Table 42 Number of Identified Specimens (NISP) and Minimum Number of Individuals (MNI) of mammal and bird bones in each phase

	Phase 1 ? *c* 1000–*c* 1170				Phase 2 *c* 1170–*c* 1230				Phase 3 *c* 1246			
TAXA	NISP	%	MNI	%	NISP	%	MNI	%	NISP	%	MNI	%
Mammals												
Cattle	79	24	3	11	99	21	4	11	–	–	–	–
Sheep/goat	118	36	8	29	189	39	9	22	3	43	1	33
Sheep	4	1	1	3.7	4	0.8	2	5	–	–	–	–
Goat	4	1	1	3.7	3	0.6	1	3	–	–	–	–
Pig	62	19	4	15	70	14.6	4	11	3	43	1	33
Fallow deer	3	1	1	3.7	4	0.8	1	3	1	14	1	33
Red deer	1	0.3	1	3.7	2	0.4	1	3	–	–	–	–
Roe deer	1	0.3	1	3.7	1	0.2	1	3	–	–	–	–
Rabbit	–	–	–	–	1	0.2	1	3	–	–	–	–
Hare	–	–	–	–	4	0.8	1	3	–	–	–	–
Horse	2	0.6	1	3.7	4	0.8	1	3	–	–	–	–
Dog	6	1.8	1	3.7	1	0.2	1	3	–	–	–	–
Cat	–	–	–	–	1	0.2	1	3	–	–	–	–
Fox	1	0.3	1	3.7	–	–	–	–	–	–	–	–
Sheep-size	20	6	–	–	46	9.6	–	–	–	–	–	–
Cattle-size	12	4	–	–	13	2.7	–	–	–	–	–	–
Birds												
Domestic fowl	11	3	2	7	19	4	2	5	–	–	–	–
Partridge	–	–	–	–	9	1.8	3	8	–	–	–	–
Goose	–	–	–	–	–	–	–	–	–	–	–	–
Duck	–	–	–	–	–	–	–	–	–	–	–	–
Woodcock	2	1	1	3.7	4	0.8	1	3	–	–	–	–
Snipe	–	–	–	–	–	–	–	–	–	–	–	–
Pigeon	–	–	–	–	–	–	–	–	–	–	–	–
Plover	–	–	–	–	–	–	–	–	–	–	–	–
Lapwing	–	–	–	–	–	–	–	–	–	–	–	–
Swan	–	–	–	–	–	–	–	–	–	–	–	–
Jackdaw	–	–	–	–	1	0.2	1	3	–	–	–	–
Turdid	2	1	1	3.7	4	0.8	2	5	–	–	–	–
Total	328	100	27	100	479	100	36	100	7	100	3	100

	Phase 4 *c* 1230–*c* 1268				Phase 5 *c* 1268–*c* 1330				Phase 6 *c* 1330–*c* 1400			
TAXA	NISP	%	MNI	%	NISP	%	MNI	%	NISP	%	MNI	%
Mammals												
Cattle	327	14	11	9	160	18	7	12	149	27	8	19
Sheep/goat	390	13	26	22	156	18	10	18	91	16	7	17
Sheep	2	3	1	1	10	1	3	5	3	0.5	1	2
Goat	–	–	–	–	–	–	–	–	2	0.3	1	2
Pig	370	16	14	12	138	16	6	11	142	26	10	24
Fallow deer	89	4	10	8	31	4	3	5	25	4.5	3	7
Red deer	43	2	4	3	5	0.5	1	2	5	1	1	2
Roe deer	12	1	2	2	3	0.3	1	2	5	1	1	2
Rabbit	13	1	1	1	10	1	2	3.5	5	1	2	5
Hare	9	0.3	2	2	3	0.3	1	2	–	–	–	–
Horse	7	0.3	1	1	3	0.3	1	2	4	1	1	2
Dog	3	0.1	1	1	1	0.1	1	2	8	1	1	2
Cat	4	0.1	1	1	–	–	–	–	5	1	1	2
Fox	2	0.1	1	1	–	–	–	–	–	–	–	–
Sheep-size	304	13	–	–	126	15	–	–	33	6	–	–
Cattle-size	116	5	–	–	58	7	–	–	53	10	–	–
Birds												
Domestic fowl	459	20	20	17	122	14	9	16	18	3	2	5
Partridge	33	1	3	2.5	17	2	2	3.5	1	0.2	1	2
Goose	25	1	3	2.5	5	0.5	1	2	–	–	–	–
Duck	10	0.4	1	1	2	0.2	1	2	1	0.2	1	2
Woodcock	12	1	3	2.5	3	0.3	2	3.5	–	–	–	–
Snipe	8	0.3	2	2	1	0.1	1	2	–	–	–	–
Pigeon	1	0.1	1	1	–	–	–	–	–	–	–	–
Plover	2	0.1	1	1	1	0.1	1	2	–	–	–	–
Lapwing	1	0.1	1	1	–	–	–	–	–	–	–	–
Swan	2	0.1	1	1	–	–	–	–	–	–	–	–
Jackdaw	31	1	3	2.5	12	1.4	2	3.5	2	0.4	1	2
Turdid	23	1	3	2.5	1	0.1	1	2	–	–	–	–
Total	2298	100%	117	100%	868	100%	56	100%	552	100%	42	100%

Table 43 Animal bone: the sheep:goat ratio in each phase

	Sheep	Goat	% Goat
Phase 1			
metacarpal	3	0	
metatarsal	1	2	
horn core	0	2	
Total	4	4	50%
Phase 2			
metacarpal	1	0	
metatarsal	3	0	
horn core	0	3	
Total	4	3	42%
Phase 4			
metacarpal	2	0	
metatarsal	2	0	
horn core	2	0	
Total	2	0	0%
Phase 5			
metacarpal	2	0	
metatarsal	5	0	
horn core	3	0	
Total	10	0	0%
Phase 6			
metacarpal	1	1	
metatarsal	2	1	
horn core	0	0	
Total	3	2	40%

Table 44 Animal bone: body part data, by phase, for the three main domesticates

3a Pig	Phase 1		Phase 2		Phase 4		Phase 5		Phase 6	
Element	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI
Maxilla	2	50	2	50	11	79	5	83	1	10
Mandible	2	50	1	25	**14**	100	3	33	4	40
Atlas	1	25	0	0	1	7	1	16	0	0
Axis	0	0	0	0	0	0	0	0	0	0
Scapula	0	0	0	0	7	50	3	50	2	20
Hum. P	3	75	1	25	5	36	3	50	6	60
Hum. D	**4**	100	3	75	11	79	5	83	8	80
Radius P	3	75	**4**	100	10	71	5	83	6	60
Radius D	1	25	**4**	100	9	64	3	50	7	70
Ulna	**4**	100	3	75	12	86	**6**	100	4	40
Pelvis	1	25	1	25	11	79	5	83	3	30
Femur P	0	0	1	25	4	29	1	16	3	30
Femur D	1	25	2	50	4	29	2	33	6	60
Tibia P	3	75	3	75	**14**	100	**6**	100	**10**	100
Tibia D	3	75	**4**	100	12	86	**6**	100	8	80
Astragalus	1	25	1	25	5	36	2	33	2	20
Calcaneum	1	25	3	75	10	71	4	66	2	20
Mc. P	2	50	1	25	6	42	2	33	2	20
Mc. D	1	25	1	25	5	36	2	33	2	20
Mt. P	1	25	1	25	5	36	2	33	2	20
Mt. D	1	25	1	25	3	21	2	33	2	20
Phalanx 1	1	25	1	25	3	21	1	16	1	10
Phalanx 3	0	0	0	0	1	7	1	16	1	10

3b Cattle	Phase 1		Phase 2		Phase 4		Phase 5		Phase 6	
Element	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI
Horn core	1	33	1	25	5	45	1	14	2	25
Maxilla	2	67	1	25	3	27	2	29	0	0
Mandible	2	67	1	25	0	0	1	14	0	0
Atlas	1	33	0	0	1	9	0	0	1	13
Axis	0	0	0	0	2	18	0	0	0	0
Scapula	1	33	2	50	5	45	2	29	6	75
Hum. P	1	33	2	50	7	63	5	71	4	50
Hum. D	2	67	3	75	**11**	100	5	71	6	75
Radius P	2	67	**4**	100	5	45	3	43	2	25
Radius D	1	33	3	75	2	18	1	14	1	13
Ulna	1	33	2	50	1	9	3	43	1	13
Pelvis	2	67	2	50	9	81	3	43	5	63
Femur P	1	33	1	25	9	81	5	71	**8**	100
Femur D	2	67	2	50	6	54	**7**	100	6	75
Tibia P	2	67	2	50	**11**	100	**7**	100	4	50
Tibia D	2	67	2	50	**11**	100	3	43	2	25
Astragalus	2	67	3	75	6	54	3	43	3	38
Calcaneum	2	67	2	50	**11**	100	2	29	6	75
Mc. P	**3**	100	1	25	6	54	1	14	2	25
Mc. D	2	67	2	50	2	18	2	29	2	25
Mt. P	2	67	2	50	3	27	3	43	0	0
Mt. D	2	67	3	75	2	18	1	14	2	25
Phalanx 1	1	33	2	50	2	18	1	14	1	13
Phalanx 3	1	33	1	25	1	9	1	14	0	0

3c Sheep	Phase 1		Phase 2		Phase 4		Phase 5		Phase 6	
Element	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI
Horn core	1	13	2	22	2	8	2	20	0	0
Maxilla	0	0	1	11	1	4	1	10	0	0
Mandible	3	38	4	44	2	8	0	0	2	29
Atlas	0	0	0	0	1	4	0	0	0	0
Axis	1	13	1	11	1	4	0	0	1	14
Scapula	1	13	1	11	12	46	8	80	2	29
Hum. P	1	13	3	33	10	38	5	50	2	29
Hum. D	3	38	6	67	20	77	**10**	100	4	57
Radius P	7	86	7	78	24	92	9	90	**7**	100
Radius D	5	63	**9**	100	20	77	9	90	5	71
Ulna	1	13	1	11	8	30	6	60	1	14
Pelvis	2	25	3	33	12	46	5	50	3	43
Femur P	2	25	2	22	10	38	2	20	3	43
Femur D	2	25	3	33	9	35	4	40	3	43
Tibia P	7	86	7	78	18	69	3	30	2	29
Tibia D	**8**	100	7	78	**26**	100	7	70	**7**	100
Astragalus	1	13	0	0	5	19	2	20	1	14
Calcaneum	1	13	2	22	6	23	2	20	1	14
Mc. P	4	50	6	67	4	15	3	30	3	43
Mc. D	3	38	5	56	5	19	2	20	2	29
Mt. P	5	63	6	67	7	27	4	40	3	43
Mt. D	7	88	7	78	6	23	4	40	4	57
Phalanx 1	1	13	1	11	1	4	0	0	2	29
Phalanx 3	0	0	1	11	1	4	1	10	0	0

Table 45 Animal bone: fusion data, by phase, for the three main domesticates:
A. Sheep. Stage 1 scapula, distal humerus and proximal radius (suggested age 6–10 months). Stage 2 first phalanx (13–16 months). Stage 3 distal metapodials, distal tibia and ulna (18–30 months). Stage 4 proximal humerus, distal radius, proximal and distal femur, proximal tibia and calcaneum (24–42 months).

B. Cattle. Stage 1 scapula (suggested age <10months). Stage 2 proximal humerus, proximal radius and first phalanx (12–18 months). Stage 3 distal metapodials and distal tibia (24–30 months). Stage 4 proximal humerus, distal radius, ulna, proximal tibia and proximal and distal femur (42–48 months)

C. Pigs. Stage 1 scapula, distal humerus and proximal radius (suggested age 12 months). Stage 2 distal metapodials, first phalanx, distal tibia and calcaneum (24 months). Stage 3 proximal humerus, distal radius, ulna, distal tibia and proximal and distal femur (36–42 months).

4a) Sheep	Phase 1			Phase 2			Phase 4		
Stage	Fused	Unfused	% Fused	Fused	Unfused	% Fused	Fused	Unfused	% Fused
1	13	4	76	17	4	81	72	29	71
2	4	2	66	4	14	22	3	1	75
3	12	9	57	8	45	15	24	29	45
4	5	12	29	1	9	10	30	55	35

	Phase 5			Phase 6		
Stage	Fused	Unfused	% Fused	Fused	Unfused	% Fused
1	39	6	87	21	2	91
2				3	0	100
3	8	5	62	15	2	88
4	11	14	44	8	2	80

4b) Cattle	Phase 1			Phase 2			Phase 4		
Stage	Fused	Unfused	% Fused	Fused	Unfused	% Fused	Fused	Unfused	% Fused
1	1	0	100	1	0	100	5	0	100
2	12	1	92	20	1	91	33	1	97
3	3	3	50	5	3	63	19	5	79
4	3	8	27	5	3	63	18	16	53

	Phase 5			Phase 6		
Stage	Fused	Unfused	% Fused	Fused	Unfused	% Fused
1	2	1	67	5	0	100
2	17	1	94	17	1	94
3	5	3	63	7	4	64
4	13	17	43	12	14	46

4c) Pig	Phase 1			Phase 2			Phase 4		
Stage	Fused	Unfused	% Fused	Fused	Unfused	% Fused	Fused	Unfused	% Fused
1	5	3	63	4	6	40	23	19	55
2	1	15	6	2	23	8	1	98	1
3	0	15	0	0	1	0	2	64	3

	Phase 5			Phase 6		
Stage	Fused	Unfused	% Fused	Fused	Unfused	% Fused
1	15	2	88	11	15	42
2	2	25	7	1	38	3
3	0	12	0	3	52	5

Table 46 Animal bone: dental ageing data, by phase, for (A) sheep and (B) pig. The data for sheep are grouped, the letters in parentheses represent Payne's 1974 stages. The suggested ages are as follows:

Stage 1. 0–6 months
Stage 2. 6–12 months
Stage 3. 1–2 years
Stage 4. 2–4 years
Stage 5. 4–8 years
Stage 6. 8–10 years.

For the pig data, the numbers in parentheses represent Grant's 1988 age stages. The groups are as follows:

Stage 1. M1 unworn
Stage 2. M1 in wear, M2 unworn
Stage 3. M2 in wear, M3 unworn
Stage 4. M3 in wear
Stage 5. M3 in heavy wear

(A) Sheep	Group						
Phase	1(A/B)	2 (C)	3 (D)	4 (E/F)	5 (G/H)	6 (I)	Total
1	2	1	0	2	1	0	6
2	1	0	2	3	3	0	9
4	1	0	0	1	3	1	6
5	1	0	0	1	1	0	3
6	0	0	0	3	1	0	4

(B) Pig	Group					
Phase	1 (1–6)	2 (7–14)	3 (15–26)	4 (27–39)	5/6 (40+)	Total
1	1	0	1	1	0	3
2	0	0	2	0	0	2
4	1	15	19	0	0	35
5	0	0	2	4	0	6
6	4	2	0	1	3	10

Table 47 Animal bone: body part data, by phase for the three deer species

5a Roe	Phase 1		Phase 2		Phase 4		Phase 5		Phase 6	
Element	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI
Antler					1	100			1	100
Maxilla										
Mandible					1	100				
Atlas										
Scapula	1	100	1	100	1	100				
Humerus P										
Humerus D										
Radius P.					1	100				
Radius D.										
Ulna										
Pelvis										
Femur P					1	100				
Femur D										
Tibia P							1	100		
Tibia D							1	100	1	100
Astragalus							1	100		
Calcaneum										
Mc. P					1	100			1	100
Mc. D					1	100			1	100
Mt. P					1	100			1	100
Mt. D					1	100				
Phal 1										
Phal 2										

5c Fallow	Phase 1		Phase 2		Phase 4		Phase 5		Phase 6	
Element	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI
Antler										
Maxilla										
Mandible										
Atlas										
Scapula							1	33		
Humerus P					1	10				
Humerus D										
Radius P.			1	100			1	33		
Radius D.									1	33
Ulna										
Pelvis					4	40	2	67	1	33
Femur P			1	100	3	30	1	33	1	33
Femur D	1	100	1	100	2	20	2	67	1	33
Tibia P	1	100			6	60	1	33	2	67
Tibia D	1	100			**10**	100	2	33	2	67
Astragalus			1	100	7	70	**3**	100	1	33
Calcaneum					5	50	1	33		
Mc. P										
Mc. D										
Mt. P			1	100	2	20	**3**	100	**3**	100
Mt. D			1	100	3	30	**3**	100	**3**	100
Phal 1							1	33	1	33
Phal 2							1	33		

5b Red	Phase 1		Phase 2		Phase 4		Phase 5		Phase 6	
Element	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI	MNI	%MNI
Antler										
Maxilla										
Mandible										
Atlas										
Scapula										
Humerus P										
Humerus D					1	25				
Radius P.					1	25				
Radius D.										
Ulna										
Pelvis					1	25				
Femur P	1	100			2	50	1	100		
Femur D			1	100	2	50	1	100		
Tibia P					3	75			1	100
Tibia D					**4**	100			1	100
Astragalus			1	100	**4**	100	1	100		
Calcaneum					2	50	1	100		
Mc. P					1	25			1	100
Mc. D					1	25				
Mt. P					1	25				
Mt. D										
Phal 1									1	100
Phal 2										

Table 48 No. of fragments of fish bone according to species and phase (NISP)

	Phase			
	2	4	5	Total
Elasmobranches		9		9
Sturgeon		15	3	18
Herring		11		11
Salmon		5		5
Cyprinidae		5 s		5
Eel		24		24
Conger eel		4		4
Whiting		63		63
Pollack		1	1	2
Saithe	3	1		4
Cod		18	2	20
Haddock		16		16
Large gadid		13	1	14
Medium gadid		1	2	3
Small gadid		5		5
Sparidae		4	1	5
Mackerel		5		5
Triglidae		6		6
Turbot		1		1
Brill		1		1
Bothidae		1		1
Plaice		17		17
Flatfish		3		3
Unidentified	2	16	1	19
Total	5	245	11	261
%	2	94	4	

Table 49 Fish bone: species representation in sieved samples

Species	No. of frags
Elasmobranches	1
Sturgeon	10
Herring	11
Salmon	4
Cyprinidae	4
Eel	24
Conger eel	3
Whiting	63
Cod	2
Haddock	4
Small gadid	5
Large gadid	1
Sparidae	3
Mackerel	5
Brill	1
Plaice	17
Flatfish	1
Unidentified	15
Total	174

Table 50 Fish bone: species representation in hand-collected material

Species	No. of frags
Elasmobranches	8
Sturgeon	8
Salmon	1
Cyprinidae	1
Conger eel	1
Pollack	2
Saithe	4
Cod	18
Haddock	12
Medium gadid	3
Large gadid	13
Sparidae	2
Turbot	1
Bothidae	1
Flatfish	2
Triglidae	6
Unidentified	4
Total	87

Table 51 Phase 4: fish bone body part representation of major species in sieved samples

	Herring	Eel	Whiting	Plaice	Total
AAV*	0	0	3	0	3
PAV **	10	6	17	4	37
CV ***	1	16	42	13	72
Vert. frag.	0	2	1	0	3

* anterior abdominal vertebrae
** posterior abdominal vertebrae
*** caudal vertebrae

Table 52 Phase 4: fish bone body part representation of major species in hand-retrieved material

	Cod	Haddock	Large gadoid	Total
Quadrate	1	0	0	1
Cleithrum	0	15	3	18
AAV *	0	0	1	1
PAV **	11	0	0	11
CV ***	6	1	0	7
Vert. frag.	0	0	9	9

* anterior abdominal vertebrae
** posterior abdominal vertebrae
*** caudal vertebrae

Table 53 Phase 4: fish bone – species representation in context 252

Species	No. of frags
Elasmobranches	7
Sturgeon	3
Cyprinidae	1
Pollack	1
Saithe	1
Cod	15
Haddock	1
Large gadid	10
Triglidae	3
Turbot	1
Bothidae	1
Flatfish	2

Table 54 Phase 4: fish bone – species representation in context 383

Species	No. of frags
Elasmobranches	1
Sturgeon	2
Salmon	1
Conger eel	1
Cod	1
Haddock	11
Large gadid	2
Medium gadid	1
Sparidae	1
Triglidae	3

Table 55 Phase 4: fish bone – taphonomy

	No. of frags
Gnawed	7
Butchered	0
Burnt	0

Table 56 Phase 4: fish bone – preservation

	No. of frags
Good	147
Moderate	95
Poor	3
Total	245

Table 57 Phase 4: fish bone – size of major species in sieved samples

Estimated total length	Eel	Herring	Plaice	Whiting	Total
300–600mm	20	0	17	9	46
150–300mm	4	11	0	54	69

Table 58 Phase 4: fish bone - size of major species in hand-collected material

Estimated total length	Cod	Haddock	Total
>1200mm	2	0	2
600–1200mm	15	8	23
300–600mm	1	8	9

Table 59 Occurrence of shell by phase and type (number of fragments)

Phase	Oyster	Whelk	Mussel	Cockle	Snail	Total
1	192	–	5	–	301	498
2	211	–	–	–	91	302
3	–	20	5	–	–	25
4	4350	1500	–	2	276	6128
5	2748	–	5	–	160	2913
6	5924	–	–	–	93	6017
7	5190	–	12	7	35	5244
Total	18,615	1520	27	9	956	21,127