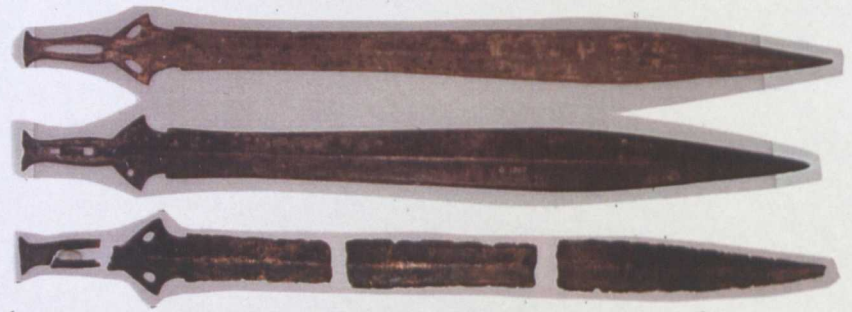
Average Dimensions - Scale 1:2



Early Swords



Wilburton Swords



Ewart Park Swords



Late Swords



Plate 4.2.2 Sword Design



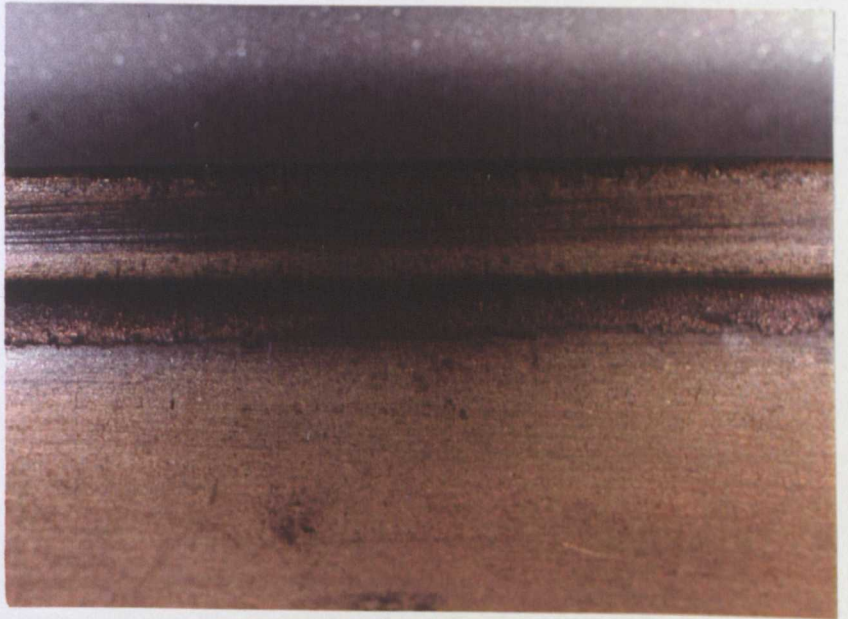
(i) Indented ricasso, formed by casting (BM P1976 7-1 13)



(ii) Milled ricasso (BM WG 1239)



(iii) Decoration in ricasso area (BM WG 1249)



(iv) Edge ridge (BM WG 2271)



(v) Blade with 'facets' (Waterden hoard)



(i) 'Slot' between rivet holes (Museum of London O 1347)



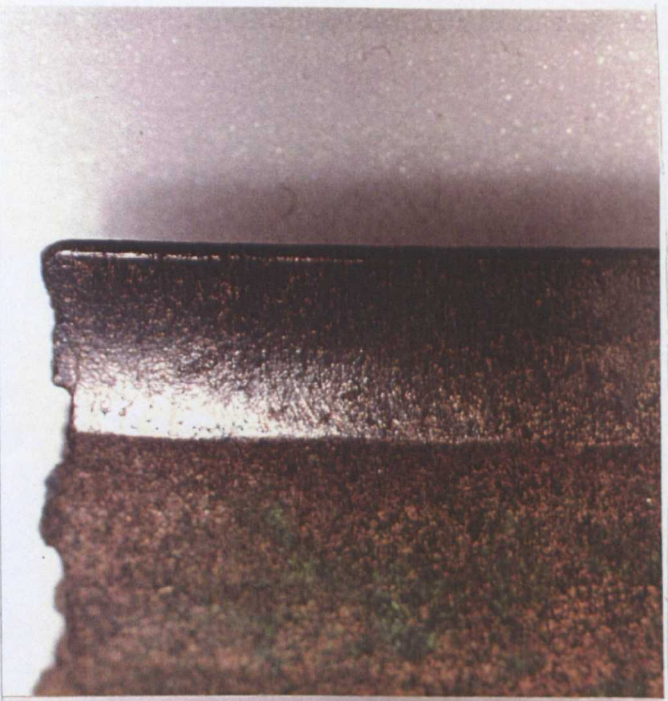
(ii) 'Slot' between rivet holes (Cambridge Museum Z 46784)



(iii) 'Full sized rivet (Museum of London O 1353)



(iv) Pin rivet (Royal Armouries IX 1317)



(v) Hollow ground edge (Cambridge Museum 31.392)



(i) BM 1892 9-1 305



(ii) CMAA Z 24871



(iii) NMS DL 16



(iv) NMS DL4



(vi) BM WG 1250



(vii) BM WG 1245



(viii) BM 91 5-14 33



(ix) NMS DL 52



(x) NMS DL 55



(xi) BM 91 5-14 32



(xii) BM 1856 7-1 1352



(xiii) CMAA 32.326



(xiv) NMS DL 5



(xv) NMS DL 20



(xvi) 1: No damage (BM 1857 9-20 1)



(xix) 3: 'Combat' damage (BM 1850 12-26 1)



(xvii) 2: Some damage, probably all corrosion (BM 1871 10-5 1)



(xx) 4: Heavy damage, morphology indicates use of axe (BM 1891 5-14 36)



(xxiii) 2: Some damage, probably notched (NMS DL 11)



(xxi) 5: Very heavy damage, clearly hacked (CMAA Z4242)

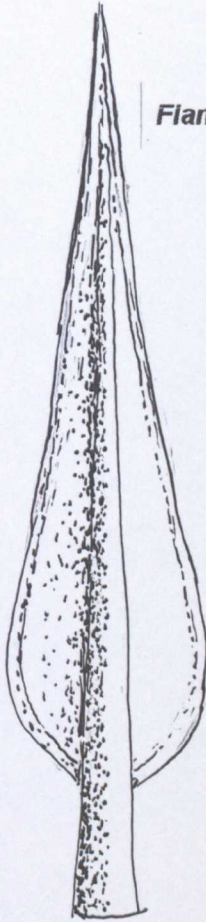


Plate 4.3.1(i): Spearhead Blade Shapes

Lanceolate



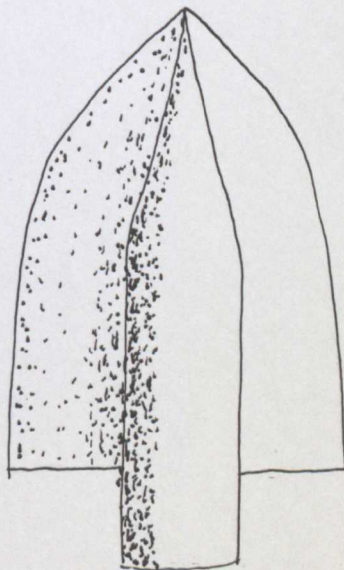
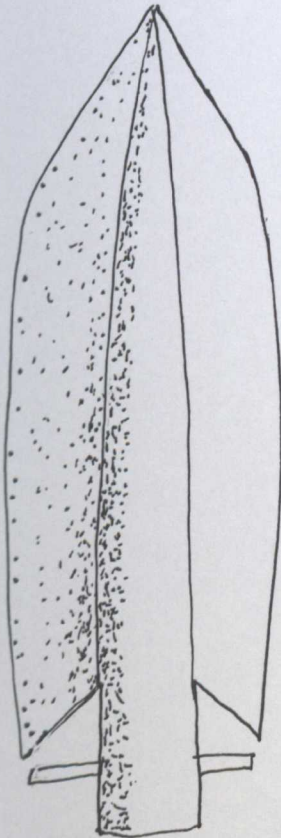
Flame-shaped



Ogival



Barbed



Triangular

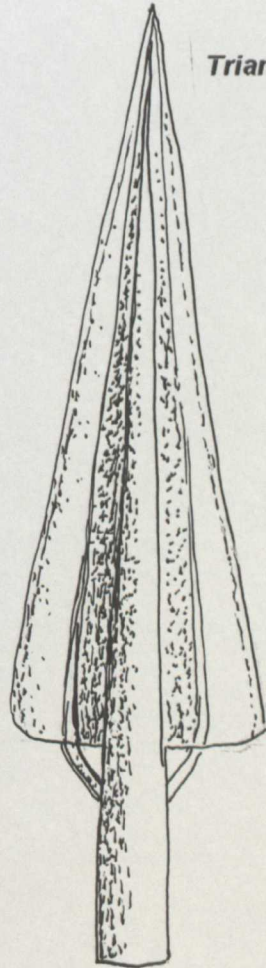


Plate 4.3.1(ii)-(iv): Spearhead Characteristics - Basal-loops, 'Dumpiness' & Blade Openings



Top Left: Basal-loops - Close up + (inset) various blade shapes

Top Right: 'Dumpiness' - Dumpy spearhead with casting fault

Bottom Left: Blade Openings

Lunate & round

Offset lunate

Stepped, fillet-defined blade with lunate openings

Plate 4.3.1(v): Spearhead Characteristics - Stepped Blades



Waterden Hoard



Blackmoor Hoard



Plate 4.3.1(vi)-(vii): Spearhead Characteristics - Fillets & Channels

Top Left: Fillet-defined lanceolate spearhead
(St Andrews Hoard)

Bottom Left: Fillet-defined channels
Basal-looped triangular spearhead
(NMS DG 12)

Bottom Right: Fillet defined channels
Basal-looped lanceolate spearhead
(NMS DG 4)

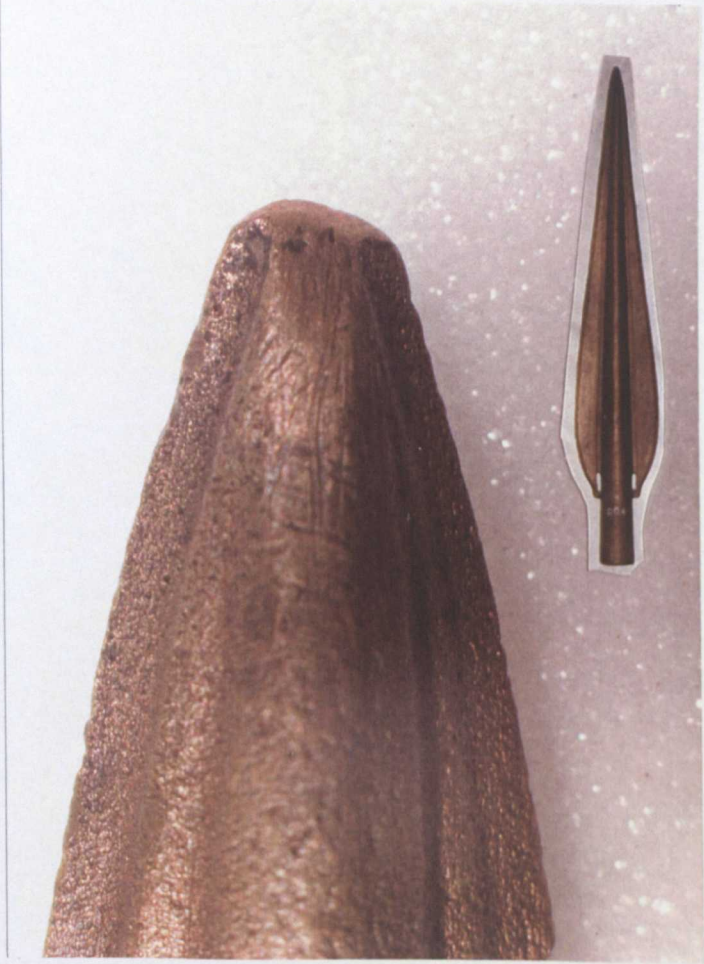


Plate 4.3.1(viii): Spearhead Characteristics - Hollow Casting



BM 1891 5-14 15



BM 1892 11-4 6



CMAA 1931.388



NMS DG 102

Plate 4.3.1(ix)-(x): Spearhead Characteristics - Straight Bases & Midrib Shapes



Top Left: Straight based spearheads (BM 1896 1-21 1, WG 1669)

Bottom Left: Round midrib (BM P1964 12-1 37)

Top Right: Angular midrib (CMAA 1913.209)

Bottom Right: No midrib (NMS L1963.42)



Plate 4.3.2: Spearheads - Socket Decoration



BM 1852 6-26 86



BM 1856 7-1 1363



BM 1853 1-22 127



CMAA Z 11413

Plate 4.3.4(i): Spearheads - Tip Damage



CMAA Z 25134



BM 1867 10-12 1



Plate 4.3.4(ii): Spearheads - Socket Damage



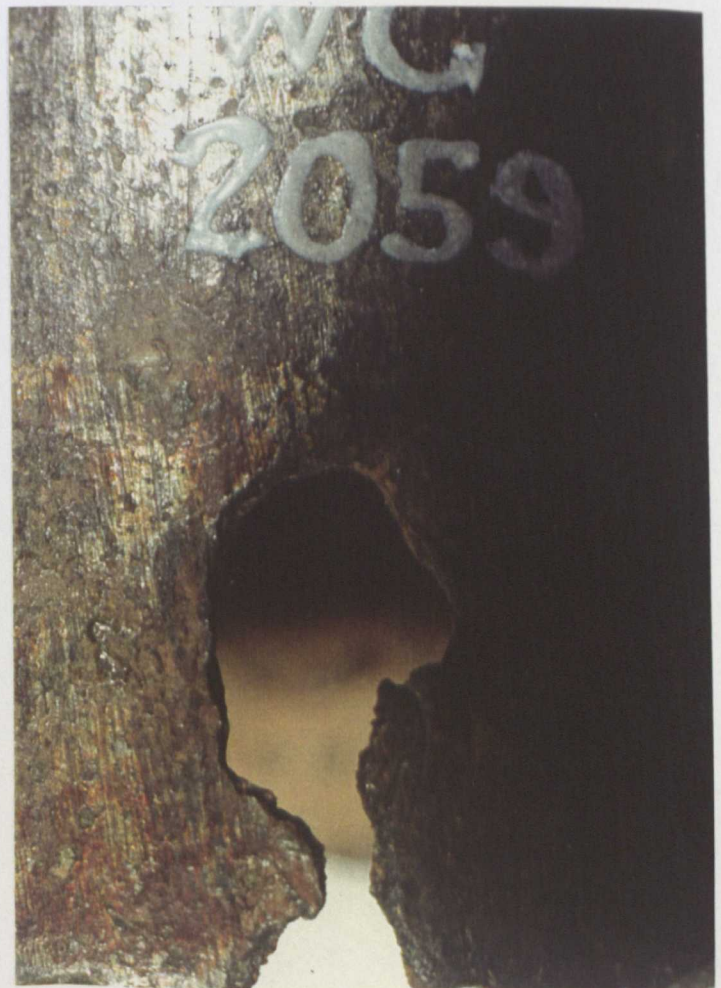
BM 1850 7-25 2



NMS DQ37



BM1847 2-8 102



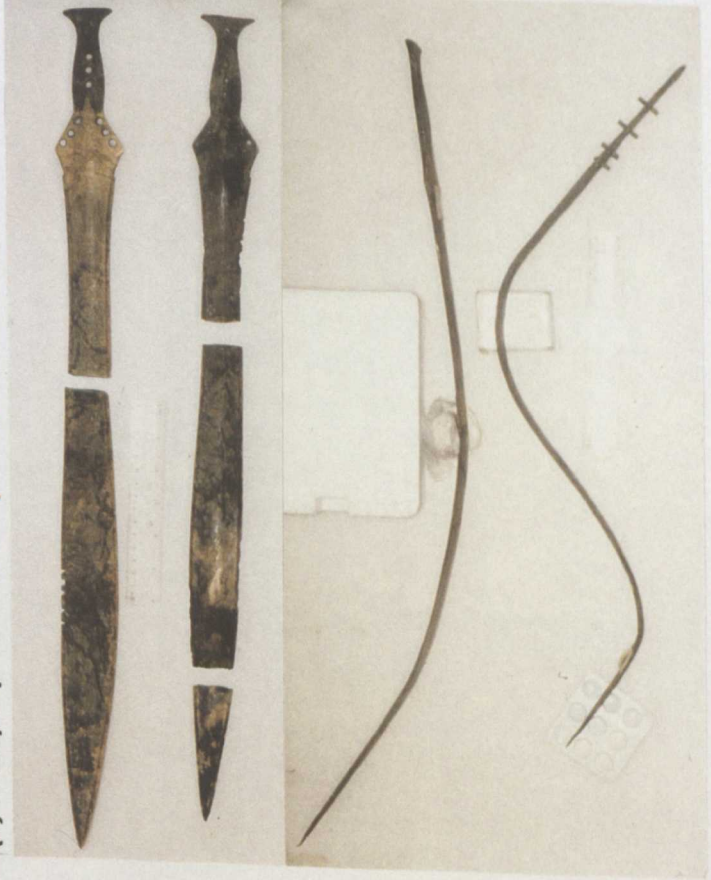
BM WG 2059

Plate 5.2.3(i)-(iv): Broken Swords.

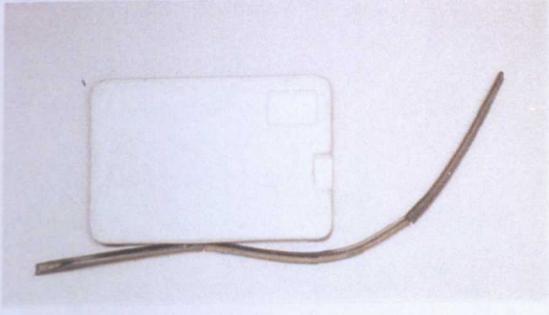


(i) Fragmentary swords from Minster, Thanet, Kent (BM 1893 4-26)

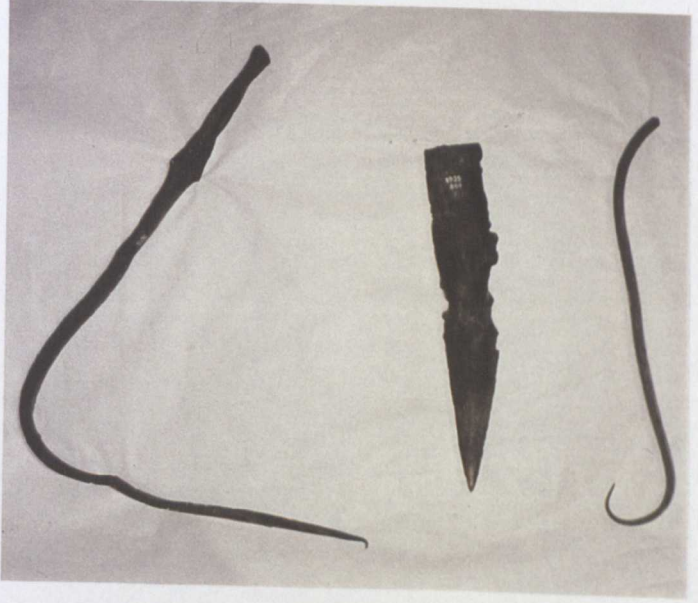
(ii) Multiple piece swords (BM 1892 11-4 3 & 1892 11-4 4)



(iii) Bent sword and sword pieces
(NMS DQ 303, DQ 304, DQ 305)



(iv) Multiple piece sword
(BM 1880 11-24 30)





(i) Broken sword tip showing porosity (CMAA 83.161)



(iii) Damaged spearhead midrib (CMAA 24.768)



(ii) 'Decommissioned' sword tip (BM 1851 12-30 1)



(iv) Crushed spearhead socket (BM 1880 11-24 29)



(i) Flag Fen - miniature sword (inset)



(ii) Burnt sword pieces and cauldron handle (Duddingston Loch)



(iii) Fused weapons (BM 1860 7-13 1)



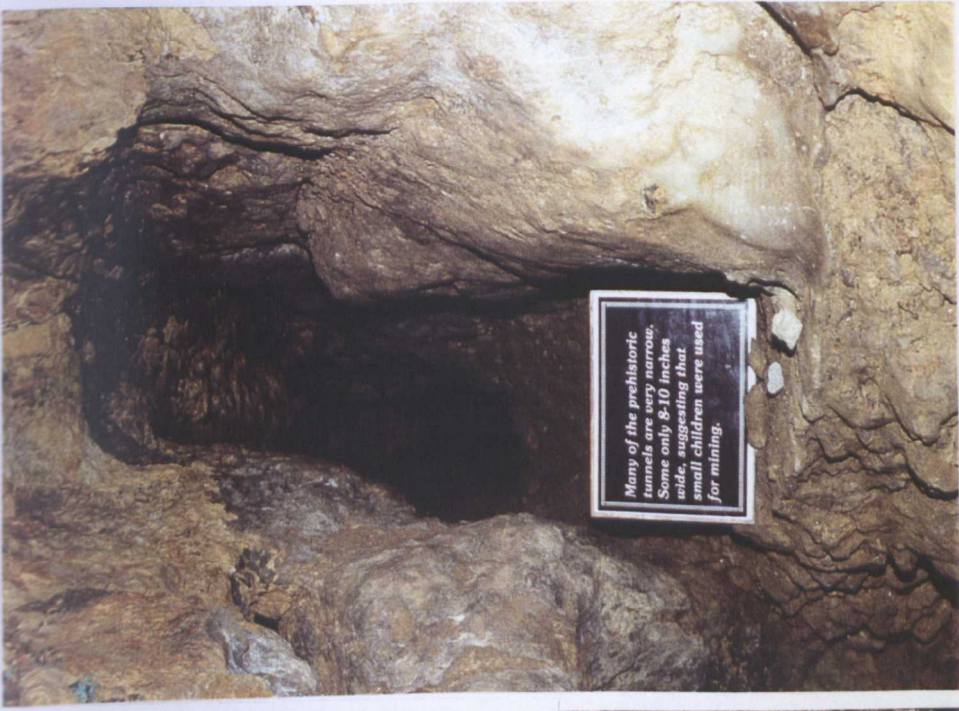
(iv) 'Melted' sword (BM WG 1709)



Plate 6.1(i)

Great Orme Llandudno

- Top Left: Great Orme Head**
- Top Right: Underground workings**
- Bottom: Open workings**



Many of the prehistoric tunnels are very narrow. Some only 6-10 inches wide, suggesting that small children were used for mining.

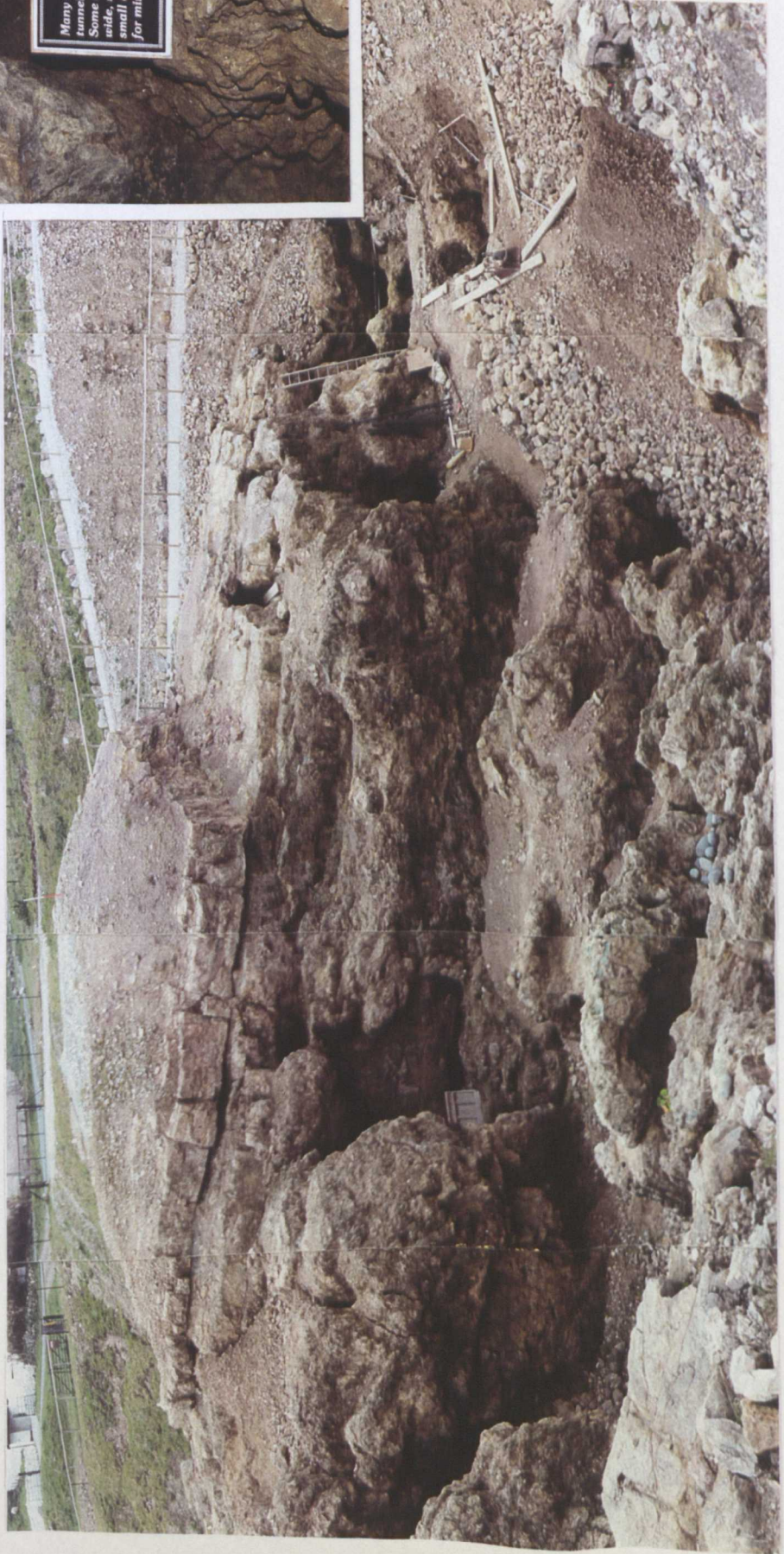




Plate 6.1(ii)

Copa Hill Cwmystwyth

- Left:** *The mine in its mountain setting*
- Top Right:** *Antler pick in course of excavation*
- Bottom Right:** *Wooden launder in situ*





Plate 6.3.3

Beeston Castle

Right: Site viewed from high ground to the southeast

Above: View to the northwest on a wet day



Appendix 1

Chi-squared tests for statistical significance

Chapter & Section	Population tested	Statistic	Groups	Category Area Tested	Type Tested	Proportion versus Expected	Chi-squared
2	<i>Metallographic Samples</i>						
2.3.1	All samples	Porosity	1&2(low)	All	East Anglia	All	6.3
2.3.1	All samples excluding burnt	Porosity	1&2(low)	All	East Anglia	All	8.9
2.3.1	All excluding hilts & burnt	Porosity	1&2(low)	Swords	All	All	12.2
2.3.2	All samples	Inclusion Distortion	4&5(high)	All	East Anglia	All	7.7
2.3.2	All samples excluding burnt	Inclusion Distortion	4&5(high)	All	East Anglia	All	8.3
2.3.2	All samples excluding burnt	Inclusion Distortion	4&5(high)	All	South East	All	5.8
2.3.2	Ewart Park sword samples	Inclusion Distortion	4&5(high)	Swords	East Anglia	Ewart Park	6.6
2.3.2	Ewart Park swords excluding burnt	Inclusion Distortion	4&5(high)	Swords	East Anglia	Ewart Park	4.5
2.3.3	All samples excluding burnt	Corrosion	1&2(low)	All	East Anglia	All	6.4
2.3.3	All samples excluding burnt	Corrosion	1&2(low)	Swords	All	All	12.1
2.3.3	All excluding hilts & burnt	Corrosion	1&2(low)	Swords	All	All	12.2
2.3.3	South Eastern excluding hilts	Corrosion	1&2(low)	Swords	South East	All	5.0
2.3.3	South Eastern excluding hilts & burnt	Corrosion	1&2(low)	Swords	South East	All	4.2
2.3.5	All samples excluding burnt	Coring	1&2(low)	All	South East	All	4.9
2.3.5	All samples excluding hilts	Recrystallisation	4&5(low)	Spears	All	All	20.6
2.3.5	All samples excluding hilts & burnt	Recrystallisation	4&5(low)	Spears	All	All	18.4
2.3.7	All samples	Grain size	a&b(small)	All	West	All	4.5
2.3.7	All samples excluding burnt	Grain size	a&b(small)	All	West	All	6.7
2.3.7	Sword samples excluding burnt	Grain size	a&b(small)	Swords	West	All	4.0
2.3.7	All excluding hilts & burnt	Grain size	f(large)	Spears	West	All	24.6
2.6.1.2	All samples	Composition Group 2	1&2	All	All	Early	29.8
2.6.1.2	All samples	Composition Group 1&2	1&2	All	All	Early	29.6
2.6.1.2	All samples	Composition Group 3	3&4	All	All	Wilburton	38.7
2.6.1.2	All samples	Composition Group 3&4	3&4	All	All	Wilburton	42.1
2.6.1.2	All samples	Composition Group 5,7,8,9&10	5,7,8,9&10	All	All	Ewart Park	24.5
2.6.1.2	South Eastern samples	Composition Group 3	3	All	South East	Wilburton	12.6
2.6.1.2	South Eastern samples	Composition Group 3&4	3&4	All	South East	Wilburton	21.9

(All tests had 1 degree of freedom: 5% significance Chi-squared > 3.8, 1% significance Chi-squared > 6.6)

Appendix 1

Chi-squared tests for statistical significance (ctd)

Chapter & Section	Population tested	Statistic	Groups	Category Area Tested	Type Tested	Proportion versus Expected	Chi-squared
2	<i>Metallographic Samples</i>						
2.6.1.2	South Eastern samples	Composition Group 5&9	All	South East	Ewart Park	Higher	11.8
2.6.1.2	All samples	Composition Group 7	All	Scotland	All	Higher	12.8
2.6.1.2	All samples	Composition Group 6,7&8	All	Scotland	All	Higher	15.5
2.6.1.2	All samples	Composition Group 3&4	All	South East	All	Higher	4.1
2.6.1.2	Ewart Park samples	Composition Group 7&8	All	South East	All	Lower	10.4
2.6.1.2	Ewart Park samples	Composition Group 6,7&8	All	Scotland	All	Higher	12.4
4	Weapons						
4.2.3	Swords	Edge Fineness	'Blunt'	Swords	Scotland	Higher	6.0
4.2.3	Swords	Edge Fineness	'Sharp'	Swords	East Anglia	Higher	12.9
4.2.3	Swords	Edge Fineness	'Sharp'	Swords	South East	Lower	6.6
4.2.4	Swords	Edge Damage	'none'	Swords	All	Higher	7.3
4.2.4	Swords	Edge Damage	'severe'	Swords	All	Lower	11.8
4.2.4	Swords	Edge Damage	'none'	Swords	All	Lower	7.8
4.2.4	Swords	Edge Damage	'severe'	Swords	All	Higher	5.0
4.2.4	Swords	Edge Damage	'severe'	Swords	All	Higher	7.4
4.2.4	South Eastern Swords	Edge Damage	'severe'	Swords	South East	Lower	10.4
4.2.4	South Eastern Swords	Edge Damage	'severe'	Swords	South East	Higher	10.4
4.2.4	South Eastern Swords	Edge Damage	'use'	Swords	South East	Lower	4.7
4.2.4	Swords	Edge Damage	'none'	Swords	South East	Higher	12.7
4.2.4	Swords	Edge Damage	'severe'	Swords	South East	Lower	18.8
4.2.4	Swords	Edge Damage	'use'	Swords	South East	Higher	11.2
4.2.4	Swords	Edge Damage	'severe'	Swords	Scotland	Higher	45.6
4.2.4	Ewart Park Swords	Edge Damage	'severe'	Swords	East Anglia	Higher	11.3
4.2.4	Ewart Park Swords	Edge Damage	'none'	Swords	South East	Lower	4.8
4.2.4	Ewart Park Swords	Edge Damage	'severe'	Swords	South East	Higher	11.7
4.2.4	Ewart Park Swords	Edge Damage	'use'	Swords	Scotland	Higher	11.7
4.2.4	Ewart Park Swords	Edge Damage	'severe'	Swords	East Anglia	Higher	29.7

(All tests had 1 degree of freedom: 5% significance Chi-squared > 3.8, 1% significance Chi-squared > 6.6)

Appendix 1

Chi-squared tests for statistical significance (ctd)

Chapter & Section	Population tested	Statistic	Groups	Category Area Tested	Type Tested	Proportion versus Expected	Chi-squared
4	Weapons						
4.2.4	Wilburton Swords	Edge Damage	'use'	Swords	South East	Wilburton	4.4
4.2.4	Wilburton Swords	Edge Damage	'severe'	Swords	South East	Wilburton	6.5
4.2.4	Wilburton Swords	Edge Damage	'use'	Swords	East Anglia	Wilburton	4.3
4.2.4	Wilburton Swords	Edge Damage	'severe'	Swords	East Anglia	Wilburton	5.5
4.3.1.2	Spearheads	Blade shape	'flame'	Spears	Scotland	All	6.9
4.3.1.2	Spearheads	Blade shape	'flame'	Spears	Scot+E Ang	All	12.5
4.3.1.2	Spearheads	Blade shape	'barbed'	Spears	Scotland	All	6.7
4.3.1.2	Spearheads	Blade shape	'barbed'	Spears	East Anglia	All	8.9
4.3.1.2	Spearheads	Blade shape	'lanceolate'	Spears	All	Basal-looped	48.6
4.3.1.2	Spearheads	Characteristics	'dumppiness'	Spears	Scotland	All	10.5
4.3.1.2	Spearheads	Characteristics	'dumppiness'	Spears	Scot+West	All	17.6
4.3.1.2	Spearheads	Characteristics	'dumppiness'	Spears	South East	All	20.2
4.3.1.2	Spearheads	Blade Shape	'lanceolate'	Spears	All	Dumpy	11.3
4.3.1.2	Spearheads	Characteristics	'openings'	Spears	Scot+West	All	6.8
4.3.1.2	Spearheads	Characteristics	'openings'	Spears	East Anglia	All	5.1
4.3.1.2	Spearheads	Characteristics	'single steps'	Spears	South East	All	8.9
4.3.1.2	Spearheads	Characteristics	'lanceolate'	Spears	All	Stepped	16.3
4.3.1.2	Spearheads	Characteristics	'fillets'	Spears	Scotland	All	11.7
4.3.1.2	Spearheads	Characteristics	'fillets'	Spears	Scot+West	All	16.2
4.3.1.2	Spearheads	Characteristics	'fillets'	Spears	East Anglia	All	5.6
4.3.1.2	Spearheads	Characteristics	'fillets'	Spears	E Anglia+SE	All	16.2
4.3.1.2	Spearheads	Characteristics	'lanceolate'	Spears	All	Fillet-defined	4.2
4.3.1.2	Spearheads	Blade shape	'hollow cast'	Spears	East Anglia	All	16.9
4.3.1.2	Spearheads	Characteristics	'hollow cast'	Spears	West	All	7.1
4.3.1.2	Spearheads	Characteristics	'hollow cast'	Spears	South East	All	10.4
4.3.1.2	Spearheads	Blade shape	'ogival'	Spears	All	Hollow cast	14.9
4.3.1.2	Spearheads	Blade shape	'triangular'	Spears	All	Hollow cast	13.7

(All tests had 1 degree of freedom: 5% significance Chi-squared > 3.8, 1% significance Chi-squared > 6.6)

Appendix 1

Chi-squared tests for statistical significance (ctd)

Chapter & Section	Population tested	Statistic	Groups	Category Area Tested	Type Tested	Proportion versus Expected	Chi-squared
4	Weapons						
4.3.1.2	Spearheads	Blade shape	'barbed'	Spears	All	Hollow cast	5.4
4.3.1.2	Spearheads	Blade shape	'lanceolate'	Spears	All	Hollow cast	14.8
4.3.1.2	Spearheads	Type & Shape	'triangular bl	Spears	All	Straight base	205.0
4.3.1.2	Spearheads	Midrib	angular	Spears	West	All	4.4
4.3.1.2	Spearheads	Midrib	none	Spears	Scotland	All	5.7
4.3.1.2	Spearheads	Midrib	none	Spears	South East	All	5.7
4.3.1.2	Spearheads	Midrib	angular	Spears	All	Flame-shape	24.6
4.3.1.2	Spearheads	Midrib	angular	Spears	All	Triangular	14.0
4.3.1.2	Spearheads	Midrib	angular	Spears	All	l/o/brb blades	40.4
4.3.1.2	Spearheads	Midrib	angular	Spears	All	Lanceolate	4.4
4.3.1.2	Spearheads	Midrib	round	Spears	All	Barbed	31.0
4.3.1.2	Spearheads	Midrib	angular	Spears	All	Flame-shape	27.0
4.3.1.2	Spearheads	Midrib	angular	Spears	All	Triangular	5.4
4.3.1.2	Spearheads	Midrib	angular	Spears	All	Lanceolate	23.6
4.3.1.2	Spearheads	Midrib	angular	Spears	All	Ogival	11.9
4.3.1.2	Spearheads	Midrib	angular	Spears	All	Ogival	40.0
4.3.1.2	Spearheads	Decoration	present	Spears	All	Basal-looped	4.6
4.3.3	Spearheads	Casting Quality	'fair'	Spears	All	Barbed	7.0
4.3.3	Spearheads	Casting Quality	'poor'	Spears	All	Barbed	6.8
4.3.3	Spearheads	Casting Quality	'good'	Spears	All	Ogival	7.7
4.3.3	South Eastern Spearheads	Casting Quality	'good'	Spears	South East	All	8.6
4.3.3	South Eastern Spearheads	Casting Quality	'poor'	Spears	South East	All	9.3
4.3.3	Western Spearheads	Casting Quality	'good'	Spears	West	All	5.4
4.3.3	Western Spearheads	Casting Quality	'poor'	Spears	West	All	14.0
4.3.4	Spearheads with tips present	Tip Damage	'undamaged'	Spears	South East	All	23.9
4.3.4	Spearheads	Tip Damage	'undamaged'	Spears	South East	All	22.8
4.3.4	Spearheads	Tip Damage	'undamaged'	Spears	West	All	4.8
4.3.4	Spearheads with tips present	Tip Damage	'undamaged'	Spears	All	Dumpy	4.6
4.3.4	Spearheads	Tip Damage	'undamaged'	Spears	All	Basal-looped	

(All tests had 1 degree of freedom: 5% significance Chi-squared > 3.8, 1% significance Chi-squared > 6.6)

Appendix 1

Chi-squared tests for statistical significance (ctd)

Chapter & Section	Population tested	Statistic	Groups	Category Area Tested	Type Tested	Proportion versus Expected	Chi-squared
4	Weapons						
4.3.4	Spearheads	Tip Damage	'undamaged'	Spears	Ogival	Higher	4.8
4.3.4	Spearheads	Tip Damage	'undamaged'	Spears	Dumpy	Higher	5.1
4.3.4	Spearheads	Tip Damage	'undamaged'	Spears	Plain Lanc'te	Lower	3.9
4.3.4	Spearheads with sockets present	Socket Damage	'undamaged'	Spears	All	Higher	6.9
4.3.4	Spearheads with sockets present	Socket Damage	'undamaged'	Spears	South East	Lower	7.3
4.3.4	Spearheads	Socket Damage	'undamaged'	Spears	Scotland	Higher	9.1
4.3.4	Spearheads with tips present	Socket Damage	'undamaged'	Spears	South East	Lower	7.6
4.3.4	Spearheads	Socket Damage	'undamaged'	Spears	Scotland	Lower	6.2
4.3.4	Spearheads	Socket Damage	'undamaged'	Spears	West	Higher	5.9
4.3.4	Spearheads	Socket Damage	'undamaged'	Spears	All	Higher	6.5
4.3.4	Spearheads	Socket Damage	'undamaged'	Spears	Ogival	Higher	7.8
4.3.4	Spearheads	Socket Damage	'undamaged'	Spears	Dumpy	Higher	6.5
4.3.4	Spearheads	Socket Damage	'undamaged'	Spears	Plain Lanc'te	Lower	7.8
5	Weapons						
5.2.2	Swords	Context	'wet'	Swords	All	Lower	14.7
5.2.2	Swords	Context	'wet'	Swords	East Anglia	Higher	5.4
5.2.2	Swords	Context	'wet'	Swords	South East	Higher	4.3
5.2.2	Swords	Context	'wet'	Swords	West	Higher	37.3
5.2.2	Swords	Context	'wet'	Swords	All	Higher	38.1
5.2.2	Swords	Context	'wet'	Swords	Early	Higher	104.2
5.2.2	Swords	Context	'wet'	Swords	Wilburton	Lower	14.9
5.2.2	Swords	Context	'wet'	Swords	Ewart Park	Higher	15.7
5.2.2	Spearheads	Context	'wet'	Spears	All	Higher	54.4
5.2.2	Spearheads	Context	'wet'	Spears	East Anglia	Lower	18.3
5.2.2	Spearheads	Context	'wet'	Spears	West	Higher	12.3
5.2.2	Spearheads	Context	'wet'	Spears	Scotland	Higher	5.8
5.2.2	Spearheads	Context	'wet'	Spears	All	Lower	40.8
5.2.2	Spearheads	Context	'wet'	Spears	Basal-looped	Higher	
5.2.2	Spearheads	Context	'wet'	Spears	Dumpy	Lower	
5.2.2	Spearheads	Context	'wet'	Spears	Ogival	Lower	
5.2.3	Weapons	Completeness	'entire'	Spears	All	Higher	

(All tests had 1 degree of freedom: 5% significance Chi-squared > 3.8, 1% significance Chi-squared > 6.6)

Appendix 1

Chi-squared tests for statistical significance (ctd)

Chapter & Section	Population tested	Statistic	Groups	Category Area Tested	Type Tested	Proportion versus Expected	Chi-squared
5	Weapons						
5.2.3	Weapons	Completeness	'multi-piece'	Swords	All	Higher	13.2
5.2.3.1	Swords	Completeness	'fragments'	Swords	South East	Higher	17.8
5.2.3.1	Swords	Completeness	'pieces'	Swords	South East	Lower	12.8
5.2.3.1	Swords	Completeness	'multi-piece'	Swords	South East	Lower	11.6
5.2.3.1	Swords	Completeness	'entire'	Swords	Scottish	Higher	15.3
5.2.3.1	Swords	Completeness	'fragments'	Swords	Scottish	Lower	19.7
5.2.3.1	Swords	Completeness	'multi-piece'	Swords	East Anglia	Higher	30.8
5.2.3.1	Swords	Completeness	'entire'	Swords	East Anglia	Lower	26.1
5.2.3.1	Swords	Completeness	'pieces'	Swords	East Anglia	Higher	10.6
5.2.3.1	Swords	Completeness	'entire'	Swords	All	Higher	22.3
5.2.3.1	Swords	Completeness	'broken'	Swords	All	Lower	18.1
5.2.3.1	Swords	Completeness	'fragments'	Swords	All	Lower	24.2
5.2.3.1	Swords	Completeness	'broken'	Swords	All	Higher	22.8
5.2.3.1	Swords	Completeness	'fragments'	Swords	Wilburton	Lower	14.5
5.2.3.1	Swords	Completeness	'entire'	Swords	Wilburton	Lower	8.9
5.2.3.1	Swords	Completeness	'fragments'	Swords	Ewart Park	Higher	15.0
5.2.3.1	Swords	Completeness	'pieces+frags'	Swords	Ewart Park	Higher	7.8
5.2.3.1	East Anglian Swords	Completeness	'pieces+frags'	Swords	East Anglia	Higher	5.0
5.2.3.1	East Anglian Swords	Completeness	'pieces+frags'	Swords	East Anglia	Lower	9.2
5.2.3.1	South Eastern Swords	Completeness	'entire'	Swords	South East	Higher	9.7
5.2.3.1	South Eastern Swords	Completeness	'pieces+frags'	Swords	South East	Lower	9.7
5.2.3.1	South Eastern Swords	Completeness	'pieces+frags'	Swords	South East	Higher	12.0
5.2.3.1	South Eastern Swords	Completeness	'broken'	Swords	South East	Higher	12.4
5.2.3.1	South Eastern Swords	Completeness	'broken'	Swords	South East	Higher	21.3
5.2.3.1	Ewart Park Swords	Completeness	'multi-piece'	Swords	East Anglia	Higher	23.1
5.2.3.1	Ewart Park Swords	Completeness	'entire'	Swords	East Anglia	Lower	46.7
5.2.3.1	Ewart Park Swords	Completeness	'entire'	Swords	East Anglia	Higher	26.1
5.2.3.1	Ewart Park Swords	Completeness	'pieces&frags'	Swords	Scotland	Higher	28.5
5.2.3.1	Ewart Park Swords	Completeness	'pieces&frags'	Swords	Scotland	Lower	28.5

(All tests had 1 degree of freedom: 5% significance Chi-squared > 3.8, 1% significance Chi-squared > 6.6)

Appendix 1

Chi-squared tests for statistical significance (ctd)

Chapter & Section	Population tested	Statistic	Groups	Category Area Tested	Type Tested	Proportion versus Expected	Chi-squared
5	Weapons						
5.2.3.1	Ewart Park Swords	Completeness	'multi-piece'	Swords	Ewart Park	Lower	8.2
5.2.3.2	Spearheads	Completeness	'entire'	Spears	All	Higher	15.1
5.2.3.2	Spearheads	Completeness	'almost entire'	Spears	South East	Higher	10.6
5.2.3.2	Spearheads	Completeness	'multi-piece'	Spears	East Anglia	Higher	13.2
5.2.3.2	Spearheads	Completeness	'fragments'	Spears	West	Lower	5.6
5.2.3.2	Spearheads	Completeness	'entire'	Spears	All	Basal-looped	12.9
5.2.3.2	Spearheads	Completeness	'entire'	Spears	All	Barbed	9.7
5.2.3.2	Spearheads	Completeness	'entire'	Spears	All	Plain Lanc'te	Lower
5.2.3.2	Spearheads	Completeness	'broken'	Spears	All	Plain Lanc'te	Higher
5.2.3.2	Spearheads	Completeness	'almost entire'	Spears	All	Complex L'te	Lower
5.2.3.2	Spearheads	Completeness	'entire'	Spears	All	Dumpy	Higher
5.2.3.2	Spearheads	Completeness	'entire'	Spears	All	Ogival	Higher
5.2.3.2	South Eastern Spearheads	Completeness	'entire'	Spears	All	Ogival	Higher
5.2.3.2	Scottish Spearheads	Completeness	'entire'	Spears	South East	Lower	5.6
5.2.3.2	South Eastern Spearheads	Completeness	'entire'	Spears	Scotland	Lower	11.8
5.2.3.2	Scottish Spearheads	Completeness	'entire'	Spears	Scotland	Higher	3.8
5.2.3.2	Plain Lanceolate Spearheads	Completeness	'entire'	Spears	South East	Higher	3.9
5.2.3.2	Complex Lanceolate Spearheads	Completeness	'entire'	Spears	Scotland	Higher	6.9
5.2.3.2	Wet Context Swords	Completeness	'entire'	Spears	Scotland	Lower	10.2
5.2.4.1	Wet Context Swords	Completeness	'entire'	Spears	South East	Higher	9.0
5.2.4.1	Wet Context Swords	Completeness	'entire'	Spears	West	Lower	8.5
5.2.4.1	Wet Context Swords	Completeness	'multi-piece'	Swords	East Anglia	Lower	11.9
5.2.4.1	Wet Context Swords	Completeness	'entire'	Swords	East Anglia	Higher	5.6
5.2.4.1	Wet Context Swords	Completeness	'pieces'	Swords	Scotland	Lower	18.3
5.2.4.1	Wet Context Swords	Completeness	'entire'	Swords	Scotland	Higher	23.8
5.2.4.1	Wet Context Swords	Completeness	'broken'	Swords	South East	Higher	5.4
5.2.4.1	Wet Context Swords	Completeness	'pieces'	Swords	South East	Lower	14.4
5.2.4.1	Wet Context Swords	Completeness	'fragments'	Swords	South East	Lower	21.8
5.2.4.1	'Dry' Context Swords	Completeness	'entire'	Swords	East Anglia	Lower	13.8

(All tests had 1 degree of freedom: 5% significance Chi-squared > 3.8, 1% significance Chi-squared > 6.6)

Appendix 1

Chi-squared tests for statistical significance (ctd)

Chapter & Section	Population tested	Statistic	Groups	Category Area Tested	Type Tested	Proportion versus Expected	Chi-squared
5	Weapons						
5.2.4.1	'Dry' Context Swords	Completeness	'multi-piece'	Swords	East Anglia	All	17.9
5.2.4.1	'Dry' Context Swords	Completeness	'fragments'	Swords	East Anglia	All	8.3
5.2.4.1	'Dry' Context Swords	Completeness	'entire'	Swords	Scotland	All	78.5
5.2.4.1	'Dry' Context Swords	Completeness	'broken'	Swords	Scotland	All	17.3
5.2.4.1	'Dry' Context Swords	Completeness	'pieces'	Swords	Scotland	All	10.8
5.2.4.1	'Dry' Context Swords	Completeness	'fragments'	Swords	Scotland	All	40.4
5.2.4.1	'Dry' Context Swords	Completeness	'entire'	Swords	South East	All	23.0
5.2.4.1	'Dry' Context Swords	Completeness	'fragments'	Swords	South East	All	75.4
5.2.4.1	'Dry' Context Swords	Completeness	'multi-piece'	Swords	South East	All	13.4
5.2.4.1	East Anglian Swords	Context	'wet'	'entire'	East Anglia	All	7.2
5.2.4.1	East Anglian Swords	Context	'wet'	'broken'	East Anglia	All	4.2
5.2.4.1	East Anglian Swords	Context	'dry'	'pieces'	East Anglia	All	6.0
5.2.4.1	South Eastern Swords	Context	'wet'	'entire'	South East	All	73.5
5.2.4.1	South Eastern Swords	Context	'wet'	'broken'	South East	All	11.9
5.2.4.1	South Eastern Swords	Context	'dry'	'fragment'	South East	All	100.6
5.2.4.1	Scottish Swords	Context	'wet'	'entire'	Scotland	All	7.7
5.2.4.1	Scottish Swords	Context	'wet'	'broken'	Scotland	All	4.5
5.2.4.1	Scottish Swords	Context	'wet'	'pieces'	Scotland	All	17.0
5.2.4.1	Scottish Swords	Context	'wet'	'fragment'	Scotland	All	8.1
5.2.4.1	Late Swords	Context	'wet'	'entire'	All	Late	5.5
5.2.4.1	Ewart Park Swords	Context	'wet'	'entire'	All	Ewart Park	15.0
5.2.4.1	Ewart Park Swords	Context	'dry'	'pieces'	All	Ewart Park	7.9
5.2.4.1	Ewart Park Swords	Context	'wet'	'entire'	South East	Ewart Park	15.9
5.2.4.2	Wet Context Spears	Completeness	'almost entire'	All	East Anglia	All	7.1
5.2.4.2	Wet Context Spears	Completeness	'fragments'	All	East Anglia	All	9.2
5.2.4.2	Wet Context Spears	Completeness	'multi-piece'	All	East Anglia	All	7.5
5.2.4.2	Wet Context Spears	Completeness	'entire'	All	Scotland	All	8.8

(All tests had 1 degree of freedom: 5% significance Chi-squared > 3.8, 1% significance Chi-squared > 6.6)

Appendix 1

Chi-squared tests for statistical significance (ctd)

Chapter & Section	Population tested	Statistic	Groups	Category Area Tested	Type Tested	Proportion versus Expected	Chi-squared
5	Weapons						
5.2.4.2	Wet Context Spears	Completeness	'broken'	All	All	Lower	5.5
5.2.4.2	Wet Context Spears	Completeness	'fragments'	All	Scotland	Higher	22.8
5.2.4.2	Wet Context Spears	Completeness	'entire'	All	Scotland	Higher	23.0
5.2.4.2	Wet Context Spears	Completeness	'fragments'	All	South East	Lower	7.3
5.2.4.2	Wet Context Spears	Completeness	'broken'	All	South East	Higher	9.2
5.2.4.2	Wet Context Spears	Completeness	'fragments'	All	West	Higher	9.1
5.2.4.2	Wet Context Spears	Completeness	'entire'	All	West	Lower	25.9
5.2.4.2	Wet Context Spears	Completeness	'entire'	All	West	Lower	5.7
5.2.4.2	'Dry' Context Spears	Completeness	'fragments'	All	Scotland	Higher	8.3
5.2.4.2	'Dry' Context Spears	Completeness	'fragments'	All	South East	Higher	5.2
5.2.4.2	'Dry' Context Spears	Completeness	'almost entire'	All	South East	Lower	8.3
5.2.4.2	Scottish Spears	Context	'dry'	'entire'	All	Higher	8.3
5.2.4.2	Scottish Spears	Context	'dry'	'broken'	Scotland	Higher	6.6
5.2.4.2	Scottish Spears	Context	'wet'	'fragment'	Scotland	Higher	25.8
5.2.4.2	South Eastern Spears	Context	'dry'	'fragment'	Scotland	Higher	8.4
5.2.4.2	Western Spears	Context	'dry'	'fragment'	South East	Higher	8.2
5.2.4.2	Plain Lanceolate Spears	Context	'wet'	'entire'	West	Higher	7.9
5.2.4.2	Plain Lanceolate Spears	Context	'dry'	'entire'	All	Higher	5.8
5.2.4.2	Plain Lanceolate Spears	Context	'dry'	'broken'	All	Higher	4.7
5.2.4.2	Plain Lanceolate Spears	Context	'dry'	'multiple'	All	Higher	8.5
5.2.4.2	Complex Lanceolate Spears	Context	'dry'	'entire'	All	Higher	8.5

(All tests had 1 degree of freedom: 5% significance Chi-squared > 3.8, 1% significance Chi-squared > 6.6)

Appendix 2: Metallurgical Data

Sample	Weapon	Position	Type	Region	Hardness Average	
ba	11	Hilt	Hilt	Ewart Park	West	133.0
ba	12	Sword	Blade	Ewart Park	West	104.4
bm	0	Spear	Blade Edge	Ewart Park	South East	123.7
bm	2	Sword	Blade Edge	Ewart Park	West	127.4
bm	3	Sword	Blade Edge	Wilburton	East Anglia	146.3
bm	4	Sword	Blade Edge	Ewart Park	South East	151.1
bm	5	Sword	Blade Edge	Ewart Park	West	167.3
bm	6	Sword	Blade Edge	Wilburton	East Anglia	144.1
bm	7	Sword	Blade Edge	Ewart Park	West	149.8
bm	8	Sword	Blade Edge	Ewart Park	South East	122.0
bm	9	Sword	Blade Edge	Ewart Park	South East	164.0
bm	10	Sword	Blade Edge	Ewart Park	East Anglia	162.5
bm	11	Sword	Blade Edge	Ewart Park	West	142.2
bm	12	Sword	Blade Edge	Ewart Park	East Anglia	179.8
bm	13	Sword	Blade Edge	Ewart Park	Scotland	182.0
bm	14	Sword	Blade Edge	Early	West	140.9
bm	15	Sword	Blade Edge	Ewart Park	Scotland	150.7
bm	16	Sword	Blade Edge	Ewart Park	East Anglia	107.8
bm	17	Sword	Blade Edge	Ewart Park	West	137.7
bm	18	Sword	Blade Edge	Ewart Park	East Anglia	163.4
bm	19	Sword	Blade Edge	Ewart Park	Scotland	161.8
bm	20	Sword	Blade Edge	Ewart Park	South East	164.6
bs	1	Sword	Blade	Ewart Park	West	163.5
cam	1	Sword	Blade Edge	Ewart Park	East Anglia	147.4
cam	2	Sword	Blade Edge	Ewart Park	East Anglia	146.5
cam	3	Sword	Blade Edge	Wilburton	East Anglia	101.9
cam	4	Sword	Blade Edge	Early	East Anglia	165.7
cam	5	Sword	Blade Edge	Ewart Park	East Anglia	170.8
cam	6	Sword	Blade Edge	Early	East Anglia	183.2
cam	7	Sword	Blade Edge	Ewart Park	East Anglia	146.2
cam	8	Sword	Blade Edge	Ewart Park	East Anglia	173.7
cam	9	Sword	Blade Edge	Wilburton	East Anglia	170.3
cam	10	Sword	Blade Edge	Ewart Park	East Anglia	158.3
cam	11	Sword	Blade Edge	Ewart Park	East Anglia	151.0
cam	12	Sword	Blade Edge	Ewart Park	East Anglia	172.7
cam	13	Sword	Blade Edge	Wilburton	East Anglia	183.3
cam	14	Sword	Blade Edge	Wilburton	East Anglia	121.7
cam	15	Sword	Blade Edge	Wilburton	East Anglia	128.8
cam	16	Sword	Blade Edge	Late	East Anglia	121.2
cam	17	Sword	Blade Edge	Wilburton	East Anglia	131.5
cam	18	Sword	Blade Edge	Ewart Park	East Anglia	159.0
cam	19	Sword	Blade Edge	Wilburton	East Anglia	134.3
cam	20	Sword	Blade Edge	Wilburton	East Anglia	120.4
cam	21	Sword	Blade Edge	Ewart Park	East Anglia	188.1
cam	22	Sword	Blade Edge	Ewart Park	East Anglia	167.2
cam	23	Sword	Blade Edge	Early	East Anglia	154.8
cam	24	Sword	Blade Edge	Wilburton	East Anglia	96.6
cma	11	Hilt	Hilt	Wilburton	East Anglia	NA
cma	12	Spear	Blade	Wilburton	East Anglia	115.2
cma	13	Spear	Blade	Wilburton	East Anglia	111.7
dor	18	Sword	Blade	Ewart Park	West	197.3

Appendix 2: Metallurgical Data

Sample		Composition								
		Fe	Co	Ni	Zn	As	Sb	Sn	Ag	Bi
ba	11	0.00	0.00	0.12	0.00	0.20	0.28	9.52	0.00	NA
ba	12	0.00	0.00	0.14	NA	0.25	0.26	8.91	0.00	NA
bm	0	0.02	0.02	0.48	NA	1.00	1.17	14.10	0.21	NA
bm	2	0.01	0.00	0.08	0.00	0.40	0.24	13.90	0.39	0.00
bm	3	0.01	0.04	0.25	0.00	0.56	1.34	6.95	0.36	0.00
bm	4	0.01	0.00	0.12	0.00	0.52	0.14	9.18	0.09	0.03
bm	5	0.01	0.01	0.08	0.01	0.42	0.28	15.37	0.23	0.01
bm	6	0.02	0.01	0.11	0.01	0.41	0.16	9.42	0.10	0.01
bm	7	0.01	0.00	0.16	0.00	0.00	0.40	10.88	0.25	0.00
bm	8	0.01	0.01	0.11	0.00	0.31	0.10	12.45	0.05	0.02
bm	9	0.02	0.01	0.17	0.01	0.16	0.23	11.52	0.16	0.01
bm	10	0.01	0.02	0.26	0.01	0.61	0.83	11.40	0.48	0.04
bm	11	0.02	0.00	0.12	0.00	0.50	0.16	9.53	0.11	0.00
bm	12	0.01	0.01	0.05	0.01	0.45	0.04	9.70	0.05	0.03
bm	13	0.00	0.00	0.31	0.02	0.79	1.12	13.40	0.45	0.02
bm	14	0.00	0.03	0.09	0.01	0.59	0.04	15.45	0.04	0.01
bm	15	0.01	0.01	0.04	0.01	0.23	0.10	11.49	0.04	0.01
bm	16	0.00	0.01	0.42	0.00	0.06	1.38	8.91	0.46	0.02
bm	17	0.01	0.01	0.18	0.00	0.65	0.30	12.57	0.14	0.02
bm	18	0.01	0.01	0.33	0.00	0.82	0.50	13.12	0.21	0.03
bm	19	0.02	0.01	0.14	0.00	0.11	0.22	10.89	0.19	0.01
bm	20	NA	NA	0.06	NA	0.14	0.13	10.28	0.05	NA
bs	1	0.09	0.00	0.07	0.00	0.30	0.30	9.10	0.00	NA
cam	1	0.01	0.01	0.10	0.00	0.00	0.25	7.46	0.13	0.04
cam	2	0.05	0.07	0.32	0.01	1.19	0.61	9.81	0.12	0.00
cam	3	0.01	0.02	0.30	0.00	1.10	1.40	5.87	0.34	0.00
cam	4	0.02	0.02	0.16	0.00	0.13	0.55	8.58	0.24	0.02
cam	5	0.01	0.06	0.37	0.00	0.19	0.89	9.60	0.39	0.02
cam	6	0.09	0.02	0.15	0.01	0.12	0.06	9.43	0.09	0.02
cam	7	0.01	0.00	0.01	0.01	0.19	0.04	11.31	0.03	0.02
cam	8	0.01	0.00	0.07	0.01	0.00	0.00	15.00	0.02	0.02
cam	9	0.03	0.03	0.20	0.00	0.74	0.49	9.14	0.13	0.04
cam	10	0.03	0.02	0.18	0.00	0.11	0.03	8.94	0.02	0.02
cam	11	0.01	0.01	0.08	0.00	0.39	0.11	10.85	0.09	0.03
cam	12	0.00	0.02	0.28	0.00	0.58	0.67	10.45	0.41	0.01
cam	13	0.01	0.07	0.24	0.00	0.88	0.50	14.05	0.15	0.02
cam	14	0.01	0.01	0.02	0.02	0.04	0.03	11.13	0.02	0.02
cam	15	0.01	0.02	0.20	0.01	0.60	0.89	9.14	0.29	0.01
cam	16	0.02	0.00	0.08	0.00	0.18	0.10	8.34	0.08	0.00
cam	17	0.00	0.00	0.13	0.00	0.60	0.23	8.06	0.14	0.02
cam	18	0.01	0.01	0.14	0.01	0.29	0.31	9.84	0.20	0.01
cam	19	0.01	0.00	0.16	0.00	0.06	0.36	10.45	0.17	0.01
cam	20	0.02	0.00	0.13	0.01	0.00	0.25	11.42	0.23	0.02
cam	21	0.01	0.01	0.15	0.00	0.06	0.33	9.62	0.19	0.03
cam	22	0.01	0.00	0.10	0.00	0.35	0.21	11.28	0.15	0.01
cam	23	0.01	0.01	0.12	0.00	0.40	0.06	12.79	0.05	0.05
cam	24	0.00	0.03	0.18	0.00	0.23	0.34	7.69	0.17	0.00
cma	11	0.05	0.21	0.61	NA	1.79	0.55	7.85	0.18	NA
cma	12	NA	0.06	0.28	0.00	0.74	0.74	8.53	0.10	NA
cma	13	0.01	0.10	0.39	NA	1.77	1.32	8.82	0.16	NA
dor	18	NA	0.04	0.12	0.00	0.15	0.13	9.92	0.09	NA

Appendix 2: Metallurgical Data

Sample		PB	Au	S	Grain Size Average	Grain Size Group	Inclusion Distortion
ba	11	10.20	0.00	NA	30.50		
ba	12	7.60	0.00	NA	39.58	e	2
bm	0	0.44	0.00	NA	24.30	f	3
bm	2	3.46	0.02	0.31	15.92	d	2
bm	3	0.26	0.00	0.07	33.42	c	5
bm	4	0.11	0.04	0.00	20.83	e	1
bm	5	3.10	0.00	0.39	11.54	d	3
bm	6	0.21	0.01	0.03	41.04	b	3
bm	7	0.24	0.04	0.01	20.25	f	3
bm	8	0.41	0.02	0.28	312.00	d	4
bm	9	0.44	0.00	0.14	5.71	f	2
bm	10	0.11	0.00	0.00	9.63	a	3
bm	11	0.03	0.04	0.00	15.63	a	4
bm	12	0.15	0.03	0.02	14.17	c	3
bm	13	0.20	0.02	0.01	17.29	b	4
bm	14	0.10	0.01	0.32	54.17	c	2
bm	15	0.16	0.00	0.04	14.79	f	3
bm	16	0.41	0.02	0.01	20.63	b	1
bm	17	1.01	0.03	0.01	14.04	d	4
bm	18	0.64	0.00	0.01	9.08	b	5
bm	19	1.36	0.01	0.10	12.96	a	4
bm	20	0.50	NA	NA	8.92	b	5
bs	1	5.00	0.00	NA	22.17	a	4
cam	1	2.73	0.03	0.34	10.58	d	4
cam	2	0.68	0.04	0.06	12.25	b	4
cam	3	0.91	0.04	0.01	98.50	b	5
cam	4	0.42	0.01	0.18	10.33	f	4
cam	5	0.58	0.02	0.15	4.83	b	5
cam	6	0.15	0.04	0.45	45.21	a	2
cam	7	0.47	0.01	0.02	10.83	f	4
cam	8	0.13	0.00	0.01	18.75	b	4
cam	9	0.13	0.02	0.18	23.88	c	1
cam	10	0.06	0.02	0.00	20.67	d	4
cam	11	0.22	0.01	0.08	7.71	d	4
cam	12	0.59	0.04	0.02	14.00	a	2
cam	13	0.12	0.03	0.01	26.21	b	5
cam	14	1.25	0.01	0.03	83.13	e	4
cam	15	1.09	0.02	0.34	116.82	f	2
cam	16	3.65	0.01	0.56	11.71	f	2
cam	17	1.90	0.05	0.02	11.83	b	4
cam	18	0.52	0.00	0.03	22.96	b	3
cam	19	2.50	0.00	0.03	23.17	d	4
cam	20	1.66	0.04	0.16	41.46	d	3
cam	21	0.24	0.02	0.03	13.63	f	4
cam	22	0.24	0.01	0.01	20.83	b	5
cam	23	0.02	0.01	0.02	37.29	d	1
cam	24	0.70	0.02	0.03	59.58	f	5
cma	11	6.70	0.16	NA	35.60	f	2
cma	12	3.00	0.00	NA	63.00	f	2
cma	13	25.80	0.00	NA	NA	f	2
dor	18	2.70	0.00	NA	26.54	e	1

Appendix 2: Metallurgical Data

Sample	Porosity	Corrosion	Coring & Recrystallisation	High Tin Phases	Grain Distortion
ba	11	5	4	3	1
ba	12	4	4	1	2
bm	0	4	2	3	2
bm	2	3	4	2	2
bm	3	3	2	1	2
bm	4	2	2	1	2
bm	5	5	4	2	3
bm	6	1	3	1	2
bm	7	4	2	2	NA
bm	8	5	2	4	2
bm	9	3	3	2	NA
bm	10	2	1	3	2
bm	11	2	2	2	2
bm	12	3	4	2	2
bm	13	5	3	2	3
bm	14	3	3	2	2
bm	15	3	3	5	1
bm	16	2	1	2	2
bm	17	4	3	2	2
bm	18	2	2	3	2
bm	19	2	1	3	2
bm	20	3	2	3	3
bs	1	2	4	1	2
cam	1	5	3	3	3
cam	2	5	4	3	2
cam	3	2	1	5	2
cam	4	2	1	3	2
cam	5	4	2	3	3
cam	6	4	3	1	3
cam	7	2	2	2	2
cam	8	1	2	2	2
cam	9	1	3	3	2
cam	10	1	3	3	2
cam	11	3	1	2	3
cam	12	2	3	3	2
cam	13	2	3	3	3
cam	14	5	4	1	2
cam	15	5	4	1	1
cam	16	1	1	1	1
cam	17	2	3	2	2
cam	18	2	2	2	2
cam	19	4	3	2	2
cam	20	2	2	3	2
cam	21	1	2	1	2
cam	22	3	2	3	3
cam	23	1	2	2	2
cam	24	4	3	1	2
cma	11	3	3	1	1
cma	12	3	4	1	1
cma	13	3	4	1	1
dor	18	3	3	5	1
				2	NA
					2

Appendix 2: Metallurgical Data

Sample	Weapon	Position	Type	Region	Hardness Average	
dor	42	Sword	Blade	Early	West	252.7
dor	43	Spear		Early	West	142.8
dor	45	Spear		Ewart Park	West	222.8
ed	9	Sword	Blade	Ewart Park	Scotland	92.5
ed	10	Spear		Ewart Park	Scotland	NA
ed	13	Sword	Blade	Ewart Park	Scotland	197.7
ed	14	Sword	Blade	Ewart Park	Scotland	98.2
ed	16	Sword	Blade	Ewart Park	Scotland	127.5
ed	18	Sword	Blade	Ewart Park	Scotland	139.2
ed	19	Sword	Blade	Ewart Park	Scotland	136.3
ed	22	Sword	Blade	Ewart Park	Scotland	103.8
ed	23	Sword	Blade	Ewart Park	Scotland	128.4
ed	24	Sword	Blade	Ewart Park	Scotland	135.7
ed	25	Hilt	Hilt	Ewart Park	Scotland	NA
ed	26	Spear		Ewart Park	Scotland	102.9
ed	27	Spear		Ewart Park	Scotland	123.2
ed	28	Spear		Ewart Park	Scotland	119.5
ed	34	Sword	Blade	Ewart Park	Scotland	194.3
ed	35	Spear		Ewart Park	Scotland	163.5
ed	36	Sword	Blade	Ewart Park	Scotland	123.5
ed	37	Sword	Blade	Ewart Park	Scotland	149.8
ed	49	Sword	Blade	Ewart Park	Scotland	125.7
ed	50	Sword	Blade	Ewart Park	Scotland	198.0
ed	51	Spear		Ewart Park	Scotland	122.1
ed	53	Spear		Early	Scotland	108.0
ed	60	Spear		Ewart Park	Scotland	130.5
ed	61	Spear		Ewart Park	Scotland	96.0
ed	66	Sword	Blade	Ewart Park	Scotland	132.2
ex	26	Spear		Early	West	186.8
ex	27	Spear		Early	West	115.2
ex	28	Sword	Blade	Early	West	114.8
ex	35	Sword	Blade	Ewart Park	West	170.5
ex	36	Spear		Early	West	132.0
isl	0	Spear		Wilburton	East Anglia	103.9
lm	8	Hilt	Hilt	Wilburton	South East	145.7
lm	9	Spear			South East	118.7
lm	10	Spear		Wilburton	South East	196.0
lm	65	Sword	Blade	Wilburton	South East	NA
lm	66	Sword	Blade	Wilburton	South East	164.6
lm	67	Spear			South East	188.3
lm	68	Spear			South East	153.5
lm	69	Spear			South East	266.3
lm	75	Sword	Blade	Wilburton	South East	126.0
lm	76	Spear		Ewart Park	South East	226.3
lm	77	Sword	Blade	Wilburton	South East	196.0
lm	78	Sword	Blade	Wilburton	South East	216.7
lm	79	Sword	Blade	Wilburton	South East	193.5
lm	80	Sword	Blade	Early	South East	206.2
lm	81	Sword	Blade	Wilburton	South East	167.0
lm	82	Sword	Blade	Wilburton	South East	202.3
lm	83	Sword	Blade	Wilburton	South East	242.8

Appendix 2: Metallurgical Data

Sample	Composition								
	Fe	Co	Ni	Zn	As	Sb	Sn	Ag	Bi
dor 42	NA	0.04	0.44	0.00	0.87	2.15	11.56	0.42	NA
dor 43	0.03	0.05	0.05	0.00	0.39	0.09	10.48	0.04	NA
dor 45	0.04	0.01	0.07	0.07	0.18	0.32	7.36	0.43	NA
ed 9	0.02	0.00	0.14	0.03	0.25	0.48	6.66	0.08	NA
ed 10	NA	NA	NA	NA	NA	NA	NA	NA	NA
ed 13	0.01	0.04	0.12	0.00	0.42	0.40	8.85	0.22	NA
ed 14	NA	0.01	0.27	0.04	1.07	1.30	4.59	0.61	NA
ed 16	0.03	0.01	0.07	0.00	0.21	0.13	9.94	0.07	NA
ed 18	0.01	0.00	0.19	0.00	0.38	0.57	7.29	0.38	NA
ed 19	NA	NA	0.07	0.00	0.14	0.18	12.29	0.08	NA
ed 22	0.00	0.01	0.31	0.00	0.26	0.46	8.01	0.46	NA
ed 23	0.01	0.01	0.35	0.02	0.24	0.80	8.74	0.56	NA
ed 24	NA	NA	0.10	0.04	0.09	0.08	10.29	NA	NA
ed 25	0.02	0.01	0.16	0.00	0.38	0.32	8.92	0.22	NA
ed 26	NA	0.00	0.30	0.00	0.48	0.83	7.82	0.41	NA
ed 27	0.01	0.00	0.10	NA	0.12	0.09	13.38	0.09	NA
ed 28	0.01	0.00	0.15	NA	0.24	0.23	7.71	0.10	NA
ed 34	0.00	NA	0.01	0.00	0.04	0.00	8.01	0.13	NA
ed 35	NA	0.02	0.13	0.00	0.16	0.23	13.09	0.14	NA
ed 36	0.01	0.00	0.02	0.00	0.25	0.06	9.46	0.06	NA
ed 37	0.00	0.00	0.12	0.03	0.23	0.31	10.47	0.24	NA
ed 49	0.00	NA	0.12	NA	0.25	0.32	8.93	0.15	NA
ed 50	NA	NA	0.06	NA	0.06	0.17	8.80	0.09	0.01
ed 51	0.03	0.04	0.11	NA	0.16	0.07	4.39	0.03	NA
ed 53	0.02	0.02	0.29	0.00	0.29	0.03	8.06	0.08	NA
ed 60	NA	0.01	0.02	0.00	0.04	0.06	10.13	0.07	NA
ed 61	0.11	0.02	0.09	0.00	0.20	0.20	7.11	0.11	NA
ed 66	0.01	0.06	0.28	0.04	0.03	0.68	11.00	0.14	NA
ex 26	NA	0.05	0.11	NA	0.03	0.00	7.08	0.06	NA
ex 27	0.00	0.01	0.05	0.03	0.32	0.00	10.00	0.02	NA
ex 28	0.00	0.05	0.17	0.00	0.31	0.00	11.84	0.00	NA
ex 35	NA	0.03	0.13	0.04	0.13	0.13	9.02	0.03	NA
ex 36	0.05	0.02	0.14	NA	0.26	0.02	8.27	NA	NA
isl 0	NA	NA	NA	NA	NA	NA	NA	NA	NA
lm 8	0.01	0.01	0.06	0.00	0.29	0.26	10.46	0.08	NA
lm 9	NA	NA	0.07	NA	0.29	0.14	8.16	0.05	NA
lm 10	0.04	NA	0.09	NA	0.32	0.26	11.51	0.08	NA
lm 65	NA	NA	NA	NA	NA	NA	NA	NA	NA
lm 66	NA	0.08	0.37	0.00	0.38	0.44	6.93	0.12	NA
lm 67	0.05	0.04	0.15	0.04	0.22	0.06	10.11	0.05	NA
lm 68	0.05	0.03	0.16	0.06	0.60	0.62	4.61	0.16	NA
lm 69	NA	NA	0.06	0.00	0.18	0.11	7.85	0.04	NA
lm 75	0.02	0.03	0.05	0.00	0.04	0.00	10.58	0.05	NA
lm 76	0.00	0.01	0.06	0.00	0.26	0.33	8.09	0.06	NA
lm 77	0.03	0.03	0.23	0.00	2.07	1.84	9.03	0.41	NA
lm 78	0.06	0.05	0.18	NA	0.60	0.45	12.03	0.18	NA
lm 79	NA	0.03	0.29	0.04	1.14	1.35	10.36	0.09	NA
lm 80	0.09	0.05	0.31	NA	0.53	0.63	7.30	0.13	NA
lm 81	0.02	0.10	0.41	0.00	2.23	2.20	8.35	0.52	NA
lm 82	0.04	0.04	0.41	NA	0.38	0.55	9.52	0.17	NA
lm 83	NA	0.05	0.27	NA	0.39	0.48	6.43	0.17	NA

Appendix 2: Metallurgical Data

Sample	PB	Au	S	Grain Size Average	Grain Size Group	Inclusion Distortion
dor 42	1.90	NA	NA	25.83	e	1
dor 43	0.07	0.03	NA	75.00	f	NA
dor 45	0.59	0.00	NA	108.57	f	2
ed 9	5.70	0.11	NA	87.50	f	2
ed 10	NA	NA	NA	NA		2
ed 13	2.60	NA	NA	132.50	f	3
ed 14	1.00	0.10	NA	127.08	f	2
ed 16	0.94	0.00	NA	85.83	f	1
ed 18	5.90	0.00	NA	89.17	f	1
ed 19	1.90	0.04	NA	52.92	f	2
ed 22	0.43	0.00	NA	115.83	f	1
ed 23	0.64	0.02	NA	111.25	f	2
ed 24	6.80	0.04	NA	52.29	f	1
ed 25	0.58	0.05	NA	106.00	f	2
ed 26	4.10	0.04	NA	124.17	f	1
ed 27	3.60	0.00	NA	93.33	f	2
ed 28	6.10	0.00	NA	146.25	f	1
ed 34	2.20	0.00	NA	18.63	c	3
ed 35	8.00	NA	NA	NA		1
ed 36	11.00	0.00	NA	11.50	b	4
ed 37	NA	0.07	NA	165.00	f	1
ed 49	11.10	NA	NA	34.50	e	1
ed 50	6.40	NA	NA	9.56	a	3
ed 51	9.90	NA	NA	20.83	d	4
ed 53	0.61	0.00	NA	31.60	e	1
ed 60	2.60	0.00	NA	215.00	f	1
ed 61	2.70	0.00	NA	261.67	f	2
ed 66	11.50	0.03	NA	26.67	e	2
ex 26	0.08	0.09	NA	36.30	f	4
ex 27	0.00	NA	NA	175.00	f	4
ex 28	0.05	0.00	NA	77.13	f	1
ex 35	2.80	0.03	NA	24.17	d	3
ex 36	0.03	0.00	NA	131.50	f	2
isl 0	NA	NA	NA	24.30	d	NA
lm 8	5.80	NA	NA	12.00	b	4
lm 9	22.80	0.00	NA	287.50	f	3
lm 10	0.90	0.03	NA	10.75	b	5
lm 65	NA	NA	NA	NA		3
lm 66	4.40	0.00	NA	10.75	b	3
lm 67	0.07	NA	NA	16.70	c	3
lm 68	0.50	0.03	NA	261.67	f	2
lm 69	11.70	0.09	NA	301.67	f	2
lm 75	0.03	0.03	NA	14.00	b	4
lm 76	0.60	0.00	NA	8.50	a	4
lm 77	0.03	0.03	NA	12.54	b	2
lm 78	1.00	NA	NA	12.75	b	3
lm 79	2.60	0.03	NA	9.67	a	5
lm 80	0.90	0.00	NA	29.92	e	3
lm 81	3.00	0.00	NA	10.79	b	4
lm 82	0.20	0.00	NA	15.75	c	5
lm 83	16.20	0.00	NA	9.83	a	4

Appendix 2: Metallurgical Data

Sample	Porosity	Corrosion	Coring & Recrystallisation	High Tin Phases	Grain Distortion
dor 42	3	3	2	3	NA
dor 43	4	4	4	1	2
dor 45	3	4	5	1	NA
ed 9	5	4	1	1	1
ed 10	3	4	1	1	NA
ed 13	1	2	1	1	1
ed 14	5	4	1	1	NA
ed 16	4	3	1	2	1
ed 18	3	3	1	1	1
ed 19	1	3	1	4	2
ed 22	4	4	1	2	1
ed 23	2	3	1	1	1
ed 24	3	4	1	1	1
ed 25	3	3	1	1	1
ed 26	5	3	1	1	1
ed 27	5	4	1	3	1
ed 28	3	4	5	2	1
ed 34	3	3	2	1	2
ed 35	5	4	NA	1	NA
ed 36	1	4	NA	2	NA
ed 37	5	3	5	3	2
ed 49	4	4	5	3	1
ed 50	5	4	2	1	3
ed 51	3	4	NA	2	2
ed 53	5	4	1	1	1
ed 60	5	4	4	2	1
ed 61	4	4	5	1	1
ed 66	5	3	2	2	2
ex 26	1	4	1	1	2
ex 27	3	4	NA	2	1
ex 28	4	3	5	2	1
ex 35	2	3	3	3	2
ex 36	5	4	5	2	1
isl 0	NA	NA	NA	NA	NA
lm 8	4	4	2	2	2
lm 9	4	3	4	3	NA
lm 10	1	4	1	4	3
lm 65	5	3	4	4	1
lm 66	3	2	2	2	2
lm 67	5	3	2	2	2
lm 68	5	4	4	3	NA
lm 69	4	3	4	4	NA
lm 75	1	2	2	1	2
lm 76	4	4	2	4	2
lm 77	5	3	3	3	2
lm 78	3	3	NA	4	2
lm 79	3	3	3	3	3
lm 80	3	3	1	2	2
lm 81	4	3	3	3	2
lm 82	2	3	3	2	3
lm 83	3	3	3	2	3

Appendix 2: Metallurgical Data

Sample	Weapon	Position	Type	Region	Hardness Average	
lm	132	Sword	Blade	Wilburton	South East	186.5
lm	133	Sword	Blade	Early	South East	150.2
lm	134	Spear			South East	116.2
lm	135	Spear		Early	South East	204.0
lm	136	Spear		Wilburton	South East	178.8
lm	137	Spear		Ewart Park	South East	127.9
lm	138	Sword	Blade	Wilburton	South East	222.0
lm	139	Spear		Wilburton	South East	221.0
lm	140	Spear		Ewart Park	South East	105.5
lm	143	Sword	Blade	Wilburton	South East	140.8
lm	144	Sword	Blade	Ewart Park	South East	171.3
lm	146	Sword	Blade	Wilburton	South East	196.8
lm	147	Sword	Blade	Wilburton	South East	135.7
lm	148	Sword	Blade	Wilburton	South East	139.0
lm	149	Sword	Blade	Wilburton	South East	166.5
lm	150	Sword	Blade	Ewart Park	South East	169.9
lm	151	Sword	Blade	Late	South East	191.2
lm	152	Sword	Blade	Early	South East	144.3
lm	153	Sword	Blade	Early	South East	184.5
lm	154	Sword	Blade	Wilburton	South East	200.8
lm	155	Spear			South East	196.7
lm	156	Spear		Early	South East	198.0
lm	157	Spear		Wilburton	South East	196.6
lm	158	Spear		Ewart Park	South East	169.8
lm	159	Spear		Early	South East	169.0
lm	160	Spear		Early	South East	241.8
lm	161	Sword	Blade	Ewart Park	South East	154.9
lm	162	Sword	Blade	Late	South East	182.5
lm	163	Sword	Blade		South East	194.0
lm	164	Spear		Early	South East	271.5
lm	165	Spear		Early	South East	246.0
lm	166	Sword	Blade	Wilburton	South East	201.2
lm	168	Hilt	Hilt	Wilburton		204.5
lm	174	Sword	Blade	Early	South East	175.0
lm	175	Sword	Blade		South East	159.1
lm	177	Sword	Blade	Early	South East	231.8
lp	1	Sword	Blade	Ewart Park	West	144.3
net	7	Spear		Early	East Anglia	216.0
nms	1	Sword	Blade Edge	Ewart Park	Scotland	128.0
nms	2	Sword	Blade Edge	Ewart Park	Scotland	166.8
nms	3	Sword	Blade Edge	Ewart Park	Scotland	137.3
nms	4	Sword	Blade Edge	Ewart Park	Scotland	111.3
nms	5	Sword	Blade Edge	Ewart Park	Scotland	174.8
nms	6	Sword	Blade Edge	Ewart Park	Scotland	174.2
nms	7	Sword	Blade Edge	Ewart Park	Scotland	131.0
nms	8	Sword	Blade Edge	Ewart Park	Scotland	130.5
nms	9	Sword	Blade Edge	Ewart Park	Scotland	151.7
nms	10	Sword	Blade Edge	Ewart Park	Scotland	108.0
nms	11	Sword	Blade Edge	Ewart Park	Scotland	156.9
nms	12	Sword	Blade Edge	Late	Scotland	150.1
nms	13	Sword	Blade Edge	Ewart Park	Scotland	152.8

Appendix 2: Metallurgical Data

Sample	Composition								
	Fe	Co	Ni	Zn	As	Sb	Sn	Ag	Bi
lm 132	0.00	0.05	0.19	NA	0.62	0.56	10.32	0.13	NA
lm 133	0.00	0.02	0.21	0.00	0.39	0.30	6.42	0.10	NA
lm 134	NA	0.05	0.18	0.01	0.50	0.30	5.45	0.10	NA
lm 135	0.02	0.01	0.05	0.00	0.31	0.00	15.09	0.02	NA
lm 136	0.03	0.02	0.10	0.00	0.20	0.12	7.83	0.06	NA
lm 137	NA	0.01	0.03	0.00	0.16	0.07	10.34	0.05	NA
lm 138	NA	0.04	0.23	NA	0.49	0.79	8.48	0.18	NA
lm 139	NA	0.01	0.26	NA	0.56	0.56	7.75	0.18	NA
lm 140	0.01	0.01	0.19	NA	0.69	0.83	9.10	0.28	NA
lm 143	0.01	0.01	0.27	NA	0.45	0.80	7.06	0.26	NA
lm 144	NA	0.01	0.07	0.00	0.18	0.18	10.37	0.06	NA
lm 146	NA	0.01	0.17	0.00	0.45	0.53	9.17	0.09	NA
lm 147	0.04	0.03	0.12	0.00	0.30	0.28	6.79	0.05	NA
lm 148	0.01	0.02	0.19	0.00	0.43	0.45	8.80	0.12	NA
lm 149	0.04	0.02	0.20	0.04	1.00	1.09	5.41	0.36	NA
lm 150	0.00	0.02	0.09	NA	0.28	0.06	12.00	0.04	NA
lm 151	NA	0.02	0.06	0.00	0.09	0.05	11.15	0.06	NA
lm 152	0.03	0.03	0.20	0.00	0.71	0.84	5.57	0.25	NA
lm 153	0.03	0.02	0.11	NA	0.72	0.56	8.58	0.28	NA
lm 154	0.00	0.05	0.23	NA	0.69	0.74	9.06	0.23	NA
lm 155	0.02	0.04	0.19	0.00	0.34	0.32	8.45	0.09	NA
lm 156	0.02	0.03	0.24	0.08	0.26	0.08	10.01	0.03	NA
lm 157	0.02	0.03	0.23	NA	0.87	0.95	8.42	0.58	NA
lm 158	NA	0.01	0.10	0.00	0.24	0.08	6.60	0.00	NA
lm 159	0.07	0.01	0.03	0.00	0.21	0.00	12.33	0.03	NA
lm 160	0.13	0.05	0.47	0.05	0.28	0.07	12.72	0.04	NA
lm 161	0.03	0.01	0.09	NA	0.16	NA	10.90	0.15	NA
lm 162	0.00	NA	0.17	0.00	0.23	0.47	6.68	NA	NA
lm 163	0.01	NA	0.04	0.00	0.17	0.06	7.95	0.03	NA
lm 164	0.20	0.05	0.61	0.00	0.52	0.09	11.34	0.06	NA
lm 165	0.01	0.02	0.20	0.00	0.27	0.07	13.05	0.13	NA
lm 166	0.02	0.04	0.26	0.00	0.62	0.60	10.40	0.18	NA
lm 168	0.03	0.01	0.16	0.03	0.24	0.33	8.67	NA	NA
lm 174	0.05	0.07	0.11	0.00	0.26	0.14	9.19	0.03	NA
lm 175	0.01	NA	0.12	0.00	0.22	0.13	7.48	0.08	NA
lm 177	NA	0.03	0.21	0.00	0.40	0.75	12.36	0.30	NA
lp 1	0.00	0.01	0.04	0.00	0.20	0.13	12.53	0.00	NA
net 7	0.37	0.06	0.40	NA	0.47	NA	12.51	0.06	NA
nms 1	0.01	0.00	0.16	0.00	0.02	0.26	13.77	0.13	0.00
nms 2	0.00	0.01	0.12	0.02	0.42	0.25	10.03	0.14	0.00
nms 3	0.01	0.00	0.10	0.00	0.31	0.19	11.82	0.10	0.03
nms 4	0.01	0.01	0.20	0.00	0.75	0.59	10.20	0.27	0.00
nms 5	0.00	0.00	0.03	0.00	0.10	0.01	13.28	0.06	0.02
nms 6	0.01	0.00	0.01	0.01	0.71	0.00	12.36	0.01	0.01
nms 7	0.01	0.01	0.22	0.00	0.59	0.52	9.31	0.30	0.00
nms 8	0.01	0.01	0.15	0.02	0.87	0.37	8.73	0.17	0.00
nms 9	0.00	0.01	0.17	0.00	0.86	0.44	11.01	0.20	0.05
nms 10	0.00	0.00	0.10	0.00	0.29	0.19	10.73	0.15	0.06
nms 11	0.01	0.01	0.14	0.00	0.69	0.30	12.27	0.08	0.03
nms 12	0.01	0.00	0.10	0.01	1.04	0.25	9.54	0.09	0.02
nms 13	0.02	0.02	0.20	0.01	1.05	0.71	10.95	0.30	0.00

Appendix 2: Metallurgical Data

Sample	PB	Au	S	Grain Size Average	Grain Size Inclusion Group	Distortion
lm 132	13.30	0.00	NA	16.75	c	2
lm 133	2.30	0.00	NA	11.08	b	3
lm 134	0.40	0.05	NA	NA		1
lm 135	NA	0.00	NA	27.60	e	2
lm 136	4.70	0.00	NA	103.33	f	2
lm 137	8.90	0.00	NA	448.00	f	2
lm 138	4.40	0.03	NA	55.21	f	1
lm 139	6.00	0.03	NA	30.50	e	1
lm 140	7.80	0.00	NA	12.75	b	4
lm 143	0.40	NA	NA	117.71	f	2
lm 144	12.60	0.00	NA	9.04	a	2
lm 146	9.90	0.03	NA	13.63	b	3
lm 147	3.10	0.00	NA	22.29	d	1
lm 148	13.70	0.00	NA	10.75	b	2
lm 149	2.20	0.00	NA	18.88	c	5
lm 150	1.30	0.00	NA	23.50	d	2
lm 151	1.80	0.00	NA	23.96	d	2
lm 152	5.10	NA	NA	18.25	c	3
lm 153	0.80	NA	NA	13.25	b	5
lm 154	8.90	0.05	NA	15.42	c	3
lm 155	3.90	0.00	NA	11.25	b	3
lm 156	0.15	0.00	NA	9.80	a	4
lm 157	2.70	0.00	NA	11.00	b	3
lm 158	2.40	0.07	NA	14.75	b	4
lm 159	0.04	0.02	NA	500.00	f	3
lm 160	0.20	0.02	NA	53.55	f	4
lm 161	3.20	0.00	NA	37.83	f	1
lm 162	3.50	0.00	NA	13.08	b	3
lm 163	0.70	0.07	NA	13.71	b	2
lm 164	0.10	0.00	NA	14.20	b	3
lm 165	0.10	0.00	NA	17.05	c	4
lm 166	3.20	0.00	NA	12.17	b	2
lm 168	1.70	0.04	NA	7.78	a	3
lm 174	0.20	0.00	NA	21.25	d	3
lm 175	4.00	0.06	NA	16.63	c	2
lm 177	0.70	0.00	NA	15.29	c	5
lp 1	0.00	0.00	NA	11.58	b	4
net 7	0.30	0.00	NA	13.50	b	1
nms 1	0.18	0.01	0.06	33.54	e	1
nms 2	0.92	0.07	0.02	26.67	e	4
nms 3	5.95	0.04	0.69	24.17	d	2
nms 4	0.64	0.05	0.01	31.25	e	4
nms 5	2.84	0.03	0.33	22.75	d	4
nms 6	0.34	0.01	0.01	31.08	e	2
nms 7	1.07	0.03	0.02	18.92	c	4
nms 8	0.42	0.02	0.04	11.00	b	3
nms 9	1.48	0.03	0.02	13.58	b	5
nms 10	0.69	0.03	0.01	16.25	c	4
nms 11	6.08	0.02	0.20	7.50	a	4
nms 12	0.21	0.01	0.03	15.67	c	1
nms 13	1.19	0.00	0.02	19.58	c	4

Appendix 2: Metallurgical Data

Sample	Porosity	Corrosion	Coring & Recrystallisation	High Tin Phases	Grain Distortion
lm 132	4	3	2	3	3
lm 133	4	3	3	3	2
lm 134	3	4	NA	3	NA
lm 135	3	3	1	4	2
lm 136	4	2	4	4	2
lm 137	4	3	5	3	NA
lm 138	5	3	1	1	3
lm 139	2	3	2	1	3
lm 140	1	3	2	4	2
lm 143	3	2	1	1	NA
lm 144	5	3	2	3	2
lm 146	4	3	2	2	3
lm 147	4	3	1	1	1
lm 148	3	3	2	2	2
lm 149	3	2	2	2	2
lm 150	3	2	1	3	2
lm 151	2	3	1	2	NA
lm 152	3	2	2	2	2
lm 153	2	2	2	4	2
lm 154	3	2	2	3	2
lm 155	3	3	3	3	2
lm 156	1	3	2	1	3
lm 157	1	2	2	2	2
lm 158	2	2	2	2	2
lm 159	4	3	5	4	NA
lm 160	1	2	1	2	2
lm 161	4	2	1	1	1
lm 162	2	2	2	2	2
lm 163	3	3	2	1	2
lm 164	2	3	2	2	3
lm 165	1	2	1	4	3
lm 166	3	2	3	2	2
lm 168	3	3	3	3	3
lm 174	1	2	1	1	2
lm 175	2	3	4	3	2
lm 177	2	2	3	4	3
lp 1	4	4	3	2	2
net 7	1	2	1	3	2
nms 1	4	3	2	3	2
nms 2	2	2	2	3	2
nms 3	3	2	2	3	2
nms 4	3	3	2	3	2
nms 5	3	2	2	3	2
nms 6	2	1	2	3	2
nms 7	2	3	3	2	2
nms 8	2	3	3	2	2
nms 9	2	2	3	2	2
nms 10	1	2	2	3	2
nms 11	2	3	3	2	3
nms 12	1	2	3	2	2
nms 13	3	4	3	2	2

Appendix 2: Metallurgical Data

Sample	Weapon	Position	Type	Region	Hardness Average	
nms	14	Sword	Blade Edge	Ewart Park	Scotland	165.7
nms	15	Sword	Blade Edge	Ewart Park	Scotland	117.6
nms	16	Sword	Blade Edge	Ewart Park	Scotland	154.3
nms	17	Sword	Blade Edge	Ewart Park	Scotland	129.3
nms	18	Sword	Blade Edge	Ewart Park	Scotland	127.8
nms	19	Sword	Blade Edge	Ewart Park	Scotland	140.5
nms	20	Sword	Blade Edge	Ewart Park	Scotland	115.6
nms	21	Sword	Blade Edge	Ewart Park	Scotland	148.6
nms	22	Sword	Blade Edge	Ewart Park	Scotland	179.3
nms	23	Sword	Blade Edge	Ewart Park	Scotland	129.1
nms	24	Sword	Blade Edge	Ewart Park	Scotland	108.8
nms	25	Sword	Blade Edge	Ewart Park	Scotland	135.3
nms	26	Sword	Blade Edge	Ewart Park	Scotland	138.3
nms	27	Sword	Blade Edge	Ewart Park	Scotland	121.7
nms	28	Sword	Blade Edge	Early	Scotland	178.5
nms	29	Sword	Blade Edge	Ewart Park	Scotland	183.4
nms	30	Sword	Blade Edge	Ewart Park	Scotland	152.3
nmw	143	Sword	Blade	Ewart Park	West	131.5
nmw	144	Sword	Blade	Ewart Park	West	201.5
nmw	145	Sword	Blade	Late	West	185.8
nmw	146	Sword	Blade	Ewart Park	West	177.3
sel	1	Spear		Ewart Park	South East	152.7
sel	2	Spear		Ewart Park	South East	148.8
sel	4	Spear		Ewart Park	South East	150.0
sel	5	Spear		Ewart Park	South East	176.4
sel	6	Spear		Ewart Park	South East	151.8
sel	7	Spear		Ewart Park	South East	125.7
sel	8	Spear		Ewart Park	South East	133.8
sel	9	Spear		Ewart Park	South East	156.7
sel	10	Spear		Ewart Park	South East	181.8
sel	11	Spear		Ewart Park	South East	184.8
sel	14	Spear		Ewart Park	South East	64.7
sel	15	Spear		Ewart Park	South East	130.6
sel	16	Spear		Ewart Park	South East	62.3
sel	17	Hilt	Hilt	Ewart Park	South East	97.5
sel	18	Hilt	Hilt	Ewart Park	South East	103.9
sel	19	Sword	Blade	Ewart Park	South East	191.5
sel	20	Spear		Ewart Park	South East	155.2
sel	21	Spear		Ewart Park	South East	71.9
sel	22	Spear		Ewart Park	South East	196.7
sel	23	Spear		Ewart Park	South East	167.1
sel	24	Spear		Ewart Park	South East	170.5
sel	25	Sword	Blade	Ewart Park	South East	213.8
sel	26	Sword	Blade	Ewart Park	South East	170.3
sel	28	Sword	Blade	Ewart Park	South East	205.3
sel	30	Sword	Blade	Ewart Park	South East	251.0
sel	31	Sword	Blade	Ewart Park	South East	158.8
sel	32	Sword	Blade	Ewart Park	South East	196.0
sel	33	Sword	Blade	Ewart Park	South East	195.4
sw	4	Sword	Blade	Ewart Park	West	155.2
tr	19	Sword	Blade	Early	West	196.7

Appendix 2: Metallurgical Data

Sample	Composition								
	Fe	Co	Ni	Zn	As	Sb	Sn	Ag	Bi
nms 14	0.01	0.00	0.11	0.00	0.31	0.18	9.02	0.11	0.02
nms 15	0.00	0.02	0.17	0.00	1.06	0.59	12.07	0.20	0.00
nms 16	0.00	0.00	0.15	0.00	0.00	0.30	8.38	0.12	0.00
nms 17	0.01	0.01	0.07	0.00	1.13	0.13	11.09	0.05	0.01
nms 18	0.00	0.01	0.16	0.00	0.69	0.43	9.20	0.25	0.07
nms 19	0.01	0.01	0.10	0.01	0.00	0.29	7.78	0.20	0.03
nms 20	0.00	0.00	0.11	0.00	0.00	0.21	11.68	0.13	0.02
nms 21	0.01	0.00	0.50	0.00	1.35	1.62	8.65	1.61	0.00
nms 22	0.01	0.01	0.10	0.00	0.38	0.10	11.57	0.08	0.01
nms 23	0.01	0.01	0.10	0.01	0.62	0.05	12.52	0.00	0.02
nms 24	0.01	0.01	0.17	0.01	0.50	0.39	10.63	0.25	0.03
nms 25	0.03	0.01	0.09	0.00	0.12	0.12	10.98	0.04	0.01
nms 26	0.00	0.01	0.11	0.00	0.94	0.24	8.59	0.11	0.01
nms 27	0.01	0.00	0.12	0.01	1.02	0.33	9.75	0.22	0.02
nms 28	0.04	0.02	0.17	0.00	0.22	0.34	12.54	0.11	0.01
nms 29	0.00	0.00	0.07	0.00	0.02	0.15	10.65	0.08	0.04
nms 30	0.01	0.01	0.17	0.01	0.25	0.46	7.70	0.24	0.02
nmw 143	NA	0.00	0.08	0.00	0.34	0.12	8.55	0.00	NA
nmw 144	NA	0.00	0.10	0.00	0.18	0.00	7.72	0.00	NA
nmw 145	0.00	0.02	0.10	0.00	0.17	0.18	10.60	0.00	NA
nmw 146	0.00	0.02	0.21	NA	0.36	0.40	7.40	0.00	NA
sel 1	NA	0.03	0.11	0.00	0.15	0.23	12.33	0.10	NA
sel 2	NA	0.07	0.32	0.00	0.40	0.80	7.80	0.08	NA
sel 4	0.00	NA	0.25	NA	0.26	0.45	7.89	0.09	NA
sel 5	0.02	0.00	0.02	0.00	0.02	NA	11.11	0.06	NA
sel 6	NA	NA	0.04	0.00	0.09	0.04	12.68	NA	NA
sel 7	NA	0.02	0.51	0.04	0.83	1.26	11.56	0.19	NA
sel 8	NA	0.03	0.40	0.00	0.61	0.95	8.35	0.12	NA
sel 9	0.00	NA	0.10	NA	0.24	0.32	9.07	0.03	NA
sel 10	NA	0.02	0.10	0.00	0.29	0.20	10.61	0.11	NA
sel 11	NA	0.02	0.12	0.00	0.29	0.38	9.36	0.09	NA
sel 14	0.02	0.01	0.04	0.03	0.10	0.04	7.53	0.00	NA
sel 15	0.02	NA	0.07	0.00	0.18	0.04	4.19	0.02	NA
sel 16	0.02	0.00	0.05	NA	0.20	0.03	7.09	0.02	NA
sel 17	0.02	NA	0.44	0.02	0.36	1.32	11.89	0.15	NA
sel 18	0.00	NA	0.03	0.00	0.10	0.05	7.92	0.04	NA
sel 19	0.00	0.05	0.36	0.00	0.66	0.85	8.90	0.04	NA
sel 20	NA	NA	0.10	0.00	0.25	0.18	5.75	0.09	NA
sel 21	NA	0.06	6.38	NA	1.95	12.36	3.24	1.19	NA
sel 22	0.00	0.01	0.10	NA	0.10	0.16	8.66	0.05	NA
sel 23	0.01	0.01	0.12	0.00	0.26	0.23	8.17	0.05	NA
sel 24	0.03	0.03	0.12	NA	0.06	0.30	14.49	0.10	NA
sel 25	NA	0.02	0.08	0.00	0.27	0.12	8.60	0.06	NA
sel 26	0.00	0.00	0.07	0.03	0.21	0.23	10.20	0.06	NA
sel 28	0.03	0.02	0.11	0.03	0.06	0.11	7.20	0.01	NA
sel 30	0.02	0.02	NA	NA	0.08	0.00	15.20	0.12	NA
sel 31	NA	0.02	0.21	0.03	0.69	0.70	8.80	0.19	NA
sel 32	0.02	0.07	0.28	0.00	0.45	0.38	10.70	0.09	NA
sel 33	0.04	0.06	0.27	NA	0.21	0.47	11.80	0.09	NA
sw 4	0.00	0.00	0.12	0.00	0.36	0.24	8.39	0.00	NA
tr 19	NA	0.04	0.12	NA	0.33	0.02	12.96	0.03	NA

Appendix 2: Metallurgical Data

Sample	PB	Au	S	Grain Size Average	Grain Size Group	Inclusion Distortion
nms 14	0.72	0.00	0.01	11.00	b	4
nms 15	8.60	0.04	0.30	11.92	b	4
nms 16	0.50	0.01	0.01	12.83	b	5
nms 17	4.07	0.04	0.36	17.67	c	3
nms 18	1.19	0.01	0.01	14.79	b	3
nms 19	1.55	0.00	0.00	15.92	c	5
nms 20	2.08	0.02	0.02	15.08	c	2
nms 21	0.22	0.00	0.01	11.29	b	3
nms 22	0.88	0.02	0.03	12.46	b	4
nms 23	0.15	0.00	0.01	52.71	f	3
nms 24	0.59	0.01	0.42	46.54	f	4
nms 25	1.06	0.04	0.07	46.67	f	2
nms 26	0.58	0.03	0.05	12.25	b	1
nms 27	0.50	0.01	0.02	12.08	b	4
nms 28	0.64	0.00	0.59	14.17	b	3
nms 29	0.86	0.00	0.02	14.58	b	1
nms 30	0.40	0.01	0.57	12.42	b	2
nmw 143	23.00	0.00	NA	20.08	d	4
nmw 144	11.10	0.00	NA	22.75	d	4
nmw 145	4.10	0.00	NA	16.17	c	4
nmw 146	7.80	0.00	NA	23.58	d	2
sel 1	2.70	0.00	NA	13.11	b	1
sel 2	4.10	0.00	NA	21.05	d	2
sel 4	0.60	0.04	NA	NA		4
sel 5	0.80	0.00	NA	8.10	a	4
sel 6	3.40	0.00	NA	12.45	b	2
sel 7	0.70	0.04	NA	30.25	e	2
sel 8	0.50	0.00	NA	13.60	b	4
sel 9	3.30	NA	NA	395.00	f	1
sel 10	3.40	0.00	NA	36.56	f	4
sel 11	0.50	0.00	NA	10.90	b	4
sel 14	5.70	0.04	NA	24.83	d	1
sel 15	4.50	0.00	NA	NA		1
sel 16	1.80	NA	NA	31.28	e	2
sel 17	1.10	0.00	NA	16.95	c	4
sel 18	0.70	NA	NA	37.00	f	3
sel 19	1.30	NA	NA	10.00	b	2
sel 20	0.40	0.03	NA	12.75	b	2
sel 21	1.40	0.06	NA	7.67	a	2
sel 22	3.90	0.00	NA	14.50	b	2
sel 23	2.90	0.00	NA	14.35	b	2
sel 24	1.40	0.06	NA	10.70	b	4
sel 25	1.40	0.00	NA	14.13	b	5
sel 26	0.50	0.05	NA	15.25	c	1
sel 28	0.90	0.00	NA	8.75	a	4
sel 30	0.03	0.05	NA	27.46	e	4
sel 31	1.40	0.08	NA	103.75	f	3
sel 32	1.40	0.03	NA	13.67	b	3
sel 33	0.40	0.05	NA	10.67	b	2
sw 4	7.00	0.00	NA	8.92	a	1
tr 19	0.08	NA	NA	12.83	b	5

Appendix 2: Metallurgical Data

Sample	Porosity	Corrosion	Coring & Recrystallisation	High Tin Phases	Grain Distortion
nms 14	1	2	2	2	2
nms 15	4	4	3	3	2
nms 16	2	1	3	2	2
nms 17	3	2	3	3	2
nms 18	3	2	3	2	2
nms 19	2	2	3	2	2
nms 20	3	3	4	4	2
nms 21	1	2	3	3	2
nms 22	3	2	3	2	3
nms 23	1	2	1	2	1
nms 24	2	2	1	2	1
nms 25	5	4	1	1	1
nms 26	1	1	3	3	2
nms 27	2	3	3	2	2
nms 28	2	3	3	3	NA
nms 29	2	2	2	4	2
nms 30	4	3	2	2	2
nmw 143	4	4	1	1	2
nmw 144	4	2	4	4	2
nmw 145	2	2	3	2	2
nmw 146	4	3	4	3	2
sel 1	5	3	5	4	2
sel 2	5	3	2	2	2
sel 4	5	4	3	3	2
sel 5	4	3	2	3	2
sel 6	4	3	2	3	2
sel 7	3	3	1	3	2
sel 8	4	2	2	2	2
sel 9	5	3	5	3	NA
sel 10	4	3	2	4	1
sel 11	4	4	2	3	2
sel 14	4	3	1	1	1
sel 15	5	3	5	2	NA
sel 16	4	3	4	1	1
sel 17	2	2	2	4	2
sel 18	4	3	2	3	2
sel 19	3	2	2	2	2
sel 20	3	2	2	1	2
sel 21	4	3	3	3	NA
sel 22	3	2	4	4	2
sel 23	4	3	2	2	2
sel 24	4	3	3	4	2
sel 25	4	3	3	2	3
sel 26	3	3	2	2	2
sel 28	2	2	2	3	2
sel 30	1	2	2	2	3
sel 31	4	3	5	3	2
sel 32	5	4	3	3	2
sel 33	2	3	2	2	2
sw 4	2	2	3	2	2
tr 19	1	2	1	2	2

Appendix 2: Metallurgical Data

Sample	Weapon	Position	Type	Region	Hardness Average	
tr	21	Sword	Blade	Early	South East	225.9
wr	1	Sword	Blade	Wilburton	South East	234.7
wr	2	Sword	Blade	Wilburton	South East	197.0
wr	3	Sword	Blade	Wilburton	South East	161.2
wr	4	Sword	Blade	Wilburton	South East	136.1
wr	5	Sword	Blade	Wilburton	South East	184.8
wr	6	Sword	Blade	Wilburton	South East	150.2

Appendix 2: Metallurgical Data

Sample		Composition								
		Fe	Co	Ni	Zn	As	Sb	Sn	Ag	Bi
tr	21	0.10	0.11	0.14	0.00	0.58	0.43	8.37	0.24	NA
wr	1	NA	0.05	0.33	0.00	0.63	0.65	8.82	0.20	NA
wr	2	0.02	0.14	0.50	NA	1.09	0.90	9.42	0.27	NA
wr	3	NA	0.03	0.23	0.00	1.33	0.80	7.25	0.24	NA
wr	4	0.01	0.02	0.24	0.00	1.24	0.95	8.09	0.38	NA
wr	5	0.03	0.14	0.56	0.00	1.13	0.59	7.75	0.26	NA
wr	6	0.04	0.04	0.09	0.00	0.78	0.55	9.04	0.20	NA

Appendix 2: Metallurgical Data

Sample		PB	Au	S	Grain Size Average	Grain Size Group	Inclusion Distortion
tr	21	0.22	0.04	NA	18.58	c	3
wr	1	1.80	NA	NA	23.13	d	2
wr	2	1.50	NA	NA	8.42	a	3
wr	3	2.60	0.00	NA	24.83	d	1
wr	4	2.00	0.00	NA	75.83	f	1
wr	5	1.80	0.00	NA	10.25	b	1
wr	6	0.60	0.00	NA	59.58	f	1

Appendix 2: Metallurgical Data

Sample	Porosity	Corrosion	Coring & Recrystallisation	High Tin Phases	Grain Distortion
tr	21	1	3	2	2
wr	1	1	2	3	2
wr	2	1	3	3	2
wr	3	2	3	2	2
wr	4	3	1	1	1
wr	5	1	2	3	2
wr	6	2	1	1	1

Compositional comparisons between pairs of samples from the same weapon

Sample #	Method	Fe	Co	Ni	Zn	As	Sb	Sn	Ag	Bi	Pb	Au
BM0 Sel3	EPMA	0.02	0.02	0.48	0.00	1.00	1.17	14.1	0.21	0.00	0.44	0.00
	EPMA	0.04	0.01	0.27	0.07	0.18	0.38	9.48	0.11	0.00	10.8	0.00
BM1 BM10	EPMA	0.01	0.01	0.27	0.00	1.33	0.75	10.8	0.47	0.00	0.21	0.02
	EPMA	0.01	0.02	0.26	0.01	0.61	0.83	11.40	0.48	0.04	0.11	0.00
BM20/Sel34 BBA145	EPMA	0.00	0.00	0.06	0.00	0.14	0.13	10.3	0.05	0.00	0.50	0.00
	AAS	0.23	0.04	0.24		0.15	0.34	8.30	0.08	0.01	17.9	
NMS23 Ed20	EPMA	0.01	0.01	0.10	0.01	0.62	0.05	12.5	0.00	0.02	0.15	0.00
	EPMA	0.00	0.01	0.10	0.00	0.22	0.05	12.1	0.05	0.00	0.63	0.00
NMS24 Ed21	EPMA	0.01	0.01	0.17	0.01	0.50	0.39	10.6	0.25	0.03	0.59	0.01
	EPMA	0.00	0.00	0.12	0.00	0.22	0.29	9.30	0.18	0.00	16.1	0.00
BM3 BBA139	EPMA	0.01	0.04	0.25	0.00	0.56	1.34	6.95	0.36	0.00	0.28	0.00
	AAS	0.01	0.04	0.23	0.00	0.56	1.34	6.00	0.17	0.04	7.48	0.00
BM6 BBA141	EPMA	0.02	0.01	0.11	0.01	0.41	0.16	9.42	0.10	0.01	0.21	0.01
	AAS	0.14	0.02	0.20	0.02	0.46	1.13	8.10	0.16	0.03	1.36	
BM11 BBA60	EPMA	0.02	0.00	0.12	0.00	0.50	0.16	9.53	0.11	0.00	0.03	0.04
	AAS	0.15	0.00	0.09	0.00	0.25	0.22	8.70	0.12	0.03	7.30	0.00
BM14 BBA506	EPMA	0.00	0.03	0.09	0.01	0.59	0.04	15.5	0.04	0.01	0.10	0.01
	AAS	0.01	0.03	0.16	0.00	0.40	0.05	11.5	0.03	0.00	0.05	0.00
BM14 BBA507	EPMA	0.00	0.03	0.09	0.01	0.59	0.04	15.5	0.04	0.01	0.10	0.01
	AAS	0.02	0.03	0.15	0.00	0.04	0.09	11.8	0.03	0.00	0.04	0.00
BBA506 BBA507	AAS	0.01	0.03	0.16	0.00	0.40	0.05	11.5	0.03	0.00	0.05	0.00
	AAS	0.02	0.03	0.15	0.00	0.04	0.09	11.8	0.03	0.00	0.04	0.00
BM15 BBA134	EPMA	0.01	0.01	0.04	0.01	0.23	0.10	11.5	0.04	0.01	0.16	0.00
	AAS	0.07	0.01	0.04	0.01	0.08	0.12	10.4	0.06	0.01	6.22	
BM16 BBA136	EPMA	0.00	0.01	0.42	0.00	0.06	1.38	8.91	0.46	0.02	0.41	0.02
	AAS	0.05	0.01	0.48		0.16	1.10	6.70	0.24	0.02	2.21	
BM8 BBA550	EPMA	0.01	0.01	0.11	0.00	0.31	0.10	12.5	0.05	0.02	0.41	0.02
	AAS	0.02	0.01	0.10	0.00	0.13	0.10	9.70	0.06	0.00	5.70	0.00
BM9 BBA553	EPMA	0.02	0.01	0.17	0.01	0.16	0.23	11.5	0.18	0.01	0.44	0.00
	AAS	0.00	0.01	0.10	0.00	0.20	0.30	9.30	0.12	0.00	4.90	0.00

Appendix 3: Sword Data

Museum Registration Exam No					Deposition Location
BM	1	WG			1245 R Thames Battersea
BM	2	1871	10	3	2 R Medway Chatham
BM	3	1871	10	3	1 R Medway Chatham
BM	4	WG			1241 Broadway Worcester - from 'cist'?
BM	5	WG			2233 Lowthorpe Humberside with axe 'ploughing'
BM	6	1892	9	1	305 Cranbourne Dorset
BM	7	1892	9	1	304 Cranbourne Dorset
BM	8	WG			1181 R Tees Middlesborough Cleveland (1887)
BM	9	1894	12	10	50 R Thames Maidenhead/Taplow
BM	10	WG			1182 R Thames Bray-on-Thames
BM	11	1976	7	1	3 R Avon Bathford Somerset
BM	12	1894	12	10	51 R Thames Maidenhead/Taplow
BM	13	1870	10	13	1 Cumbria
BM	14	1862	2	12	1 R Lea Greater London
BM	15	WG			1248 R Thames Richmond 'new lock' (1893)
BM	16	WG			1711 R Thames Richmond
BM	17	WG			1689 R Thames Putney
BM	18	1877	1	16	1 b R Thames Lambeth
BM	18	1877	1	16	1 h R Thames Lambeth
BM	19	1863	1	22	120 R Thames Kingston
BM	20	WG			1707 R Thames Isleworth (1887)
BM	21	WG			1710 R Thames Isleworth (1887)
BM	22	1863	1	22	121 R Thames Kingston
BM	23	WG			1268 R Thames Isleworth (butt 1886, point 1887)
BM	24	WG			1709 R Thames Mortlake
BM	25	WG			1247 R Thames Hammersmith near bridge
BM	26	WG			1251 Thames St City of London near Custom Hous
BM	27	WG			1244 R Thames Chiswick
BM	28	WG			2272 R Thames Battersea
BM	29	WG			1243 R Thames Battersea
BM	30	1856	7	1	1362 R Thames Wandsworth
BM	31	WG			1226 R Thames Wandsworth (1854)
BM	32	WG			1246 'mouth of' R Wandle Wandsworth (1894)
BM	33	Unregistered			R Thames Wandsworth
BM	34	1862	9	12	2 R Thames
BM	35	1951	10	7	1 Kielder Forest Northumberland confluence
BM	36	1871	10	2	7 R Medway Chatham
BM	37	1976	7	1	2 Buildwas Bridge Shropshire - s bank R Sev
BM	38	WG			1239 'Barrow' Suffolk (Proc Suff Inst of Arch
BM	39	1836	9	1	1 Battle Sussex
BM	40	1964	12	1	46 Sussex?
BM	41	WG			2433 Stanford Norfolk
BM	42	1856	8	13	1 R Thames?
BM	43	1863	1	22	119 R Thames?
BM	44	1864	9	3	5 R Thames
BM	45	WG			1242 R Thames Battersea? (1850)
BM	46	1854	10	28	1 R Thames Battersea
BM	47	1850	12	26	1 R Thames Battersea
BM	48	WG			1249 R Thames Battersea
BM	49	1850	7	25	1 R Thames Wandsworth
BM	50	1986	9	1	2 in old riverbed? Chertsey

Appendix 3: Sword Data

Museum	Region	Type	Complete	Weight	Length	Blade	Hilt	
Exam			ness	gms	mm	Length	Length	
No						mm	mm	
BM	1	South East	Early	1	534.4	642.0	545.0	97.0
BM	2	South East	Early	9	525.9	562.0	NA	NA
BM	3	South East	Ewart Park	1	609.2	606.0	492.0	114.0
BM	4	West	Ewart Park	1	733.3	616.0	509.0	107.0
BM	5	Scotland	Ewart Park	9	571.6	481.0	NA	106.0
BM	6	West	Ewart Park	3	712.0	584.0	NA	104.0
BM	7	West	Wilburton	2	556.4	605.0	509.0	96.0
BM	8	Scotland	Ewart Park	1	487.7	548.0	454.0	94.0
BM	9	South East		6	552.4	475.0	NA	NA
BM	10	South East	Wilburton	3	563.6	477.0	410.0	NA
BM	11	West	Ewart Park	1	584.4	530.0	425.0	105.0
BM	12	South East	Wilburton	7	297.6	220.0	NA	NA
BM	13	West	Early	7	293.6	206.0	NA	NA
BM	14	South East	Early	1	800.7	703.0	570.0	107.0
BM	15	South East	Ewart Park	1	586.0	573.0	457.0	116.0
BM	16	South East		7	227.5	175.0	NA	NA
BM	17	South East	Early	2	337.6	446.0	NA	NA
BM	18	South East	Late	9	193.1	149.0	NA	NA
BM	18	South East	Late	9	447.1	320.0	NA	NA
BM	19	South East	Early	2	582.8	495.0	437.0	NA
BM	20	South East	Ewart Park	5	413.8	305.0	NA	121.0
BM	21	South East	Ewart Park	7	124.4	159.0	NA	NA
BM	22	South East		6	171.0	292.0	NA	NA
BM	23	South East	Ewart Park	9	658.8	593.0	497.0	96.0
BM	24	South East	Early	5	365.2	319.0	NA	108.0
BM	25	South East	Early	1	661.9	599.0	496.0	103.0
BM	26	South East	Early	1	604.4	525.0	465.0	60.0
BM	27	South East	Ewart Park	1	716.1	649.0	537.0	112.0
BM	28	South East	Late	2	665.5	705.0	588.0	117.0
BM	29	South East	Early	1	630.5	673.0	572.0	101.0
BM	30	South East	Early	7	305.8	360.0	NA	NA
BM	31	South East	Early	1	897.8	642.0	537.0	105.0
BM	32	South East	Ewart Park	1	745.6	634.0	519.0	106.0
BM	33	South East	Late	3	437.9	415.0	NA	NA
BM	34	South East	Early	1	587.0	590.0	NA	NA
BM	35	Scotland	Ewart Park	4	511.6	539.0	497.0	NA
BM	36	South East	Early	1	942.8	795.0	686.0	109.0
BM	37	West	Ewart Park	1	472.3	531.0	432.0	99.0
BM	38	East Anglia	Early	1	852.2	697.0	589.0	108.0
BM	39	South East	Early	9	1091.3	767.0	628.0	116.0
BM	40	South East		7	254.2	336.0	NA	NA
BM	41	East Anglia	Ewart Park	8	100.5	88.0	NA	NA
BM	42	South East	Early	2	925.8	728.0	NA	NA
BM	43	South East	Late	1	530.1	618.0	618.0	110.0
BM	44	South East	Late	1	741.2	618.0	505.0	113.0
BM	45	South East	Wilburton	1	639.0	639.0	522.0	117.0
BM	46	South East	Early	1	794.0	698.0	587.0	111.0
BM	47	South East	Late	2	589.9	534.0	478.0	56.0
BM	48	South East	Early	2	760.1	630.0	513.0	117.0
BM	49	South East	Early	1	591.0	550.0	442.0	108.0
BM	50	South East	Early	6	595.5	571.0	NA	NA
BM				1	768.6	608.0	507.0	101.0

Appendix 3: Sword Data

Museum	Exam	CoG to Shldr	Max Width Shldr	Max Width Blade	Blade Thickness	Edge Fine ness	Edge Damage	Casting Quality	PBF No
BM	1	208.0	65.0	41.0	7.5		3	3	118
BM	2	NA	NA	NA	8.4	c	2 c	3	78
BM	3	178.0	50.0	39.0	7.0	c	2 c	2	317
BM	4	190.0	51.0	43.0	8.0		1	3	432
BM	5	NA	51.0	40.0	6.0		3	2	504
BM	6	182.0	49.0	41.0	8.0	c	2 c	3	437
BM	7	188.0	NA	35.0	7.2	c	2 c	3	181
BM	8	174.0	51.0	37.0	5.1	c	2 c	3	459
BM	9	NA	NA	43.0	9.0		2	3	NA
BM	10	NA	52.0	42.0	8.5	c	3 c	2	290
BM	11	150.0	51.0	40.0	7.4		3	1	NA
BM	12	NA	NA	44.0	7.4	c	1 c	1	238
BM	13	NA	NA	NA	NA		4	2	20
BM	14	209.0	NA	38.0	9.6	c	2 c	1	84
BM	15	168.0	50.0	42.0	6.7	c	2 c	1	312
BM	16	NA	NA	NA	NA	c	3 c	1	NA
BM	17	NA	NA	NA	NA		1	3	8
BM	18	NA	NA	NA	NA		3 c	4	737
BM	18	NA	NA	NA	NA		3 c	4	737
BM	19	NA	NA	32.0	8.1		2	3	37
BM	20	NA	52.0	NA	NA		2 c	4	320
BM	21	NA	NA	NA	NA		2	4	373
BM	22	NA	NA	34.0	5.0	c	2 c	3	767
BM	23	NA	NA	43.0	6.0		2 c	3	228
BM	24	NA	71.0	NA	NA		1 b	3 b	97
BM	25	190.0	50.0	44.0	7.9		2	3	62
BM	26	187.0	NA	NA	NA		2	3	43
BM	27	202.0	47.0	42.0	7.3		1	3	315
BM	28	208.0	58.0	31.0	6.5	c	2 c	4	719
BM	29	212.0	73.0	48.0	8.6	c	3 c	2	102
BM	30	NA	NA	43.0	8.1	c	2 c	2	107
BM	31	201.0	57.0	42.0	9.5		1	1	88
BM	32	200.0	52.0	48.0	6.5		2	3	318
BM	33	NA	61.0	33.0	6.7	c	2 c	4	745
BM	34	NA	54.0	53.0	7.0		1	2	65
BM	35	NA	46.0	38.0	6.2		3	3	548
BM	36	268.0	61.0	46.0	8.2	c	3 c	3	89
BM	37	157.0	NA	34.0	6.2		3	3	NA
BM	38	228.0	55.0	45.0	10.5	c	2 c	3	94
BM	39	214.0	59.0	45.0	8.8	c	2 c	3	87
BM	40	NA	NA	NA	NA	c	NA c	NA	NA
BM	41	NA	47.0	NA	NA	c	2 c	3	411
BM	42	230.0	56.0	43.0	8.5	c	2 c	2	783
BM	43	159.0	57.0	NA	6.6	c	2 c	4	718
BM	44	182.0	56.0	42.0	6.8		1	3	698
BM	45	242.0	66.0	NA	8.3	c	2 c	2	158
BM	46	198.0	44.0	40.0	6.1		2	2	44
BM	47	189.0	58.0	47.0	8.4		2	3	697
BM	48	NA	49.0	41.0	9.0		2	1	73
BM	49	NA	NA	36.0	8.2	c	2 c	1	80
BM	50	191.0	67.0	46.0	7.6	c	1 c	3	NA

Appendix 3: Sword Data

Museum Registration					Deposition Location
Exam					
No					
BM	51	WG			1250 R Thames Twickenham
BM	52	OA			124 Twickenham
BM	53	1861	6	4	9 R Thames Teddington
BM	54	WG			1708 R Thames Twickenham
BM	55	1856	7	1	1353 R Thames
BM	56	1856	7	1	1352 R Thames
BM	57	1856	7	1	1351 R Thames
BM	58	1858	11	1	1 Yorkshire?
BM	59	WG			1237 Brechin Angus Forfarshire/Tayside
BM	60	1878	11	1	206 New Forest Lansannor Glam
BM	61	1903	2	14	4 Waltham Forest Walthamstow London
BM	62	WG			2271 R Tyne below Newcastle
BM	63	1857	9	20	1 R Thames Battersea
BM	64	1960	11	7	1 R Thames Wandsworth
BM	65	1854	6	10	1 R Thames Brentford
BM	66	WG			2227 Broadward Salop/Hereford
BM	67	WG			2228 Broadward Salop/Hereford
BM	68	WG			2229 Broadward Salop/Hereford
BM	69	WG			2230 Broadward Salop/Hereford
BM	70	WG			2231 Broadward Salop/Hereford
BM	71	WG			2232 Broadward Salop/Hereford
BM	72	1902	5	15	8 Broadward Salop/Hereford
BM	73	1902	5	15	19 Broadward Salop/Hereford
BM	74	1872	3	29	10 Broadward Salop/Hereford
BM	75	1878	11	1	203 Fulbourne Cambs (Archaeologia XIX)
BM	76	1878	11	1	204 Fulbourne Cambs (Archaeologia XIX)
BM	77	1858	11	15	1 Tarves Grampian in the farm of Ythsie?
BM	78	1858	11	15	2 Tarves Grampian in the farm of Ythsie?
BM	79	1880	11	24	33 Meldreth Cambs
BM	80	1880	11	24	50 Meldreth Cambs
BM	81	1880	11	24	32 Meldreth Cambs
BM	82	1880	11	24	30 Meldreth Cambs
BM	83	1880	11	24	34 Meldreth Cambs
BM	84	1880	11	24	36 Meldreth Cambs
BM	85	1880	11	24	Meldreth Cambs
BM	86	1868	8	15	1 Wicken Fen Cambs 6' from surface
BM	87	1868	8	15	3 Wicken Fen Cambs 6' from surface
BM	88	1868	8	15	2 Wicken Fen Cambs 6' from surface
BM	89	1868	8	15	5 Wicken Fen Cambs 6' from surface
BM	90	1868	8	15	4 Wicken Fen Cambs 6' from surface
BM	91	WG			1279 Heathery Burn Durham (Cu68.8, Sn9.4, Pb20.3)
BM	92	1853	6	27	42 Chrishall Essex
BM	93	1853	6	27	41 Chrishall Essex
BM	94	1853	6	27	43 Chrishall Essex
BM	95	1892	6	13	1 Shoebury Essex (PSA 1892 XIV)
BM	96	1892	6	13	2 Shoebury Essex (PSA 1892 XIV)
BM	97	WG			1240 Bromley Kent - with another
BM	98	1851	12	30	1 Dolwyddelan Gwynedd buried in peat
BM	99	WG			1269 Blackmoor Woolmer Forest Selbourne Hants
BM	100	1931	3	14	9 Bexleyheath London 5'6" under gravel
BM	101	1903	7	23	7 Cliffe at Hoo Kent

Appendix 3: Sword Data

Museum	Region	Type	Comp	Weight	Length	Blade	Hilt	
Exam			lete	gms	mm	Length	Length	
No			ness			mm	mm	
BM	51	South East	Early	2	684.1	550.0	496.0	54.0
BM	52	South East	Wilburton	4	785.8	598.0	559.0	NA
BM	53	South East	Late	7	455.0	360.0	NA	NA
BM	54	South East	Wilburton	7	266.4	200.0	NA	NA
BM	55	South East	Early	4	615.9	625.0	584.0	NA
BM	56	South East	Early	1	522.1	522.0	423.0	99.0
BM	57	South East	Early	1	433.0	449.0	350.0	99.0
BM	58	Scotland	Late	3	524.9	533.0	NA	NA
BM	59	Scotland	Late	4	835.1	663.0	630.0	NA
BM	60	West		7	166.3	184.0	NA	NA
BM	61	South East		7	48.0	117.0	NA	NA
BM	62	Scotland	Late	1	662.8	696.0	584.0	112.0
BM	63	South East	Late	1	802.6	726.0	608.0	118.0
BM	64	South East	Wilburton	1	555.2	591.0	496.0	95.0
BM	65	South East	Early	1	873.7	621.0	529.0	92.0
BM	66	West		7	135.3	137.0	NA	NA
BM	67	West		7	136.6	136.0	NA	NA
BM	68	West		8	77.5	97.0	NA	NA
BM	69	West		8	91.8	76.0	NA	NA
BM	70	West		8	63.4	51.0	NA	NA
BM	71	West	Ewart Park	8	39.2	59.0	NA	NA
BM	72	West		7	147.5	145.0	NA	NA
BM	73	West		8	25.1	49.0	NA	NA
BM	74	West	Ewart Park	7	196.4	217.0	NA	NA
BM	75	East Anglia	Ewart Park	9	463.8	577.0	476.0	101.0
BM	76	East Anglia	Ewart Park	9	550.4	577.0	471.0	106.0
BM	77	Scotland	Ewart Park	1	815.7	639.0	543.0	96.0
BM	78	Scotland	Ewart Park	1	668.6	588.0	481.0	105.0
BM	79	East Anglia	Late	8	45.6	60.0	NA	NA
BM	80	East Anglia	Ewart Park	8	40.2	65.0	NA	NA
BM	81	East Anglia	Ewart Park	7	129.4	125.0	NA	NA
BM	82	East Anglia	Ewart Park	9	418.3	373.0	NA	NA
BM	83	East Anglia		8	56.6	62.0	NA	NA
BM	84	East Anglia		8	51.6	61.0	NA	NA
BM	85	East Anglia		8	29.5	29.0	NA	NA
BM	86	East Anglia	Wilburton	8	117.4	79.0	NA	NA
BM	87	East Anglia	Wilburton	7	130.5	145.0	NA	NA
BM	88	East Anglia		7	110.5	103.0	NA	NA
BM	89	East Anglia		8	7.6	41.0	NA	NA
BM	90	East Anglia		8	22.2	65.0	NA	NA
BM	91	Scotland		7	126.5	148.0	NA	NA
BM	92	South East		8	102.3	91.0	NA	NA
BM	93	South East		8	127.9	81.0	NA	NA
BM	94	South East		7	58.4	110.0	NA	NA
BM	95	South East	Ewart Park	7	156.1	108.0	NA	NA
BM	96	South East		8	107.9	84.0	NA	NA
BM	97	South East	Ewart Park	1	821.1	636.0	534.0	102.0
BM	98	West	Ewart Park	3	412.2	492.0	NA	NA
BM	99	South East	Ewart Park	7	267.7	269.0	NA	NA
BM	100	South East	Ewart Park	9	268.8	241.0	NA	103.0
BM	101	South East		8	83.0	78.0	NA	NA

Appendix 3: Sword Data

Museum	Exam No	CoG to Shldr	Max Width Shldr	Max Width Blade	Blade Thickness	Edge Fine ness	Edge Damage	Casting Quality	PBF No			
BM	51	203.0	44.0	48.0	6.7		1	3	3	23		
BM	52	NA	62.0	39.0	8.3		2	3	2	152		
BM	53	NA	62.0	NA	NA		2	3	3	727		
BM	54	NA	65.0	NA	NA	cb	1	cb	3	213		
BM	55	NA	58.0	43.0	7.2	c	2	c	1	119		
BM	56	143.0	62.0	49.0	6.9		2	3	2	135		
BM	57	115.0	44.0	39.0	5.8		2	3	3	71		
BM	58	NA	53.0	41.0	6.0		1	4	2	754		
BM	59	NA	NA	NA	NA	c	2	c	3	723		
BM	60	NA	43.0	NA	NA		3	1	2	NA		
BM	61	NA	NA	NA	NA	c	2	c	3	375		
BM	62	213.0	56.0	31.0	7.3		2	2	2	715		
BM	63	217.0	59.0	34.0	8.0		2	1	3	710		
BM	64	175.0	57.0	37.0	6.7	c	1	c	3	208		
BM	65	214.0	74.0	59.0	8.8		1	3	2	128		
BM	66	NA	NA	NA	NA	cb	NA	cb	NA	cb	3	NA
BM	67	NA	NA	NA	NA	cb	NA	cb	NA	cb	3	NA
BM	68	NA	NA	NA	NA	cb	NA	cb	NA	cb	3	NA
BM	69	NA	NA	NA	NA	cb	NA	cb	NA	cb	3	NA
BM	70	NA	NA	NA	NA	cb	NA	cb	NA	cb	3	NA
BM	71	NA	NA	NA	NA	cb	NA	cb	NA	cb	3	NA
BM	72	NA	NA	NA	NA	cb	NA	cb	NA	cb	3	453
BM	73	NA	NA	NA	NA	cb	NA	cb	NA	cb	3	NA
BM	74	NA	NA	NA	NA	cb	NA	cb	NA	cb	3	NA
BM	75	156.0	50.0	40.0	5.0		1	4	3	435		
BM	76	161.0	53.0	41.0	5.6		2	4	3	378		
BM	77	201.0	49.0	45.0	7.7	c	1	c	3	388		
BM	78	158.0	50.0	42.0	6.9	c	1	c	3	575		
BM	79	NA	NA	NA	NA		NA	NA	3	490		
BM	80	NA	NA	NA	NA		NA	NA	3	689		
BM	81	NA	NA	NA	NA	c	1	c	NA	3	397	
BM	82	NA	44.0	34.0	7.7	c	2	c	1	3	394	
BM	83	NA	NA	NA	NA	c	2	c	1	2	404	
BM	84	NA	NA	NA	5.9	c	2	c	4	3	NA	
BM	85	NA	NA	NA	NA	c	2	c	1	3	NA	
BM	86	NA	67.0	NA	NA	c	1	c	NA	3	NA	
BM	87	NA	NA	NA	NA	c	2	c	1	2	251	
BM	88	NA	NA	NA	NA	c	2	c	1	2	252	
BM	89	NA	NA	NA	NA	c	3	c	3	2	NA	
BM	90	NA	NA	NA	NA	c	2	c	NA	3	NA	
BM	91	NA	NA	NA	NA		NA	c	3	3	NA	
BM	92	NA	NA	NA	NA		4		1	2	NA	
BM	93	NA	NA	NA	NA	c	3	c	3	3	NA	
BM	94	NA	NA	NA	NA	c	2	c	3	2	NA	
BM	95	NA	47.0	NA	NA	c	2	c	2	2	NA	
BM	96	NA	NA	NA	NA	c	NA	c	NA	3	325	
BM	97	199.0	51.0	42.0	8.0	c	NA	c	NA	4	NA	
BM	98	NA	46.0	35.0	6.2		1	c	2	1	283	
BM	99	NA	NA	NA	6.8	c	2	c	3	3	433	
BM	100	NA	47.0	NA	NA	c	2	c	4	2	227	
BM	101	NA	NA	NA	NA	c	2	c	1	3	311	
							3	c	2	3	NA	

Appendix 3: Sword Data

Museum Registration				Deposition Location	
	Exam				
	No				
BM 102	1946	7	6	12	Dartford Kent roadworks nr Watling St (PP
BM 103	1914	9	24	27	Addington London
BM 104	1914	9	24	25	Addington London
BM 105	1914	9	24	29	Addington London
BM 106	1914	9	24	28	Addington London
BM 107	1914	9	24	24	Addington London
BM 108	1903	6	23	25	Bromley le Bow London 4'6" deep
BM 109	1866	2	24	9	Kensington London
BM 110	1864	5	2	12	Hounslow London in a field
BM 111	1864	5	2	13	Hounslow London in a field
BM 112	1879	3	20		Cumberlow Green Herts
BM 112	1879	3	20		Cumberlow Green Herts
BM 113	1911	10	21	6	Heathery Burn Durham
BM 114	1894	8	3	40	All Hallows Hoo Homewood Fm (Arch Cant XI
BM 115	1894	8	3	41	All Hallows Hoo Homewood Fm (Arch Cant XI
BM 116	1894	8	3	48	All Hallows Hoo Homewood Fm (Arch Cant XI
BM 117	1894	8	3	26	All Hallows Hoo Littlecoombe Fm trenching
BM 118	1894	8	3	23	All Hallows Hoo Littlecoombe Fm trenching
BM 119	1894	8	3	24	All Hallows Hoo Littlecoombe Fm trenching
BM 120	1894	8	3	50	All Hallows Hoo Homewood Fm (Arch Cant XI
BM 121	1894	8	3	42	All Hallows Hoo Homewood Fm (Arch Cant XI
BM 122	1894	8	3	39	All Hallows Hoo Homewood Fm (Arch Cant XI
BM 123	1894	8	3	47	All Hallows Hoo Homewood Fm (Arch Cant XI
BM 124	1898	7	12	20	R Thames Taplow
BM 125	1898	7	12	19	R Thames Taplow
BM 126	1914	9	24	26	Addington London
BM 127	1880	11	24	31	Meldreth Cambs
BM 128	1891	5	14	33	Blackmoor Woolmer Forest Selbourne Hants
BM 129	1891	5	14	31	Blackmoor Woolmer Forest Selbourne Hants
BM 130	1891	5	14	34	Blackmoor Woolmer Forest Selbourne Hants
BM 131	1891	5	14	32	Blackmoor Woolmer Forest Selbourne Hants
BM 132	1891	5	14	35	Blackmoor Woolmer Forest Selbourne Hants
BM 133	1891	5	14	38	Blackmoor Woolmer Forest Selbourne Hants
BM 134	1891	5	14	37	Blackmoor Woolmer Forest Selbourne Hants
BM 135	1891	5	14	36	Blackmoor Woolmer Forest Selbourne Hants
BM 136	1891	5	14	39	Blackmoor Woolmer Forest Selbourne Hants
BM 137	1891	5	14	41	Blackmoor Woolmer Forest Selbourne Hants
BM 138	1891	5	14	40	Blackmoor Woolmer Forest Selbourne Hants
BM 139	1981	7	2	49	Langdon Bay wreck (Ant LIV)
BM 140	1892	11	4	3	Marston St Lawrence
BM 141	1892	11	4	4	Marston St Lawrence
BM 142	WG			1252	R Thames Sandford Oxon 20 yds from river
BM 143	WG			1238	Brechin Angus Forfarshire/Tayside
BM 144	1893	2	5	1	Stoke Hoo Kent
BM 145	1893	2	5	2	Stoke Hoo Kent
BM 146	1893	2	5	3	Stoke Hoo Kent
BM 147	1893	2	5	4	Stoke Hoo Kent
BM 148	1893	2	5	5	Stoke Hoo Kent
BM 149	1893	4	26	142	Minster Thanet Kent (PSA XIV)
BM 150	1893	4	26	143	Minster Thanet Kent (PSA XIV)
BM 151	1922	2	6	28	Swalecliffe Kent

Appendix 3: Sword Data

Museum	Region	Type	Complete	Weight	Length	Blade	Hilt
Exam			ness	gms	mm	Length	Length
No						mm	mm
BM 102	South East	Ewart Park	8	110.5	66.0	NA	NA
BM 103	South East		8	37.7	41.0	NA	NA
BM 104	South East		8	58.0	68.0	NA	NA
BM 105	South East		8	40.3	39.0	NA	NA
BM 106	South East		8	69.4	55.0	NA	NA
BM 107	South East		8	33.1	54.0	NA	NA
BM 108	South East	Ewart Park	8	122.6	93.0	NA	NA
BM 109	South East		8	41.1	85.0	NA	NA
BM 110	South East		8	43.7	100.0	NA	NA
BM 111	South East		7	68.6	132.0	NA	NA
BM 112	South East		9	98.5	78.0	NA	NA
BM 112	South East		9	137.1	92.0	NA	NA
BM 113	Scotland	Ewart Park	9	520.5	518.0	NA	NA
BM 114	South East		8	133.4	100.0	NA	NA
BM 115	South East		8	106.8	90.0	NA	NA
BM 116	South East	Ewart Park	8	105.5	86.0	NA	NA
BM 117	South East	Ewart Park	8	33.3	61.0	NA	NA
BM 118	South East		8	31.6	51.0	NA	NA
BM 119	South East		8	35.7	68.0	NA	NA
BM 120	South East		8	38.9	38.0	NA	NA
BM 121	South East		8	51.7	40.0	NA	NA
BM 122	South East		9	108.9	95.0	NA	NA
BM 123	South East	Wilburton	8	64.2	59.0	NA	NA
BM 124	South East	Wilburton	5	359.1	280.0	NA	NA
BM 125	South East	Wilburton	5	325.8	310.0	NA	NA
BM 126	South East	Late	5	173.2	143.0	NA	91.0
BM 127	East Anglia	Ewart Park	5	245.2	179.0	NA	NA
BM 128	South East	Ewart Park	5	252.9	250.0	NA	95.0
BM 129	South East	Ewart Park	6	471.9	367.0	NA	NA
BM 130	South East	Ewart Park	5	185.8	247.0	NA	96.0
BM 131	South East		6	477.1	342.0	NA	NA
BM 132	South East	Ewart Park	5	189.2	192.0	NA	95.0
BM 133	South East		8	14.8	35.0	NA	NA
BM 134	South East		7	135.0	175.0	NA	NA
BM 135	South East		7	189.8	171.0	NA	NA
BM 136	South East		7	NA	112.0	NA	NA
BM 137	South East		8	38.1	57.3	NA	NA
BM 138	South East		8	38.4	62.0	NA	NA
BM 139			8	60.2	80.0	NA	NA
BM 140	East Anglia	Ewart Park	9	719.2	628.0	522.0	106.0
BM 141	East Anglia	Ewart Park	9	540.3	592.0	494.0	98.0
BM 142	South East	Early	1	387.9	484.0	443.0	41.0
BM 143	Scotland	Late	1	609.8	668.0	562.0	106.0
BM 144	South East		8	62.4	41.0	NA	NA
BM 145	South East	Ewart Park	7	156.4	102.0	NA	NA
BM 146	South East		8	50.1	54.0	NA	NA
BM 147	South East		8	78.4	81.0	NA	NA
BM 148	South East		7	138.2	116.0	NA	NA
BM 149	South East		8	25.4	49.0	NA	NA
BM 150	South East		8	15.7	39.0	NA	NA
BM 151	South East		8	20.1	50.0	NA	NA

Appendix 3: Sword Data

Museum	Exam No	CoG to Shldr	Max Width Shldr	Max Width Blade	Blade Thickness	Edge Finess	Edge Damage	Casting Quality	PBF No	
BM	102	NA	NA	NA	NA	c	2 c	NA	2	607
BM	103	NA	NA	NA	NA	c	2 c	NA	3	NA
BM	104	NA	NA	NA	NA	c	3 c	2	3	NA
BM	105	NA	NA	NA	NA	c	3 c	2	3	NA
BM	106	NA	NA	NA	NA	c	3 c	2	3	NA
BM	107	NA	NA	NA	NA	c	NA c	NA	2	NA
BM	108	NA	NA	NA	NA	c	2 c	NA	2	324
BM	109	NA	NA	NA	NA	c	1 c	2	2	NA
BM	110	NA	NA	NA	NA	c	1 c	2	2	NA
BM	111	NA	NA	NA	NA	c	2 c	NA	3	NA
BM	112	NA	47.0	NA	NA	c	3 c	NA	3	NA
BM	112	NA	NA	NA	NA	c	3 c	NA	3	NA
BM	113	NA	NA	NA	NA		2	1	2	528
BM	114	NA	NA	NA	NA		1	4	3	NA
BM	115	NA	NA	NA	NA	c	2 c	3	2	NA
BM	116	NA	NA	NA	NA	c	2 c	NA	2	356
BM	117	NA	NA	NA	NA		NA	NA	3	348
BM	118	NA	NA	NA	NA	c	2 c	NA	3	NA
BM	119	NA	NA	NA	NA	c	4 c	NA	3	NA
BM	120	NA	NA	NA	NA	c	2 c	NA	3	NA
BM	121	NA	NA	NA	NA	c	2 c	NA	2	NA
BM	122	NA	NA	NA	NA	c	3 c	NA	2	NA
BM	123	NA	NA	NA	NA	c	3 c	NA	2	NA
BM	124	NA	59.0	NA	NA	c	3 c	NA	2	186
BM	125	NA	56.0	NA	NA	c	3 c	3	3	167
BM	126	NA	47.0	NA	NA	c	3 c	NA	2	691
BM	127	NA	49.0	NA	NA	c	2 c	NA	2	386
BM	128	NA	47.0	NA	NA		1	3	2	263
BM	129	NA	NA	44.0	8.0		1	3	1	276
BM	130	NA	44.0	NA	NA		2	NA	2	264
BM	131	NA	NA	47.0	7.8		1	3	2	NA
BM	132	NA	47.0	NA	NA		1	3	2	267
BM	133	NA	NA	NA	NA		2	2	2	NA
BM	134	NA	NA	NA	5.8	c	1 c	4	2	NA
BM	135	NA	NA	NA	NA		2	4	3	NA
BM	136	NA	NA	NA	NA		2	3	2	NA
BM	137	NA	NA	NA	NA		NA	NA	2	NA
BM	138	NA	NA	NA	NA		NA	NA	3	NA
BM	139	NA	NA	NA	NA	c	NA c	NA	2	NA
BM	140	187.0	53.0	45.0	6.0		1	5	3	393
BM	141	211.0	NA	NA	NA		2	5	2	389
BM	142	186.0	40.0	36.0	5.7	c	3 c	1	2	77
BM	143	188.0	59.0	32.0	6.4		1	3	1	740
BM	144	NA	NA	NA	NA	c	2 c	NA	3	NA
BM	145	NA	NA	NA	NA	c	3 c	NA	2	347
BM	146	NA	NA	NA	NA	c	3 c	3	2	NA
BM	147	NA	NA	NA	NA	c	2 c	3	3	NA
BM	148	NA	NA	NA	NA	c	2 c	3	3	NA
BM	149	NA	NA	NA	NA	c	NA c	NA c	NA	NA
BM	150	NA	NA	NA	NA	c	NA c	NA c	NA	NA
BM	151	NA	NA	NA	NA	c	NA c	NA c	NA	NA

Appendix 3: Sword Data

Museum Registration				Deposition Location		
	Exam					
	No					
BM	152	1922	2	6	26	Swalecliffe Kent
BM	153	1922	2	6	22	Swalecliffe Kent
BM	154	1922	2	6	25	Swalecliffe Kent
BM	155	1922	2	6	23	Swalecliffe Kent
BM	156	1966	12	8	7	Whalley Portfield Farm Lancs - pipe layin
BM	157	1893	4	26	9	Minster Thanet Kent (PSA XIV)
BM	158	1893	4	26	11	Minster Thanet Kent (PSA XIV)
BM	159	1893	4	26	13	Minster Thanet Kent (PSA XIV)
BM	160	1893	4	26	18	Minster Thanet Kent (PSA XIV)
BM	161	1893	4	26	31	Minster Thanet Kent (PSA XIV)
BM	162	1893	4	26	33	Minster Thanet Kent (PSA XIV)
BM	163	1893	4	26	10	Minster Thanet Kent (PSA XIV)
BM	164	1893	4	26	12	Minster Thanet Kent (PSA XIV)
BM	165	1893	4	26	14	Minster Thanet Kent (PSA XIV)
BM	166	1893	4	26	15	Minster Thanet Kent (PSA XIV)
BM	167	1893	4	26	16	Minster Thanet Kent (PSA XIV)
BM	168	1893	4	26	17	Minster Thanet Kent (PSA XIV)
BM	169	1893	4	26	19	Minster Thanet Kent (PSA XIV)
BM	170	1893	4	26	20	Minster Thanet Kent (PSA XIV)
BM	171	1893	4	26	21	Minster Thanet Kent (PSA XIV)
BM	172	1893	4	26	22	Minster Thanet Kent (PSA XIV)
BM	173	1893	4	26	23	Minster Thanet Kent (PSA XIV)
BM	174	1893	4	26	24	Minster Thanet Kent (PSA XIV)
BM	175	1893	4	26	25	Minster Thanet Kent (PSA XIV)
BM	176	1893	4	26	26	Minster Thanet Kent (PSA XIV)
BM	177	1893	4	26	27	Minster Thanet Kent (PSA XIV)
BM	178	1893	4	26	28	Minster Thanet Kent (PSA XIV)
BM	179	1893	4	26	29	Minster Thanet Kent (PSA XIV)
BM	180	1893	4	26	30	Minster Thanet Kent (PSA XIV)
BM	181	1893	4	26	32	Minster Thanet Kent (PSA XIV)
BM	182	1893	4	26	34	Minster Thanet Kent (PSA XIV)
BM	183	1893	4	26	35	Minster Thanet Kent (PSA XIV)
BM	184	1893	4	26	36	Minster Thanet Kent (PSA XIV)
BM	185	1893	4	26	37	Minster Thanet Kent (PSA XIV)
BM	186	1893	4	26	38	Minster Thanet Kent (PSA XIV)
BM	187	1893	4	26	39	Minster Thanet Kent (PSA XIV)
BM	188	1893	4	26	40	Minster Thanet Kent (PSA XIV)
BM	189	1893	4	26	41	Minster Thanet Kent (PSA XIV)
BM	190	1893	4	26	42	Minster Thanet Kent (PSA XIV)
BM	191	1928	2	10	3	Somerleyton Suffolk in rectory garden (An
BM	192	1928	2	10	4	Somerleyton Suffolk in rectory garden (An
BM	193	1928	2	10	5	Somerleyton Suffolk in rectory garden (An
BM	194	1928	2	10	6	Somerleyton Suffolk in rectory garden (An
BM	195	1928	2	10	7	Somerleyton Suffolk in rectory garden (An
BM	196	1928	2	10	8	Somerleyton Suffolk in rectory garden (An
BM	197	1928	2	10	9	Somerleyton Suffolk in rectory garden (An
BM	198	1928	2	10	10	Somerleyton Suffolk in rectory garden (An
BM	199	WG			2014	A York Cemetery (1/1869)
BM	200	WG			2014	York Cemetery (1/1869)
BM	201	Unregi				Beachy Head
BM	202	1928	2	10	2	Somerleyton Suffolk in rectory garden (An

Appendix 3: Sword Data

Museum	Region	Type	Complete ness	Weight gms	Length mm	Blade Length mm	Hilt Length mm	
BM	152	South East	8	42.4	40.0	NA	NA	
BM	153	South East	7	50.3	102.0	NA	NA	
BM	154	South East	8	41.1	41.0	NA	NA	
BM	155	South East	8	45.2	86.0	NA	NA	
BM	156	West	Ewart Park	8	33.2	59.0	NA	NA
BM	157	South East	Late	7	143.3	121.0	NA	NA
BM	158	South East	Late	8	124.4	78.0	NA	NA
BM	159	South East	Ewart Park	8	80.3	84.0	NA	NA
BM	160	South East		8	27.6	60.0	NA	NA
BM	161	South East		7	113.2	105.0	NA	NA
BM	162	South East		8	87.4	70.0	NA	NA
BM	163	South East	Late	8	82.7	63.0	NA	NA
BM	164	South East	Ewart Park	8	137.1	98.0	NA	NA
BM	165	South East	Ewart Park	8	78.5	59.0	NA	NA
BM	166	South East	Ewart Park	8	73.8	58.0	NA	NA
BM	167	South East	Ewart Park	8	74.4	97.0	NA	NA
BM	168	South East		8	34.8	60.0	NA	NA
BM	169	South East	Ewart Park	7	98.1	119.0	NA	NA
BM	170	South East		8	42.7	53.0	NA	NA
BM	171	South East		8	71.5	52.0	NA	NA
BM	172	South East		8	29.2	27.0	NA	NA
BM	173	South East		8	36.3	27.0	NA	NA
BM	174	South East		8	35.2	37.0	NA	NA
BM	175	South East		8	75.5	88.0	NA	NA
BM	176	South East		8	51.8	51.0	NA	NA
BM	177	South East	Ewart Park	8	71.5	59.0	NA	NA
BM	178	South East		8	38.5	36.0	NA	NA
BM	179	South East		7	125.4	112.0	NA	NA
BM	180	South East		8	82.1	84.0	NA	NA
BM	181	South East		7	161.6	105.0	NA	NA
BM	182	South East		8	84.9	72.0	NA	NA
BM	183	South East		8	74.6	68.0	NA	NA
BM	184	South East		8	64.7	63.0	NA	NA
BM	185	South East		8	78.6	66.0	NA	NA
BM	186	South East		8	98.1	68.0	NA	NA
BM	187	South East		8	69.6	52.0	NA	NA
BM	188	South East		8	40.0	47.0	NA	NA
BM	189	South East		8	40.1	40.0	NA	NA
BM	190	South East		8	34.9	32.0	NA	NA
BM	191	East Anglia		8	87.8	94.0	NA	NA
BM	192	East Anglia		8	47.4	63.0	NA	NA
BM	193	East Anglia		8	68.1	91.0	NA	NA
BM	194	East Anglia		8	40.2	96.0	NA	NA
BM	195	East Anglia		8	66.1	87.0	NA	NA
BM	196	East Anglia		8	65.2	83.0	NA	NA
BM	197	East Anglia		8	71.2	97.0	NA	NA
BM	198	East Anglia		7	76.6	105.0	NA	NA
BM	199	Scotland		8	22.9	56.0	NA	NA
BM	200	Scotland	Ewart Park	8	57.8	83.0	NA	NA
BM	201	South East	Late	7	133.5	115.0	NA	NA
BM	202	East Anglia	Ewart Park	7	145.6	152.0	NA	NA

Appendix 3: Sword Data

Museum	Exam	CoG	Max	Max	Blade	Edge	Edge	Edge	Casting	PBF		
	No	to	Width	Width	Thickness	Fine	Damage	Quality		No		
		Shldr	Shldr	Blade		ness						
BM	152	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	153	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	154	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	155	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	156	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	157	NA	NA	NA	NA	c	NA	c	NA	c	NA	572
BM	158	NA	NA	NA	NA	c	3	c	1		3	683
BM	159	NA	NA	NA	NA	c	3	c	1		3	685
BM	160	NA	NA	NA	NA	c	2	c	1		3	332
BM	161	NA	NA	NA	NA		NA		NA		2	NA
BM	162	NA	NA	NA	NA	c	2	c	2		2	NA
BM	162	NA	NA	NA	NA	c	2	c	1		2	NA
BM	163	NA	NA	NA	NA	c	3	c	1		2	684
BM	164	NA	NA	NA	NA	c	3	c	1		3	333
BM	165	NA	NA	NA	NA	c	2	c	1		3	334
BM	166	NA	NA	NA	NA	c	2	c	1		3	335
BM	167	NA	NA	NA	NA	c	NA	c	NA		3	354
BM	168	NA	NA	NA	NA		NA		NA		3	NA
BM	169	NA	NA	NA	NA	c	3	c	1		3	355
BM	170	NA	NA	NA	NA	c	3	c	1		2	NA
BM	171	NA	NA	NA	NA	c	2	c	3		2	NA
BM	172	NA	NA	NA	NA	c	2	c	1		2	NA
BM	173	NA	NA	NA	NA	c	2	c	3		2	NA
BM	174	NA	NA	NA	NA	c	2	c	1		2	NA
BM	175	NA	NA	NA	NA	c	1	c	1		2	NA
BM	176	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	177	NA	NA	NA	NA	c	2	c	1		2	NA
BM	178	NA	NA	NA	NA	c	3	c	1		2	344
BM	179	NA	NA	NA	NA	c	2	c	1		2	NA
BM	180	NA	NA	NA	NA	c	3	c	1		3	NA
BM	181	NA	NA	NA	NA	c	2	c	3		3	NA
BM	182	NA	NA	NA	NA	c	3	c	3		2	NA
BM	183	NA	NA	NA	NA	c	2	c	1		3	NA
BM	184	NA	NA	NA	NA	c	2	c	1		3	NA
BM	185	NA	NA	NA	NA	c	3	c	1		3	NA
BM	186	NA	NA	NA	NA	c	2	c	3		3	NA
BM	187	NA	NA	NA	NA	c	NA	c	NA		3	NA
BM	188	NA	NA	NA	NA	c	2	c	1		3	NA
BM	189	NA	NA	NA	NA	c	2	c	1		3	NA
BM	190	NA	NA	NA	NA	c	2	c	1		3	NA
BM	191	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	192	NA	NA	NA	NA	c	NA	c	NA		4	NA
BM	193	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	194	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	195	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	196	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	197	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	198	NA	NA	NA	NA	c	NA	c	NA	c	NA	NA
BM	199	NA	NA	NA	NA	c	NA	c	NA		NA	NA
BM	200	NA	NA	NA	NA	c	2	c	NA		NA	NA
BM	201	NA	NA	NA	NA	c	NA	c	NA		NA	563
BM	202	NA	NA	NA	NA	c	2	c	NA		NA	690
							NA	c	NA		NA	413

Appendix 3: Sword Data

Museum Registration					Deposition Location	
	Exam					
	No					
BM	203	1853	4	19	135	Farley Heath Surrey
BM	204	1961	10	6	1	Minnis Bay BA occupation site (PPS 9 1943
BM	205	1961	10	6	70	Minnis Bay BA occupation site (PPS 9 1943
BM	206	1961	10	6	71	Minnis Bay BA occupation site (PPS 9 1943
BM	207	1961	10	6	72	Minnis Bay BA occupation site (PPS 9 1943
BM	208	1961	10	6	73	Minnis Bay BA occupation site (PPS 9 1943
BM	209	1961	10	6	74	Minnis Bay BA occupation site (PPS 9 1943
BM	210	1961	10	6	2	Minnis Bay BA occupation site (PPS 9 1943
BM	211	1961	10	6	3	Minnis Bay BA occupation site (PPS 9 1943
BM	212	1961	10	6	4	Minnis Bay BA occupation site (PPS 9 1943
BM	213	1961	10	6	5	Minnis Bay BA occupation site (PPS 9 1943
BM	214	1961	10	6	6	Minnis Bay BA occupation site (PPS 9 1943
BM	215	1860	7	13	2 a	R Thames near Kingston?
BM	216	1860	7	13	2 b	R Thames near Kingston?
BM	217	1875	2	1	7 c	Thames St Grtr London
BM	218	1875	2	1	7 d	Thames St Grtr London
Cam	1	Z			4281	Haddenham
Cam	2	1874			199	Peterborough
Cam	3	Z			24871	Soham Fen
Cam	4	1883			162 A	Quy Fen
Cam	5	1883			161	Quy
Cam	6	Z			4242	Waterbeach
Cam	7	1900			492	Cambridge
Cam	8	Z			1116	Barrington
Cam	9	1922			567	nr Ely
Cam	10	1922			568	nr Ely
Cam	11	1922			566	Coveney
Cam	12	1948			300	Great Wilbraham
Cam	13	1935			998	R Thames
Cam	14	1948			314	R Thames nr Corvay Stakes
Cam	15	Z			25018	Bromley
Cam	16	Z			46784	R Thames Hammersmith
Cam	17	Z			25017	Sedge Fen
Cam	18	1933			505	Methwold
Cam	19	D 1929			25	R Ouse Hockwold
Cam	20	Z			24870	Mildenhall
Cam	21	1932			326	R Ouse Horse Fen Farm Southery
Cam	22	1923			188 B	
Cam	23	1923			188 C	
Cam	24	Z			24869	R Thames London
Cam	25	1922			565	Coveney
Cam	26	1919	6		12	Wilburton
Cam	27	1919	6		11	Wilburton
Cam	28	1919	6		10	Wilburton
Cam	29	1919	6		8 B	Wilburton
Cam	30	1919	6		8	Wilburton
Cam	31	1919	6		6	Wilburton
Cam	32	1919	6		7	Wilburton
Cam	33	1919	6		13	Wilburton
Cam	34	1919	6		14	Wilburton
Cam	35	1919	6		15	Wilburton

Appendix 3: Sword Data

Museum	Region	Type	Completeness	Weight gms	Length mm	Blade Length mm	Hilt Length mm	
Exam No								
BM	203	South East		8	16.7	21.0	NA	NA
BM	204	South East	Ewart Park	3	352.8	370.0	306.0	NA
BM	205	South East		8	54.3	66.0	NA	NA
BM	206	South East		8	67.5	66.0	NA	NA
BM	207	South East		7	155.9	126.0	NA	NA
BM	208	South East		8	41.4	44.0	NA	NA
BM	209	South East		8	74.1	70.0	NA	NA
BM	210	South East		7	141.0	115.0	NA	NA
BM	211	South East		8	30.8	87.0	NA	NA
BM	212	South East		8	24.1	67.0	NA	NA
BM	213	South East		8	69.2	62.0	NA	NA
BM	214	South East		8	57.8	54.0	NA	NA
BM	215	South East		7	NA	240.0	NA	NA
BM	216	South East		8	NA	NA	NA	NA
BM	217	South East		7	NA	NA	NA	NA
BM	218	South East		7	NA	NA	NA	NA
Cam	1	East Anglia	Wilburton	6	201.0	385.0	NA	NA
Cam	2	East Anglia	Early	2	517.0	505.0	437.0	NA
Cam	3	East Anglia	Wilburton	6	393.0	462.0	NA	NA
Cam	4	East Anglia	Ewart Park	6	338.0	342.0	NA	NA
Cam	5	East Anglia	Ewart Park	4	569.0	562.0	NA	NA
Cam	6	East Anglia	Early	9	330.0	480.0	381.0	99.0
Cam	7	East Anglia	Wilburton	6	380.0	402.0	NA	NA
Cam	8	East Anglia	Late	8	27.0	29.0	NA	NA
Cam	9	East Anglia	Late	2	581.0	629.0	537.0	92.0
Cam	10	East Anglia	Ewart Park	7	191.0	239.0	NA	NA
Cam	11	East Anglia	Ewart Park	3	581.0	476.0	NA	102.0
Cam	12	East Anglia	Ewart Park	9	681.0	623.0	518.0	105.0
Cam	13	South East	Ewart Park	3	606.0	600.0	532.0	NA
Cam	14	South East	Early	9	480.0	607.0	512.0	95.0
Cam	15	South East	Ewart Park	2	646.0	598.0	494.0	104.0
Cam	16	South East	Ewart Park	1	530.0	538.0	438.0	100.0
Cam	17	East Anglia	Early	3	539.0	559.0	472.0	NA
Cam	18	East Anglia	Early	2	317.0	411.0	NA	NA
Cam	19	East Anglia	Ewart Park	1	598.0	564.0	473.0	91.1
Cam	20	East Anglia	Wilburton	6	217.0	197.0	NA	NA
Cam	21	East Anglia	Ewart Park	6	207.0	317.0	NA	NA
Cam	22			7	105.0	120.0	NA	NA
Cam	23			8	48.0	58.0	NA	NA
Cam	24	South East	Ewart Park	3	432.0	531.0	432.0	NA
Cam	25	East Anglia	Early	3	570.0	487.0	NA	111.7
Cam	26	East Anglia	Wilburton	9	596.0	547.0	NA	NA
Cam	27	East Anglia	Wilburton	9	647.0	531.0	NA	NA
Cam	28	East Anglia	Wilburton	9	579.0	560.0	NA	NA
Cam	29	East Anglia		7	NA	280.0	NA	96.0
Cam	30	East Anglia	Wilburton	5	NA	208.0	NA	NA
Cam	31	East Anglia	Wilburton	9	557.0	574.0	NA	95.0
Cam	32	East Anglia	Wilburton	9	654.0	622.0	NA	105.0
Cam	33	East Anglia	Wilburton	6	167.0	204.0	NA	NA
Cam	34	East Anglia	Wilburton	6	155.0	175.0	NA	NA
Cam	35	East Anglia	Wilburton	7	192.0	199.0	NA	NA

Appendix 3: Sword Data

Museum	Exam No	CoG to Shldr	Max Width Shldr	Max Width Blade	Blade Thickness	Edge Fine ness	Edge Damage	Casting Quality	PBF No	
BM	203	NA	NA	NA	NA	c	2 c	NA	3	NA
BM	204	101.0	44.0	33.0	7.0		2	3	3	NA
BM	205	NA	NA	NA	NA		NA	NA	2	NA
BM	206	NA	NA	NA	NA		1	3	3	NA
BM	207	NA	NA	NA	NA		2	3	2	NA
BM	208	NA	NA	NA	NA		2	1	2	NA
BM	209	NA	NA	NA	NA	c	2 c	3	2	NA
BM	210	NA	NA	NA	NA	c	2 c	3	2	NA
BM	211	NA	NA	19.0	NA		NA	NA	NA	NA
BM	212	NA	NA	NA	NA		NA	NA	NA	NA
BM	213	NA	NA	NA	NA		2	1	3	NA
BM	214	NA	NA	NA	NA		2	1	3	NA
BM	215	NA	NA	NA	NA		NA	NA	NA	NA
BM	216	NA	NA	NA	NA		NA	NA	NA	NA
BM	217	NA	NA	NA	NA		NA	NA	NA	NA
BM	218	NA	NA	NA	NA		NA	NA	NA	NA
Cam	1	NA	NA	NA	6.7	c	NA c	NA	3	240
Cam	2	NA	45.5	38.9	6.7		2	1	2	25
Cam	3	NA	NA	42.0	6.9		2	3	2	242
Cam	4	NA	NA	38.5	5.8		2	3	2	420
Cam	5	NA	51.6	42.2	5.9	c	2 c	2	4	400
Cam	6	NA	54.2	NA	7.0	c	2 c	5	3	74
Cam	7	NA	NA	37.9	7.4	c	1 c	3	3	246
Cam	8	NA	NA	NA	NA	c	1 c	1	2	694
Cam	9	NA	45.0	NA	8.3	c	NA c	NA	2	671
Cam	10	NA	NA	NA	NA	c	NA c	NA	3	424
Cam	11	NA	45.8	41.4	7.2		2	3	2	382
Cam	12	NA	51.9	45.9	6.9	c	3 c	2	2	381
Cam	13	NA	NA	54.0	5.7		2	2	3	NA
Cam	14	NA	62.0	43.6	8.3		2	3	2	121
Cam	15	NA	NA	39.2	7.7	c	NA c	NA	4	299
Cam	16	NA	47.5	39.5	7.0		1	3	2	NA
Cam	17	NA	60.0	39.4	6.7	c	2 c	2	1	123
Cam	18	NA	NA	NA	NA		2	3	2	14
Cam	19	NA	46.8	38.4	6.6		2	3	2	379
Cam	20	NA	61.1	NA	NA		1	3	2	157
Cam	21	NA	NA	NA	NA		1	3	2	422
Cam	22	NA	NA	NA	NA	c	NA c	NA	3	NA
Cam	23	NA	NA	NA	NA	c	NA c	NA	3	NA
Cam	24	NA	46.1	37.6	6.1	c	1 c	3	3	293
Cam	25	NA	41.5	NA	7.3	c	NA c	3	4	21
Cam	26	NA	58.2	NA	NA	cb	1 cb	3	cb	2
Cam	27	NA	NA	NA	8.4	cb	NA cb	4	cb	3
Cam	28	NA	51.8	37.6	8.0	cb	NA cb	4	cb	NA
Cam	29	NA	58.0	NA	NA	cb	2 cb	4	cb	3
Cam	30	NA	NA	NA	NA	cb	2 cb	4	cb	3
Cam	31	NA	58.0	NA	NA	cb	NA cb	4	cb	3
Cam	32	NA	56.0	NA	NA	cb	NA cb	5	cb	4
Cam	33	NA	58.8	NA	NA	c	2 c	2	3	222
Cam	34	NA	NA	NA	NA	c	1 c	4	4	248
Cam	35	NA	NA	NA	NA	cb	2 cb	4	cb	3

Appendix 3: Sword Data

Museum	Registration	Exam	Registration	Deposition	Location
		No			
Cam	36	1919	6	16	Wilburton
Cam	37	1983	NA	220	E2 Litlington
Cam	38	1983	NA	220	E1 Litlington
Cam	39	1948		313	F Chrishall Essex
Cam	40	1948		313	G Chrishall Essex
Cam	41	1908		115	B Lakenheath
Cam	42	1905		35	Royston
Cam	43	Z		25019	Haddenham
Cam	44	Z		4269	Ely
Cam	45	1919	6	9	Wilburton
Cam	46	1919	6	9	b Wilburton
Cam	47	1919	6	9	c Wilburton
Cam	48	1919	6	9	d Wilburton
Cam	49	1925		138	
Cam	50	1923		116	L Cumberlow Green Herts
Cam	51	1923		116	I
Cam	52	1931		391	Green End Road
Cam	53	1931		392	Green End Road
Cam	54	1951		259	P7 Stuntney
Cam	55	1951		259	P8 Stuntney
FF	1	1			Flag Fen
FF	2	147			Flag Fen
FF	3	203			Flag Fen
FF	4	162			Flag Fen
FF	5	281			Flag Fen
HM	1	1951		3223	Grosvenor Crescent?
HM	2	1951		3254	'Britain'
HM	3	1951		3253	'Britain'
HM	4	1951		3227	Druidstone Park, Errol, Perthshire
HM	5			116	
HM	6	1951		225	Towie, Strathdon, Aberdeenshire
HM	7	1951		2134	'Scotland'
HM	8	1914		337	Craigleith Quarry, Edinburgh
HM	9	1951		3252	'Britain'
MoL	1	0		1380	No prov
MoL	2	0		1372	No prov
MoL	3	0		1376	No prov
MoL	4			58	No prov
MoL	5	0		1375	No prov
MoL	6	0		1385	No prov
MoL	7	0		1337	R Thames Mortlake
MoL	8	0		1351	R Thames
MoL	9	0		1388	No prov? RT Brentford
MoL	10	A		24934	R Thames Battersea
MoL	11	0		1384	No prov
MoL	12	0		1347	No prov
MoL	13	0		1345	No prov
MoL	14	0		1387	R Thames
MoL	15	A		10944	R Thames
MoL	16	0		1344	No prov
MoL	17	0		1343	No prov

Appendix 3: Sword Data

Museum	Region	Type	Complete	Weight	Length	Blade	Hilt	
Exam			ness	gms	mm	Length	Length	
No						mm	mm	
Cam	36	East Anglia	Wilburton	8	54.0	89.0	NA	NA
Cam	37	East Anglia		8	49.0	60.0	NA	NA
Cam	38	East Anglia		8	87.0	88.0	NA	NA
Cam	39	East Anglia		8	59.0	48.0	NA	NA
Cam	40	East Anglia		8	31.0	31.0	NA	NA
Cam	41	East Anglia		8	98.0	80.0	NA	NA
Cam	42	East Anglia	Ewart Park	2	442.0	445.0	388.0	NA
Cam	43	East Anglia	Wilburton	1	652.0	592.0	487.0	105.0
Cam	44	East Anglia	Ewart Park	2	565.0	598.0	498.0	100.0
Cam	45	East Anglia	Wilburton	6	NA	150.0	NA	NA
Cam	46	East Anglia		8	NA	87.0	NA	NA
Cam	47	East Anglia		7	NA	130.0	NA	NA
Cam	48	East Anglia		7	NA	198.0	NA	NA
Cam	49		Late	8	163.0	82.0	NA	NA
Cam	50	South East	Ewart Park	7	132.0	115.0	NA	NA
Cam	51		Ewart Park	8	NA	61.0	NA	NA
Cam	52	East Anglia		8	62.0	60.0	NA	NA
Cam	53	East Anglia		8	62.0	71.0	NA	NA
Cam	54	East Anglia		8	12.0	41.0	NA	NA
Cam	55	East Anglia		8	50.0	50.0	NA	NA
FF	1	East Anglia	Ewart Park	9	660.0	619.0	519.0	100.0
FF	2	East Anglia	Wilburton	1	755.0	572.0	NA	96.0
FF	3	East Anglia	Ewart Park	9	440.0	475.0	NA	101.0
FF	4	East Anglia		8	30.0	37.0	NA	NA
FF	5	East Anglia		1	175.0	272.0	185.5	86.5
HM	1	Scotland	Ewart Park	4	780.0	544.0	492.0	NA
HM	2		Ewart Park	4	633.0	626.0	524.0	102.0
HM	3		Ewart Park	1	723.0	643.0	535.0	108.0
HM	4	Scotland	Ewart Park	4	558.0	534.0	496.0	NA
HM	5		Ewart Park	7	370.0	261.0	NA	NA
HM	6	Scotland		9	225.0	205.0	NA	NA
HM	7	Scotland	Ewart Park	3	637.0	589.0	520.0	NA
HM	8	Scotland		4	755.0	568.0	524.0	NA
HM	9		Ewart Park	1	719.0	628.0	523.0	105.0
MoL	1	South East	Wilburton	5	252.6	257.0	NA	94.0
MoL	2	South East	Wilburton	4	429.8	495.0	NA	NA
MoL	3	South East	Wilburton	5	380.3	322.0	NA	NA
MoL	4	South East	Wilburton	9	655.4	623.0	530.0	93.0
MoL	5	South East	Wilburton	5	443.7	345.0	NA	101.0
MoL	6	South East	Wilburton	5	142.3	128.0	NA	101.0
MoL	7	South East	Wilburton	4	648.8	579.0	526.0	NA
MoL	8	South East	Late	7	148.8	135.4	NA	NA
MoL	9	South East	Ewart Park	6	411.3	355.0	NA	NA
MoL	10	South East	Early	5	350.3	300.0	NA	102.0
MoL	11	South East	Wilburton	5	221.5	186.0	NA	101.0
MoL	12	South East	Ewart Park	3	565.8	499.0	NA	99.0
MoL	13	South East	Late	3	579.3	541.0	481.0	NA
MoL	14	South East	Ewart Park	6	525.9	385.0	NA	NA
MoL	15	South East	Wilburton	5	210.2	220.0	NA	93.0
MoL	16	South East	Wilburton	4	821.7	587.0	493.0	NA
MoL	17	South East	Early	9	622.3	567.0	518.0	NA

Appendix 3: Sword Data

Museum	Exam No	CoG to Shldr	Max Width Shldr	Max Width Blade	Blade Thickness	Edge Fine ness	Edge Damage	Casting Quality	PBF No	
Cam	36	NA	NA	NA	NA	NA	NA	3	249	
Cam	37	NA	NA	NA	5.0	c	3 c	1	2	NA
Cam	38	NA	NA	NA	7.0	c	3 c	3	3	NA
Cam	39	NA	NA	NA	10.5	c	2 c	2	2	NA
Cam	40	NA	NA	NA	7.0	c	2 c	1	2	NA
Cam	41	NA	NA	NA	NA	c	2 c	1	2	NA
Cam	42	NA	41.8	36.7	7.4	c	2 c	2	2	603
Cam	43	NA	57.5	43.0	7.8	c	1 c	2	2	168
Cam	44	NA	NA	41.6	5.6	c	2 c	3	2	402
Cam	45	NA	58.0	NA	NA	cb	NA cb	NA cb	NA	162
Cam	46	NA	NA	NA	NA	cb	NA cb	4 cb	NA	NA
Cam	47	NA	NA	NA	NA	cb	NA cb	4 cb	3	NA
Cam	48	NA	NA	NA	NA	cb	NA cb	NA cb	NA	NA
Cam	49	NA	NA	NA	NA		3	1	3	681
Cam	50	NA	45.4	NA	NA	c	3 c	2	2	339
Cam	51	NA	44.0	NA	NA		NA	NA	3	604
Cam	52	NA	NA	NA	NA		2	1	2	NA
Cam	53	NA	NA	NA	NA		2	1	2	NA
Cam	54	NA	NA	NA	NA	c	1 c	NA	3	NA
Cam	55	NA	NA	NA	NA	c	1 c	NA	3	NA
FF	1	193.0	54.5	NA	NA	c	1 c	4	3	NA
FF	2	178.0	50.3	42.0	NA	c	NA c	4	2	NA
FF	3	129.0	46.4	35.0	NA	c	2 c	3	2	NA
FF	4	NA	NA	NA	NA		NA	NA	NA	NA
FF	5	45.5	39.8	35.2	NA		1	1	2	NA
HM	1	NA	54.0	45.2	7.0		1	3	2	538
HM	2	196.0	49.0	39.3	6.3		2	1	2	635
HM	3	187.0	56.0	45.6	6.6		2	3	2	613
HM	4	NA	48.2	NA	NA	c	NA c	NA	3	532
HM	5	NA	NA	NA	8.2	c	NA c	4	4	658
HM	6	NA	NA	NA	NA	c	NA c	NA	3	769
HM	7	NA	53.0	43.0	5.8		1	3	3	508
HM	8	NA	48.0	45.3	8.0	c	1 c	2	2	NA
HM	9	181.0	54.0	43.0	7.0		1	3	2	633
MoL	1	NA	56.5	NA	6.8		1	2	3	216
MoL	2	NA	65.4	48.8	7.1	c	1 c	5	4	153
MoL	3	NA	NA	NA	7.5		1	3	2	154
MoL	4	199.0	58.1	40.6	6.6		1	4	2	202
MoL	5	NA	72.4	NA	8.0		3	3	2	141
MoL	6	NA	62.0	NA	NA	c	NA c	NA	2	207
MoL	7	NA	54.1	43.8	6.6		2	2	3	194
MoL	8	NA	NA	NA	NA	c	2 c	4	3	736
MoL	9	NA	NA	38.4	7.5		1	1	3	655
MoL	10	NA	72.7	NA	9.0		1	2	3	130
MoL	11	NA	62.5	NA	NA	c	2 c	4	3	155
MoL	12	NA	47.0	38.4	8.4	c	1 c	2	4	608
MoL	13	NA	48.5	37.0	6.6	c	1 c	3	2	695
MoL	14	NA	NA	46.4	7.3		1	3	2	363
MoL	15	NA	50.5	NA	NA	c	2 c	3	2	177
MoL	16	NA	59.3	NA	7.9	c	1 c	3	3	174
MoL	17	NA	68.3	43.6	7.8		1	2	2	108

Appendix 3: Sword Data

Museum	Registration	Deposition	Location
	Exam		
	No		
MoL	18 O	1342	No prov
MoL	19 O	1341	No prov
MoL	20 O	1340	No prov
MoL	21 O	1367	R Thames
MoL	22 O	1366	R Thames
MoL	23 O	1364	R Thames
MoL	24 A	9505	R Thames
MoL	25 O	1352	R Thames
MoL	26 A		R Thames
MoL	26 A		R Thames
MoL	27 A	11898	R Thames
MoL	28 O	1356	R Thames
MoL	29 O	1359	R Thames
MoL	30 A	10948	R Thames
MoL	31 O	1355	
MoL	32 A	27190	
MoL	33	11022	R Thames
MoL	34 49.107	811	'R Thames'
MoL	35 O	1379	R Thames Brentford
MoL	36 O	1332	
MoL	37 O	1353	
MoL	38	57	
MoL	39 O	1354	R Thames
MoL	40 O	1360	
MoL	41 B	25	R Thames
MoL	42 O	1361	
MoL	43 O	1357	
MoL	44 O	1365	
NMS	1 DL	13	Lanarks?
NMS	2 DL	16	Nr Keith House E Lothian (1882)
NMS	3 DL	15	No Prov
NMS	4 DL	20	Southfield Gladsmuir E Lothian (<1825)
NMS	5 DL	8	Cauldhame Angus (1853)
NMS	6 DL	19	Jacksbank Farm Glenbervie Kincardine 1m d
NMS	7 DL	12	No Prov
NMS	8 DL	11	No Prov
NMS	9 DL	14	Lanarks?
NMS	10 DL	17	Eastertown Angus (1838)
NMS	11 L	3 1978	Millbank Douglas Lanarks - roadworks on A
NMS	12 DL	27	Moss of Cowie Stonehaven Kincardine
NMS	13 DL	46	Auchencorth Peebles (<1900)
NMS	14 DL	39	Dowies Burn Wigtownshire
NMS	15 DL	36	'Skye' Inverness
NMS	16 DL	48	Midlothian
NMS	17 DL	47	Midlothian
NMS	18 DL	23	Auchterarder Perth - 30cm below surface -
NMS	19 DL	25	No Prov
NMS	20 DL	21	Shuna Island Nether Lorn Argyll - in peat
NMS	21 DL	29	Strathblane Stirling - said from cist wit
NMS	22 DL	35	No Prov
NMS	23 DL	31	Scotland? (<1783)

Appendix 3: Sword Data

Museum	Region	Type	Comp	Weight	Length	Blade	Hilt	
Exam			lete	gms	mm	Length	Length	
No			ness			mm	mm	
MoL	18	South East	Late	4	658.2	604.0	NA	NA
MoL	19	South East	Wilburton	1	783.9	631.0	NA	105.0
MoL	20	South East	Wilburton	4	953.6	618.0	550.0	NA
MoL	21	South East	Wilburton	1	590.8	595.0	NA	NA
MoL	22	South East	Wilburton	1	659.3	614.0	515.0	99.0
MoL	23	South East	Wilburton	1	902.1	662.0	561.0	101.0
MoL	24	South East	Early	1	387.9	541.0	457.0	84.0
MoL	25	South East	Late	1	680.4	738.0	644.0	94.0
MoL	26	South East	Early	9	536.3	451.0	NA	NA
MoL	26	South East	Early	9	280.9	252.0	NA	113.0
MoL	27	South East	Early	1	486.2	520.0	428.0	92.0
MoL	28	South East	Wilburton	1	488.7	558.0	464.0	94.0
MoL	29	South East	Wilburton	1	466.2	577.0	483.0	94.0
MoL	30	South East	Early	1	689.2	662.0	563.0	99.0
MoL	31	South East	Ewart Park	2	671.3	551.0	442.0	109.0
MoL	32	South East	Ewart Park	1	605.7	574.0	478.0	96.0
MoL	33	South East	Wilburton	9	520.0	541.0	493.0	NA
MoL	34	South East	Ewart Park	1	630.0	607.0	501.0	106.0
MoL	35	South East	Late	5	276.1	269.0	NA	NA
MoL	36	South East	Early	1	674.2	685.0	590.0	95.0
MoL	37	South East	Late	1	748.5	712.0	594.0	NA
MoL	38	South East	Ewart Park	1	592.9	555.0	455.0	100.0
MoL	39	South East	Ewart Park	2	762.4	556.0	450.0	106.0
MoL	40	South East	Early	1	701.5	719.0	613.0	106.0
MoL	41	South East	Ewart Park	1	668.7	542.0	442.0	100.0
MoL	42	South East	Wilburton	1	641.6	619.0	524.0	95.0
MoL	43	South East	Late	6	541.3	519.0	NA	NA
MoL	44	South East	Early	2	891.0	660.0	558.0	102.0
NMS	1	Scotland	Ewart Park	2	599.2	595.0	NA	103.0
NMS	2	Scotland	Ewart Park	2	655.7	622.0	NA	104.0
NMS	3	Scotland	Ewart Park	2	607.3	628.0	NA	107.0
NMS	4	Scotland	Ewart Park	4	721.8	583.0	535.0	NA
NMS	5	Scotland	Ewart Park	3	612.9	554.0	485.0	NA
NMS	6	Scotland	Ewart Park	9	267.1	452.0	NA	NA
NMS	7	Scotland	Ewart Park	5	617.6	540.0	520.0	NA
NMS	8	Scotland	Ewart Park	1	641.1	617.0	516.0	NA
NMS	9	Scotland	Ewart Park	9	424.2	NA	NA	102.0
NMS	10	Scotland	Ewart Park	4	285.8	361.0	324.0	NA
NMS	11	Scotland	Ewart Park	2	508.7	573.0	NA	102.0
NMS	12	Scotland	Ewart Park	9	485.5	584.0	NA	102.0
NMS	13	Scotland	Ewart Park	5	422.4	462.0	NA	NA
NMS	14	Scotland		9	629.1	592.0	544.0	NA
NMS	15	Scotland	Ewart Park	9	1101.6	658.0	579.0	NA
NMS	16	Scotland	Ewart Park	1	494.5	511.0	NA	104.0
NMS	17	Scotland	Ewart Park	4	439.9	433.0	390.0	NA
NMS	18	Scotland	Ewart Park	2	592.8	600.0	495.0	105.0
NMS	19	Scotland		5	224.9	393.0	NA	NA
NMS	20	Scotland	Ewart Park	3	585.5	538.0	470.0	NA
NMS	21	Scotland		7	121.1	172.0	NA	NA
NMS	22	Scotland	Ewart Park	7	146.7	186.0	NA	NA
NMS	23	Scotland	Ewart Park	7	186.1	259.0	NA	NA

Appendix 3: Sword Data

Museum	CoG	Max	Max	Blade	Edge	Edge	Casting	PBF				
Exam	to	Width	Width	Thickness	Fine	Damage	Quality	No				
No	Shldr	Shldr	Blade		ness							
MoL	18	NA	NA	32.3	7.2		2	3	2	731		
MoL	19	192.0	58.7	42.4	6.4	c	2	c	2	3	145	
MoL	20	NA	57.8	51.3	9.7		1		3	2	175	
MoL	21	186.0	56.5	46.9	6.4		2		3	3	143	
MoL	22	204.0	55.2	41.2	8.2	c	1	c	3	3	777	
MoL	23	211.0	61.6	49.8	8.5		1		3	3	201	
MoL	24	167.0	56.4	37.5	7.4		1		2	2	105	
MoL	25	236.0	55.2	42.0	NA		1		4	2	672	
MoL	26	NA	NA	46.9	NA	c	3	c	3	c	4	83
MoL	26	NA	57.8	NA	NA	c	3	c	3	c	4	83
MoL	27	158.0	61.8	48.2	5.5		1		1		1	131
MoL	28	169.0	59.2	33.2	5.5		2		4		2	220
MoL	29	191.0	55.0	43.2	6.7		3		2		3	197
MoL	30	219.0	57.0	40.0	7.0	c	2	c	4		2	126
MoL	31	158.0	51.1	42.6	6.7	c	3	c	3		3	313
MoL	32	179.0	49.8	41.0	7.0		2		3		1	302
MoL	33	NA	58.3	48.0	7.3	c	2	c	3		3	151
MoL	34	171.0	55.3	41.0	6.0		3		3		2	272
MoL	35	NA	53.6	NA	NA		3		2		2	711
MoL	36	227.0	67.0	45.8	8.4		2		3		3	100
MoL	37	203.0	56.4	30.2	7.8		3		3		2	702
MoL	38	165.0	NA	37.3	7.7		1		3		2	282
MoL	39	158.0	52.2	45.4	7.3		2		3		2	308
MoL	40	236.0	63.9	47.1	8.1	c	1	c	2		3	85
MoL	41	162.0	47.8	34.2	8.4	c	3	c	5		2	279
MoL	42	200.0	62.5	48.2	6.8		2		3		2	150
MoL	43	NA	NA	33.9	7.9	c	3	c	4		3	709
MoL	44	204.0	69.7	56.0	7.8		1		2		3	127
NMS	1	206.0	45.2	39.8	7.9	c	3	c	2		2	774
NMS	2	203.0	51.0	43.0	6.8		2		3		3	470
NMS	3	201.0	NA	39.5	7.5	c	3	c	3		2	772
NMS	4	NA	53.0	46.0	6.2		2		3		2	557
NMS	5	NA	NA	NA	6.8	c	3	c	3		3	469
NMS	6	NA	NA	NA	NA	c	NA	c	NA		3	553
NMS	7	NA	46.5	42.4	6.0	c	NA	c	4		2	646
NMS	8	197.0	54.0	42.6	5.7		2		2		2	634
NMS	9	NA	45.5	35.7	6.5		1		3		2	472
NMS	10	NA	41.5	29.5	6.5		3		3		3	556
NMS	11	176.0	47.2	37.0	6.5	c	2	c	2	c	4	506
NMS	12	158.0	50.0	NA	4.3	c	2	c	3	c	4	466
NMS	13	NA	NA	NA	6.0	c	NA	c	NA		3	533
NMS	14	NA	52.0	43.7	6.3	c	1	c	4		2	NA
NMS	15	225.0	56.4	51.0	7.7	c	3	c	3		2	596
NMS	16	NA	45.2	40.6	8.0		1		4		3	468
NMS	17	NA	44.3	33.3	7.0		2		3		3	539
NMS	18	NA	48.0	40.6	6.2	c	1	c	3		4	516
NMS	19	NA	NA	30.4	4.0		1		3		2	NA
NMS	20	NA	50.8	39.0	6.3		2		3		3	507
NMS	21	NA	NA	NA	NA	c	NA	c	NA		4	770
NMS	22	NA	NA	NA	NA		3		4		2	665
NMS	23	NA	NA	NA	NA	c	3	c	NA		3	660

Appendix 3: Sword Data

Museum	Registration	Exam	Deposition Location
		No	
NMS	24	DL	30 Dumfries (1865)
NMS	25	DL	57 'Borders'
NMS	26	DL	58 Alves Morayshire - 1m down in fine sand a
NMS	27	DL	56 Glenluce Sands Wigtown - between Claysham
NMS	28	DL	55 Scotland? - bought in Edinburgh late '20s
NMS	29	DL	53 Aberdeenshire? (<1925)
NMS	30	DL	60 Ardintoul Ross - by sheeptrack 280mSE of
NMS	31	DL	18 Jacksbank Farm Glenbervie Kincardine 1m d
NMS	32	DL	44 Aird South Dell Lewis Ross - 30cm from an
NMS	33	DL	49 Edinburgh Midlothian - during demolition
NMS	34	DL	37 Rigg Skye Inverness - while digging out r
NMS	35	DL	24 Nr Schivas House Methlick Aberdeen (<1834
NMS	36	DL	59 Brawlands Farm Auchindoir Clova Aberdeen
NMS	37	DL	10 Cauldhame Angus (1853)
NMS	38	DL	38 Rigg Skye Inverness - under stone slab 1m
NMS	39	DL	52 Fendom Ross & Cromarty
NMS	40	DL	50 Mey Caithness (1908)
NMS	41	DL	42 Leadburn Peebles (<1890)
NMS	42	DL	22 Cowgill Lamington Lanark (1897)
NMS	43	DL	51 Nr Arbroath Angus (<1920)
NMS	44	DL	40 Poldar Moss Stirling (<1888)
NMS	45	DL	1 Nr Graham's Dyke Corriden Stirling
NMS	46	DL	3 Iochdar South Uist Inverness on clay belo
NMS	47	DL	2 Forse Latheron Caithness (<1855)
NMS	48	DL	28 Scotland?
NMS	49	DL	26 Carlinwark Loch Kirkcudbright - in loch a
NMS	50	DQ	201 Grosvenor Crescent Edinburgh (1869)
NMS	51	DQ	91 Arthur's Seat Midlothian - in bed of char
NMS	52	DQ	90 Arthur's Seat Midlothian - in bed of char
NMS	53	DQ	236 Grosvenor Crescent Edinburgh (1869)
NMS	54	DQ	237 Grosvenor Crescent Edinburgh (1869)
NMS	55	DQ	199 Grosvenor Crescent Edinburgh (1869)
NMS	56	DQ	200 Grosvenor Crescent Edinburgh (1869)
NMS	57	DQ	306 Grosvenor Crescent Edinburgh (1869)
NMS	58	DQ	252 Corsbie Moss Legerwood Berwick in peat mo
NMS	59	DQ	325 Alton Glen Clova Angus
NMS	60	L	16 1965 Ballimore House Argyll - while digging or
NMS	61	L	17 1965 Ballimore House Argyll - while digging or
NMS	62	DQ	2 Duddingston Loch Midlothian
NMS	63	DQ	3 Duddingston Loch Midlothian
NMS	64	DQ	4 Duddingston Loch Midlothian
NMS	65	DQ	5 Duddingston Loch Midlothian
NMS	66	DQ	6 Duddingston Loch Midlothian
NMS	67	DQ	7 Duddingston Loch Midlothian
NMS	68	DQ	8 Duddingston Loch Midlothian
NMS	69	DQ	9 Duddingston Loch Midlothian
NMS	70	DQ	10 Duddingston Loch Midlothian
NMS	71	DQ	11 Duddingston Loch Midlothian
NMS	72	DQ	12 Duddingston Loch Midlothian
NMS	73	DQ	13 Duddingston Loch Midlothian
NMS	74	DQ	14 Duddingston Loch Midlothian

Appendix 3: Sword Data

Museum	Region	Type	Complete	Weight	Length	Blade	Hilt	
Exam			ness	gms	mm	Length	Length	
No						mm	mm	
NMS	24	Scotland	Ewart Park	6	271.5	268.0	NA	NA
NMS	25	Scotland	Ewart Park	4	700.7	547.0	527.0	NA
NMS	26	Scotland	Ewart Park	5	562.1	555.0	NA	NA
NMS	27	Scotland	Ewart Park	1	500.7	571.0	NA	100.0
NMS	28	Scotland	Ewart Park	2	780.3	625.0	NA	105.0
NMS	29	Scotland	Ewart Park	3	629.3	602.0	517.0	NA
NMS	30	Scotland	Ewart Park	7	345.6	282.0	NA	NA
NMS	31	Scotland	Ewart Park	2	574.0	658.0	NA	104.0
NMS	32	Scotland	Ewart Park	6	224.8	247.0	NA	NA
NMS	33	Scotland	Ewart Park	1	500.3	452.0	NA	101.0
NMS	34	Scotland	Ewart Park	1	843.1	730.0	NA	98.0
NMS	35	Scotland	Ewart Park	1	289.2	456.0	NA	100.0
NMS	36	Scotland	Ewart Park	3	513.1	556.0	464.0	NA
NMS	37	Scotland	Ewart Park	2	715.0	602.0	NA	106.0
NMS	38	Scotland	Ewart Park	1	1081.6	672.0	NA	107.0
NMS	39	Scotland	Ewart Park	4	999.2	585.0	560.0	NA
NMS	40	Scotland	Ewart Park	1	449.5	486.0	NA	105.0
NMS	41	Scotland	Ewart Park	2	1018.1	631.0	495.0	NA
NMS	42	Scotland	Ewart Park	2	707.6	645.0	540.0	105.0
NMS	43	Scotland	Ewart Park	2	749.4	616.0	509.0	105.0
NMS	44	Scotland	Wilburton	1	669.8	593.0	507.0	NA
NMS	45	Scotland	Ewart Park	1	711.6	646.0	537.0	109.0
NMS	46	Scotland	Ewart Park	1	995.8	684.0	NA	109.0
NMS	47	Scotland	Ewart Park	1	718.1	641.0	536.0	105.0
NMS	48	Scotland	Late	5	497.9	479.0	NA	NA
NMS	49	Scotland	Ewart Park	3	516.9	515.0	412.0	102.0
NMS	50	Scotland	Ewart Park	1	704.0	515.0	380.0	105.0
NMS	51	Scotland	Ewart Park	9	841.8	663.0	NA	107.0
NMS	52	Scotland	Ewart Park	1	820.6	630.0	NA	112.0
NMS	53	Scotland	Ewart Park	3	583.1	602.0	497.0	105.0
NMS	54	Scotland	Ewart Park	2	752.0	618.0	515.0	103.0
NMS	55	Scotland	Ewart Park	3	643.3	509.0	NA	108.0
NMS	56	Scotland	Ewart Park	4	712.7	560.0	503.0	NA
NMS	57	Scotland	Ewart Park	6	640.6	485.0	NA	NA
NMS	58	Scotland	Ewart Park	1	451.5	580.0	NA	101.0
NMS	59	Scotland	Ewart Park	9	454.0	544.0	NA	105.0
NMS	60	Scotland	Ewart Park	2	447.6	570.0	NA	107.0
NMS	61	Scotland	Ewart Park	4	405.5	527.0	NA	NA
NMS	62	Scotland	Ewart Park	6	129.2	173.0	NA	NA
NMS	63	Scotland	Ewart Park	8	42.9	71.0	NA	NA
NMS	64	Scotland	Ewart Park	7	148.4	194.0	NA	NA
NMS	65	Scotland	Ewart Park	7	227.0	209.0	NA	NA
NMS	66	Scotland		7	101.5	126.0	NA	NA
NMS	67	Scotland		7	185.1	203.0	NA	NA
NMS	68	Scotland		7	148.9	142.0	NA	NA
NMS	69	Scotland		7	212.5	245.0	NA	NA
NMS	70	Scotland		7	114.9	177.0	NA	NA
NMS	71	Scotland		7	185.5	193.0	NA	NA
NMS	72	Scotland		7	130.4	192.0	NA	NA
NMS	73	Scotland		7	116.3	103.0	NA	NA
NMS	74	Scotland		7	89.6	126.0	NA	NA

Appendix 3: Sword Data

Museum	Exam No	CoG to Shldr	Max Width Shldr	Max Width Blade	Blade Thickness	Edge Finess	Edge Damage	Casting Quality	PBF No	
NMS	24	NA	47.0	NA	NA	c	3 c	2	2	541
NMS	25	NA	NA	40.3	7.6	c	1 c	4	2	552
NMS	26	NA	NA	39.5	5.8	c	3 c	3	4	567
NMS	27	NA	NA	NA	5.3	c	NA c	NA	2	495
NMS	28	NA	46.0	39.0	7.3		3	3	1	618
NMS	29	190.0	52.0	41.0	6.6	c	2 c	3	2	591
NMS	30	NA	NA	NA	NA	c	NA c	NA	4	570
NMS	31	NA	NA	NA	7.5	c	NA c	NA	4	493
NMS	32	NA	43.0	NA	NA	c	NA c	NA	3	558
NMS	33	NA	49.5	37.0	7.0		2	2	2	499
NMS	34	NA	48.0	49.3	8.9		2	2	1	584
NMS	35	NA	NA	32.0	4.9		1	3	3	498
NMS	36	NA	47.0	NA	6.3	c	NA c	NA	2	485
NMS	37	NA	NA	NA	6.8	c	2 c	2	2	501
NMS	38	NA	53.2	49.8	7.8	c	3 c	1	2	585
NMS	39	NA	56.0	49.2	8.5		3	3	2	590
NMS	40	NA	46.5	36.2	6.6		1	4	2	512
NMS	41	123.0	54.0	44.6	7.0		2	3	3	600
NMS	42	199.0	52.1	44.2	6.5	c	1 c	3	3	482
NMS	43	NA	50.8	46.1	6.4	c	NA c	NA	2	592
NMS	44	214.0	NA	42.0	7.8	c	NA c	3	2	142
NMS	45	207.0	51.0	41.1	6.0	c	3 c	3	3	514
NMS	46	NA	58.0	46.5	6.0		1	3	3	579
NMS	47	200.0	53.6	46.5	6.0	c	1 c	3	2	583
NMS	48	NA	NA	NA	NA	c	2 c	3	3	724
NMS	49	160.0	50.7	40.4	4.8	c	2 c	3	2	465
NMS	50	NA	42.4	39.7	7.2	c	NA c	NA	3	607
NMS	51	NA	54.0	43.6	6.8		3	3	3	475
NMS	52	NA	53.0	44.7	8.0	c	3 c	2	2	483
NMS	53	176.0	49.0	38.0	5.8	c	3 c	3	2	474
NMS	54	197.0	NA	NA	7.2	c	3 c	3	2	488
NMS	55	NA	49.8	NA	7.3	c	2 c	NA	3	513
NMS	56	NA	57.0	49.5	6.0	c	2 c	2	3	547
NMS	57	NA	52.3	NA	5.9	c	NA c	3	3	530
NMS	58	NA	51.6	37.5	5.6	c	NA c	NA	3	230
NMS	59	157.0	NA	NA	5.2	c	NA c	NA	2	NA
NMS	60	NA	NA	NA	NA	c	NA c	NA	3	522
NMS	61	NA	NA	NA	NA	c	NA c	NA	3	NA
NMS	62	NA	NA	NA	NA	cb	NA cb	NA cb	NA	559
NMS	63	NA	NA	NA	NA	cb	NA cb	NA cb	NA	560
NMS	64	NA	NA	NA	NA	cb	NA cb	NA cb	NA	561
NMS	65	NA	NA	NA	NA	cb	NA cb	NA cb	NA	562
NMS	66	NA	NA	NA	NA	cb	NA cb	NA cb	NA	NA
NMS	67	NA	NA	NA	NA	cb	NA cb	NA cb	NA	NA
NMS	68	NA	NA	NA	NA	cb	NA cb	NA cb	NA	NA
NMS	69	NA	NA	NA	NA	cb	NA cb	NA cb	NA	NA
NMS	70	NA	NA	NA	NA	cb	NA cb	NA cb	NA	NA
NMS	71	NA	NA	NA	NA	cb	NA cb	NA cb	NA	NA
NMS	72	NA	NA	NA	NA	cb	NA cb	NA cb	NA	NA
NMS	73	NA	NA	NA	NA	cb	NA cb	NA cb	NA	NA
NMS	74	NA	NA	NA	NA	cb	NA cb	NA cb	NA	NA

Appendix 3: Sword Data

Museum	Registration	Exam No	Deposition Location
NMS	75	DQ	15 Duddingston Loch Midlothian
NMS	76	DQ	16 Duddingston Loch Midlothian
NMS	77	DQ	17 Duddingston Loch Midlothian
NMS	78	DQ	18 Duddingston Loch Midlothian
NMS	79	DQ	19 Duddingston Loch Midlothian
NMS	80	DQ	20 Duddingston Loch Midlothian
NMS	81	DQ	21 Duddingston Loch Midlothian
NMS	82	DQ	22 Duddingston Loch Midlothian
NMS	83	DQ	23 Duddingston Loch Midlothian
NMS	84	DQ	24 a Duddingston Loch Midlothian
NMS	85	DQ	24 b Duddingston Loch Midlothian
NMS	86	DQ	24 c Duddingston Loch Midlothian
NMS	87	DQ	24 d Duddingston Loch Midlothian
NMS	88	DQ	24 e Duddingston Loch Midlothian
NMS	89	DQ	24 f Duddingston Loch Midlothian
NMS	90	DQ	25 Duddingston Loch Midlothian
NMS	91	DQ	26 Duddingston Loch Midlothian
NMS	92	DQ	304 Duddingston Loch Midlothian
NMS	93	DQ	305 Duddingston Loch Midlothian
NMS	94	DQ	303 Duddingston Loch Midlothian
NMS	95	DQ	393 Point of Sleat Skye Inverness between Gil
NMS	96	DL	41 R Tay Mugdrum Island Perth
NMS	97	DL	5 R Tay nr Perth (<1877)
NMS	98	DL	4 R Tay nr Elcho Castle Rhynd Perth (1865)
NMS	99	DQ	96 & Kilkerran Ayrshire - during field drainag
NMS	100	DM	41 Yorkshire
NMS	101	DQ	118 Kelton Kirkcudbright 2m down - broken by
NMS	102	DL	63 Colonsay Argyll
NMS	103	DB	1992 Crofts of Dipple Fochabers Grampian
Wtr	1	sw15	6 Waterden
Wtr	2	sw9	28 Waterden
Wtr	3	sw7+sw	Waterden
Wtr	4	sw18+s	Waterden
Wtr	5	sw23	18 Waterden
Wtr	6	sw26	21 Waterden
Wtr	7	sw54+1	Waterden
Wtr	8	sw38+s	Waterden
Wtr	9	sw5	39 Waterden
Wtr	10	sw35	50 Waterden
Wtr	11	sw37	52 Waterden
Wtr	12	sw42	57 Waterden
Wtr	13	sw33	48 Waterden
Wtr	14	sw63	71 Waterden
Wtr	15	6a	8 Waterden
Wtr	16	sw59	67 Waterden
Wtr	17	sw52	78 Waterden
Wtr	18	sw4+sw	Waterden
Wtr	19	sw21+s	Waterden
Wtr	20	sw14+6	Waterden
Wtr	21	sw17+2	Waterden
Wtr	22	sw16	22 Waterden

Appendix 3: Sword Data

Museum	Region	Type	Complete	Weight	Length	Blade	Hilt	
Exam			ness	gms	mm	Length	Length	
No						mm	mm	
NMS	75	Scotland	7	122.7	145.0	NA	NA	
NMS	76	Scotland	7	177.8	208.0	NA	NA	
NMS	77	Scotland	7	154.7	127.0	NA	NA	
NMS	78	Scotland	8	57.5	56.0	NA	NA	
NMS	79	Scotland	8	72.5	87.0	NA	NA	
NMS	80	Scotland	7	137.5	139.0	NA	NA	
NMS	81	Scotland	7	124.3	256.0	NA	NA	
NMS	82	Scotland	8	19.7	87.0	NA	NA	
NMS	83	Scotland	8	36.3	99.0	NA	NA	
NMS	84	Scotland	7	86.3	115.0	NA	NA	
NMS	85	Scotland	7	100.5	101.0	NA	NA	
NMS	86	Scotland	8	79.7	90.0	NA	NA	
NMS	87	Scotland	8	68.8	83.0	NA	NA	
NMS	88	Scotland	8	44.1	76.0	NA	NA	
NMS	89	Scotland	8	18.1	25.0	NA	NA	
NMS	90	Scotland	8	92.7	96.0	NA	NA	
NMS	91	Scotland	7	39.1	147.0	NA	NA	
NMS	92	Scotland	7	245.7	260.0	NA	NA	
NMS	93	Scotland	7	319.6	NA	NA	NA	
NMS	94	Scotland	Wilburton	1	677.5	NA	NA	
NMS	95	Scotland	Ewart Park	1	702.6	567.0	NA	107.0
NMS	96	Scotland	Early	1	736.6	773.0	NA	101.0
NMS	97	Scotland	Late	1	851.5	737.0	NA	112.0
NMS	98	Scotland	Late	2	714.9	629.0	NA	109.0
NMS	99	Scotland		7	181.2	238.0	NA	NA
NMS	100	Scotland	Ewart Park	1	528.8	469.0	NA	105.0
NMS	101	Scotland	Ewart Park	9	359.7	439.0	NA	102.0
NMS	102	Scotland		7	331.4	270.0	NA	NA
NMS	103	Scotland	Ewart Park	9	886.6	628.0	546.0	NA
Wtr	1	East Anglia	Ewart Park	9	208.0	197.0	NA	102.0
Wtr	2	East Anglia	Ewart Park	9	270.0	247.0	NA	110.0
Wtr	3	East Anglia	Ewart Park	9	478.0	399.0	NA	101.0
Wtr	4	East Anglia	Ewart Park	9	630.0	613.8	NA	NA
Wtr	5	East Anglia	Ewart Park	7	176.0	151.0	NA	NA
Wtr	6	East Anglia	Ewart Park	7	94.0	102.2	NA	NA
Wtr	7	East Anglia	Ewart Park	9	282.0	364.0	NA	NA
Wtr	8	East Anglia	Ewart Park	9	250.0	317.0	NA	NA
Wtr	9	East Anglia	Ewart Park	7	186.0	143.2	NA	NA
Wtr	10	East Anglia	Ewart Park	7	144.0	135.7	NA	NA
Wtr	11	East Anglia	Ewart Park	7	160.0	131.0	NA	NA
Wtr	12	East Anglia	Ewart Park	7	93.0	101.0	NA	NA
Wtr	13	East Anglia	Ewart Park	7	148.0	142.0	NA	NA
Wtr	14	East Anglia	Ewart Park	8	4.0	37.0	NA	NA
Wtr	15	East Anglia	Ewart Park	7	40.0	106.1	NA	NA
Wtr	16	East Anglia	Ewart Park	7	113.0	160.0	NA	NA
Wtr	17	East Anglia	Ewart Park	9	132.0	164.0	NA	NA
Wtr	18	East Anglia	Ewart Park	9	786.0	509.0	NA	107.0
Wtr	19	East Anglia	Ewart Park	9	490.0	456.7	NA	NA
Wtr	20	East Anglia	Ewart Park	9	290.0	294.0	NA	105.6
Wtr	21	East Anglia	Ewart Park	9	154.0	188.6	NA	NA
Wtr	22	East Anglia	Ewart Park	9	168.0	175.0	NA	99.0

Appendix 3: Sword Data

Museum	CoG	Max	Max	Blade	Edge	Edge	Casting	PBF
Exam	to	Width	Width	Thickness	Fine	Damage	Quality	No
No	Shldr	Shldr	Blade		ness			
NMS	75	NA	NA	NA	NA	cb	NA	NA
NMS	76	NA	NA	NA	NA	cb	NA	NA
NMS	77	NA	NA	NA	NA	cb	NA	NA
NMS	78	NA	NA	NA	NA	cb	NA	NA
NMS	79	NA	NA	NA	NA	cb	NA	NA
NMS	80	NA	NA	NA	NA	cb	NA	NA
NMS	81	NA	NA	NA	NA	cb	NA	NA
NMS	82	NA	NA	NA	NA	cb	NA	NA
NMS	83	NA	NA	NA	NA	cb	NA	NA
NMS	84	NA	NA	NA	NA	cb	NA	NA
NMS	85	NA	NA	NA	NA	cb	NA	NA
NMS	86	NA	NA	NA	NA	cb	NA	NA
NMS	87	NA	NA	NA	NA	cb	NA	NA
NMS	88	NA	NA	NA	NA	cb	NA	NA
NMS	89	NA	NA	NA	NA	cb	NA	NA
NMS	90	NA	NA	NA	NA	cb	NA	NA
NMS	91	NA	NA	NA	NA	cb	NA	NA
NMS	92	NA	NA	NA	NA	cb	NA	NA
NMS	93	NA	NA	30.0	7.5	c	2	NA
NMS	94	NA	57.0	NA	7.0	cb	NA	234
NMS	95	168.0	50.8	42.6	8.0	c	NA	586
NMS	96	268.0	67.8	45.6	8.8	c	3	113
NMS	97	225.0	64.4	41.3	5.9		2	739
NMS	98	189.0	NA	33.5	6.7		2	743
NMS	99	NA	NA	NA	NA	c	NA	768
NMS	100	120.0	42.0	39.8	7.8		2	500
NMS	101	NA	NA	NA	NA	c	NA	489
NMS	102	NA	NA	NA	NA	c	NA	NA
NMS	103	222.0	54.0	NA	7.0	c	NA	NA
Wtr	1	NA	50.5	NA	NA		1	NA
Wtr	2	NA	51.2	NA	NA		3	NA
Wtr	3	NA	53.0	NA	NA		1	NA
Wtr	4	NA	54.7	NA	5.5		1	NA
Wtr	5	NA	51.8	NA	NA		2	NA
Wtr	6	NA	52.9	NA	NA	c	1	NA
Wtr	7	NA	NA	39.6	5.0		1	NA
Wtr	8	NA	NA	NA	5.0	cb	2	NA
Wtr	9	NA	NA	43.0	6.0		3	NA
Wtr	10	NA	NA	NA	NA		1	NA
Wtr	11	NA	NA	NA	NA		3	NA
Wtr	12	NA	NA	NA	NA	cb	NA	NA
Wtr	13	NA	NA	NA	NA		1	NA
Wtr	14	NA	NA	NA	NA		1	NA
Wtr	15	NA	NA	NA	NA		1	NA
Wtr	16	NA	NA	NA	6.0		2	NA
Wtr	17	NA	NA	NA	7.0		2	NA
Wtr	18	NA	57.5	48.0	7.5		2	NA
Wtr	19	NA	NA	NA	6.0		1	NA
Wtr	20	NA	53.0	NA	NA		1	NA
Wtr	21	NA	NA	NA	NA	c	3	NA
Wtr	22	NA	NA	NA	NA	c	NA	NA

Appendix 3: Sword Data

Museum	Registration	Exam	Deposition	Location
		No		
Wtr	23	sw1	3	Waterden
Wtr	24	sw12	24	Waterden
Wtr	25	sw13	23	Waterden
Wtr	26	sw8	29	Waterden
Wtr	27	sw19+s	13	Waterden
Wtr	28	sw20+s		Waterden
Wtr	29	sw24	14	Waterden
Wtr	30	sw3	25	Waterden
Wtr	31	sw2	26	Waterden
Wtr	32	sw22	15	Waterden
Wtr	34	3	33	Waterden
Wtr	35	sw47	73	Waterden
Wtr	36	sw40	55	Waterden
Wtr	37	sw28	43	Waterden
Wtr	38	sw29	44	Waterden
Wtr	39	sw48	74	Waterden
Wtr	40	sw50+2		Waterden
Wtr	41	sw31	46	Waterden
Wtr	42	sw34	49	Waterden
Wtr	43	sw32	47	Waterden
Wtr	44	sw41	56	Waterden
Wtr	45	sw39	54	Waterden
Wtr	46	sw30	45	Waterden
Wtr	47	6e	12	Waterden
Wtr	48	sw36	51	Waterden
Wtr	49	sw44	59	Waterden
Wtr	50	sw53	61	Waterden
Wtr	51	sw62+6		Waterden
Wtr	52	sw45+s		Waterden
Wtr	53	sw51	77	Waterden
Wtr	54	sw57	65	Waterden
Wtr	55	sw58	66	Waterden
Wtr	56	sw56	64	Waterden
Wtr	57	sw6	40	Waterden
Wtr	58	1	32	Waterden
Wtr	59	6b	9	Waterden
Wtr	60	28	79	Waterden
Wtr	61	sw61	69	Waterden
Wtr	62	10	34	Waterden
Wtr	63	sw19	13	Waterden

Appendix 3: Sword Data

Museum	Region	Type	Comp	Weight	Length	Blade	Hilt	
Exam			lete	gms	mm	Length	Length	
No			ness			mm	mm	
Wtr	23	East Anglia	Ewart Park	5	214.0	204.0	NA	97.5
Wtr	24	East Anglia	Ewart Park	9	140.0	140.6	NA	107.2
Wtr	25	East Anglia	Ewart Park	9	210.0	200.1	NA	102.0
Wtr	26	East Anglia	Ewart Park	9	332.0	317.0	NA	105.7
Wtr	27	East Anglia	Ewart Park	9	514.0	487.0	NA	NA
Wtr	28	East Anglia	Ewart Park	9	500.0	554.9	NA	NA
Wtr	29	East Anglia	Ewart Park	7	178.0	151.0	NA	NA
Wtr	30	East Anglia	Ewart Park	7	188.0	149.4	NA	NA
Wtr	31	East Anglia	Ewart Park	7	234.0	156.0	NA	NA
Wtr	32	East Anglia	Ewart Park	7	134.0	109.9	NA	NA
Wtr	34	East Anglia	Ewart Park	7	146.0	127.0	NA	NA
Wtr	35	East Anglia	Ewart Park	9	418.0	410.0	NA	NA
Wtr	36	East Anglia	Ewart Park	7	132.0	117.0	NA	NA
Wtr	37	East Anglia	Ewart Park	7	206.0	189.0	NA	NA
Wtr	38	East Anglia	Ewart Park	7	228.0	184.0	NA	NA
Wtr	39	East Anglia	Ewart Park	9	352.0	370.0	NA	NA
Wtr	40	East Anglia	Ewart Park	9	350.0	382.0	NA	NA
Wtr	41	East Anglia	Ewart Park	7	156.0	149.0	NA	NA
Wtr	42	East Anglia	Ewart Park	7	146.0	138.4	NA	NA
Wtr	43	East Anglia	Ewart Park	7	216.0	145.0	NA	NA
Wtr	44	East Anglia	Ewart Park	7	116.0	108.0	NA	NA
Wtr	45	East Anglia	Ewart Park	7	134.0	124.0	NA	NA
Wtr	46	East Anglia	Ewart Park	7	204.0	156.0	NA	NA
Wtr	47	East Anglia	Ewart Park	7	124.0	124.0	NA	NA
Wtr	48	East Anglia	Ewart Park	7	192.0	131.0	NA	NA
Wtr	49	East Anglia	Ewart Park	8	92.0	91.0	NA	NA
Wtr	50	East Anglia	Ewart Park	7	206.0	244.0	NA	NA
Wtr	51	East Anglia	Ewart Park	9	190.0	215.7	NA	NA
Wtr	52	East Anglia	Ewart Park	9	146.0	209.0	NA	NA
Wtr	53	East Anglia	Ewart Park	9	124.0	177.0	NA	NA
Wtr	54	East Anglia	Ewart Park	7	142.0	173.0	NA	NA
Wtr	55	East Anglia	Ewart Park	7	86.0	167.0	NA	NA
Wtr	56	East Anglia	Ewart Park	7	120.0	190.0	NA	NA
Wtr	57	East Anglia	Ewart Park	7	120.0	191.0	NA	NA
Wtr	58	East Anglia	Ewart Park	7	166.0	208.0	NA	NA
Wtr	59	East Anglia	Ewart Park	8	46.0	97.0	NA	NA
Wtr	60	East Anglia	Ewart Park	7	58.0	121.2	NA	NA
Wtr	61	East Anglia	Ewart Park	7	84.0	117.0	NA	NA
Wtr	62	East Anglia	Ewart Park	7	116.0	150.0	NA	NA
Wtr	63	East Anglia	Ewart Park	7	78.0	137.0	NA	NA

Appendix 3: Sword Data

Museum	Exam	CoG to Shldr	Max Width Shldr	Max Width Blade	Blade Thickness	Edge Finess	Edge Damage	Casting Quality	PBF No			
Wtr	23	NA	52.1	NA	NA		2	2	3	NA		
Wtr	24	NA	55.5	NA	NA		NA	NA	3	NA		
Wtr	25	NA	54.9	NA	NA		1	2	2	NA		
Wtr	26	NA	48.8	NA	NA		1	3	3	NA		
Wtr	27	NA	52.0	NA	5.5		2	3	3	NA		
Wtr	28	NA	NA	NA	5.8	c	2	c	4	3	NA	
Wtr	29	NA	54.6	NA	5.5	c	1	c	4	3	NA	
Wtr	30	NA	50.8	NA	5.6		1	3	3	NA		
Wtr	31	NA	56.5	NA	NA		1	4	3	NA		
Wtr	32	NA	52.6	NA	NA		2	3	2	NA		
Wtr	34	NA	NA	NA	NA	cb	1	cb	4	cb	3	NA
Wtr	35	NA	NA	NA	NA		3	4	3	NA		
Wtr	36	NA	NA	NA	NA		1	4	2	NA		
Wtr	37	NA	NA	NA	NA		2	3	2	NA		
Wtr	38	NA	NA	NA	NA		2	3	3	NA		
Wtr	39	NA	NA	NA	5.8		1	4	3	NA		
Wtr	40	NA	NA	NA	5.5		2	4	3	NA		
Wtr	41	NA	NA	NA	NA		2	2	2	NA		
Wtr	42	NA	NA	NA	NA		2	4	3	NA		
Wtr	43	NA	NA	NA	NA		2	4	2	NA		
Wtr	44	NA	NA	NA	NA		1	1	2	NA		
Wtr	45	NA	NA	NA	NA		1	4	3	NA		
Wtr	46	NA	NA	NA	NA		1	3	2	NA		
Wtr	47	NA	NA	NA	NA		1	5	3	NA		
Wtr	48	NA	NA	NA	NA	c	2	c	4	2	NA	
Wtr	49	NA	NA	NA	NA	c	NA	c	NA	3	NA	
Wtr	50	NA	NA	NA	6.3		1	5	3	NA		
Wtr	51	NA	NA	NA	5.7		1	4	3	NA		
Wtr	52	NA	NA	NA	5.2		1	5	3	NA		
Wtr	53	NA	NA	NA	6.1		1	4	3	NA		
Wtr	54	NA	NA	37.8	5.4		2	4	3	NA		
Wtr	55	NA	NA	NA	NA		1	4	3	NA		
Wtr	56	NA	NA	NA	NA		2	3	2	NA		
Wtr	57	NA	NA	NA	NA		1	4	2	NA		
Wtr	58	NA	NA	NA	NA		2	4	3	NA		
Wtr	59	NA	NA	NA	NA		1	3	3	NA		
Wtr	60	NA	NA	NA	NA		1	4	3	NA		
Wtr	61	NA	NA	NA	NA		1	3	4	NA		
Wtr	62	NA	NA	NA	NA		1	4	2	NA		
Wtr	63	NA	NA	NA	NA		2	4	1	NA		

Appendix 4: Spearhead Data

Museum	Registration	Exam	Registration	Exam	Registration	Deposition Location
		No				
bm	2	1870	11	26	2	Ty Mawr Holyhead on Holyhead mountain
bm	3	1982	6	3	42	Langdon Bay Kent
bm	5	WG			2049	Melbourn, Cambs
bm	6	WG			2043	Burwell Fen Cambs
bm	9	1898	2	20	1	R Thames? 2mi above Taplow Bucks
bm	14	1905	7	13	1	R Thames Cookham Dean Berks
bm	17	WG			2055	Quy Fen Cambs
bm	18	1896	1	21	1	R Thames Windsor Berks
bm	20	1856	7	1	1371	R Thames Datchet Berks
bm	21	WG			1642	R Thames Isleworth (Arch LXI)
bm	22	WG			1644	R Thames Battersea
bm	23	WG			1643	R Thames Hammersmith
bm	24	WG			1641	R Thames Sion Reach Isleworth (1904)
bm	25	1982	7	2	1	Smallmouth Cove Ilfracombe Devon SS559480
bm	28	WG			2054	Nawath Castle Brampton Cumbria (Evans fig
bm	30	1879	7	5	5	Bakewell/Tideswell Derbyshire
bm	36	WG			1649	R Thames Teddington (Arch LXI)
bm	37	WG			1650	R Thames Barnes bank Hammersmith (Arch LXI)
bm	38	WG			1651	R Thames Barnes bank Hammersmith (Arch LXI)
bm	39	WG			1652	R Thames Chiswick (1885)
bm	45	WG			1653	R Thames Hammersmith (1905)
bm	46	WG			1665	R Thames Richmond
bm	47	WG			1654	R Thames Twickenham
bm	48	WG			1655	R Thames? New Pier Chiswick (1905)
bm	49	WG			1669	R Thames Richmond
bm	50	WG			1656	R Thames Teddington
bm	53	WG			1668	R Thames Richmond
bm	54	1863	1	22	125	R Thames Kingston
bm	56	1865	12	20	6	Plaistow Marshes
bm	57	1875	4	1	40	New River Works Pentonville Islington
bm	59	1896	6	24	8	R Thames Cremorne Chelsea
bm	60	1859	3	29	1	R Thames Lambeth
bm	61	1856	7	19	1	R Thames Battersea
bm	62	1856	7	1	1370	R Thames Westminster
bm	63	1856	7	1	1366	R Thames
bm	64	1854	10	28	2	R Thames Battersea
bm	65	1850	7	25	2	R Thames Wandsworth
bm	66	WG			1671	R Thames Isleworth
bm	67	WG			1670	R Thames Isleworth (1892)
bm	68	WG			2255	Wandle Valley Croydon - 9.5' in gravel pit
bm	71	WG			2050	Methwold Whiteplot Norfolk
bm	75	1910	6	19	2	Battersea - making a filtering bed
bm	76	1934	2	6	2	1 R Thames Tower Bridge?
bm	78	1964	12	1	8	R Thames Surrey Commercial Docks
bm	79	1916	6	3	1	Bramby Common Scunthorpe Lincs
bm	83	WG			2057	R Humber N bank Ferriby
bm	84	WG			2113	Ironstone Mines Scunthorpe Lincs
bm	88	1879	7	5	6	Duddingston Loch (1775)
bm	89	1911	7	10	65	West Furze Holderness Humberside - 'lake d
bm	90	1855	9	27	1	R Thames?

Appendix 4: Spearhead Data

Museum	Region	General	Detailed	Complete	Weight	Length	
Exam		Type	Type	Dec-ness	gms	mm	
No				orat			
				ion			
bm	2 West	l	l		3	196.3	227.0
bm	3 South East	l	l		2	113.6	154.0
bm	5 East Anglia	bl	flbl		2	104.3	189.0
bm	6 East Anglia	bl	tgrrsbl		2	152.9	183.0
bm	9 South East	l	l	sdec	2	184.2	229.0
bm	14 South East	l	l		1	189.6	193.0
bm	17 East Anglia	fl	fl		2	371.9	371.0
bm	18 South East	lc	ls		2	348.7	433.0
bm	20 South East	bl	lbl		2	367.7	564.0
bm	21 South East	l	ll		1	404.5	375.0
bm	22 South East	l	l		2	304.2	342.0
bm	23 South East	l	l		2	351.2	373.0
bm	24 South East	l	ll		1	433.0	474.0
bm	25 West	l	l		2	77.1	136.0
bm	28 West	lc	l2rop		2	222.1	235.0
bm	30 Scotland	l	l		2	116.8	165.0
bm	36 South East	bl	tgrsbl		1	498.1	481.0
bm	37 South East	bl	tgrrsbl		1	355.6	385.0
bm	38 South East	bl	tgrsbl		9 3.0	271.3	381.0
bm	39 South East	bl	lbl		1	439.9	440.0
bm	45 South East	bl	lgrbl		2	192.9	243.0
bm	46 South East	lc	lh		2	198.7	320.0
bm	47 South East	bl	lbl		2	186.8	248.0
bm	48 South East	bl	tgrsbl		2	138.7	195.0
bm	49 South East	lc	lhfgrs		1	250.6	271.0
bm	50 South East	bl	tgrrsbl		1	151.4	170.0
bm	53 South East	lc	llops		8	45.5	77.0
bm	54 South East	bl	lbl		5	255.3	225.0
bm	56 South East	brb	brb		2	320.7	274.0
bm	57 South East	bl	tgrsbl		2	219.5	362.0
bm	59 South East	l	l		2	239.6	263.0
bm	60 South East	bl	lbl		2	131.1	191.0
bm	61 South East	lc	lh		1	229.0	252.0
bm	62 South East	bl	tgrsbl		7	285.0	280.0
bm	63 South East	bl	lgrbl		1	201.2	234.0
bm	64 South East	l	ll		2	395.7	342.0
bm	65 South East	lc	lfs		2	329.7	371.0
bm	66 South East	o	o		1	59.1	113.0
bm	67 South East	lc	lf		2	244.9	282.0
bm	68 South East	bl	flbl		9 2.0	1346.8	800.0
bm	71 East Anglia	bl	flbl		2	132.9	183.0
bm	75 South East	lc	lhf		2	409.9	355.0
bm	76 South East	flc	fllops		4	350.1	340.0
bm	78 South East	bl	lgrbl		4	367.0	424.0
bm	79 East Anglia	bl	tgrsbl		2	333.8	447.0
bm	83 East Anglia	brb	brb		3	309.3	275.0
bm	84 East Anglia	l	l		1	212.9	222.0
bm	88 Scotland	lc	lh		4	95.4	146.0
bm	89 East Anglia	l	l		4	51.1	115.0
bm	90 South East	l	ll		1	339.0	329.0

Appendix 4: Spearhead Data

Museum	Blade	Socket	Internal	Max	Socket	Socket	Socket	
Exam	Length	Length	Socket	Width	Width at	Width at	Wall	
No	mm	mm	Length	Blade	End	Blade	mm	
			mm	mm	mm	mm		
bm	2	156.0	71.0	180.0	32.0	25.6	20.1	1.8
bm	3	90.0	64.0	NA	31.0	22.0	18.0	1.5
bm	5	137.0	52.0	113.0	27.0	20.0	NA	NA
bm	6	151.0	32.0	NA	45.0	NA	NA	NA
bm	9	166.0	63.0	185.0	42.0	27.0	20.0	2.5
bm	14	123.0	70.0	NA	NA	NA	NA	NA
bm	17	317.0	54.0	290.0	64.0	26.0	25.0	1.8
bm	18	373.0	60.0	NA	50.0	26.0	22.0	2.5
bm	20	465.0	99.0	412.0	NA	26.0	20.4	2.7
bm	21	300.0	75.0	327.0	57.0	25.0	20.0	0.8
bm	22	NA	342.0	NA	54.0	23.0	20.9	1.0
bm	23	NA	373.0	NA	58.0	24.0	22.0	1.3
bm	24	452.0	22.0	NA	NA	25.5	25.0	1.4
bm	25	107.0	29.0	101.0	NA	21.0	18.0	1.5
bm	28	177.0	58.0	190.0	52.0	32.0	23.8	2.2
bm	30	109.0	56.0	123.0	41.0	25.7	22.5	1.8
bm	36	318.0	163.0	237.0	58.0	23.0	19.6	1.3
bm	37	282.0	103.0	220.0	54.0	26.5	21.3	1.7
bm	38	295.0	NA	NA	47.0	NA	NA	NA
bm	39	333.0	107.0	NA	58.0	25.0	19.5	1.5
bm	45	197.0	46.0	NA	54.0	24.4	20.7	1.9
bm	46	278.0	42.0	NA	58.0	26.0	21.7	1.0
bm	47	185.0	63.0	165.0	44.0	23.0	18.5	1.0
bm	48	109.0	86.0	NA	35.0	23.4	16.7	1.5
bm	49	235.0	36.0	175.0	53.0	26.0	24.5	1.9
bm	50	87.0	83.0	120.0	33.0	23.5	17.2	0.7
bm	53	NA	NA	NA	NA	NA	NA	NA
bm	54	NA	NA	NA	50.0	NA	NA	NA
bm	56	246.0	28.0	NA	67.0	21.8	20.4	1.6
bm	57	281.0	81.0	250.0	51.0	24.0	18.4	1.9
bm	59	182.0	81.0	207.0	53.0	27.3	21.2	1.5
bm	60	135.0	56.0	103.0	32.0	20.0	15.0	1.8
bm	61	221.0	31.0	NA	48.0	26.0	23.6	2.2
bm	62	NA	127.0	146.0	NA	NA	NA	NA
bm	63	166.0	68.0	142.0	47.0	24.4	17.1	3.2
bm	64	305.0	37.0	NA	60.0	23.0	20.7	1.5
bm	65	327.0	44.0	NA	52.0	24.2	22.2	NA
bm	66	81.0	32.0	88.0	34.0	19.8	15.9	1.7
bm	67	241.0	41.0	NA	48.0	25.8	NA	1.6
bm	68	NA	96.0	255.0	69.0	29.8	22.7	3.3
bm	71	126.0	57.0	85.0	34.0	20.0	14.4	2.0
bm	75	270.0	85.0	307.0	57.0	32.0	24.0	2.4
bm	76	312.0	NA	NA	86.0	30.1	27.9	NA
bm	78	390.0	NA	230.0	53.0	NA	19.6	NA
bm	79	339.0	108.0	NA	46.0	23.0	20.5	1.0
bm	83	248.0	27.0	NA	NA	23.5	22.3	2.2
bm	84	170.0	52.0	165.0	43.0	28.8	21.7	1.3
bm	88	125.0	NA	77.0	40.0	24.1	NA	1.4
bm	89	80.0	NA	NA	29.0	NA	NA	NA
bm	90	286.0	43.0	NA	61.0	24.0	20.7	1.7

Appendix 4: Spearhead Data

Museum	Exam	Casting	Tip	Socket	Midrib
	No	Quality	Damage	Damage	Shape
bm	2	2	damaged	undamaged	round
bm	3	2		undamaged	round
bm	5	4		damaged	angled
bm	6	3	undamaged	damaged	round
bm	9	3	undamaged	undamaged	round
bm	14	3	undamaged	undamaged	round
bm	17	4	damaged	undamaged	round
bm	18	2	undamaged	undamaged	round
bm	20	3	undamaged	undamaged	angled
bm	21	3	undamaged	undamaged	round
bm	22	2	undamaged	undamaged	round
bm	23	3	undamaged	damaged	round
bm	24	3	undamaged	undamaged	angled
bm	25	2	damaged	damaged	round
bm	28	3	undamaged	undamaged	round
bm	30	4	undamaged	damaged	round
bm	36	2	undamaged	undamaged	angledr
bm	37	2	undamaged	undamaged	angledr
bm	38	2	undamaged	damaged	angledr
bm	39	2	undamaged	undamaged	angled
bm	45	3	undamaged	damaged	round
bm	46	3	undamaged	damaged	angled+
bm	47	2	damaged	damaged	angled
bm	48	3	undamaged	undamaged	round
bm	49	2	undamaged	undamaged	round
bm	50	2	undamaged	undamaged	angled
bm	53	3	missing	damaged	angled
bm	54	2	undamaged	missing	angled
bm	56	2	undamaged	undamaged	flat
bm	57	3	damaged	damaged	angledr
bm	59	2	undamaged	damaged	round
bm	60	1	undamaged	damaged	angled
bm	61	2	undamaged	undamaged	round
bm	62	2	missing	damaged	round
bm	63	1	undamaged	undamaged	angled
bm	64	1	undamaged	undamaged	round
bm	65	2	undamaged	damaged	round
bm	66	2	undamaged	undamaged	round
bm	67	3	undamaged	undamaged	round
bm	68	4	undamaged	undamaged	angled
bm	71	3	undamaged	undamaged	angled
bm	75	2	damaged	damaged	round
bm	76	2	damaged	undamaged	angled
bm	78	3	damaged	damaged	angled
bm	79	3	undamaged	damaged	angledr
bm	83	4	undamaged	damaged	round
bm	84	1	undamaged	undamaged	round
bm	88	3	undamaged	damaged	angledr
bm	89	NA	undamaged		round
bm	90	1	undamaged	undamaged	round

Appendix 4: Spearhead Data

Museum Registration					Deposition Location	
	Exam					
	No					
bm	91	1867	3	24	1	R Thames
bm	93	1863	1	22	127	R Thames Kingston
bm	94	1866	12	11	5	R Thames
bm	95	1867	10	12	1	R Thames
bm	97	1875	4	1	43	R Thames
bm	100	WG			2056	High Blakehope Alnham Northumberland
bm	101	WG			2058	Elford Northumberland
bm	102	1964	12	1	33	Oxford
bm	104	WG			2045	Woolpit Suffolk
bm	105	1964	12	1	34	Lakenheath Suffolk
bm	106	1964	12	1	35	Lakenheath Fen Suffolk
bm	107	1964	12	1	36	Lakenheath Fen Suffolk
bm	108	1856	7	1	1363	Thames Ditton
bm	110	1877	5	12	1	R Thames Thames Ditton
bm	111	1964	12	1	37	Mildenhall Suffolk
bm	112	1964	12	1	38	Mildenhall Suffolk
bm	113	1981	1	1	1	Walton-on Thames Surrey probably R Thames
bm	114	WG			2046	Taunton Somerset
bm	115	1853	4	12	10	Sth Downs near Lewes Sussex 'in a tumulus'
bm	117	1964	12	1	47	Sussex?
bm	118	1862	8	2	1	R Thames Thames Ditton (UCH Surrey i,244)
bm	119	1856	7	1	1367	R Thames
bm	120	WG			2024	Scamridge N Yorks
bm	122	1847	2	8	102	Melsonby/Stanwick St John N Yorks (PPS XXV
bm	123	1847	2	8	103	Melsonby/Stanwick St John N Yorks (PPS XXV
bm	124	WG			1646	R Tyne Newcastle Bridge (1867)
bm	125	1847	2	8	104	Melsonby/Stanwick St John N Yorks (PPS XXV
bm	126	WG			1667	R Tyne N Bank Kings Meadows Elswick Tyne &
bm	129	SL			447	Scotland?
bm	130	1875	4	1	38	Wales? (1870)
bm	132	WG			1272	Heathery Burn Durham (Arch LIV)
bm	133	WG			1277	Heathery Burn Durham (Arch LIV)
bm	134	WG			1274	Heathery Burn Durham (Arch LIV)
bm	135	WG			1273	Heathery Burn Durham (Arch LIV)
bm	136	WG			1275	Heathery Burn Durham (Arch LIV)
bm	137	WG			1278	Heathery Burn Durham (Arch LIV)
bm	138	1911	10	21	7	Heathery Burn Durham
bm	139	WG			1647	R Thames Maidenhead (with 1648)
bm	140	WG			1648	R Thames Maidenhead (with 1647)
bm	141	1931	10	19	5	Bray-on-Thames Berks
bm	142	1853	6	27	40	Chrishall Essex
bm	143	1880	11	24	13	b Meldreth Cambs
bm	145	1880	11	24	28	Meldreth Cambs
bm	146	1880	11	24	29	Meldreth Cambs
bm	147	WG			2008	Llantisilio/Llandysilio Clywd
bm	148	1868	8	15	8	Wicken Fen Cambs 6' from surface
bm	149	1896	7	6	1	Fenny Bentley Derbyshire 3' below surface
bm	150	WG			2114	near Chagford Dartmoor
bm	151	WG			2115	near Chagford Dartmoor
bm	157	1898	2	20	3	R Thames Taplow

Appendix 4: Spearhead Data

Museum	Region	General	Detailed	Comple	Weight	Length	
Exam		Type	Type	ness	gms	mm	
No				Dec- orat ion			
bm	91	South East	l	ll	1	444.7	425.0
bm	93	South East	l	l	sdec	4	138.9
bm	94	South East	to	to		1	395.0
bm	95	South East	l	l		5	379.2
bm	97	South East	bl	tsbl		3	45.1
bm	100	Scotland	lc	lolop		4	204.5
bm	101	Scotland	bl	tgrsbl		2	260.0
bm	102	South East	l	l		9	225.2
bm	104	East Anglia	bl	tgrsbl		2	222.6
bm	105	East Anglia	l	l		3	86.6
bm	106	East Anglia	l	l		7	81.8
bm	107	East Anglia	l	l		7	144.5
bm	108	South East	o	odec	sdec	2	86.2
bm	110	South East	bl	tgrsbl		1	324.1
bm	111	East Anglia	l	l		7	53.4
bm	112	East Anglia	ld	ld		3	22.7
bm	113	South East	lc	lgrr		1	242.7
bm	114	West	ld	ldst		2	25.9
bm	115	South East	l	l		1	98.1
bm	117	South East	brb	brb		2	496.1
bm	118	South East	l	ll		1	604.2
bm	119	South East	bl	lgrbl		1	210.4
bm	120	Scotland	l	l		5	23.6
bm	122	Scotland	lc	lh		2	235.6
bm	123	Scotland	l	l		5	309.5
bm	124	Scotland	fl	fl		4	441.3
bm	125	Scotland	bl	tgrsbl		5	221.4
bm	126	Scotland	flc	fllop		2	268.6
bm	129	Scotland	l	l		9	308.8
bm	130	West	l	l		2	255.5
bm	132	Scotland	lc	lhfst		2	305.6
bm	133	Scotland	lc	lhfst		2	224.6
bm	134	Scotland	lc	lhst		2	236.8
bm	135	Scotland	lc	lhst		2	282.2
bm	136	Scotland	lc	lhst		2	217.8
bm	137	Scotland	lc	lhst		2	164.5
bm	138	Scotland	lc	lh		2	225.5
bm	139	South East	l	l		2	76.1
bm	140	South East	ld	ld		2	67.0
bm	141	South East	ld	ld		7	26.1
bm	142	South East	l	l		5	74.1
bm	143	East Anglia	l	l		7	40.0
bm	145	East Anglia	ld	ld		6	27.5
bm	146	East Anglia	ld	ld		8	37.6
bm	147	West	lc	lh		7	41.3
bm	148	East Anglia	l	l		5	66.8
bm	149	Scotland	lc	ls		1	242.5
bm	150	West	l	l		2	109.0
bm	151	West	lc	lst		2	108.0
bm	157	South East	l	l		2	109.2

Appendix 4: Spearhead Data

Museum	Blade	Socket	Internal	Max	Socket	Socket	Socket	
Exam	Length	Length	Socket	Width	Width at	Width at	Wall	
No	mm	mm	Length	Blade	End	Blade	mm	
			mm	mm	mm	mm		
bm	91	299.0	126.0	NA	54.0	25.5	20.0	2.0
bm	93	179.0	NA	128.0	34.0	NA	16.9	1.7
bm	94	198.0	147.0	238.0	61.0	24.0	18.5	1.4
bm	95	NA	NA	NA	60.0	NA	NA	NA
bm	97	60.0	25.0	NA	22.0	17.0	NA	1.9
bm	100	142.0	NA	NA	51.0	NA	17.0	1.7
bm	101	133.0	88.0	192.0	54.0	25.0	20.9	2.3
bm	102	150.0	NA	NA	44.0	28.0	18.7	2.0
bm	104	145.0	79.0	NA	NA	28.2	19.6	2.0
bm	105	73.0	48.0	NA	NA	22.6	16.0	1.8
bm	106	145.0	NA	NA	NA	NA	NA	NA
bm	107	NA	NA	NA	NA	NA	NA	NA
bm	108	107.0	48.0	NA	38.0	24.7	19.2	1.5
bm	110	248.0	96.0	NA	50.0	22.6	18.5	1.2
bm	111	NA	NA	NA	NA	NA	NA	NA
bm	112	48.0	15.0	45.0	26.0	NA	20.0	1.7
bm	113	171.0	67.0	203.0	45.0	29.3	21.0	1.5
bm	114	50.0	14.0	NA	26.0	16.6	14.7	0.6
bm	115	104.0	61.0	100.0	43.0	23.5	16.5	1.7
bm	117	235.0	26.0	81.0	67.0	NA	21.7	1.5
bm	118	473.0	34.0	NA	61.0	26.1	24.5	0.9
bm	119	171.0	71.0	NA	51.0	23.0	18.3	1.3
bm	120	NA	NA	NA	29.0	NA	NA	NA
bm	122	148.0	53.0	162.0	51.0	27.0	24.5	1.5
bm	123	NA	NA	250.0	57.0	NA	NA	NA
bm	124	332.0	NA	NA	65.0	NA	19.1	2.5
bm	125	288.0	NA	210.0	52.0	NA	NA	NA
bm	126	214.0	19.0	118.0	67.0	27.3	25.5	2.0
bm	129	196.0	NA	233.0	52.0	30.5	22.6	1.5
bm	130	136.0	78.0	180.0	46.0	32.0	21.9	3.0
bm	132	220.0	74.0	245.0	53.0	30.4	24.0	2.1
bm	133	161.0	68.0	155.0	44.0	27.8	21.7	2.4
bm	134	207.0	69.0	228.0	47.0	27.0	21.7	2.0
bm	135	212.0	78.0	232.0	45.0	28.1	21.7	1.3
bm	136	173.0	59.0	197.0	50.0	27.3	22.1	1.5
bm	137	122.0	46.0	NA	50.0	26.0	22.3	2.2
bm	138	176.0	78.0	200.0	49.0	29.5	23.0	2.0
bm	139	96.0	30.0	NA	NA	NA	NA	1.5
bm	140	65.0	27.0	53.0	32.0	25.0	20.6	2.0
bm	141	NA	NA	NA	NA	NA	NA	NA
bm	142	90.0	NA	NA	29.0	NA	NA	NA
bm	143	NA	NA	NA	NA	NA	NA	NA
bm	145	NA	NA	NA	NA	NA	NA	NA
bm	146	NA	NA	NA	NA	NA	NA	NA
bm	147	NA	NA	NA	NA	NA	NA	NA
bm	148	112.0	NA	NA	NA	NA	NA	NA
bm	149	258.0	28.0	NA	62.0	27.0	25.2	1.8
bm	150	117.0	65.0	112.0	33.0	25.6	19.0	1.7
bm	151	93.0	37.0	101.0	NA	26.9	19.0	2.5
bm	157	120.0	69.0	159.0	32.0	NA	19.0	1.5

Appendix 4: Spearhead Data

Museum	Exam No	Casting Quality	Tip Damage	Socket Damage	Midrib Shape
bm	91	1	undamaged	undamaged	angled
bm	93	3	undamaged	damaged	round
bm	94	2	undamaged	undamaged	round
bm	95	3	damaged	missing	angled
bm	97	3	undamaged	damaged	angled+
bm	100	3	damaged	damaged	angled
bm	101	3	undamaged	undamaged	round
bm	102	3	damaged	damaged	flat
bm	104	3	undamaged	damaged	round
bm	105	2	undamaged	damaged	angled
bm	106	2	undamaged	undamaged	round
bm	107	2	missing	undamaged	round
bm	108	3	undamaged	undamaged	round
bm	110	1	undamaged	undamaged	angledr
bm	111	2	undamaged	missing	round
bm	112	2	undamaged	damaged	round
bm	113	2	undamaged	undamaged	angledr
bm	114	2	undamaged	damaged	flat
bm	115	2	undamaged	undamaged	flat r
bm	117	2	undamaged	damaged	flat r
bm	118	2	undamaged	undamaged	round
bm	119	3	undamaged	undamaged	angled
bm	120	2	undamaged	missing	round
bm	122	NA	undamaged	damaged	round
bm	123	3	undamaged	missing	round
bm	124	3	damaged	damaged	round
bm	125	4	undamaged	missing	round
bm	126	2	undamaged	damaged	angled
bm	129	4	undamaged	damaged	round
bm	130	4	undamaged	damaged	round
bm	132	3	damaged	undamaged	round
bm	133	2	undamaged	undamaged	round
bm	134	3	damaged	damaged	round
bm	135	3	undamaged	undamaged	round
bm	136	2	damaged	undamaged	angledr
bm	137	3	undamaged	undamaged	round
bm	138	3	damaged	damaged	round
bm	139	2	undamaged	damaged	round
bm	140	2	damaged	damaged	round
bm	141	2	missing	undamaged	round
bm	142	2	undamaged	damaged	round
bm	143	2	missing	damaged	round
bm	145	NA	missing	missing	round
bm	146	NA	missing	damaged	
bm	147	4	undamaged	missing	round
bm	148	3	undamaged	missing	round
bm	149	2	undamaged	undamaged	angled+
bm	150	3	damaged	undamaged	round
bm	151	2	undamaged	undamaged	round
bm	157	3	undamaged	damaged	round

Appendix 4: Spearhead Data

Museum	Registration	Exam	Registration	Exam	Deposition	Location
		No		No		
bm	158	1898	2	20	2	R Thames Taplow
bm	159	WG			1276	Heathery Burn Durham (Arch LIV)
bm	160	1875	4	1	37	Heathery Burn Cave? Durham
bm	161	1898	7	12	13	R Thames near Taplow
bm	162	1880	11	24	27	Meldreth Cambs
bm	163	1892	9	1	300	Monkton Farm Tarrant Monkton Devon
bm	164	1898	7	12	14	R Thames near Taplow
bm	165	1898	7	12	15	R Thames near Taplow
bm	166	1898	7	12	12	R Thames near Taplow
bm	167	1898	7	12	16	R Thames near Taplow
bm	168	1898	7	12	20	a R Thames near Taplow
bm	169	1903	6	23	24	Bromley-le-Bow Grtr London 4'6" deep (PSA
bm	170	1873	2	10	9	Walthamstow Grtr London
bm	171	1864	5	2	11	Hounslow Grtr London in a field
bm	172	1855	2	27	21	Wickham Park nr Croydon
bm	173	1860	7	13	1	a R Thames nr Kingston (PSA 1.125)
bm	174	1860	7	13	1	b R Thames nr Kingston (PSA 1.125)
bm	175	1875	2	1	7	a Thames St Grtr London (1868)
bm	176	1875	2	1	7	b Thames St Grtr London (1868)
bm	177	1891	5	14	4	Blackmoor Woolmer Forest Selborne
bm	178	1891	5	14	5	Blackmoor Woolmer Forest Selborne
bm	179	1891	5	14	6	Blackmoor Woolmer Forest Selborne
bm	180	1891	5	14	7	Blackmoor Woolmer Forest Selborne
bm	181	1891	5	14	8	Blackmoor Woolmer Forest Selborne
bm	182	1891	5	14	9	Blackmoor Woolmer Forest Selborne
bm	183	1891	5	14	10	Blackmoor Woolmer Forest Selborne
bm	184	1891	5	14	11	Blackmoor Woolmer Forest Selborne
bm	185	1891	5	14	12	Blackmoor Woolmer Forest Selborne
bm	186	1891	5	14	13	Blackmoor Woolmer Forest Selborne
bm	187	1891	5	14	14	Blackmoor Woolmer Forest Selborne
bm	188	1891	5	14	15	Blackmoor Woolmer Forest Selborne
bm	189	1891	5	14	16	Blackmoor Woolmer Forest Selborne
bm	190	1891	5	14	17	Blackmoor Woolmer Forest Selborne
bm	191	1891	5	14	18	Blackmoor Woolmer Forest Selborne
bm	192	1891	5	14	19	Blackmoor Woolmer Forest Selborne
bm	193	1891	5	14	20	Blackmoor Woolmer Forest Selborne
bm	194	1891	5	14	21	Blackmoor Woolmer Forest Selborne
bm	195	1891	5	14	22	Blackmoor Woolmer Forest Selborne
bm	196	1891	5	14	23	Blackmoor Woolmer Forest Selborne
bm	197	1891	5	14	25	Blackmoor Woolmer Forest Selborne
bm	198	1891	5	14	26	Blackmoor Woolmer Forest Selborne
bm	199	1891	5	14	27	Blackmoor Woolmer Forest Selborne
bm	200	1891	5	14	28	Blackmoor Woolmer Forest Selborne
bm	201	1891	5	14	29	Blackmoor Woolmer Forest Selborne
bm	202	1891	5	14	30	Blackmoor Woolmer Forest Selborne
bm	203	WG			2100	Blackmoor Woolmer Forest Selbourne Hants
bm	210	WG			1642	R Thames Isleworth
bm	211	WG			2101	Blackmoor Woolmer Forest Selbourne Hants
bm	212	WG			2102	Blackmoor Woolmer Forest Selbourne Hants
bm	213	WG			2103	Blackmoor Woolmer Forest Selbourne Hants

Appendix 4: Spearhead Data

Museum	Region	General	Detailed	Comple	Weight	Length		
Exam		Type	Type	ness	gms	mm		
No				Dec- orati on				
bm	158	South East	l	l	2	106.3	154.0	
bm	159	Scotland	lc	lhst	2	268.8	225.0	
bm	160	Scotland	lc	lhst	2	303.0	317.0	
bm	161	South East	l	l	3	150.2	200.0	
bm	162	East Anglia	ld	ld	1	39.8	81.0	
bm	163	West	bl	lgrbl	9	247.7	203.0	
bm	164	South East	lc	lh	1	146.9	176.0	
bm	165	South East	lc	lh	2	149.8	195.0	
bm	166	South East	l	l	1	124.4	164.0	
bm	167	South East	lc	lst	sdec	6	156.4	195.0
bm	168	South East	l	l	8	28.8	61.0	
bm	169	South East	l	l	6	75.2	111.0	
bm	170	South East	bl	tgrsbl	2	189.3	282.0	
bm	171	South East	l	l	6	84.7	119.0	
bm	172	South East	ld	ld	8	29.0	59.0	
bm	173	South East	l	l	3	NA	180.0	
bm	174	South East	l	l	4	NA	245.0	
bm	175	South East	l	l	5	NA	180.0	
bm	176	South East	l	l	5	NA	NA	
bm	177	South East	lc	lf2stlop	2	276.0	289.0	
bm	178	South East	lc	l3st	2	277.1	305.0	
bm	179	South East	lc	l2st	2	230.6	288.0	
bm	180	South East	lc	lhst	2	136.9	246.0	
bm	181	South East	lc	lh2st	2	176.3	234.0	
bm	182	South East	lc	lh	2	152.4	229.0	
bm	183	South East	lc	l2st	2	176.2	217.0	
bm	184	South East	lc	lh2st	2	133.1	204.0	
bm	185	South East	lc	lh	2	135.7	201.0	
bm	186	South East	lc	lhst	2	139.5	194.0	
bm	187	South East	l	l	2	89.9	166.0	
bm	188	South East	lc	lh3st	9	201.2	257.0	
bm	189	South East	l	l	sdec	6	180.2	158.0
bm	190	South East	l	l	7	77.3	94.0	
bm	191	South East	l	l	7	123.9	156.0	
bm	192	South East	l	l	7	76.3	NA	
bm	193	South East	lc	lgr	8	41.0	91.0	
bm	194	South East	lc	l4st	8	32.5	87.0	
bm	195	South East	lc	l3st	8	33.1	67.0	
bm	196	South East	l	l	8	24.3	71.0	
bm	197	South East	ld	ldh	1	48.9	85.0	
bm	198	South East	ld	ld	2	59.8	85.0	
bm	199	South East	ld	ld	2	74.7	84.0	
bm	200	South East	ld	ldh	2	62.5	84.0	
bm	201	South East	ld	ldh	2	42.6	61.0	
bm	202	South East	ld	ldh	3	30.2	80.0	
bm	203	South East	lc	lf	1	302.7	319.0	
bm	210	South East	l	ll	1	404.4	373.0	
bm	211	South East	lc	l3st	2	254.9	282.0	
bm	212	South East	l	l	1	215.2	267.0	
bm	213	South East	lc	lhst	1	160.1	205.0	

Appendix 4: Spearhead Data

Museum	Exam No	Blade Length mm	Socket Length mm	Internal Socket Length mm	Max Width Blade mm	Socket Width at End mm	Socket Width at Blade mm	Socket Wall mm
bm	158	108.0	46.0	110.0	35.0	NA	18.8	1.3
bm	159	163.0	62.0	186.0	53.0	28.0	24.0	1.5
bm	160	235.0	82.0	265.0	50.0	28.1	22.5	1.7
bm	161	145.0	55.0	83.0	43.0	26.5	NA	1.5
bm	162	58.0	23.0	57.0	29.0	26.3	18.9	2.2
bm	163	124.0	NA	NA	46.0	24.5	18.0	1.3
bm	164	131.0	45.0	141.0	NA	28.1	23.9	1.9
bm	165	128.0	67.0	NA	32.0	24.9	17.5	1.7
bm	166	112.0	52.0	115.0	33.0	25.1	18.3	2.0
bm	167	NA	55.0	57.0	NA	NA	19.0	1.3
bm	168	NA	NA	NA	NA	NA	NA	NA
bm	169	97.0	NA	111.0	NA	NA	NA	NA
bm	170	201.0	81.0	NA	43.0	NA	NA	NA
bm	171	NA	117.0	NA	NA	NA	NA	NA
bm	172	NA	NA	NA	NA	NA	NA	NA
bm	173	155.0	25.0	NA	NA	NA	NA	NA
bm	174	NA	NA	NA	NA	NA	NA	NA
bm	175	NA	NA	NA	NA	NA	NA	NA
bm	176	NA	NA	NA	NA	NA	NA	NA
bm	177	250.0	39.0	250.0	59.0	30.8	24.5	2.0
bm	178	225.0	80.0	240.0	41.0	29.4	22.3	2.0
bm	179	214.0	74.0	NA	40.0	28.5	21.5	1.5
bm	180	203.0	43.0	190.0	35.0	25.9	20.1	1.1
bm	181	187.0	47.0	182.0	40.0	27.7	NA	1.8
bm	182	160.0	69.0	195.0	40.0	27.5	21.1	1.5
bm	183	165.0	52.0	NA	NA	29.0	20.5	2.5
bm	184	150.0	54.0	170.0	34.0	28.0	19.9	1.7
bm	185	143.0	58.0	150.0	38.0	29.0	20.4	1.5
bm	186	141.0	53.0	157.0	40.0	26.9	18.5	1.7
bm	187	120.0	46.0	117.0	35.0	26.1	17.7	1.5
bm	188	197.0	NA	211.0	NA	29.5	23.1	1.9
bm	189	NA	61.0	NA	NA	28.8	20.3	2.0
bm	190	NA	54.0	NA	NA	28.9	20.1	1.7
bm	191	NA	NA	NA	NA	NA	NA	NA
bm	192	NA	NA	NA	NA	NA	NA	NA
bm	193	NA	NA	NA	NA	NA	NA	NA
bm	194	NA	NA	NA	NA	NA	NA	NA
bm	195	NA	NA	NA	NA	NA	NA	NA
bm	196	NA	NA	NA	NA	NA	NA	NA
bm	197	65.0	20.0	60.0	30.0	29.0	21.9	NA
bm	198	67.0	18.0	64.0	33.5	25.0	22.2	NA
bm	199	65.0	19.0	55.0	34.5	26.0	24.0	NA
bm	200	65.0	19.0	53.0	31.0	29.0	22.9	NA
bm	201	51.0	10.0	34.0	27.5	23.8	19.1	NA
bm	202	63.0	17.0	56.0	35.6	27.1	22.2	NA
bm	203	251.0	68.0	246.0	42.5	30.2	23.2	1.9
bm	210	297.0	76.0	330.0	57.0	24.7	20.9	0.8
bm	211	210.0	72.0	NA	44.3	31.0	22.6	2.1
bm	212	210.0	57.0	223.0	38.8	25.4	21.0	1.2
bm	213	152.0	53.0	170.0	39.0	25.5	18.0	1.8

Appendix 4: Spearhead Data

Museum Exam No	Casting Quality	Tip Damage	Socket Damage	Midrib Shape
bm 158	3	undamaged	damaged	round
bm 159	3	undamaged	undamaged	round
bm 160	2	undamaged	damaged	round
bm 161	4	undamaged	damaged	round
bm 162	2	undamaged	undamaged	round
bm 163	4	missing	damaged	angled
bm 164	2	undamaged	undamaged	round
bm 165	3	undamaged	damaged	round
bm 166	3	undamaged	undamaged	round
bm 167	2	missing	damaged	round
bm 168	2	undamaged	missing	round
bm 169	NA	missing	damaged	round
bm 170	2	undamaged	damaged	angled
bm 171	NA	missing	damaged	round
bm 172	NA	missing	damaged	round
bm 173	NA		undamaged	angled
bm 174	NA		undamaged	round
bm 175	NA		missing	round
bm 176	NA		missing	round
bm 177	3	undamaged	undamaged	angled
bm 178	2	damaged	undamaged	round
bm 179	1	undamaged	undamaged	round
bm 180	3	undamaged	undamaged	round
bm 181	3	undamaged	undamaged	round
bm 182	1	undamaged	damaged	round
bm 183	2	undamaged	undamaged	round
bm 184	4	undamaged	undamaged	round
bm 185	3	undamaged	damaged	round
bm 186	2	undamaged	undamaged	round
bm 187	3	undamaged	undamaged	round
bm 188	3	undamaged	undamaged	round
bm 189	2	missing	damaged	round
bm 190	2	missing	damaged	round
bm 191	2	undamaged	missing	round
bm 192	3	undamaged	missing	round
bm 193	NA	damaged	missing	round
bm 194	4	undamaged	missing	round
bm 195	3	undamaged	missing	round
bm 196	2	undamaged	missing	round
bm 197	2	undamaged	undamaged	round
bm 198	4	undamaged	undamaged	round
bm 199	5	undamaged	undamaged	round
bm 200	4	undamaged	damaged	round
bm 201	4	undamaged	undamaged	round
bm 202	2	undamaged	damaged	round
bm 203	2	undamaged	undamaged	round
bm 210	3	undamaged	undamaged	round
bm 211	2	undamaged	undamaged	round
bm 212	3	undamaged	undamaged	round
bm 213	1	undamaged	undamaged	angled

Appendix 4: Spearhead Data

Museum	Registration	Exam	Registration	Deposition	Location
		No			
bm	214	WG		2104	Blackmoor Woolmer Forest Selbourne Hants
bm	215	WG		2105	Blackmoor Woolmer Forest Selbourne Hants
bm	216	WG		2106	Blackmoor Woolmer Forest Selbourne Hants
bm	217	WG		2107	Blackmoor Woolmer Forest Selbourne Hants
bm	218	WG		2108	Blackmoor Woolmer Forest Selbourne Hants
bm	219	WG		2109	Blackmoor Woolmer Forest Selbourne Hants
bm	220	WG		2110	Blackmoor Woolmer Forest Selbourne Hants
bm	221	WG		2111	Blackmoor Woolmer Forest Selbourne Hants
bm	222	WG		2112	Blackmoor Woolmer Forest Selbourne Hants
bm	223	1933	4 6	123	Sutton End Sutton W Sussex - Laun Meadow (
bm	224	1902	6 16	30	Brignerston Down Wilts
bm	225	WG		2009	York cemetery (1/1869)
bm	226	1918	7 9	5	Kilnhurst S Yorks (Trans Hunter Arch Soc c
bm	228	1902	6 16	31	Brignerston Down Wilts
bm	229	1852	6 26	86	Thorndon Suffolk
bm	230	1853	4 19	24	Farley Heath Surrey near Albury
bm	231	1853	4 19	23	Farley Heath Surrey near Albury
bm	233	1961	10 6	8	Minnis Bay Birchington Kent occupation sit
bm	235	1977	4 2	94	Langdon Bay Kent
bm	236	1982	6 3	42	Langdon Bay Kent
bm	239	1913	5 17	1	Broadness Kent (PSA XXIII)
bm	240	1893	4 26	126	Minster Thanet Kent
bm	241	1893	4 26	124	Minster Thanet Kent
bm	242	1893	4 26	131	Minster Thanet Kent
bm	243	1894	8 3	19	Littlecoombe Farm All-Hallows-Hoo Kent tre
bm	244	1894	8 3	38	Homewood Farm All-Hallows-Hoo Kent (Arch C
bm	245	1894	8 3	20	Littlecoombe Farm All-Hallows-Hoo Kent tre
bm	246	WG		1717	R Thames Broadness Northfleet hole Erith
bm	248	WG		1713	R Thames Broadness Northfleet hole Erith
bm	249	WG		1714	R Thames Broadness Northfleet hole Erith
bm	250	WG		1718	R Thames Broadness Northfleet hole Erith
bm	251	1903	7 23	9	Cliffe-at-Hoo Kent
bm	254	1977	4 2	95	Langdon Bay Kent
bm	255	1893	4 26	125	Minster Thanet Kent
bm	256	1893	4 26	127	Minster Thanet Kent
bm	258	WG		1666	R Thames Battersea
bm	259	1875	4 1	39	Bottisham Lode Cambs
bm	260	WG		1712	R Thames Broadness Northfleet hole Erith
bm	261	WG		1715	R Thames Broadness Northfleet hole Erith
bm	262	WG		1716	R Thames Broadness Northfleet hole Erith
bm	263	1892	11 4	6	Thenford Hill Farm Marston St Lawrence N'H
bm	264	WG		2051	Alnwick Northumberland
bm	265	1892	11 4	8	Thenford Hill Farm Marston St Lawrence N'H
bm	266	1892	11 4	5	Thenford Hill Farm Marston St Lawrence N'H
bm	267	1892	11 4	7	Thenford Hill Farm Marston St Lawrence N'H
bm	268	WG		2052	Park House Birtley Northumberland
bm	269	WG		2053	Park House Birtley Northumberland
bm	270	1836	7 9	1	Stibbard Norfolk in field 4m N of N Almham
bm	271	1944	7 2	4	'barrow' Dorset
bm	272	WG		2083	Feltwell Fen Norfolk

Appendix 4: Spearhead Data

Region	General Type	Detailed Type	Comple- ness Dec- orat ion	Weight gms	Length mm	Blade Length mm	
South East	ld	ld		2	49.8	86.0	64.0
South East	ld	ld		2	71.2	86.0	55.0
South East	ld	ld		1	44.0	81.0	63.0
South East	ld	ld		1	52.1	84.0	63.0
South East	ld	ld		1	52.2	85.0	65.0
South East	ld	ld		1	47.2	69.0	57.0
South East	ld	ld		2	52.2	87.0	66.0
South East	ld	ld		1	45.4	83.0	63.0
South East	ld	ld		1	45.7	71.0	53.0
South East	lc	l6orop		1	478.3	311.0	275.0
West	bl	lbl	alld	6	166.5	188.0	NA
Scotland	lc	lh		9	117.9	119.0	NA
Scotland	l	l		5	139.9	149.0	128.0
West	lc	lflop		8	35.2	42.0	NA
South East	o	odec	sdec	2	102.0	152.0	98.0
South East	l	l		5	41.4	88.0	65.0
South East	l	l		9	92.7	152.0	121.0
South East	o	oldec	sdec	1	68.5	122.0	86.0
South East	l	l		7	84.6	69.0	NA
South East	l	l		3	113.3	151.0	92.0
South East	brb	brb		6	92.1	115.0	NA
South East	o	o		2	86.7	111.0	78.0
South East	o	oldec	sdec	3	36.5	82.0	65.0
South East	l	l		8	29.0	41.0	NA
South East	o	ol		4	45.2	99.0	66.0
South East	o	ol		3	30.7	75.0	49.0
South East	o	oldec	sdec	8	29.8	55.0	NA
South East	o	oldec	sdec	1	119.6	168.0	117.0
South East	brb	brb		7	182.4	141.0	NA
South East	brb	brb		6	100.9	144.0	NA
South East	lc	lstlop		5	138.2	158.0	NA
South East	o	ol		1	54.4	118.0	94.0
South East	o	ol		3	87.4	162.0	84.0
South East	o	o		2	90.6	144.0	94.0
South East	o	o		7	49.0	84.0	NA
South East	flc	fllop	alld	2	406.6	425.0	375.0
East Anglia	bl	tgrsbl		1	364.0	385.0	281.0
South East	brb	brblop		3	379.8	262.0	235.0
South East	l	l		1	209.2	248.0	210.0
South East	l	l		1	161.3	183.0	109.0
East Anglia	lc	lhf		9	179.3	249.0	188.0
Scotland	lc	lh		1	163.4	235.0	162.0
East Anglia	o	o		1	77.7	124.0	94.0
East Anglia	lc	lhst		1	189.8	201.0	165.0
East Anglia	lc	lhfst		6	175.1	212.0	NA
Scotland	lc	lhst		4	159.6	195.0	139.0
Scotland	lc	lhst		5	182.0	154.0	148.0
East Anglia	bl	tgrsbl		3	84.0	192.0	136.0
West	o	o		2	53.8	118.0	87.0
East Anglia	o	oldec	sdec	3	23.6	81.0	55.0

Appendix 4: Spearhead Data

Museum	Exam No	Blade Length mm	Socket Length mm	Internal Socket Length mm	Max Width Blade mm	Socket Width at End mm	Socket Width at Blade mm	Socket Wall mm
bm	214	64.0	22.0	60.5	32.6	24.0	21.4	2.1
bm	215	55.0	31.0	49.7	34.0	31.0	21.0	2.4
bm	216	63.0	18.0	64.5	30.7	30.0	23.8	1.9
bm	217	63.0	21.0	66.0	30.0	28.4	22.2	2.4
bm	218	65.0	20.0	65.5	30.0	29.5	21.0	2.7
bm	219	57.0	12.0	47.5	33.5	26.0	23.0	2.3
bm	220	66.0	21.0	69.0	33.5	29.4	25.5	1.9
bm	221	63.0	20.0	67.3	28.7	28.6	21.0	1.5
bm	222	53.0	18.0	43.8	27.8	25.5	19.0	2.3
bm	223	275.0	36.0	135.0	64.0	26.4	24.0	2.1
bm	224	NA	NA	NA	NA	26.3	21.1	2.0
bm	225	NA	NA	NA	NA	NA	23.9	1.3
bm	226	128.0	NA	NA	44.4	NA	19.7	2.0
bm	228	NA	NA	NA	NA	NA	NA	NA
bm	229	98.0	54.0	134.0	31.3	22.7	17.2	1.5
bm	230	65.0	NA	NA	NA	NA	NA	NA
bm	231	121.0	NA	76.0	35.3	NA	17.2	2.0
bm	233	86.0	36.0	100.0	29.3	23.0	17.4	1.5
bm	235	NA	NA	NA	39.0	NA	NA	NA
bm	236	92.0	59.0	NA	NA	22.0	16.9	1.2
bm	239	NA	NA	NA	NA	NA	NA	NA
bm	240	78.0	33.0	NA	28.0	22.0	17.3	1.1
bm	241	65.0	17.0	63.0	25.0	20.0	16.2	1.5
bm	242	NA	NA	NA	NA	NA	NA	NA
bm	243	66.0	NA	80.0	NA	NA	14.9	1.5
bm	244	49.0	26.0	34.0	NA	20.7	15.1	1.0
bm	245	NA	NA	NA	NA	23.4	NA	2.0
bm	246	117.0	51.0	NA	40.0	26.0	16.5	2.5
bm	248	NA	NA	112.0	NA	22.7	21.5	1.9
bm	249	NA	NA	NA	NA	NA	NA	NA
bm	250	NA	NA	NA	NA	NA	NA	NA
bm	251	94.0	24.0	NA	30.4	24.5	21.3	1.4
bm	254	84.0	78.0	118.0	28.2	NA	16.6	1.3
bm	255	94.0	50.0	119.0	NA	25.0	18.8	1.9
bm	256	NA	NA	77.0	31.2	NA	NA	NA
bm	258	375.0	50.0	305.0	70.0	29.2	22.9	1.0
bm	259	281.0	104.0	275.0	52.0	24.8	19.2	1.7
bm	260	235.0	27.0	NA	64.1	NA	NA	NA
bm	261	210.0	38.0	200.0	43.0	25.9	20.1	2.1
bm	262	109.0	74.0	135.0	45.0	22.4	17.4	2.0
bm	263	188.0	NA	210.0	NA	27.8	22.3	1.5
bm	264	162.0	73.0	190.0	36.8	26.7	20.6	1.2
bm	265	94.0	30.0	116.0	39.3	24.2	19.5	1.2
bm	266	165.0	36.0	150.0	44.0	24.3	20.8	1.6
bm	267	NA	NA	NA	50.0	29.5	21.6	1.2
bm	268	139.0	NA	NA	NA	NA	22.7	1.8
bm	269	148.0	NA	NA	NA	NA	NA	NA
bm	270	136.0	56.0	129.0	NA	NA	13.9	1.2
bm	271	87.0	31.0	87.0	32.0	19.3	14.0	1.7
bm	272	55.0	26.0	69.0	22.0	20.0	16.5	1.0

Appendix 4: Spearhead Data

Museum	Exam	Casting	Tip	Socket	Midrib
	No	Quality	Damage	Damage	Shape
bm	214	4	undamaged	undamaged	round
bm	215	2	undamaged	undamaged	round
bm	216	2	undamaged	undamaged	round
bm	217	2	undamaged	undamaged	round
bm	218	2	undamaged	undamaged	round
bm	219	2	undamaged	undamaged	round
bm	220	4	undamaged	undamaged	round
bm	221	2	undamaged	undamaged	round
bm	222	3	undamaged	undamaged	round
bm	223	3	undamaged	undamaged	angled
bm	224	2	missing	undamaged	angled
bm	225	NA	missing	damaged	angled
bm	226	3		missing	round
bm	228	2	missing	undamaged	round
bm	229	2	damaged	damaged	round
bm	230	3		damaged	round
bm	231	2	undamaged	damaged	round
bm	233	3	undamaged	undamaged	round
bm	235	2	missing	missing	round
bm	236	2		undamaged	round
bm	239	3	undamaged	missing	round
bm	240	3	undamaged	damaged	round
bm	241	2	undamaged	undamaged	round
bm	242	3	missing	missing	round
bm	243	2	undamaged	damaged	round
bm	244	2	undamaged	damaged	round
bm	245	3	missing	undamaged	round
bm	246	4	undamaged	undamaged	round
bm	248	3	missing	undamaged	round
bm	249	4	undamaged	missing	round
bm	250	4	undamaged	missing	round
bm	251	3	undamaged	undamaged	round
bm	254	4	undamaged	damaged	round
bm	255	2	undamaged	undamaged	round
bm	256	4	missing	damaged	round
bm	258	3	undamaged	damaged	angledr
bm	259	3	undamaged	undamaged	round
bm	260	2	undamaged	undamaged	round
bm	261	2	undamaged	undamaged	round
bm	262	2	undamaged	undamaged	round
bm	263	3	undamaged	undamaged	round
bm	264	2	undamaged	undamaged	round
bm	265	3	undamaged	undamaged	round
bm	266	3	undamaged	undamaged	round
bm	267	4	missing	undamaged	round
bm	268	3	undamaged	damaged	round
bm	269	3	damaged	missing	angledr
bm	270	2	undamaged	damaged	round+
bm	271	2	undamaged	undamaged	round
bm	272	2	undamaged	damaged	round

Appendix 4: Spearhead Data

Museum Registration				Deposition Location		
	Exam					
	No					
bm	273	WG		2084	Feltwell Fen Norfolk	
bm	276	WG		2116	Newark Notts - railway constr, 1/2 mi from	
bm	277	WG		2117	Newark Notts - railway constr, 1/2 mi from	
bm	278	WG		2120	Newark Notts - railway constr, 1/2 mi from	
bm	279	WG		2119	Newark Notts - railway constr, 1/2 mi from	
bm	280	WG		2118	Newark Notts - railway constr, 1/2 mi from	
bm	281	WG		2121	Newark Notts - railway constr, 1/2 mi from	
bm	282	1891	5 14	24	Blackmoor Woolmer Forest Selborne	
bm	283	WG		2205	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	284	WG		2208	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	285	WG		2207	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	287	WG		2210	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	288	WG		2209	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	289	WG		2206	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	290	WG		2203	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	291	1902	5 15	14	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	292	1902	5 15	15	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	294	1902	5 15	16	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	295	1902	5 15	17	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	296	1902	5 15	18	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	299	WG		2212	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	300	WG		2213	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	301	WG		2214	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	302	WG		2215	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	303	WG		2216	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	304	WG		2217	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	305	WG		2218	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	306	WG		2219	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	307	WG		2220	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	308	WG		2221	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	309	WG		2222	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	311	Unregistered				Broadward Salop (PSA XIX Arch Camb 4th ser
bm	312	1872	3 29	1	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	313	1872	3 29	2	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	314	1872	3 29	3	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	315	1856	7 1	1368	R Thames Grtr London	
bm	316	1868	8 15	14	Cwm Moch Gwynedd near ancient road between	
bm	319	1872	3 29	4	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	320	1872	3 29	5	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	321	1872	3 29	6	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	323	1902	5 15	1	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	324	1902	5 15	2	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	325	1902	5 15	3	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	326	1902	5 15	4	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	327	1902	5 15	5	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	328	1902	5 15	6	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	329	1902	5 15	7	Broadward Salop (PSA XIX Arch Camb 4th ser	
bm	338	1867	3 20	7	Nettleham nr Lincoln	
bm	339	1867	3 20	8	Nettleham nr Lincoln	
bm	340	St Germans				

Appendix 4: Spearhead Data

Museum	Region	General	Detailed	Comple	Weight	Length	
Exam		Type	Type	ness	gms	mm	
No				Dec- orat ion			
bm 273	East Anglia	o	oldec	sdec	3	31.7	82.0
bm 276	East Anglia	lc	lhst		2	252.6	268.0
bm 277	East Anglia	l	l		2	203.3	256.0
bm 278	East Anglia	lc	lh		2	165.2	175.0
bm 279	East Anglia	lc	lh		2	121.4	179.0
bm 280	East Anglia	lc	lhst		2	208.3	185.0
bm 281	East Anglia	lc	lhst		1	122.9	141.0
bm 282	South East	ld	ld		2	58.6	101.0
bm 283	West	brb	brbs		4	154.7	133.0
bm 284	West	brb	brbs		5	121.3	105.0
bm 285	West	brb	brbs		7	212.0	101.0
bm 287	West	brb	brb		7	95.9	111.0
bm 288	West	brb	brb		9	98.1	132.0
bm 289	West	brb	brb		7	208.6	141.0
bm 290	West	brb	brblop		9	125.3	104.0
bm 291	West	brb	brbs		6	138.9	111.0
bm 292	West	l	l		6	129.6	174.0
bm 294	West	lc	lf		5	74.6	118.0
bm 295	West	l	l		7	85.6	120.0
bm 296	West	lc	lflop		7	61.6	71.0
bm 299	West	o	o		6	88.0	137.0
bm 300	West	lc	lf		5	135.2	134.0
bm 301	West	lc	lf		9	94.4	138.0
bm 302	West	lc	lf		6	102.7	113.0
bm 303	West	lc	lf		9	121.0	122.0
bm 304	West	brb	brb		9	14.9	32.0
bm 305	West	l	l		8	89.1	93.0
bm 306	West	l	l		7	57.1	91.0
bm 307	West	l	l		9	26.4	64.0
bm 308	West	l	l		6	94.9	150.0
bm 309	West	lc	lf		8	29.3	69.0
bm 311	West	brb	brbhldp		7	183.3	125.0
bm 312	West	brb	brbs		2	219.1	162.0
bm 313	West	brb	brbs		9	150.3	131.0
bm 314	West	brb	brbs		5	172.9	117.0
bm 315	South East	bl	lgrbl		2	295.0	302.0
bm 316	West	bl	tgrsbl		2	322.8	345.0
bm 319	West	l	l		6	138.7	206.0
bm 320	West	lc	lf		6	86.0	132.0
bm 321	West	l	l		9	58.9	110.0
bm 323	West	brb	brbs		2	198.2	142.0
bm 324	West	brb	brb		8	45.7	42.0
bm 325	West	brb	brbs		4	167.0	146.0
bm 326	West	brb	brblops		4	81.4	105.0
bm 327	West	lc	llop		7	52.0	81.0
bm 328	West	l	l		2	218.2	199.0
bm 329	West	l	l	sdec	6	108.9	147.0
bm 338	East Anglia	lc	lf		3	148.5	221.0
bm 339	East Anglia	bl	flbl		2	91.2	191.0
bm 340	East Anglia	l	l		2	NA	192.0

Appendix 4: Spearhead Data

Museum	Blade	Socket	Internal	Max	Socket	Socket	Socket	
Exam	Length	Length	Socket	Width	Width at	Width at	Wall	
No	mm	mm	Length	Blade	End	Blade	mm	
			mm	mm	mm	mm		
bm	273	56.0	26.0	69.0	22.5	19.7	16.1	1.3
bm	276	198.0	70.0	210.0	48.5	29.0	12.6	1.5
bm	277	193.0	63.0	202.0	46.4	28.0	21.9	1.6
bm	278	124.0	51.0	132.0	47.0	27.4	25.1	1.8
bm	279	126.0	53.0	150.0	53.0	28.5	21.5	1.8
bm	280	141.0	44.0	NA	51.0	25.0	21.7	1.8
bm	281	107.0	34.0	98.0	40.4	24.5	NA	1.7
bm	282	68.0	33.0	70.0	31.5	30.0	22.8	2.0
bm	283	NA	NA	NA	NA	NA	NA	NA
bm	284	NA	NA	NA	NA	NA	NA	NA
bm	285	NA	NA	NA	NA	NA	NA	NA
bm	287	NA	NA	NA	NA	NA	NA	NA
bm	288	NA	NA	NA	NA	NA	NA	NA
bm	289	NA	NA	NA	NA	NA	NA	NA
bm	290	NA	NA	NA	NA	NA	NA	NA
bm	291	NA	NA	NA	NA	19.0	NA	NA
bm	292	NA	NA	145.0	NA	20.6	18.3	1.3
bm	294	NA	NA	NA	NA	NA	NA	2.5
bm	295	NA	NA	NA	NA	NA	NA	NA
bm	296	NA	NA	NA	NA	18.3	NA	2.0
bm	299	NA	NA	NA	NA	NA	NA	NA
bm	300	120.0	NA	NA	NA	21.4	NA	1.7
bm	301	127.0	NA	NA	NA	19.4	NA	NA
bm	302	NA	NA	NA	NA	16.3	NA	NA
bm	303	NA	NA	NA	NA	NA	19.0	NA
bm	304	NA	NA	NA	NA	NA	NA	NA
bm	305	NA	NA	NA	NA	NA	NA	NA
bm	306	NA	NA	NA	NA	NA	NA	NA
bm	307	NA	NA	NA	NA	NA	NA	NA
bm	308	NA	70.0	NA	NA	25.9	NA	1.9
bm	309	NA	NA	NA	NA	NA	NA	NA
bm	311	NA	NA	NA	NA	NA	NA	NA
bm	312	136.0	26.0	73.0	75.0	24.1	21.5	NA
bm	313	109.0	NA	NA	67.0	23.1	26.3	0.7
bm	314	117.0	NA	NA	74.7	NA	20.9	NA
bm	315	217.0	85.0	NA	42.8	25.3	19.7	1.7
bm	316	264.0	81.0	270.0	46.5	25.4	23.1	1.8
bm	319	121.0	NA	NA	NA	NA	NA	2.0
bm	320	NA	NA	NA	NA	NA	NA	NA
bm	321	NA	NA	NA	NA	NA	NA	NA
bm	323	NA	142.0	NA	76.5	22.9	21.4	2.0
bm	324	NA	NA	NA	NA	23.6	NA	2.4
bm	325	125.0	NA	NA	NA	NA	22.3	1.7
bm	326	NA	NA	NA	NA	24.7	27.3	NA
bm	327	NA	NA	NA	NA	NA	NA	2.0
bm	328	124.0	75.0	132.0	NA	24.2	18.9	2.4
bm	329	NA	76.0	119.0	NA	NA	NA	2.0
bm	338	174.0	47.0	162.0	NA	26.4	21.0	1.3
bm	339	133.0	58.0	115.0	25.0	19.8	15.1	1.1
bm	340	122.0	70.0	81.0	38.7	27.4	18.5	2.7

Appendix 4: Spearhead Data

Museum	Exam No	Casting Quality	Tip Damage	Socket Damage	Midrib Shape
bm	273	2	damaged	undamaged	round
bm	276	2		undamaged	round
bm	277	2		undamaged	round
bm	278	2	undamaged	undamaged	angledr
bm	279	4	undamaged	undamaged	round
bm	280	1	undamaged	damaged	angledr
bm	281	1	undamaged	undamaged	angledr
bm	282	2	undamaged	damaged	round
bm	283	NA		damaged	flat
bm	284	NA		missing	flat
bm	285	NA	missing	missing	flat
bm	287	NA		missing	flat
bm	288	NA	damaged	damaged	flat
bm	289	NA	missing	damaged	flat
bm	290	NA		missing	flat
bm	291	4	missing	undamaged	round
bm	292	3	missing	damaged	round
bm	294	3		missing	round
bm	295	NA	missing	missing	round
bm	296	NA	missing	missing	
bm	299	3	missing	damaged	round
bm	300	3		missing	round
bm	301	NA	damaged	missing	round
bm	302	4	missing	missing	round
bm	303	3	missing	missing	round
bm	304	NA	missing	damaged	
bm	305	4	missing	missing	round
bm	306	3	missing	missing	round
bm	307	3	missing	missing	round
bm	308	4		undamaged	round
bm	309	3	missing	missing	round
bm	311	NA		missing	flat
bm	312	4	undamaged	damaged	flat r
bm	313	4		undamaged	flat r
bm	314	3	undamaged	missing	flat r
bm	315	3	undamaged	undamaged	angledr
bm	316	4	undamaged	damaged	round
bm	319	3		damaged	round
bm	320	3		missing	round
bm	321	NA		missing	round
bm	323	4		undamaged	flat
bm	324	NA	missing	undamaged	
bm	325	3		damaged	flat
bm	326	NA	damaged	undamaged	flat
bm	327	4	missing	damaged	round
bm	328	3		damaged	round
bm	329	3	missing	damaged	round
bm	338	2		undamaged	round
bm	339	3	damaged	undamaged	angled
bm	340	2	undamaged	undamaged	round

Appendix 4: Spearhead Data

Museum Registration Exam No	Deposition Location
cam 1 Z	4272 Aldreth, Cambs
cam 2 1883	155 D Barton, Cambs
cam 3 1883	155 B Bottisham Fen Cambs
cam 4 1923	1561 Bottisham Fen Cambs
cam 5 1927	603 Bottisham Cambs
cam 6 13	207 Burwell Fen Cambs
cam 7 1947	565 Burwell Fen Cambs
cam 8 1910	230 Chatteris, Landwood Fen Cambs
cam 10 1933	503 Little Downham Cambs
cam 12 1922	563 Cambs?
cam 13 1883	155 E Ely Cambs
cam 17 1927	607 Cambs
cam 18 1922	564 Coveney Cambs
cam 21 1913	210 Isleham Fen Cambs
cam 22 1923	1333 Burnt Fen Cambs
cam 23 1913	209 Stow-cum-Quy Cambs
cam 24 D1984	27 Burnt Fen
cam 25 1883	154 Foxton Cambs
cam 26 Z	4280 Littleport Cambs
cam 27 1927	609 Stow-cum-Quy Cambs
cam 30 1903	152 Cambs
cam 31 Z	4254 Swaffham Cambs
cam 33 1927	595 A Cambs
cam 34 1927	595 B Cambs
cam 35 1913	208 Newton Cambs
cam 36 1981	163 Little Thetford? Cambs
cam 37 1948	302 Linton Cambs
cam 38 1922	552 Quanea Stuntney Cabs
cam 39 1923	1560 Cowcroft Fen Cambs
cam 40 1919	96 Wilburton Cambs
cam 41 1883	155 A Litlington? Cambs
cam 46 Z	25057 Medhurst Kent
cam 47 1904	329 Winterton Lincs
cam 48 1885	6 Wem Shropshire
cam 50 1891	16 Middleton-on-the Wolds Humberside
cam 51 1948	320 A Richmond Yorks?
cam 52 1948	320 B Richmond Yorks?
cam 53 1883	155 Cambs?
cam 54 Z	25058 Middleton, Beverley, Humberside - gravel p
cam 56 1923	186 D High Wycombe Bucks
cam 57 1925	343 No Provenance - Welsh Borders
cam 59 Z	25134 ?Wilburton Cambs
cam 64 1928	950 Bangor Wales
cam 65 24	768 a Weeting Norfolk
cam 66 1932	120 Cupola Farm Undley Suffolk
cam 68 Z	4291 West Row Mildenhall Suffolk
cam 69 D1929	2 River Wissey Stoke Ferry Norfolk
cam 70 1929	493 River Wissey Stoke Ferry Norfolk
cam 71 1933	746 Queen's Ground, Methwold Common Fen Norfolk
cam 72 Z	4300 Warboys Fen Cambs

Appendix 4: Spearhead Data

Museum	Region	General	Detailed	Comple	Weight	Length	
Exam		Type	Type	ness	gms	mm	
No				Dec-			
				orat			
				ion			
cam	1	East Anglia	lc	lh	2	161.0	169.0
cam	2	East Anglia	lc	lh	2	116.0	159.0
cam	3	East Anglia	fl	fl	4	59.0	121.0
cam	4	East Anglia	bl	lgrbl	2	179.0	222.0
cam	5	East Anglia	bl	tgrsbl	4	85.0	138.0
cam	6	East Anglia	flc	flh	6	94.0	130.0
cam	7	East Anglia	l	l	1	38.0	88.0
cam	8	East Anglia	bl	lbl	2	180.0	241.0
cam	10	East Anglia	bl	tgrbl	9	267.0	293.0
cam	12	East Anglia	bl	tgrsbl	1	206.0	292.0
cam	13	East Anglia	l	l	7	154.0	149.0
cam	17	East Anglia	lc	lh	4	284.0	291.0
cam	18	East Anglia	bl	tgrsbl	3	307.0	419.0
cam	21	East Anglia	bl	tgrsbl	1	316.0	394.0
cam	22	East Anglia	lc	lh	6	57.0	113.0
cam	23	East Anglia	bl	flbl	6	78.0	173.0
cam	24	East Anglia	bl	tgrbl	7	68.0	147.0
cam	25	East Anglia	o	ol	1	107.0	129.0
cam	26	East Anglia	lc	lh	5	68.0	150.0
cam	27	East Anglia	ld	ld	2	120.0	116.0
cam	30	East Anglia	bl	lgrbl	7	15.0	169.0
cam	31	East Anglia	flc	flh	1	NA	155.0
cam	33	East Anglia	bl	tgrsbl	2	135.0	188.0
cam	34	East Anglia	bl	tgrbl	3	120.0	174.0
cam	35	East Anglia	o	o	1	76.0	138.0
cam	36	East Anglia	l	l	5	120.0	130.0
cam	37	East Anglia	o	ol	4	65.0	110.0
cam	38	East Anglia	bl	flbl	3	142.0	229.0
cam	39	East Anglia	l	l	6	124.0	168.0
cam	40	East Anglia	ld	ld	1	46.0	98.0
cam	41	East Anglia	lc	lh	7	67.0	98.0
cam	46	South East	l	l	2	100.0	149.0
cam	47	East Anglia	ld	ld	2	25.0	68.0
cam	48	West	lc	lst	9	280.0	270.0
cam	50	East Anglia	lc	lhst	6	161.0	166.0
cam	51	Scotland	o	o	2	190.0	202.0
cam	52	Scotland	o	ol	2	99.0	164.0
cam	53	East Anglia	l	l	6	17.0	75.0
cam	54	East Anglia	l	l	4	176.0	178.0
cam	56	South East	l	l	6	37.0	82.0
cam	57	West	lc	lhsts	6	225.0	214.0
cam	59	East Anglia	l	l	3	105.0	141.0
cam	64	West	lc	lgrlop	2	230.0	206.0
cam	65	East Anglia	o	o	2	85.0	149.0
cam	66	East Anglia	lc	lst	2	303.0	262.0
cam	68	East Anglia	o	o	6	39.0	80.0
cam	69	East Anglia	lc	lh	2	73.0	143.0
cam	70	East Anglia	lc	lhst	1	165.0	198.0
cam	71	East Anglia	bl	lgrbl	2	302.0	285.0
cam	72	East Anglia	bl	tgrsbl	2	327.0	315.0

Appendix 4: Spearhead Data

Museum	Blade	Socket	Internal	Max	Socket	Socket	Socket	
Exam	Length	Length	Socket	Width	Width at	Width at	Wall	
No	mm	mm	Length	Blade	End	Blade	mm	
			mm	mm	mm	mm		
cam	1	135.0	NA	138.0	49.9	30.8	25.1	1.5
cam	2	135.0	NA	125.0	37.5	26.0	20.5	2.3
cam	3	110.0	NA	46.0	37.0	14.9	NA	NA
cam	4	138.0	NA	130.0	43.7	23.0	16.4	NA
cam	5	110.0	NA	74.0	NA	NA	18.4	NA
cam	6	NA	NA	NA	36.5	26.3	20.3	NA
cam	7	64.0	NA	75.0	23.8	NA	NA	NA
cam	8	165.0	NA	NA	39.0	23.0	18.0	NA
cam	10	198.0	NA	225.0	42.6	24.0	18.8	1.6
cam	12	215.0	0.0	170.0	41.2	24.6	17.4	2.0
cam	13	NA	35.6	NA	NA	27.4	24.5	2.4
cam	17	222.0	NA	232.0	48.8	24.0	21.7	NA
cam	18	353.0	NA	175.0	NA	26.0	21.2	2.0
cam	21	270.0	NA	305.0	47.0	24.0	19.5	1.5
cam	22	NA	NA	NA	26.5	NA	NA	NA
cam	23	131.0	NA	NA	NA	17.0	12.8	0.7
cam	24	NA	NA	NA	NA	NA	NA	NA
cam	25	87.0	NA	105.0	29.0	25.5	18.5	2.2
cam	26	NA	NA	NA	NA	NA	18.0	1.3
cam	27	87.0	NA	72.0	NA	NA	NA	NA
cam	30	NA	NA	NA	NA	24.0	19.8	2.0
cam	31	119.0	NA	106.0	NA	29.4	24.0	1.8
cam	33	NA	NA	NA	NA	NA	NA	NA
cam	34	120.0	NA	NA	NA	22.0	17.3	1.8
cam	35	99.0	NA	116.0	31.3	23.0	19.8	1.3
cam	36	114.0	NA	96.0	NA	NA	20.0	2.8
cam	37	84.0	NA	NA	40.5	NA	17.0	NA
cam	38	158.0	NA	147.0	NA	21.4	15.6	0.9
cam	39	NA	NA	NA	NA	NA	NA	NA
cam	40	71.0	NA	68.0	31.2	23.3	18.8	1.0
cam	41	NA	NA	NA	NA	NA	20.6	1.2
cam	46	107.0	NA	70.0	NA	25.0	19.6	1.5
cam	47	47.0	NA	58.0	19.6	17.5	14.0	1.3
cam	48	199.0	NA	160.0	NA	18.0	14.8	2.1
cam	50	118.0	NA	132.0	47.8	27.5	24.6	1.5
cam	51	122.0	NA	NA	44.5	27.0	19.4	2.0
cam	52	100.0	NA	NA	NA	21.8	16.6	1.9
cam	53	58.5	NA	27.0	NA	NA	10.2	1.5
cam	54	154.0	NA	NA	45.0	NA	22.3	1.5
cam	56	NA	NA	NA	33.5	NA	NA	NA
cam	57	NA	54.0	NA	57.5	NA	NA	NA
cam	59	110.0	NA	111.0	42.5	NA	22.5	1.1
cam	64	127.0	NA	140.0	44.4	26.5	21.0	1.3
cam	65	89.0	NA	117.0	37.2	23.0	17.2	1.8
cam	66	229.0	NA	NA	57.5	22.4	18.8	1.8
cam	68	NA	NA	NA	29.0	NA	NA	NA
cam	69	93.0	NA	107.0	21.6	26.8	17.0	2.0
cam	70	159.0	NA	160.0	NA	27.9	22.1	1.9
cam	71	215.0	NA	170.0	49.0	23.0	18.7	1.3
cam	72	235.0	NA	250.0	50.4	24.1	19.1	2.7

Appendix 4: Spearhead Data

Museum	Exam	Casting	Tip	Socket	Midrib
	No	Quality	Damage	Damage	Shape
cam	1	3		undamaged	flat r
cam	2	2		undamaged	angledr
cam	3	4	undamaged	damaged	angledr
cam	4	NA	undamaged	undamaged	angled
cam	5	3	undamaged	damaged	round
cam	6	3	missing	undamaged	round
cam	7	1	undamaged	undamaged	round
cam	8	3	damaged	undamaged	angled
cam	10	2	undamaged	damaged	round
cam	12	4	undamaged	undamaged	angled
cam	13	3	missing	damaged	round
cam	17	2	damaged	damaged	round
cam	18	3	undamaged	damaged	round
cam	21	2	undamaged	undamaged	angled
cam	22	2	undamaged	missing	angled
cam	23	4	missing	undamaged	angled
cam	24	3	damaged	missing	round
cam	25	3	undamaged	undamaged	round
cam	26	4	undamaged	missing	angled
cam	27	1	undamaged	undamaged	round
cam	30	3	missing	damaged	angled
cam	31	1	undamaged	undamaged	flat r
cam	33	4		undamaged	round
cam	34	4		damaged	angledr
cam	35	2	undamaged	undamaged	round
cam	36	NA		undamaged	angledr
cam	37	2	undamaged	damaged	round
cam	38	NA	damaged	undamaged	angled
cam	39	NA	missing	missing	round
cam	40	NA	undamaged	undamaged	round
cam	41	3	missing	damaged	round
cam	46	2	undamaged	damaged	round
cam	47	1	undamaged	undamaged	round
cam	48	3	undamaged	damaged	angled
cam	50	4	undamaged	damaged	angled
cam	51	1		undamaged	round
cam	52	2		damaged	round
cam	53	2	damaged	damaged	round
cam	54	2	undamaged	damaged	round
cam	56	2	undamaged	missing	round
cam	57	4	missing	undamaged	angled
cam	59	4	damaged	damaged	round
cam	64	2	undamaged	undamaged	round
cam	65	2	undamaged	undamaged	round
cam	66	3	damaged	undamaged	round
cam	68	3	undamaged	missing	round
cam	69	2	undamaged	damaged	round
cam	70	3	undamaged	undamaged	round
cam	71	2	undamaged	damaged	angled
cam	72	4	undamaged	undamaged	round

Appendix 4: Spearhead Data

Museum	Registration	Deposition	Location
Exam No			
cam	96 1919 6	43	Wilburton, Cambs, on clay below peat
cam	97 1919 6	42	Wilburton, Cambs, on clay below peat
cam	98 1919 6	41	Wilburton, Cambs, on clay below peat
cam	99 1919 6	40	Wilburton, Cambs, on clay below peat
cam	100 1919 6	55	Wilburton, Cambs, on clay below peat
cam	101 1919 6	56	Wilburton, Cambs, on clay below peat
cam	102 1919 6	57	Wilburton, Cambs, on clay below peat
cam	103 1919 6	58	Wilburton, Cambs, on clay below peat
cam	104 1919 6	59	Wilburton, Cambs, on clay below peat
cam	105 1919 6	60	Wilburton, Cambs, on clay below peat
cam	106 1919 6	61	Wilburton, Cambs, on clay below peat
cam	107 1919 6	62	Wilburton, Cambs, on clay below peat
cam	108 1919 6	63	Wilburton, Cambs, on clay below peat
cam	109 1919 6	64	Wilburton, Cambs, on clay below peat
cam	110 1919 6	65	Wilburton, Cambs, on clay below peat
cam	111 1919 6	1	Wilburton, Cambs, on clay below peat
cam	112 1919 6	2	Wilburton, Cambs, on clay below peat
cam	113 1919 6	3	Wilburton, Cambs, on clay below peat
cam	114 1919 6	4	Wilburton, Cambs, on clay below peat
cam	115 1919 6	5	Wilburton, Cambs, on clay below peat
cam	116 1919 6	6	Wilburton, Cambs, on clay below peat
cam	117 1919 6	8	Wilburton, Cambs, on clay below peat
cam	118 1919 6	9	Wilburton, Cambs, on clay below peat
cam	119 1919 6	10	Wilburton, Cambs, on clay below peat
cam	120 1919 6	11	Wilburton, Cambs, on clay below peat
cam	121 1919 6	13	Wilburton, Cambs, on clay below peat
cam	122 1919 6	14	Wilburton, Cambs, on clay below peat
cam	123 1919 6	33	Wilburton, Cambs, on clay below peat
cam	124 1919 6	34	Wilburton, Cambs, on clay below peat
cam	125 1919 6	35	Wilburton, Cambs, on clay below peat
cam	126 1919 6	36	Wilburton, Cambs, on clay below peat
cam	127 1919 6	37	Wilburton, Cambs, on clay below peat
cam	128 1919 6	38	Wilburton, Cambs, on clay below peat
cam	129 1919 6	39	Wilburton, Cambs, on clay below peat
cam	130 1919 6	12	Wilburton, Cambs, on clay below peat
cam	131 1919 6	21	Wilburton, Cambs, on clay below peat
cam	132 1919 6	23	Wilburton, Cambs, on clay below peat
cam	133 1919 6	24	Wilburton, Cambs, on clay below peat
cam	134 1919 6	25	Wilburton, Cambs, on clay below peat
cam	135 1919 6	26	Wilburton, Cambs, on clay below peat
cam	136 1919 6	27	Wilburton, Cambs, on clay below peat
cam	137 1919 6	28	Wilburton, Cambs, on clay below peat
cam	138 1919 6	29	Wilburton, Cambs, on clay below peat
cam	139 1919 6	30	Wilburton, Cambs, on clay below peat
cam	140 1919 6	31	Wilburton, Cambs, on clay below peat
cam	141 1919 6	32	Wilburton, Cambs, on clay below peat
cam	142 1919 6	66	Wilburton, Cambs, on clay below peat
cam	143 1919 6	67	Wilburton, Cambs, on clay below peat
cam	144 1919 6	68	Wilburton, Cambs, on clay below peat
cam	145 1919 6	69	Wilburton, Cambs, on clay below peat

Appendix 4: Spearhead Data

Museum	Region	General	Detailed	Comple	Weight	Length	
Exam		Type	Type	ness	gms	mm	
No				Dec- orat ion			
cam	96	East Anglia lc	lh		2	98.0	150.0
cam	97	East Anglia l	l		2	92.0	147.0
cam	98	East Anglia lc	lh		3	72.0	146.0
cam	99	East Anglia lc	lh		2	109.0	146.0
cam	100	East Anglia lc	lh		2	172.0	220.0
cam	101	East Anglia lc	lh		4	185.0	262.0
cam	102	East Anglia lc	lh		3	201.0	245.0
cam	103	East Anglia lc	lhs		6	219.0	214.0
cam	104	East Anglia lc	lhf		6	133.0	168.0
cam	105	East Anglia lc	lf		7	140.0	186.0
cam	106	East Anglia lc	lf		7	202.0	201.0
cam	107	East Anglia lc	lhfs		6	258.0	283.0
cam	108	East Anglia lc	lhst		7	125.0	139.0
cam	109	East Anglia lc	lh2st		3	321.0	337.0
cam	110	East Anglia ld	ld		3	48.0	96.0
cam	111	East Anglia l	l		6	176.0	165.0
cam	112	East Anglia lc	lh		5	131.0	222.0
cam	113	East Anglia l	l		6	120.0	176.0
cam	114	East Anglia lc	lh		5	101.0	156.0
cam	115	East Anglia l	l		5	137.0	154.0
cam	116	East Anglia l	l		4	86.0	152.0
cam	117	East Anglia l	l		3	89.0	141.0
cam	118	East Anglia l	l		5	76.0	125.0
cam	119	East Anglia lc	lhst		6	89.0	98.0
cam	120	East Anglia ld	ld		3	68.0	98.0
cam	121	East Anglia lc	lst		7	99.0	168.0
cam	122	East Anglia lc	lh2st		7	179.0	185.0
cam	123	East Anglia l	l		3	96.0	128.0
cam	124	East Anglia lc	lh		2	120.0	131.0
cam	125	East Anglia lc	lh		2	100.0	133.0
cam	126	East Anglia lc	lh		3	126.0	136.0
cam	127	East Anglia lc	lh		2	91.0	141.0
cam	128	East Anglia lc	lh		2	100.0	136.0
cam	129	East Anglia lc	lh		2	97.0	133.0
cam	130	East Anglia l	l		3	47.0	89.0
cam	131	East Anglia l	l		2	51.0	96.0
cam	132	East Anglia l	l		2	67.0	98.0
cam	133	East Anglia l	l		2	54.0	103.0
cam	134	East Anglia l	l		2	63.0	110.0
cam	135	East Anglia l	l		2	58.0	112.0
cam	136	East Anglia l	l		2	77.0	117.0
cam	137	East Anglia l	l		2	86.0	115.0
cam	138	East Anglia l	l		2	86.0	119.0
cam	139	East Anglia l	l		2	80.0	119.0
cam	140	East Anglia l	l		2	68.0	121.0
cam	141	East Anglia lc	lh		2	105.0	128.0
cam	142	East Anglia lc	lhst		2	127.0	161.0
cam	143	East Anglia lc	lhst		2	87.0	161.0
cam	144	East Anglia lc	lh		4	105.0	162.0
cam	145	East Anglia lc	lhst		4	169.0	240.0

Appendix 4: Spearhead Data

Museum	Exam No	Blade Length mm	Socket Length mm	Internal Socket Length mm	Max Width Blade mm	Socket Width at End mm	Socket Width at Blade mm	Socket Wall mm
cam	96	113.0	NA	106.0	37.4	26.3	20.0	1.9
cam	97	110.0	NA	105.0	NA	27.2	21.4	1.9
cam	98	109.0	NA	99.0	31.0	24.1	18.7	1.7
cam	99	121.0	NA	96.0	35.3	27.0	22.8	2.5
cam	100	187.0	NA	154.0	39.0	25.9	21.6	1.6
cam	101	245.0	NA	NA	NA	NA	20.5	1.6
cam	102	207.0	NA	183.0	44.0	25.3	21.3	1.6
cam	103	NA	NA	NA	NA	26.8	23.6	1.8
cam	104	NA	NA	NA	NA	27.0	21.6	1.5
cam	105	NA	NA	NA	NA	NA	NA	2.0
cam	106	NA	NA	NA	52.7	NA	25.0	2.0
cam	107	NA	NA	155.0	52.5	NA	NA	2.0
cam	108	NA	NA	NA	41.0	27.6	21.5	1.6
cam	109	303.0	NA	244.0	51.2	26.0	22.6	1.7
cam	110	66.0	NA	66.0	31.7	28.0	21.2	2.1
cam	111	NA	NA	NA	46.3	25.3	21.8	1.4
cam	112	202.0	NA	NA	NA	NA	21.2	1.4
cam	113	NA	NA	NA	NA	NA	21.2	1.8
cam	114	146.0	NA	105.0	36.9	NA	19.8	1.5
cam	115	131.0	NA	NA	44.9	NA	24.0	1.5
cam	116	111.0	NA	112.0	NA	23.0	18.4	1.8
cam	117	109.0	NA	78.0	NA	25.2	18.1	2.8
cam	118	110.0	NA	NA	40.8	NA	23.0	1.2
cam	119	NA	NA	NA	NA	27.4	21.9	3.0
cam	120	75.0	NA	71.0	NA	25.0	NA	1.8
cam	121	155.0	NA	NA	38.3	NA	NA	NA
cam	122	NA	NA	NA	NA	27.9	22.9	2.2
cam	123	87.0	NA	92.0	39.0	25.2	20.0	1.7
cam	124	99.0	NA	95.0	31.7	26.4	20.8	2.2
cam	125	100.0	NA	93.0	37.6	26.3	21.0	2.0
cam	126	108.0	NA	96.0	41.2	25.8	22.0	2.2
cam	127	104.0	NA	107.0	37.4	30.4	23.6	1.9
cam	128	107.0	NA	102.0	34.7	23.9	19.3	2.0
cam	129	96.0	NA	96.0	38.4	27.8	21.1	1.9
cam	130	58.0	NA	60.0	NA	24.7	16.7	1.5
cam	131	68.0	NA	75.0	29.0	22.8	18.1	1.9
cam	132	72.0	NA	72.0	29.6	27.0	21.0	1.8
cam	133	85.0	NA	75.0	30.4	20.6	18.8	2.0
cam	134	83.0	NA	76.0	29.2	25.2	19.8	1.5
cam	135	89.0	NA	93.0	36.2	25.0	21.7	1.0
cam	136	79.0	NA	88.0	28.8	22.1	16.5	2.1
cam	137	85.0	NA	77.0	33.5	23.6	19.8	1.7
cam	138	85.0	NA	85.0	38.5	27.6	21.3	1.7
cam	139	85.0	NA	83.0	34.6	26.3	20.0	2.0
cam	140	84.0	NA	79.0	32.0	24.5	18.6	1.3
cam	141	93.0	NA	105.0	40.0	27.6	22.4	2.0
cam	142	117.0	NA	94.0	38.7	26.1	20.3	1.7
cam	143	122.0	NA	124.0	34.6	25.2	19.8	1.5
cam	144	115.0	NA	116.0	27.7	NA	19.3	1.7
cam	145	NA	NA	180.0	41.7	NA	21.5	2.0

Appendix 4: Spearhead Data

Museum	Exam	Casting	Tip	Socket	Midrib
	No	Quality	Damage	Damage	Shape
cam	96	2	undamaged	undamaged	round
cam	97	3	undamaged	damaged	round
cam	98	4	undamaged	damaged	round
cam	99	1	undamaged	undamaged	round
cam	100	3	undamaged	undamaged	round
cam	101	3	undamaged	damaged	round
cam	102	2	undamaged	damaged	round
cam	103	4	missing	undamaged	round
cam	104	2	missing	damaged	angledr
cam	105	4	missing	damaged	round
cam	106	3	missing	damaged	round
cam	107	3	missing	damaged	round
cam	108	3	missing	damaged	round
cam	109	2	damaged	damaged	round
cam	110	4	undamaged	damaged	round
cam	111	2	missing	damaged	round
cam	112	4	damaged	damaged	round
cam	113	4	missing	damaged	round
cam	114	3	damaged	missing	round
cam	115	NA	damaged	missing	round
cam	116	4		damaged	round
cam	117	4	damaged	undamaged	round
cam	118	4	undamaged	missing	round
cam	119	4	missing	undamaged	round
cam	120	4	undamaged	undamaged	round
cam	121	4	damaged	missing	round
cam	122	4	missing	undamaged	round
cam	123	2	undamaged	damaged	round
cam	124	2	undamaged	undamaged	round
cam	125	2	undamaged	undamaged	round
cam	126	2	damaged	undamaged	round
cam	127	3	undamaged	damaged	round
cam	128	4	damaged	damaged	round
cam	129	4	damaged	damaged	round
cam	130	3		undamaged	round
cam	131	4	damaged	undamaged	round
cam	132	3	damaged	damaged	round
cam	133	4	undamaged	damaged	round
cam	134	2	undamaged	damaged	round
cam	135	2	undamaged	damaged	round
cam	136	1	damaged	undamaged	round
cam	137	3	damaged	damaged	round
cam	138	2	undamaged	undamaged	round
cam	139	2	undamaged	undamaged	round
cam	140	4	damaged	undamaged	round
cam	141	3	damaged	undamaged	round
cam	142	3		undamaged	flat a
cam	143	4	undamaged	undamaged	flat a
cam	144	4	undamaged	damaged	flat a
cam	145	3	damaged	damaged	flat a

Appendix 4: Spearhead Data

Museum	Registration	Exam	Deposition	Location	
		No			
cam	146	1919	6	70	Wilburton, Cambs, on clay below peat
cam	147	1919	6	72	Wilburton, Cambs, on clay below peat
cam	148	1919	6	73	Wilburton, Cambs, on clay below peat
cam	149	1919	6	74	Wilburton, Cambs, on clay below peat
cam	150	1919	6	75	Wilburton, Cambs, on clay below peat
cam	151	1919	6	76	Wilburton, Cambs, on clay below peat
cam	152	1919	6	77	Wilburton, Cambs, on clay below peat
cam	153	1919	6	78	Wilburton, Cambs, on clay below peat
cam	155	1928		748	A River Wissey Stoke Ferry Norfolk
cam	156	Z		11413	Burwell Fen Cambs
cam	158	1931		386	Green End Road Chesterton Cambs
cam	159	1931		387	Green End Road Chesterton Cambs
cam	160	1931		388	Green End Road Chesterton Cambs
cam	163	DEP1931		1	V Milton Road Chesterton
cam	164	1913		206	Reach Fen/Burwell Fen Cambs
cam	165	1883		155	C Burwell churchyard Cambs
cam	166	1910		231	Lakenheath Suffolk
cam	167	1910		232	Lakenheath Suffolk
ff	1			138	Flag Fen
ff	2			274	Flag Fen
ff	4			19	Flag Fen
ff	5	17/8/94		NA	Flag Fen
hm	1	b1951		2733	Scotland
hm	2	b1951		2133	Scotland
nms	1	DQ		28	Duddingston Loch, Mid Lothian
nms	2	DQ		29	Duddingston Loch, Mid Lothian
nms	7	DG		94	Gattercauld Quarry nr Ceres, Fife
nms	8	DG		95	Eildon Hills, Roxboroughshire
nms	10	DG		97	Black Midden, Rhynie, Aberdeenshire
nms	17	DG		105	Callander, Perthshire
nms	18	DG		106	Brownrigg Farm, North Berwick, East Lothia
nms	24	DG		114	Struan, Bracadale, Skye
nms	25	DG		60	Kinneff, Kincardineshire
nms	27	DG		63	Little Kinnord, Aberdeenshire
nms	28	DG		64	Stranraer, Wigtownshire
nms	29	DG		61	New Downie, Panmure, Angus
nms	30	DG		65	Wigtownshire
nms	31	DG		67	Scotland? No prov
nms	33	DG		70	Badentinnan, Speymouth, Morayshire
nms	35	DG		75	Swinton, berwickshire
nms	36	DG		74	Boreland, nr Blackford, Perthshire
nms	40	DG		80	Scotland? No prov
nms	45	DG		85	Kettelshiels, Longformacus, Berwickshire
nms	46	DG		86	Dalswinton, dumfriesshire
nms	50	DG		30	Buchan, Glentool, Kirkcudbrightshire
nms	54	DG		34	Skye, Invernessshire
nms	57	DG		37	Scotland? No Prov
nms	58	DG		39	Scotland? No Prov
nms	59	DG		40	Crawford parish, Lanarkshire
nms	63	DG		44	Balmaclellan, Kirkcudbrightshire

Appendix 4: Spearhead Data

Museum	Region	General	Detailed	Comple	Weight	Length	
Exam		Type	Type	ness	gms	mm	
No				Dec- orat ion			
cam	146	East Anglia	lc	lhst	3	282.0	310.0
cam	147	East Anglia	lc	lhst	9	225.0	257.0
cam	148	East Anglia	l	l sdec	2	154.0	232.0
cam	149	East Anglia	lc	lh2rops	2	266.0	246.0
cam	150	East Anglia	lc	lhstlop sdec	6	190.0	180.0
cam	151	East Anglia	flc	flhstlop	5	213.0	245.0
cam	152	East Anglia	flc	flstlop	1	227.0	271.0
cam	153	East Anglia	flc	flstlops	2	307.0	320.0
cam	155	East Anglia	lc	lfst dec	1	343.0	362.0
cam	156	East Anglia	o	odec sdec	2	109.0	160.0
cam	158	East Anglia	flc	flh	2	82.0	140.0
cam	159	East Anglia	l	l	2	69.0	110.0
cam	160	East Anglia	brb	brbh	7	NA	81.7
cam	163	East Anglia	o	o	1	67.0	108.0
cam	164	East Anglia	lc	lhst	1	NA	259.0
cam	165	East Anglia	lc	lhst	6	242.0	252.0
cam	166	East Anglia	l	l	3	150.0	175.0
cam	167	East Anglia	lc	lgr	6	139.0	170.0
ff	1	East Anglia	o	ol	2	92.0	134.0
ff	2	East Anglia	l	l	2	97.0	157.0
ff	4	East Anglia	l	l	2	135.0	188.0
ff	5	East Anglia	l	l	2	132.0	189.0
hm	1	Scotland	l	l	2	162.0	194.0
hm	2	Scotland	o	o	2	274.0	222.0
nms	1	Scotland	l	l	7	152.6	182.0
nms	2	Scotland	l	l	7	132.9	188.0
nms	7	Scotland	flc	flgrr dec	2	540.9	377.0
nms	8	Scotland	bl	lbl	3	98.7	170.0
nms	10	Scotland	l	l	2	90.4	152.0
nms	17	Scotland	o	ol	2	48.9	109.0
nms	18	Scotland	l	l	7	66.0	105.0
nms	24	Scotland	l	l	5	505.8	320.0
nms	25	Scotland	o	o	2	89.0	145.0
nms	27	Scotland	l	l	5	28.1	72.0
nms	28	Scotland	lc	ls	3	52.8	119.0
nms	29	Scotland	bl	lgrbl sdec	6	478.3	453.0
nms	30	Scotland	fl	fl	2	58.6	140.0
nms	31	Scotland	l	l	9	189.0	200.0
nms	33	Scotland	lc	lh	6	20.1	58.0
nms	35	Scotland	bl	tsbl	2	77.4	161.0
nms	36	Scotland	l	l	2	128.6	197.0
nms	40	Scotland	bl	tbl	2	49.5	101.0
nms	45	Scotland	flc	flh	2	48.0	135.0
nms	46	Scotland	lc	lgr	7	43.8	73.0
nms	50	Scotland	l	l	7	45.8	106.0
nms	54	Scotland	fl	fl	4	127.4	175.0
nms	57	Scotland	l	l	6	85.1	128.0
nms	58	Scotland	l	l	5	91.3	110.0
nms	59	Scotland	bl	lbl	1	119.8	208.0
nms	63	Scotland	l	l	2	83.4	153.0

Appendix 4: Spearhead Data

Museum	Exam No	Blade Length mm	Socket Length mm	Internal Socket Length mm	Max Width Blade mm	Socket Width at End mm	Socket Width at Blade mm	Socket Wall mm
cam	146	266.0	NA	246.0	NA	27.2	24.8	1.5
cam	147	201.0	NA	205.0	44.5	25.4	21.3	1.8
cam	148	196.0	NA	195.0	NA	25.5	22.7	2.1
cam	149	207.0	NA	182.0	NA	28.9	24.6	2.1
cam	150	NA	NA	NA	NA	25.8	24.3	1.8
cam	151	237.0	NA	145.0	56.0	NA	25.0	1.3
cam	152	234.0	NA	197.0	NA	27.7	22.5	1.2
cam	153	278.0	NA	250.0	66.6	24.2	22.1	1.3
cam	155	318.0	NA	296.0	56.2	26.1	23.5	1.4
cam	156	106.0	NA	134.0	33.0	23.8	17.2	1.8
cam	158	118.0	NA	114.0	38.0	27.3	24.9	1.7
cam	159	70.7	NA	93.0	NA	22.5	16.3	2.1
cam	160	NA	40.0	NA	NA	22.0	21.3	1.8
cam	163	58.0	NA	83.0	33.7	23.8	15.5	1.9
cam	164	197.0	NA	228.0	45.0	27.5	20.3	1.5
cam	165	NA	NA	165.0	43.3	27.9	20.7	2.4
cam	166	128.0	NA	NA	NA	28.0	24.2	2.2
cam	167	168.0	NA	NA	NA	NA	NA	NA
ff	1	79.0	NA	115.0	37.0	22.8	15.3	2.7
ff	2	105.0	NA	NA	38.0	27.0	NA	2.2
ff	4	139.0	NA	NA	44.5	24.1	17.7	1.3
ff	5	156.0	NA	NA	NA	26.2	22.1	2.3
hm	1	139.0	NA	86.0	42.0	23.9	19.1	1.8
hm	2	134.0	NA	88.0	48.2	27.0	17.8	2.9
nms	1	NA	71.0	NA	52.6	27.8	23.3	1.3
nms	2	NA	NA	NA	NA	NA	NA	NA
nms	7	314.0	NA	260.0	70.0	27.2	NA	1.8
nms	8	115.0	NA	104.0	NA	19.0	14.5	0.8
nms	10	124.0	NA	126.0	34.4	NA	19.4	0.9
nms	17	70.0	NA	92.0	28.5	21.3	16.6	1.3
nms	18	NA	NA	NA	NA	NA	NA	NA
nms	24	NA	NA	NA	NA	NA	NA	NA
nms	25	104.0	NA	111.0	40.0	24.2	21.6	1.5
nms	27	69.0	NA	NA	NA	NA	NA	NA
nms	28	67.0	NA	NA	NA	21.2	13.0	1.5
nms	29	373.0	NA	NA	57.8	24.5	20.9	1.3
nms	30	96.0	NA	115.0	NA	20.2	15.0	1.4
nms	31	119.0	NA	NA	40.0	23.8	19.4	1.3
nms	33	NA	NA	NA	NA	NA	NA	NA
nms	35	110.0	NA	113.0	27.2	20.0	15.9	1.0
nms	36	134.0	NA	150.0	39.0	27.5	20.5	1.4
nms	40	61.0	NA	NA	24.0	21.0	12.5	2.5
nms	45	94.0	NA	48.0	24.8	16.0	10.1	0.8
nms	46	NA	NA	NA	29.7	NA	NA	NA
nms	50	NA	NA	NA	NA	NA	NA	NA
nms	54	158.0	NA	134.0	43.2	NA	22.2	2.0
nms	57	NA	NA	NA	35.4	NA	19.6	1.5
nms	58	NA	NA	NA	47.8	NA	NA	NA
nms	59	147.0	NA	145.0	37.3	20.3	15.5	0.6
nms	63	110.0	NA	109.0	33.0	25.5	20.0	1.8

Appendix 4: Spearhead Data

Museum	Exam No	Casting Quality	Tip Damage	Socket Damage	Midrib Shape
cam	146	4	damaged	damaged	flat r
cam	147	2	undamaged	damaged	flat a
cam	148	2		undamaged	angled
cam	149	2	undamaged	undamaged	flat a
cam	150	3	missing	damaged	flat r
cam	151	2	damaged	missing	flat a
cam	152	2	undamaged	undamaged	angled+
cam	153	3	undamaged	damaged	flat r
cam	155	2	undamaged	undamaged	round
cam	156	2	undamaged	damaged	round
cam	158	4	undamaged	undamaged	round
cam	159	2	undamaged	undamaged	round
cam	160	3	missing	undamaged	flat r
cam	163	2	undamaged	undamaged	round
cam	164	2	undamaged	undamaged	round
cam	165	4	missing	undamaged	round
cam	166	2		undamaged	angledr
cam	167	3		missing	angledr
ff	1	2	undamaged	undamaged	round
ff	2	3	undamaged	undamaged	round
ff	4	2	undamaged	undamaged	round
ff	5	3	damaged	damaged	round
hm	1	2		damaged	angled
hm	2	2		undamaged	round
nms	1	NA	missing	undamaged	round
nms	2	NA		missing	round
nms	7	2	undamaged	undamaged	angled
nms	8	3	undamaged	damaged	angled
nms	10	4	undamaged	damaged	round
nms	17	2	undamaged	undamaged	round
nms	18	4		missing	round
nms	24	NA	undamaged	missing	round
nms	25	2	damaged	undamaged	angled
nms	27	3	undamaged	missing	angledr
nms	28	3	undamaged	damaged	round
nms	29	3	missing	undamaged	angled
nms	30	2	undamaged	undamaged	round
nms	31	2	damaged	damaged	round
nms	33	3	undamaged	missing	round
nms	35	3	undamaged	damaged	round
nms	36	3	undamaged		round
nms	40	3	undamaged	undamaged	round
nms	45	2	undamaged	damaged	flat a
nms	46	2	missing	missing	round
nms	50	3	undamaged	missing	round
nms	54	2	undamaged	damaged	round
nms	57	2	missing	damaged	round
nms	58	2	damaged	missing	round
nms	59	2	undamaged	undamaged	angled
nms	63	3	undamaged	undamaged	round

Appendix 4: Spearhead Data

Museum	Registration	Examination No	Deposition Location
nms	64 DG		45 Linton, Roxburghshire - 'from moss'
nms	65 DG		46 Scotland? No Prov
nms	66 DG		49 Nr Stirling, Stirlingshire- 'in moss'
nms	67 DG		59 Burghhead, Morayshire
nms	70 DG		53 Nr Falkirk, Stirlingshire
nms	73 DG		52 Barhullion, Wigtownshire
nms	74 DG		48 Nr Lordcarnie, Fifeshire
nms	78 DG		1 Denhead, Coupar-Angus, Perthshire
nms	79 DG		2 Scotland? No Prov
nms	80 DG		3 East Lothian
nms	81 DG		4 East Lothian
nms	82 DG		5 Nr Kinghorn, Fife
nms	88 DG		12 Scotland? No Prov
nms	89 DG		13 Scotland? No Prov
nms	90 DG		14 Scotland? No Prov
nms	91 DG		15 Galloway
nms	93 DG		18 Scotland? No Prov
nms	94 DG		19 Merton, nr Newtown Stewart, Wigtownshire
nms	95 DG		20 Scotland? No Prov
nms	96 DG		21 Scotland? No Prov
nms	97 DG		22 Scotland? No Prov
nms	100 DG		25 Langburnshiels, Roxburghshire
nms	103 DG		28 Scotland? No Prov
nms	104 DG		29 Stirlingshire
nms	105 DH		99 Northumberland
nms	107 L	6	1975 NW of Meikleour, Perthshire (NO150399) - 1
nms	109 DQ		46 Islay, Argyll
nms	110 DQ		50 Monmore, Killin, Perthshire
nms	111 DQ		74 Inshoch, Auldearn, Nairnshire
nms	112 DQ		75 Inshoch, Auldearn, Nairnshire
nms	113 DQ		78 Castlehill, forfar, angus
nms	114 DQ		87 Highfield, Dingwall, Ross & Cromarty - cai
nms	115 DQ		88 Highfield, Dingwall, Ross & Cromarty - cai
nms	116 DQ		106 Auchtertyre, Morayshire
nms	117 DQ		107 Auchtertyre, Morayshire
nms	118 DQ		116 Torran Ford, Loch Awe, Argyllshire
nms	121 DQ		215 Adabrock, Lewis, Ross & cromarty
nms	122 DQ		231 Nr Cullerne House, Findhorn, Morayshire
nms	123 DQ		232 Nr Cullerne House, Findhorn, Morayshire
nms	124 DQ		239 Loch trool, Minnigaff, Kirkcudbrightshire
nms	126 DQ		302 Duddingston Loch, Mid Lothian (?)
nms	127 DQ		394 Point of Sleat, Skye, Invernessshire
nms	128 DQ		395 Point of Sleat, Skye, Invernessshire
nms	129 DG		71 Murrayfield, Midlothian
nms	130 DG		72 Murrayfield, Midlothian
nms	139 DQ		30 Duddingston Loch, Mid Lothian
nms	140 DQ		31 Duddingston Loch, Mid Lothian
nms	141 DQ		32 Duddingston Loch, Mid Lothian
nms	142 DQ		33 Duddingston Loch, Mid Lothian
nms	143 DQ		34 Duddingston Loch, Mid Lothian

Appendix 4: Spearhead Data

Museum	Region	General	Detailed	Comple	Weight	Length		
Exam		Type	Type	ness	gms	mm		
No				Dec-				
				orat				
				ion				
nms	64	Scotland	bl	lbl	9	98.4	208.0	
nms	65	Scotland	l	l	6	101.9	138.0	
nms	66	Scotland	l	l	2	128.3	176.0	
nms	67	Scotland	l	l	6	218.0	212.0	
nms	70	Scotland	lc	lf	2	177.5	210.0	
nms	73	Scotland	bl	lgrbl	2	340.0	386.0	
nms	74	Scotland	to	to	3	768.8	563.0	
nms	78	Scotland	flc	fllop10r	9	621.7	442.0	
nms	79	Scotland	lc	lgr	9	395.3	430.0	
nms	80	Scotland	bl	tgrbl	9	297.5	411.0	
nms	81	Scotland	bl	lfgrbl	2	456.3	393.0	
nms	82	Scotland	lc	lh	2	352.2	330.0	
nms	88	Scotland	bl	tgrsbl	2	359.1	401.0	
nms	89	Scotland	bl	flgrbl	2	616.4	375.0	
nms	90	Scotland	bl	flgrrsbl	6	404.0	290.0	
nms	91	Scotland	l	l	6	NA	260.0	
nms	93	Scotland	flc	fl2rlop	2	369.1	264.0	
nms	94	Scotland	bl	tgrsbl	2	195.3	241.0	
nms	95	Scotland	lc	lhst	1	309.0	237.0	
nms	96	Scotland	lc	lh	7	21.5	101.0	
nms	97	Scotland	l	l	6	74.3	119.0	
nms	100	Scotland	bl	tbl	1	96.2	155.0	
nms	103	Scotland	l	l	5	94.7	134.0	
nms	104	Scotland	flc	flflop	7	79.1	144.0	
nms	105	Scotland	flc	flflop	9	510.2	438.0	
nms	107	Scotland	o	olf	4	145.1	189.0	
nms	109	Scotland	l	l	3	102.0	137.0	
nms	110	Scotland	lc	lh	2	266.8	273.0	
nms	111	Scotland	lc	lh	6	201.8	216.0	
nms	112	Scotland	lc	lf	2	261.4	227.0	
nms	113	Scotland	l	l	sdec	2	107.6	166.0
nms	114	Scotland	flc	flflop	5	139.7	190.0	
nms	115	Scotland	l	l	4	51.4	111.5	
nms	116	Scotland	lc	lf	9	289.4	295.0	
nms	117	Scotland	l	l	9	141.1	209.0	
nms	118	Scotland	l	l	3	239.2	262.0	
nms	121	Scotland	o	o	2	72.7	116.3	
nms	122	Scotland	lc	lh	9	112.8	197.0	
nms	123	Scotland	l	l	3	67.8	130.5	
nms	124	Scotland	bl	lgrbl	sdec	3	161.5	248.0
nms	126	Scotland	lc	lh	7	95.1	94.0	
nms	127	Scotland	o	olst	2	186.0	199.0	
nms	128	Scotland	lc	lh	2	124.9	197.0	
nms	129	Scotland	lc	lh	2	284.4	281.0	
nms	130	Scotland	l	l	2	250.2	271.0	
nms	139	Scotland	l	l	7	178.7	112.4	
nms	140	Scotland	l	l	7	122.4	106.7	
nms	141	Scotland	l	l	7	118.6	128.0	
nms	142	Scotland	l	l	9	255.5	275.0	
nms	143	Scotland	lc	lh	8	66.2	123.0	

Appendix 4: Spearhead Data

Museum	Exam No	Blade Length mm	Socket Length mm	Internal Socket Length mm	Max Width Blade mm	Socket Width at End mm	Socket Width at Blade mm	Socket Wall mm
nms	64	167.0	NA	NA	31.0	21.0	13.5	0.8
nms	65	90.0	NA	NA	31.0	24.0	18.0	1.8
nms	66	148.0	NA	NA	41.0	22.0	19.0	1.3
nms	67	NA	NA	NA	46.0	NA	23.0	1.5
nms	70	113.0	NA	NA	35.5	26.5	19.8	1.5
nms	73	280.0	NA	295.0	45.0	25.4	20.7	1.8
nms	74	NA	NA	200.0	77.0	22.6	17.1	1.4
nms	78	412.0	NA	NA	82.0	30.2	29.4	1.8
nms	79	364.0	NA	NA	NA	23.9	19.9	2.2
nms	80	291.0	NA	NA	NA	25.0	19.8	0.8
nms	81	345.0	NA	330.0	64.0	27.0	24.8	1.3
nms	82	254.0	NA	265.0	53.2	29.1	22.3	1.6
nms	88	293.0	NA	121.0	NA	25.0	18.8	1.5
nms	89	317.0	NA	185.0	64.2	25.0	22.6	1.4
nms	90	NA	NA	NA	67.0	27.0	23.0	2.5
nms	91	NA	NA	NA	59.8	29.3	25.5	2.6
nms	93	195.0	NA	170.0	NA	28.7	24.0	1.7
nms	94	182.0	NA	NA	49.0	26.0	22.4	1.7
nms	95	175.0	NA	196.0	50.3	30.7	22.3	1.9
nms	96	NA	NA	NA	22.4	NA	NA	NA
nms	97	119.0	NA	NA	NA	NA	NA	NA
nms	100	108.0	NA	NA	27.0	20.6	16.0	1.0
nms	103	120.0	NA	NA	39.4	NA	20.0	1.5
nms	104	NA	NA	NA	NA	NA	NA	NA
nms	105	340.0	NA	355.0	74.0	30.3	25.0	1.5
nms	107	148.0	NA	155.0	NA	NA	17.8	NA
nms	109	94.0	NA	NA	31.0	24.3	18.5	1.6
nms	110	199.0	NA	255.0	48.0	27.5	22.5	2.0
nms	111	NA	75.0	NA	NA	28.5	22.5	1.6
nms	112	182.0	NA	202.0	48.0	27.7	23.3	2.1
nms	113	111.0	NA	137.0	NA	23.5	19.5	1.4
nms	114	175.0	NA	NA	NA	NA	19.5	1.5
nms	115	71.0	NA	100.0	NA	NA	15.5	1.3
nms	116	235.0	NA	NA	NA	29.4	24.3	2.3
nms	117	NA	NA	NA	NA	28.4	NA	1.5
nms	118	171.0	NA	198.0	52.6	NA	22.5	1.8
nms	121	76.0	NA	96.0	30.0	19.1	15.1	1.6
nms	122	185.0	NA	185.0	NA	NA	18.8	1.2
nms	123	81.0	NA	117.0	NA	NA	16.6	1.5
nms	124	178.0	NA	205.0	NA	23.0	17.7	1.5
nms	126	NA	NA	NA	NA	NA	NA	NA
nms	127	119.0	NA	150.0	35.8	NA	NA	NA
nms	128	111.0	NA	180.0	35.8	24.2	18.4	0.9
nms	129	198.0	NA	255.0	53.4	28.2	23.0	2.1
nms	130	206.0	NA	240.0	NA	26.4	21.4	1.7
nms	139	NA	NA	NA	NA	NA	NA	NA
nms	140	NA	NA	NA	NA	NA	NA	NA
nms	141	NA	NA	NA	NA	NA	NA	NA
nms	142	NA	NA	NA	NA	29.8	NA	2.1
nms	143	NA	NA	NA	NA	NA	NA	NA

Appendix 4: Spearhead Data

Museum	Exam No	Casting Quality	Tip Damage	Socket Damage	Midrib Shape
nms	64	2	undamaged	damaged	angled
nms	65	2	missing	undamaged	round
nms	66	2	undamaged	damaged	round
nms	67	2	missing	damaged	round
nms	70	3	damaged	undamaged	angledr
nms	73	3	undamaged	undamaged	round
nms	74	NA	damaged	undamaged	round
nms	78	3	damaged	undamaged	angled
nms	79	2	damaged	undamaged	flat a
nms	80	4	undamaged	damaged	angledr
nms	81	4	undamaged	damaged	round
nms	82	3	undamaged	damaged	round
nms	88	3	undamaged	damaged	angled
nms	89	3		damaged	angledr
nms	90	NA	missing	damaged	angled
nms	91	2	missing	damaged	round
nms	93	3	undamaged	undamaged	round
nms	94	3	undamaged	damaged	angled
nms	95	2	undamaged	undamaged	round
nms	96	4	missing	missing	round
nms	97	4	damaged	missing	round
nms	100	2	undamaged	undamaged	round
nms	103	4	undamaged	missing	round
nms	104	3	damaged	missing	round
nms	105	3	undamaged	damaged	angled
nms	107	2	undamaged	damaged	round
nms	109	2	damaged	undamaged	round
nms	110	4	undamaged	undamaged	round
nms	111	4	missing	damaged	round
nms	112	2	undamaged	undamaged	angledr
nms	113	4	undamaged	undamaged	round
nms	114	NA	damaged	missing	round
nms	115	3	damaged	damaged	round
nms	116	4	damaged	undamaged	round+
nms	117	4	damaged	damaged	round
nms	118	2	undamaged	damaged	round
nms	121	2		undamaged	round
nms	122	4		damaged	round
nms	123	4	undamaged	damaged	round
nms	124	2		damaged	round+
nms	126	4		missing	round
nms	127	3	undamaged	undamaged	round
nms	128	4	undamaged	undamaged	round
nms	129	2	undamaged	undamaged	round
nms	130	2	undamaged	undamaged	round
nms	139	NA	missing	missing	round
nms	140	NA	missing	damaged	round
nms	141	NA	missing	damaged	round
nms	142	NA	missing	damaged	round
nms	143	3	missing	damaged	round

Appendix 4: Spearhead Data

Museum	Registration	Deposition Location
	Exam No	
nms	144 DQ	35 Duddingston Loch, Mid Lothian
nms	145 DQ	36 Duddingston Loch, Mid Lothian
nms	146 DQ	37 Duddingston Loch, Mid Lothian
nms	148 DQ	39 Duddingston Loch, Mid Lothian
nms	149 DQ	40 Duddingston Loch, Mid Lothian
nms	150 DQ	41 Duddingston Loch, Mid Lothian
nms	151 DQ	42 Duddingston Loch, Mid Lothian
nms	154 DG	113 Eyre Point, Raasay, Invernessshire
nms	160 St Andrews	38 St Andrews, Fife
nms	161 St Andrews	35 St Andrews, Fife
nms	162 St Andrews	40 St Andrews, Fife
nms	163 St Andrews	36 St Andrews, Fife
nms	164 St Andrews	34 St Andrews, Fife
nms	165 St Andrews	37 St Andrews, Fife
nms	166 St Andrews	32 St Andrews, Fife
nms	167 St Andrews	33 St Andrews, Fife
nms	168 St Andrews	39 St Andrews, Fife

Appendix 4: Spearhead Data

Museum	Region	General	Detailed	Comple	Weight	Length
Exam		Type	Type	ness	gms	mm
No				Dec- orat ion		
nms 144	Scotland	l	l		8 50.1	94.7
nms 145	Scotland	lc	lhf		7 120.2	130.0
nms 146	Scotland	lc	lhf		7 70.6	84.0
nms 148	Scotland	lc	lf		7 116.7	86.0
nms 149	Scotland	flc	flhflop		7 59.3	198.0
nms 150	Scotland	lc	lflop		7 201.6	124.0
nms 151	Scotland	brb	brblop		4 135.8	205.0
nms 154	Scotland	lc	lst		6 359.5	304.0
nms 160	Scotland	lc	lh		2 NA	195.0
nms 161	Scotland	lc	lh		2 NA	252.0
nms 162	Scotland	o	o		4 NA	131.0
nms 163	Scotland	lc	lh		2 NA	236.0
nms 164	Scotland	lc	lhfst		2 NA	257.0
nms 165	Scotland	lc	lhst		2 NA	227.0
nms 166	Scotland	bl	lgrstbl		4 NA	385.0
nms 167	Scotland	lc	lhst		2 NA	291.0
nms 168	Scotland	o	odec	sdec	2 NA	153.0

Appendix 4: Spearhead Data

Museum	Exam	Blade	Socket	Internal	Max	Socket	Socket	Socket
	No	Length	Length	Socket	Width	Width at	Width at	Wall
		mm	mm	Length	Blade	End	Blade	mm
				mm	mm	mm	mm	
nms	144	NA	NA	NA	NA	NA	NA	NA
nms	145	NA	NA	NA	NA	NA	NA	NA
nms	146	NA	NA	NA	NA	NA	NA	NA
nms	148	NA	NA	NA	NA	28.8	NA	1.6
nms	149	NA	NA	NA	NA	NA	NA	NA
nms	150	NA	NA	NA	NA	NA	NA	NA
nms	151	NA	NA	NA	NA	NA	NA	NA
nms	154	NA	NA	NA	NA	NA	NA	NA
nms	160	155.0	NA	NA	57.0	28.8	25.3	1.1
nms	161	193.0	NA	NA	46.3	29.0	23.0	3.3
nms	162	108.0	NA	NA	41.0	NA	21.3	3.0
nms	163	172.0	NA	NA	46.6	29.5	17.8	1.9
nms	164	186.0	NA	NA	51.2	NA	23.3	3.0
nms	165	156.0	NA	NA	48.4	28.5	21.8	1.5
nms	166	342.0	NA	NA	63.3	NA	NA	2.3
nms	167	221.0	NA	NA	51.4	27.4	25.9	2.0
nms	168	93.0	NA	NA	37.8	NA	21.1	2.4
							18.1	1.9

Appendix 4: Spearhead Data

Museum	Exam No	Casting Quality	Tip Damage	Socket Damage	Midrib Shape
nms	144	NA	missing	missing	round
nms	145	NA	missing	missing	round
nms	146	3	missing	damaged	angled
nms	148	3	missing	missing	angled+
nms	149	2	missing	missing	
nms	150	4	missing	damaged	angled
nms	151	4		damaged	flat r
nms	154	3	missing	damaged	round
nms	160	2	undamaged	damaged	round
nms	161	2	undamaged	damaged	round
nms	162	2		damaged	round
nms	163	2		damaged	round
nms	164	2	undamaged	damaged	round
nms	165	2		damaged	round
nms	166	3		damaged	angled
nms	167	2	undamaged	damaged	round
nms	168	NA	undamaged	undamaged	round