Dated mortar samples and fractions along with comparative dates on wood and charcoal as well as dendro dates. Those CO_2 fractions that date the samples according to criteria discussed in the text are emphasized in boldface, while wood and charcoal samples that are clearly not associated with the time of hardening of the mortar are given in italic. Laboratory numbers are Aarhus AAR numbers unless otherwise indicated (Hel-# are Helsinki conventional Radiocarbon Laboratory).

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
ECKERÖ CHURCH										
Unit: tower *(conclusive)*										
Eka 021	1474	plant			440	80	-28,5			
EKA 029W	2001	wood			395	55	-23,4			
Eka 015	**1471,1**	**mortar**	**3.8; NR**	**45**	**370**	**120**	**-11,7**	**-17,3**	**CI**	
Eka 015	1471,2	mortar		55	390	90	-11,5	-18,6		
Eka 016	**1472,1**	**mortar**	**5.2; NR**	**48**	**350**	**70**	**-10,4**	**-19,9**	**CIII**	
Eka 016	1472,2	mortar		52	570	70	-8,6	-20,9		
Dendro: AD 1469										
Unit: nave *(conclusive)*										
Eka 010W	Hel-2999	wood			680	70				
Eka 012	**1470,1**	**mortar**	**6.2; NR**	**40**	**800**	**110**	**-15,7**	**-22,4**	**CI, CII**	
Eka 012	1470,2	mortar		60	855	65	-8,9	-21,4		
Eka 011W	Hel-3000	wood			780	80				
EKA 025.1	**2062,1**	**mortar**	**8.6; 63-74**	**29**	**715**	**65**	**-13,3**	**-13,3**	**CI, CII**	
EKA 025.2	2062,2	mortar		71	790	75	-11,1	-11,1		
EKA 026.1	**2063,1**	**mortar**	**5.8; 63-74**	**43**	**810**	**100**	**-16,1**	**-22,7**	**CI, CII**	
EKA 026.2	2063,2	mortar		57	850	55	-14,6	-22,5		
EKA 027.1	**2064,1**	**mortar**	**5.4; 63-74**	**46**	**750**	**90**	**-11,5**	**-19,2**	**CII**	
EKA 027.2	2064,2	mortar		54	1040	150	-10,9	-19,2		
Eka 027-2.1	**2064-2.1**	**mortar**	**4.8; 76-125**	**19,2**	**855**	**50**	**-12,64**	**-19,57**	**CII**	
Eka 027-2.2	2064-2.2	mortar		18,4	965	48	[-9]			Estimated δ13C value
Eka 027-2.3	2064-2.3	mortar		19,0	1076	47	-11,29	-19,82		
Eka 027-2.4	2064-2.4	mortar		17,7	1149	49	-11,37	-19,87		
Eka 027-2.5	2064-2.5	mortar		24,4	1801	44	-10,96	-19,82		
EKA 028 C	*2000*	*charcoal*			*640*	*60*	*-24,2*			

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
EKA 028i.1	**2065,1**	**mortar**	**8.1; 63-74**	**32**	**740**	**80**	**-13,6**	**-19,6**	**CII**	
EKA 028i.2	2065,2	mortar		68	1010	55	-9,4	-17,8		
EKA 028y.1	**2066,1**	**mortar**	**6.7; 63-74**	**34**	**705**	**55**	**-13,3**	**-20,4**	**CII**	
EKA 028y.2	2066,2	mortar		66	1260	55	-10	-19,9		
EKA 030 W	2049	wood			840	90	-24,2			
EKA 030.1	**2067,1**	**mortar**	**7.3; 63-74**	**33**	**690**	**55**	**-18,5**	**-19,9**	**CI, CII**	
EKA 030.2	2067,2	mortar		67	690	60	-13,3	-17,3		
Eka 030-2.1	**2067-2.2.1**	**mortar**	**7.7; 63-74**	**22,1**	**[705]**	**55**	**-19,64**	**-19,94**	**CI, CII**	
Eka 030-2.2	2067-2.2.2	mortar		17,3	889		-7,73	-14,94		
Eka 030-2.3	2067-2.2.3	mortar		23,9	955	44	-14,62	-17,89		
Eka 030-2.4	2067-2.2.4	mortar		19,3	895	55	-15,42	-17,39		
Eka 030-2.5	2067-2.2.5	mortar		38,2	1200	50	[-15]			Estimated δ13C value
EKA 031.1	**2068,1**	**mortar**	**6.0; 63-74**	**40**	**670**	**75**	**-11,4**	**-20,1**	**CI, CII**	
EKA 031.2	2068,2	mortar		60	670	60	-12	-22,1		
Eka 018W	*Hel-3002*	*wood*			*550*	*80*				
Unit: porch *(conclusive)*										
Eka 007W	*Hel-2997*	*wood*			*1190*	*90*				
Eka 008W	Hel-2998	wood			290	70				
Eka 003.1	**1469,1**	**mortar**	**7.4; NR**	**35**	**280**	**55**	**-13**		**CI**	
Eka 003.2	1469,2	mortar		65	210	70	-10,4	-18,9		
FINSTRÖM CHURCH										
Unit: first nave *(conclusive?)*										
Fika 033.1	**1877,1**	**mortar**	***4.8, <250 panned***	**32**	**680**	**55**	**-13,4**	**-15,1**	**CI, CIII**	<Unusually large grain size -
FIKA-033.2	1877,2	mortar		68	760	60	-8,7	-13,1		should be repeated
Fika 051-2.1	**8953-2.1**	**mortar**	**6.4; 76-150**	**15,7**	**740**	**50**	**-19,82**	**-20,08**	**CI, CIII**	with smaller grain size>
Fika 051-2.2	8953-2.2	mortar		17,3	687	48	-17,34	-20,4		
Fika 051-2.3	8953-2.3	mortar		15,3	712	47	-18,66	-21,02		
Fika 051-2.4	8953-2.4	mortar		14,9	675	70	-19,4	-22,58		
Fika 051-2.5	8953-2.5	mortar		37,3	738	47	-19,26	-23,48		
Unit: rebuilding of church *(conclusive)*										

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
Fika 050.1	8952,1	mortar	4.7; 76-150	19,9	505	47	-20,64	-16,56		<From deep within wall,
Fika 050.2	8952,2	mortar		19,6	660	60	-19,87	-21,66		i.e. delayed hardening,
Fika 050.3	8952,3	mortar		19,4	667	45	-22,02	-24,41		and very negative δ13C>
Fika 050.4	8952,4	mortar		18,4	592	47	-21,81	-23,88		
Fika 050.5	8952,5	mortar		22,3	740	90	-21,7	-24,83		
Fika 052.1	**8954,1**	**mortar**	**4.0; 76-150**	**19,7**	**496**	**43**	**-11,49**	**-13,16**		Normal δ13C value
Fika 052.2	8954,2	mortar		21,6	450	65	-12,67	-15,08		
Fika 052.3	8954,3	mortar		20,3	515	75	-13,31	-16,12		
Fika 052.4	8954,4	mortar		12,2	500	50	-13,37	-16,67		
Fika 052.5	8954,5	mortar		26,8	553	50	-13,2	-17,28		
Fika 002.1	**1862,1**	**mortar**	**8.8; <250 panned**	**25**	**535**	**60**	**-13,7**	**-18,4**	**CI, CII**	
Fika 002.2	1862,2	mortar		75	375	45	-9,6	-16,8		
Fika 002W	1863	wood			555	60	-24,2			
Fika 018.1	**1864,1**	**mortar**	**8.5; <250 panned**	**33**	**390**	**50**	**-11,8**	**-20,2**	**CI, CII**	
Fika 018.2	1864,2	mortar		67	470	60	-9,2	-19		
Fika 018W	1865	wood			555	65	-20,3			
Fika 058.1	**10151,1**	**mortar**	**7.1; 46-75**	**20,7**	**415**	**29**	**-10,51**	**-19,01**	**CI, CII**	
Fika 058.2	10151,2	mortar		20,4	473	28	-10,01	-18,74		
Fika 058.3	10151,3	mortar		19,5	574	29	-10,86	-20,67		
Fika 058.4	10151,4	mortar		18,8	480	30	-10,74	-21,09		
Fika 058.5	10151,5	mortar		20,7	499	35	-11,88	-21,41		
Fika 058Li.1	**10155,1**	**lime**	**5.3; 21-150**	**75**	**376**	**34**	**-7,04**	**-19,31**	**CI, CII**	
Fika 058Li.2	10155,2	lime		25	439	39	-8,14	-21,29		
Fika 057.1	**10150,1**	**mortar**	**6.7; 46-75**	**18,9**	**406**	**35**	**-10,5**	**-18,68**	**CI, CII**	
Fika 057.2	10150,2	mortar		19,6	431	30	-10,4	-18,85		
Fika 057.3	10150,3	mortar		19,4	485	37	-11,21	-20,52		
Fika 057.4	10150,4	mortar		18,9	417	35	-11,68	-21,08		
Fika 057.5	10150,5	mortar		23,2	470	34	-11,23	-21,85		
Fika 021.1	**1866,1**	**mortar**	**6.3; <250, panned**	**50**	**440**	**50**	**-12,1**	**-19,1**	**CI, CII**	
Fika 021.2	1866,2	mortar		50	470	50	-11,3	-18,3		
Fika 021	**1867**	**lime**	**NR; NR**		**400**	**55**	**-7,4**			

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
Fika 021W	*1878*	*wood*			*630*	*60*	*-24,1*			
Fika 022W	1868	wood			405	55	-24,3			
Fika 059.1	**10152,1**	**mortar**	**6.7; 46-75**	17,6	**416**	**35**	**-17,59**	**-20,37**	**CII**	
Fika 059.2	10152,2	mortar		16,7	531	28	-9,46	-16,57		
Fika 059.3	10152,3	mortar		16,6	498	26	-13,02	-18,76		
Fika 059.4	10152,4	mortar		17,4	484	30	-13,86	-19,54		
Fika 059.5	10152,5	mortar		31,8	544	31	-13,47	-19,59		
Fika 060.1	**10153,1**	**mortar**	**6.7; 46-75**	20,5	**416**	**31**	**-11,97**	**-19,21**	**CI, CII**	
Fika 060.2	10153,2	mortar		22,5	430	33	-6,2	-16,9		
Fika 060.3	10153,3	mortar		22,1	414	29	-9,25	-18,87		
Fika 060.4	10153,4	mortar		23,4	401	32	-10,07	-19,06		
Fika 060.5	10153,5	mortar		11,5	453	46	-10,88	-19,29		
Fika 061W	10156	wood			391	33	-25,5			
Fika 063W	10157	wood			543	34	-24,73			
Unit: sacristy										
Fika 071.1	**10154,1**	**mortar**	**7.8; 46-75**	23	**392**	**35**	**-16,27**	**-18,62**	**CI**	
Fika 071.2	10154,2	mortar		21	432	38	-9,4	-15,99		
Fika 071.3	10154,3	mortar		20,2	398	43	-12,8	-17,32		
Fika 071.4	10154,4	mortar		19,8	350	36	-13,96	-17,83		
Fika 071.5	10154,5	mortar		16	589	32	-13,85	-17,51		
Dendro: AD 1440-1440										
Unit: tower										
Dendro: AD 1467										
Unit: porch										
Dendro: AD 1452										
FÖGLÖ CHURCH										
Unit: nave *(inconclusive)*										
Foka 001.1	11855,1	mortar	8.4; 46-75	12,7	393	34	-21,95	-20,48		
Foka 001.2	11855,2	mortar		20,4	571	32	-11,01	-17,89		
Foka 001.3	11855,3	mortar		22,6	760	39	-12,26	-19,15		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	$\delta^{13}C$ ‰ VPDB	$\delta^{18}O$ ‰ VPDB	Criterion	Comments
Foka 003.1	**11857,1**	**mortar**	**8.8; 46-75**	**10,8**	**610**	**31**	**-20,67**	**-20,72**	**CIV**	
Foka 003.2	11857,2	mortar		23	714	28	-8,84	-18,6		
Foka 003.3	11857,3	mortar		21,3	1085	46	-9,88	-19,29		
Unit: tower *(conclusive)*										
Foka 004.1	**12323,1**	**mortar**	**8.3, 46-75**	**9,1**	**338**	**41**	**-26,36**	**-14,86**	**CII**	
Foka 004.2	12323,2	mortar		19,7	446	30	-13,49	-15,42		
Foka 004.3	12323,3	mortar		18,0	636	33	-13,71	-15,6		
Foka 006.1	**12324,1**	**mortar**	**8.0, 46-75**	**9,1**	**475**	**35**	**-26,05**	**-19,26**		
Foka 006.2	12324,2	mortar		20,0	589	35	-11,44	-17,47		
Foka 006.3	12324,3	mortar		18,1	694	44	-10,67	-17,57		
Foka 007.1	**12325,1**	**mortar**	**7.6; 46-75**	**9,3**	**323**	**35**	**-20,43**	**-19,89**	**CII**	
Foka 007.2	12325,2	mortar		20,2	493	36	-6,93	-17,58		
Foka 007.3	12325,3	mortar		19,3	481	34	-9,19	-18,71		
Foka 008.1	**12326,1**	**mortar**	**6.7; 46-75**	**9,7**	**356**	**47**	**-22,7**	**-18,16**	**CII**	
Foka 008.2	12326,2	mortar		21,9	495	31	-14,9	-16,6		
Foka 008.3	12326,3	mortar		15,0	605	22	-15,79	-17,89		
GETA CHURCH										
Unit: nave *(conclusive)*										
Geka 001-2.1	**10599-2.1**	**mortar**	**8.0; 46-75**	**13,3**	**463**	**31**	**-20,15**	**-22,46**	**CI, CII**	
Geka 001-2.2	10599-2.2	mortar		15,4	455	30	-5,58	-18,09		
Geka 001-2.3	10599-2.3	mortar		14,5	438	28	-9,81	-18,7		
Geka 001-2.4	10599-2.4	mortar		14,8	422	27	-12,25	-18,75		
Geka 001-2.5	10599-2.5	mortar		41,9	517	31	-12,89	-20,67		
Geka 001W	10604	wood			426	33	-23,32			
Geka 002.1	**10600,1**	**mortar**	**7.0; 46-75**	**18,6**	**444**	**31**	**-20,25**	**-23,74**	**CI, CII**	
Geka 002.2	10600,2	mortar		22,0	447	26	-4,01	-18,47		
Geka 002.3	10600,3	mortar		17,7	446	30	-10,19	-20,07		
Geka 002.4	10600,4	mortar		18,9	451	28	-11,72	-21,3		
Geka 002.5	10600,5	mortar		22,8	584	27	-13,03	-20,87		
Geka 003.1	**10601,1**	**mortar**	**6.5; 46-75**	**16,3**	**396**	**29**	**-18,44**	**-21,02**	**CII**	

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
Geka 003.2	10601,2	mortar		17,9	463	27	-5,59	-16,11		
Geka 003.3	10601,3	mortar		16,7	443	31	-11,36	-18,55		
Geka 003.4	10601,4	mortar		16,5	372	36	-12,48	-19,39		
Geka 003.5	10601,5	mortar		32,5	484	28	-13,49	-19,98		
Geka 005.1	**10602,1**	**mortar**	**7.2; 46-75**	**17,4**	**466**	**37**	**-20,1**	**-22,78**	**CI, CII**	
Geka 005.2	10602,2	mortar		19,9	496	30	-2,94	-16,97		
Geka 005.3	10602,3	mortar		17,2	540	28	-9,57	-19,44		
Geka 005.4	10602,4	mortar		18,2	540	26	-11,22	-21,01		
Geka 005.5	10602,5	mortar		27,3	589	32	-12,84	-21,22		
Geka 006C	10605	charcoal			492	28	-24,8			
Dendro: AD 1470-1475										
HAMMARLAND CHURCH										
Unit: early nave (conclusive)										
Haka 018.1	**1465,1**	**mortar**	**5.3; NR**	**45**	**695**	**65**	**-12,9**	**-22,1**	**CI, CII**	
Haka 018.2	1465,2	mortar		55	750	60	-8	-21,4		
Haka 018 C	*1466*	*charcoal*			*820*	*60*	*-26,7*			
Haka 042.1	**2521,1**	**mortar**	**6.9; 39-75**	**30**	**725**	**55**	**-19,4**	**-20,4**	**CI, CII**	
Haka 042.2	2521,2	mortar		70	815	50	-11,3	-17,5		
Haka 052.1	**2168,1**	**mortar**	**7.2; 63-74**	**40**	**690**	**65**	**-13,9**	**-20,3**	**CII**	
Haka 052.2	2168,2	mortar		60	875	70	-8,4	-18,6		
Haka 052-2.1	**2168-2.2.1**	**mortar**	**2.9; 76-125**	**19,5**	**756**	**44**	**[-17.04]**	**[-13.53]**	**CII**	
Haka 052-2.2	2168-2.2.2	mortar		17,1	841	43	-3,98	-16,19		
Haka 052-2.3	2168-2.2.3	mortar		18,1	882	44	-9,19	-18,52		
Haka 052-2.4	2168-2.2.4	mortar		16,9	729	33	-9,72	-19,12		
Haka 052-2.5	2168-2.2.5	mortar		28,1	1010	55	-11,04	-19,07		
Haka 52 C	*2169*	*charcoal*			*970*	*70*	*-23,1*			
Haka 53.1	**2522,1**	**mortar**	**6.8; 39-75**	**29**	**755**	**45**	**-16,5**	**-21,4**	**CI, CII**	
Haka 53.2	2522,2	mortar		71	790	40	-9,6	-19		
Haka 54.1	**2171,1**	**mortar**	**5.2; 63-74**	**40**	**710**	**90**	**-12**	**-19,2**	**CI, CII**	
Haka 54.2	2171,2	mortar		60	730	60	-10,9	-19,4		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	$\delta^{13}C$ ‰ VPDB	$\delta^{18}O$ ‰ VPDB	Criterion	Comments
Haka 57.1	**2174,1**	**mortar**	**5.8; 63-74**	**40**	**680**	**50**	**-12,5**	**-18,1**	**CI, CII**	
Haka 57.2	2174,2	mortar		60	755	45	-10,7	-19		
Haka 58.1	**2176,1**	**mortar**	**5.3; 63-74**	**40**	**795**	**50**	**-11,5**	**-17,7**	**CI, CII**	
Haka 58.2	2176,2	mortar		60	845	60	-10,4	-19,3		
Haka 58 C	*2177*	*charcoal*			*950*	*55*	*-24,1*			
Unit: tower *(conclusive)*										
Haka 024W	*Hel-2996*	*wood*			*860*	*70*				
Haka 061 C	*2182*	*charcoal*			*1015*	*45*	*-24,5*			
Haka 061.1	2181	**mortar**	**6.0; 63-74**	**43**	640	60	**-13,3**	**-18,6**	**CII**	
Haka 061.2	2181	**mortar**		**57**	690	90	-10,4	-18,3		
Haka 062.1	**2184,1**	**mortar**	**6.1; 63-74**	**39**	**740**	**70**	**-14,2**	**-17,8**	**CI, CII**	
Haka 062.2	2184,2	mortar		61	700	55	-11,6	-18,1		
Haka 048.1	**2080,1**	**mortar**	**4.0; 63-74**	**73**	**690**	**75**	**-12,3**	**-17,6**	**CII**	
Haka 048.2	2080,2	mortar		27	910	45	-8,2	-17		
Haka 048 C	2048	charcoal			745	65	-26,2			
Haka 049.1	**2081,1**	**mortar**	**8.7; 63-74**	**31**	**680**	**50**	**-13,9**	**-20,5**	**CI, CII**	
Haka 049.2	2081,2	mortar		69	660	50	-9,2	-19,5		
Unit: vaulting and rebuilding of nave *(conclusive)*										
Haka 009W	Hel-2995	wood			660	75				
Haka 002W	Hel-2994	wood			630	70				
Haka 010W	Hel-3313	wood			570	80				
Haka 047W	2046	wood			640	80	-28,9			
Haka 047.1	***2079,1***	***mortar***	***3.8; 63-74***	***58***	***810***	***50***	***-12,4***	***-19,9***	***CI, CII***	<probably wrong -
Haka 047.2	2079,2	mortar		42	800	75	-10,7	-19,1		older than attached wood>
Haka 047 C	*2047*	*charcoal*			*910*	*75*	*-24,8*			
Haka 045.1	***2077,1***	***mortar***	***5.7; 63-74***	***47***	***815***	***45***	***-11,7***	***-19,4***		<probably wrong -
Haka 045.2	2077,2	mortar		53	730	50	-9,2	-19,1		too old>
Haka 041.1	**2072,1**	**mortar**	**5.7; 63-74**	**44**	**510**	**70**	**-13**	**-21,9**	**CII**	
Haka 041.2	2072,2	mortar		56	800	80	-7,6	-19,6		
Haka 055.1	**2172,1**	**mortar**	**NR; 63-74**	**39**	**575**	**70**	**-11,9**	**-19,4**	**CII**	
Haka 055.2	2172,2	mortar		61	845	55	-10,3	-19,5		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
Haka 055-2.1	***2172-2.2.1***	***mortar***	***3.0; 76-125***	*16,8*	***739***	***32***	***-13,85***	***-18,83***	***CI***	<profile older than
Haka 055-2.2	2172-2.2.2	mortar		17,0	768	30	[-8]			result from two
Haka 055-2.3	2172-2.2.3	mortar		16,4	807	33	-10,25	-18,6		fractions, depending on
Haka 055-2.4	2172-2.2.4	mortar		17,1	740	33	[-8.68]	[-14.32]		different grain-size fractions>
Haka 055-2.5	2172-2.2.5	mortar		32,0	825	50	-10,32	-19,28		
Haka 061.1	**2181,1**	**mortar**	**6.0; 63-74**	**43**	**640**	**60**	**-13,3**	**-18,6**	**CI, CII**	
Haka 061.2	2181,2	mortar		57	690	90	-10,4	-18,3		
Haka 044.1	**2075,1**	**mortar**	**5.3; 63-74**	**56**	**615**	**55**	**-12,5**	**-19,6**	**CII**	
Haka 044.2	2075,2	mortar		44	760	55	-10,2	-18,8		
Haka 044L.1	**2076,1**	**lime**	**5.8; not sieved**	**47**	**635**	**60**	**-10,3**	**-19,3**	**CI, CII**	
Haka 044L.2	**2076,2**	**lime**		**53**	**660**	**115**	**-6,7**	**-19,9**		
Haka 046.1	**2078,1**	**mortar**	**5.6; 63-74**	**46**	**625**	**50**	**-13,9**	**-20,9**	**CII**	
Haka 046.2	2078,2	mortar		54	880	55	-8,1	-19,6		
Haka 056.1	**2173,1**	**mortar**	**6.0; 63-74**	**37**	**615**	**50**	**-11,9**	**-18,9**	**CI, CII**	
Haka 056.2	2173,2	mortar		63	675	60	-11	-19,9		
Haka 059.1	**2178,1**	**mortar**	**7.2; 63-74**	**33**	**615**	**55**	**-13**	**-19**	**CII**	
Haka 059.2	2178,2	mortar		67	730	60	-11,1	-18,8		
Haka 059C	*2179*	*charcoal*			*1270*	*60*	*-26*			
Haka 060.1	**2180,1**	**mortar**	**6.0; 63-74**	**38**	**615**	**50**	**-11,9**	**-19,3**	**CII**	
Haka 060.2	2180,2	mortar		62	715	50	-10,5	-19,8		
Unit: "murklack" ***(conclusive?)***										
Haka 001.1	**1463,1**	**mortar**	**4; NR**	**50**	**545**	**65**	**-10,1**	**-16,7**	**CI**	
Haka 001.2	1463,2	mortar		50	630	70	-9,8	-16,4		
Haka 001 C	1464	charcoal			430	60	-26,5			
Haka 040.1	**2071,1**	**mortar**	**5.7; 63-74**	**47**	**715**	**45**	**-12,8**	**-18,9**	**CI**	
Haka 040.2	2071,2	mortar		53	760	75	-11,6	-18,6		
Haka 043.1	**2074,1**	**mortar**	**6.3; 63-74**	**35**	**490**	**80**	**-15**	**-19,8**	**CII**	
Haka 043.2	2074,2	mortar		65	690	80	-14,4	-20,6		
Unit: chancel ***(conclusive)***										
Haka 031W	Hel-3260	wood			520	60				
Haka 038.1	**2069,1**	**mortar**	**7.5; 63-74**	**36**	**510**	**60**	**-15,2**	**-21,5**	**CI, CII**	

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	$\delta^{13}C$ ‰ VPDB	$\delta^{18}O$ ‰ VPDB	Criterion	Comments
Haka 038.2	2069,2	mortar		64	600	65	-10,4	-19,8		
Haka 038C	2089	charcoal			570	45	-25			
Haka 038W	2088	wood			480	50	-25,3			
Haka 039.1	**2070,1**	**mortar**	**7.2; 63-74**	**43**	**480**	**55**	**-15,8**	**-20,9**	**CIII**	
Haka 039.2	2070,2	mortar		57	695	65	-10,7	-17,8		
Unit: chancel roof construction *(conclusive)*										
Haka 051.1	**2083,1**	**mortar**	**4.6; 63-74**	**57**	**340**	**45**	**-16,2**	**-19,3**	**CIV**	
Haka 051.2	2083,2	mortar		43	730	45	-15,4	-17,6		
Dendro: AD 1466										
Unit: sacristy *(conclusive)*										
Haka 050.1	**2082,1**	**mortar**	**7.6; 63-74**	**43**	**375**	**50**	**-14,3**	**-20,7**	**CIV**	
Haka 050.2	2082,2	mortar		57	795	50	-11,2	-18,5		
Haka 050 W	2090	wood			450	60	-25,6			
HAMNÖ CHAPEL, KÖKAR *(conclusive)*										
Hamnkap.001.1	**4236,1**	**mortar**	**8.4; 39-75**	**20**	**310**	**35**	**-18,1**	**-21,2**	**CI**	
Hamnkap.001.2	4236,2	mortar		80	315	45	-12,7	-21		
Hamnkap. 002.1	**4237,1**	**mortar**	**7.7; 39-75**	**30**	**460**	**35**	**-12,8**	**-19,7**	**CI, CII**	
Hamnkap. 002.2	4237,2	mortar		70	440	40	-12,1	-20,2		
Hamnkap. 005.1	**4238.1-1**	**mortar**	**8.0; 39-75**	**28**	**395**	**40**	**-16,9**	**-21,5**	**CII**	
Hamnkap. 005.2	4238.2-1	mortar		72	540	65	-13,2	-20,3		
Hamnkap. 005.2.1	**4238.2-1**	**mortar**	**8.1; 39-75**	**22**	**390**	**45**	**-18,2**	**-21,2**	**CII**	
Hamnkap. 005.2.2	4238.2-2	mortar		78	520	50	-13,3	-20,4		
Hamnkap. 006.1	**4239,1**	**mortar**	**8.9; 39-75**	**25**	**365**	**40**	**-14,3**	**-21,2**	**CII**	
Hamnkap. 006.2	4239,2	mortar		75	515	50	-12,7	-22		
JOMALA CHURCH										
Unit: nave (conclusive)										
joka 030.1	**13006,1**	**mortar**	**7.4; 46-75µm**	**17,0**	**849**	**40**	**-11,08**	**-11,13**	**CI, CII**	
Joka 030.2	13006,2	mortar		18,1	886	44	-10,55	-10,03		
Joka 031.1	**13144,1**	**mortar**	**6.1; 46-75µm**	**12,2**	**817**	**34**	**-11,75**	**-12,01**	**CI, CII**	

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
Joka 031.2	13144,2	mortar		18,3	787	29	-11,81	-11,3		
Joka 031.4	13144,4	mortar		14,7	885	28	-11,72	-11,04		
Joka 031.5	13144,5	mortar		17,4	936	29	-11,6	-10,76		
Joka 033W	Oxford	wood			780	15				
Unit: tower (conclusive)										
joka 005.1	**4839,1**	**mortar**	**8.3; 39-75**	**27**	**735**	**30**	**-17,7**	**-22,4**	**CII**	
Joka 005.2	4839,2	mortar		72	865	50	-9,5	-19,5		
Joka 011.1	**4836,1**	**mortar**	**9.5; 39-75**	**17**	**675**	**25**	**-19,5**	**-22,6**	**CI, CII**	
Joka 011.2	4836,2	mortar		83	740	40	-8,3	-19,5		
Joka 013a.1	**4835,1**	**mortar**	**5.7; 39-75**	**28**	**765**	**30**	**-22,8**	**-25**	**CII**	
Joka 013a.2	4835,2	mortar		72	900	45	-9,8	-22		
Joka 013a.2.1	***4835.2.1***	***mortar***	***3.6; 39-75***	***10,3***	***810***	***35***	***-23,35***	***-22,72***	***CI, CII***	<age profile too old
Joka 013a.2.2	***4835.2.2***	mortar		42,8	865	30	-11,61	-19,42		old compared to dendro -
Joka 013a.2.3	***4835.2.3***	mortar		24,1	850	35	-10,01	-19,53		reason unknown>
Joka 013a.2.4	***4835.2.4***	mortar		22,5	840	30	-11,13	-20,16		
Joka 013a.3.1	4835.3.1	mortar	4.6; 39-75	3,5	825	35	-30,22	-23,97		very negative δ13C
Joka 013a.3.2	4835.3.2	mortar		28,2	907	28	-10,82	-19,48	CII	
Joka 013a.3.3	4835.3.3	mortar		15,0			-12,03	-19,42		
Joka 013a.3.4	4835.3.4	mortar		12,2	890	30	-10,05	-19,17		
Joka 013a.3.5	4835.3.5	mortar		15,0			-10,87	-20,01		
Joka 013a.3.6	4835.3.6	mortar		12,4	886	29	-11,06	-19,89		
Joka 013a.3.7	4835.3.7	mortar		8,0			-11,16	-19,59		
Joka 013a.3.8	4835.3.8	mortar		2,6	1135	50	-11,71	-18,82		
Joka 013a.3.9	4835.3.9	mortar		3,0			-11,24	-16,76		
joka 014.1	**4838,1**	**mortar**	**8.9; 39-75**	**22**	**735**	**30**	**-15**	**-17,9**	**CII**	
Joka 014.2	4838,2	mortar		78	815	45	-8,1	-16,4		
Joka 014-2.1	4838-2.2.1	mortar	6.3, 46-75	17,9	879	47	-14,64	-16,29		
Joka 014-2.2	4838-2.2.2	mortar		19,2	900	80	-3,1	-12,55		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	$\delta^{13}C$ ‰ VPDB	$\delta^{18}O$ ‰ VPDB	Criterion	Comments
Joka 014-2.3	4838-2.2.3	mortar		18,5	893	50	-9,27	-15,04		
Joka 014-2.4	4838-2.2.4	mortar		18,9	930	42	-9,96	-15,36		
Joka 014-2.5	4838-2.2.5	mortar		24,6	1055	47	-10,08	-15,13		
Joka 016.1	**4837,1**	**mortar**	**8.8; 39-75**	**20**	**715**	**30**	**-20,9**	**-21,5**	**CII**	
Joka 016.2	4837,2	mortar		80	925	40	-10,9	-18,2		
dendro: AD 1283										
KUMLINGE CHURCH										
Unit: nave, west gable *(conclusive)*										
Kumka 001.1	**11852,1**	**mortar**	**2.8; 46-75 µm**	**17,4**	**428**	**34**	**-15,07**	**-17,23**	**CI**	
Kumka 001.2	11852,2	mortar		18,8	495	27	-4,21	-13,21		
Kumka 001.3	11852,3	mortar		25,0	528	28	-9,4	-16,1		
Kumka 002.1	**11853,1**	**mortar**	**7.4; 46-75µm**	**18,5**	**535**	**29**	**-15,18**	**-18,1**	**CI, CII**	
Kumka 002.2	11853,2	mortar		24,9	516	29	-6,64	-17,31		
Kumka 002.3	11853,3	mortar		25,1	489	26	-10,78	-17,31		
Kumka 003.1	**12319,1**	**mortar**	**7.4; 46-75µm**	**18,5**	**512**	**36**	**-16,88**	**-15,77**	**CI, CII**	
Kumka 003.2	12319,2	mortar		24,9	491	42	-5,56	-11,99		
Kumka 003.3	12319,3	mortar		25,1	583	40	-9,59	-13,6		
Unit: nave east gable *(conclusive)*										
Kumka 004.1	11854,1	mortar	7.5; 46-75µm	14,6	250	27	-11,36	-15,98		
Kumka 004.2	**11854,2**	**mortar**		**23,6**	**632**	**49**	**-8,24**	**-15,19**	**plateau**	Fire damage
Kumka 004.3	**11854,3**	**mortar**		**24,3**	**607**	**34**	**-11,72**	**-18,05**		
Kumka 004.4	**11854,4**	**mortar**		**24,1**	**603**	**31**	**-11,93**	**-18,3**		
Kumka 004.5	11854,5	mortar		13,4	806	27	-12,29	-18,15		
Kumka 005.1	12320,1	mortar	6.0; 46-75µm	10,8	294	48	-15,54	-18,19		
Kumka 005.2	12320,2	mortar		23,8	420	34	-4,87	-16,02		
Kumka 005.3	**12320,3**	**mortar**		**23,7**	**550**	**35**	**-9,21**	**-17,89**	**plateau**	Fire damage
Kumka 005.4	**12320,4**	**mortar**		**21,2**	**549**	**25**	**-10,63**	**-19,32**		
Kumka 005.5	**12320,5**	**mortar**		**20,4**	**678**	**25**	**-11,29**	**-18,98**		
Kumka 006.1	12321,1	mortar	5.6; 46-75µm	9,0	107	33	-16,18	-17,22		
Kumka 006.2	**12321,2**	**mortar**		**21,2**	**401**	**34**	**-8,11**	**-15,65**		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	$\delta^{13}C$ ‰ VPDB	$\delta^{18}O$ ‰ VPDB	Criterion	Comments
Kumka 006.3	**12321,3**	**mortar**		**20,7**	**420**	**34**	**-10,86**	**-15,61**	**plateau**	
Kumka 006.4	**12321,4**	**mortar**		**21,5**	**464**	**27**	**-11,62**	**-18,61**		
Kumka 006.5	12321,5	mortar		27,5	616	29	-11,69	-18,82		
Unit: tower staircase *(inconclusive)*										
Kumka 007.1	**13005,1**	**mortar**	**5.7; 46-75µm**	**9,9**	**440**	**39**	**-15,63**	**-19,36**	**CIV**	
Kumka 007.2	13005,2	mortar		22,7	573	26	-6,1	-16,11		
Kumka 007.3	13005,3	mortar		18,9	543	36	-10,16	-18,44		
KÖKAR CHURCH										
Unit: chancel (inconclusive)										
Kökar 010.1	13147,1	mortar	8.6; 46-75	9,3	775	48	-16,13	-11,91		<Atypical profile, hydrolysis
Kökar 010.2	13147,2	mortar		11,4	751	31	-15,64	-10,88		with HCl >
Kökar 010.3	13147,3	mortar		11,8	734	34	-16,22	-11,13		
Kökar 010.4	13147,4	mortar		16,8	634	30	-15,65	-9,96		
Kökar 010.5	13147,5	mortar		50,4	637	34	-15,04	-11,09		
LEMBÖTE CHAPEL										
Unit: east gable *(conclusive)*										
Lembo 3.1	**4232,1**	**mortar**	**5.4; 39-62**	**41**	**590**	**30**	**-15,9**	**-18,2**	**CII**	
Lembo 3.2	4232,2	mortar		59	775	55	-17,3	-19,7		
Lembo 4.1	**4233,1**	**mortar**	**4.4; 39-62**	**50**	**675**	**35**	**-19,4**	**-20,8**	**CII**	
Lembo 4.2	4233,2	mortar		50	785	50	-20,2	-23,1		
Lembo 5.1	**4234,1**	**mortar**	**5.6; 39-62**	**32**	**610**	**40**	**-16,9**	**-19,7**	**CII**	
Lembo 5.2	4234,2	mortar		68	755	55	-18,5	-21		
Lembo 8.1	**4235,1**	**mortar**	**5.6; 39-62**	**32**	**705**	**45**	**-12,8**	**20,6**	**CI, CII**	
Lembo 8.2	4235,2	mortar		68	770	50	-10,9	-22		
Lembo-1.1	**3186,1**	**mortar**	**8.5; 39-62**	**65**	**710**	**35**	**-18,9**	**-19,4**	**CII**	
Lembo-1.2	3186,2	mortar		35	815	40	-19	-20,3		
Lembo-2.1	**3187,1**	**mortar**	**5.8; 39-62**	**34**	**580**	**40**	**-12**	**-18,8**	**CII**	
Lembo-2.2	3187,2	mortar		66	795	35	[-12]			Estimated δ13C value

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
LEMLAND CHURCH										
Unit: nave *(conclusive)*										
Leka 021.1	**13145,1**	**mortar**	**2.3; 46-75**	**34,2**	**821**	**31**	**-6,29**	**-4,97**	**CI**	
Leka 021.2	13145,2	mortar		26,5	836	29	-6,81	-4,72		
Leka 021.3	13145,3	mortar		27,7	875	29	-7,12	-5,09		
dendro: AD 1239-44										
dendro: AD 1285-88										
dendro: AD 1292-1295										
Unit: tower *(conclusive)*										
leka 002.1	**4808,1**	**mortar**	**5.4; 39-75**	**28**	**595**	**30**	**-10,3**	**-13**	**CIII**	
leka 002.2	4808,2	mortar		72	760	45	-7,2	-14,6		
leka 003C	*4809*	*charcoal*			*725*	*25*	*-22,5*			
leka 004C	*4810*	*charcoal*			*710*	*25*	*-21,7*			
leka 006C	*4811*	*charcoal*			*945*	*20*	*-23,8*			
leka 007.1	***4812,1***	***mortar***	***4.4; 39-75***	***32***	***475***	***30***	***-10,1***	***-18***		*Alkaline sample*
leka 007.2	4812,2	mortar		68	715	40	-8,5	-18,1		
leka 008.1	4814,1	mortar	5.8; <39	26	710	30	-18,2	-20,4		
leka 008.2	4814,2	mortar		74	650	40	-8,8	-17,7		
leka 008C	*4813*	*charcoal*			*870*	*25*	*-24,3*			
leka 009.1	**4815,1**	**mortar**	**7.5; 39-75**	**21**	**665**	**30**	**-18,5**	**-20,9**		
leka 009.2	4815,2	mortar		79	785	40	-9,4	-24		
dendro: AD 1318										
SALTVIK CHURCH										
Unit: sacristy and early nave *(conclusive)*										
Saka 119.1	**2534,1**	**mortar**	**7.8; 63-74**	**29**	**655**	**60**	**-5,1**	**-11**	**CI, CII**	
Saka 119.2	2534,2	mortar		71	780	110	-3	-9,8		
Saka 120.1	**2535,1**	**mortar**	**6.9; 63-74**	**33**	**[760]**	**45**	**[-15]**		**CI, CII**	Estimated δ13C value
Saka 120.2	2535,2	mortar		77	740	90	-7,6	-14,2		
Saka 121.1	**2536,1**	**mortar**	**6.8; 63-74**	**34**	**665**	**55**	**-11,6**	**-17,3**	**CII**	
Saka 121.2	2536,2	mortar		66	770	55	-7,9	-16,2		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	$\delta^{13}C$ ‰ VPDB	$\delta^{18}O$ ‰ VPDB	Criterion	Comments
Saka 121-2.1	**2536-2.2.1**	**mortar**	**5.0; 76-125**	**20,0**	**448**	**43**	**-10,8**	**-10,8**		
Saka 121-2.2	2536-2.2.2	mortar		14,4	559	49	-5,89	-5,89		
Saka 121-2.3	2536-2.2.3	mortar		14,6	580	55	-9,26	-9,26		
Saka 121-2.4	2536-2.2.4	mortar		13,7	499	44	-9,04	-9,04		
Saka 121-2.5	2536-2.2.5	mortar		37,3	642	38	-9,44	-9,44		
Saka 122.1	**2537,1**	**mortar**	**7.9; 63-74**	**30**	**750**	**80**	**-16,7**	**-19,6**	**CI, CII**	
Saka 122.2	2537,2	mortar		70	865	45	-11,7	-17,5		
Saka 122-2.1	**2537-2.1**	**mortar**	**6.8; 76-125**	**13,3**	**763**	**42**	**-16,55**	**-17,45**	**CI, CII**	
Saka 122-2.2	2537-2.2	mortar		16,2	751	50	-10,02	-15,95		
Saka 122-2.3	2537-2.3	mortar		15,9	825	55	-12,98	-17,48		
Saka 122-2.4	2537-2.4	mortar		18,5	740	55	-13,36	-17,26		
Saka 122-2.5	2537-2.5	mortar		36,5	840	55	-13,53	-16,52		
Saka 132.1	**3013,1**	**mortar**	**7.0; 39-62**	**39**	**720**	**45**	**-7,3**	**-13,8**	**CI, CII**	
Saka 132.2	3013,2	mortar		61	790	35	-7,7	-13,9		
Saka 147.1	**4563,1**	**mortar**	**5.8; 63-74**	**34**	**705**	**35**	**-9,8**	**-14,9**	**CI, CII**	
Saka 147.2	4563,2	mortar		66	695	50	-9,6	-14,8		
Unit: rebuilding of nave *(conclusive)*										
Saka 107W	Hel-3561	wood			520	70				
Saka 108W	Hel-3562	wood			640	70				
Saka 103.1	**2524,1**	**mortar**	**6.8; 63-74**	**29**	**595**	**45**	**-22,4**	**-22,9**	**CII**	
Saka 103.2	2524,2	mortar		71	865	60	-10,6	-18,4		
Saka 104.1	**2525,1**	**mortar**	**7.7; 63-74**	**29**	**625**	**45**	**-12,1**	**-17**	**CII**	
Saka 104.2	2525,2	mortar		71	1385	50	-6,8	-14,6		
Saka 105.1	**2995,1**	**mortar**	**7.7; <62**	**35**	**645**	**30**	**-11,7**	**-16,3**	**CI, CII**	
Saka 105.2	2995,2	mortar		65	690	25	-10,4	-16		
Saka 106.1	**2996,1**	**mortar**	**8.1; <62**	**43**	**625**	**30**	**-7,8**	**-11,9**	**CII**	
Saka 106.2	2996,2	mortar		57	700	40	-9,2	-12,8		
Saka 109.1	**2997,1**	**mortar**	**7.8; <62**	**50**	**625**	**30**	**-8,6**	**-14,1**	**CII**	
Saka 109.2	2997,2	mortar		50	705	30	-9,4	-14,9		
Saka 133.1	**3014,1**	**mortar**	**6.5; 39-62**	**43**	**635**	**40**	**-10**	**-16**	**CII**	
Saka 133.2	3014,2	mortar		57	765	35	-10,5	-16,5		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	$\delta^{13}C$ ‰ VPDB	$\delta^{18}O$ ‰ VPDB	Criterion	Comments
Saka 146.1	**4562,1**	**mortar**	**7.0; 39-62**	**27**	**615**	**40**	**-9,6**	**-15,5**	**CII**	
Saka 146.2	4562,2	mortar		73	900	55	-8,4	-15,9		
Saka 146-2.1	**4562-2.1**	**mortar**	**6.1; 63-74**	**16,5**	**632**	**44**	**-9,69**	**-14,36**	**CII**	
Saka 146-2.2	4562-2.2	mortar		19,0	810	65	-7,46	-13,38		
Saka 146-2.3	4562-2.3	mortar		18,7	895	55	-9,15	-15,08		
Saka 146-2.4	4562-2.4	mortar		20,8	894	46	-9,46	-15,09		
Saka 146-2.5	4562-2.5	mortar		24,2	948	48	-9,2	-14,71		
Saka 148.1	**4241,1**	**mortar**	**7.2; 39-75**	**34**	**645**	**35**	**-9,6**	**-13,8**	**CII**	
Saka 148.2	4241,2	mortar		66	735	35	-8,9	-14		
Saka 148-2.1	**4241-2.1**	**mortar**	**6.6; 39-62**	**17,3**	**613**	**43**	**-11,87**	**-14,05**	**CI, CII**	
Saka 148-2.2	4241-2.2	mortar		18,1	615	48	-6,13	-6,13		
Saka 148-2.3	4241-2.3	mortar		18,2	730	60	-9	-13,14		
Saka 148-2.4	4241-2.4	mortar		18,5	665	55	-9,41	-12,52		
Saka 148-2.5	4241-2.5	mortar		28,2	758	41	-9,86	-14,04		
Saka 151.1	**4564,1**	**mortar**	**7.1; 39-75**	**28**	**600**	**45**	**-10,3**	**-14,8**	**CII**	
Saka 151.2	4564,2	mortar		72	705	50	-9,1	-15,3		
Saka 152.1	**4242,1**	**mortar**	**7.6; NR**	**29**	**610**	**40**	**-10,6**	**-13,6**	**CI, CII**	
Saka 152.2	4242,2	mortar		71	645	45	-8,5	-14,8		
Dendro: AD 1373										
Unit: tower *(conclusive)*										
Saka 163W	5421	wood			615	35	-26,4			
Saka 164W	5422	wood			670	30	-23,1			
Saka 165W	5423	wood			650	30	-23			
Saka 110.1	**2998,1**	**mortar**	**6.3; <62**	**44**	**620**	**35**	**-10,6**	**-19,7**	**CII**	
Saka 110.2	2998,2	mortar		56	790	40	-9,5	-20,1		
Saka 113.1	**2529,1**	**mortar**	**8.2; 63-74**	**32**	**670**	**45**	**-15,3**	**-19,5**	**CII**	
Saka 113.2	2529,2	mortar		68	840	50	-7	-16,4		
Saka 153	4243	wood			690	45	-24			
Saka 118.1	**2533,1**	**mortar**	**6.9; 63-74**	**35**	**630**	**55**	**-13,3**	**-20,5**	**CII**	
Saka 118.2	2533,2	mortar		65	815	60	-9,7	-19,2		
Saka 155.1	**4246,1**	**mortar**	**6.2; 39-62**	**35**	**670**	**35**	**-22,3**	**-20,9**	**CI, CII**	

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
Saka 155.2	4246,2	mortar		65	675	35	-20,5	-21		
dendro: AD 1381										
Unit: tower upper level *(conclusive)*										
Saka 115W	Hel-3565	wood			495	45				
Saka 114.1	**2530,1**	**mortar**	**7.8; 63-74**	**31**	**495**	**45**	**-15,8**	**-20**	**CII**	
Saka 114.2	2530,2	mortar		69	590	55	-7,8	-17,6		
Saka 116.1	**3000,1**	**mortar**	**6.2; <62**	**35**	**535**	**30**	**-16,7**	**-20,4**	**CII**	
Saka 116.2	3000,2	mortar		65	630	35	-12,3	-19,1		
Saka 117.1	**3001,1**	**mortar**	**6.4; <62**	**36**	**590**	**35**	**-15,1**	**-19**	**CII**	
Saka 117.2	3001,2	mortar		64	780	30	-11,5	-17,6		
Saka 125.1	3006,1	mortar	7.7; 39-62	34	715	35	-11,1	-19,2		
Saka 125.2	3006,2	mortar		66	830	35	-6,5	-18,1		
Saka 126b.1	**3007,1**	**mortar**	**6.6; 39-62**	**36**	**585**	**50**	**-13**	**-22,5**	**CII**	
Saka 126b.2	3007,2	mortar		64	710	30	-8,8	-22		
Saka 154-2.1	**4244,1**	**mortar**	**7.6; NR**		**480**	**35**	**-10,6**	**-13,6**	**CII**	
Saka 154-2.2	4244,2	mortar			625	40	-8,2	-14,8		
Saka 154W	4245	wood			580	40	-23,6			
Unit: nave west gable *(conclusive)*										
Saka 013W	Hel-3332	wood			540	80				
Saka 111W	Hel-3563	wood			530	70				
Saka 112W	Hel-3564	wood			480	75				
Saka 129a.1	**3009.1**	**mortar**	**7.1; 39-62**	**31**	**490**	**40**	**-21,3**	**-20,9**	**CII**	
Saka 129a.2	3009.2	mortar		69	655	30	-19	-20,4		
Saka 129b.1	**3010.1**	**mortar**	**6.7, 39-62**	**30**	**460**	**30**	**-18,1**	**-18,9**	**CII**	
Saka 129b.2	3010.2	mortar		70	600	35	-16,9	-18,2		
Saka 130.1	**3011.1**	**mortar**	**7.1; 39-62**	**30**	**475**	**30**	**-18,3**	**-19,9**	**CII**	
Saka 130.2	3011.2	mortar		70	605	35	-17,3	-19,4		
SUND CHURCH										
Unit: nave *(fire damage, conclusive?)*										
Suka 014.1	7563.1	mortar	5.9; 46-75	14,4	496	32	-22,26	-21,96		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	$\delta^{13}C$ ‰ VPDB	$\delta^{18}O$ ‰ VPDB	Criterion	Comments
Suka 014.2	7563.2	mortar		15,7	683	33	-11,69	-19,74		
Suka 014.3	**7563.3**	**mortar**		**23,3**	**781**	**33**	**-10,81**	**-17,76**	**plateau**	
Suka 014.4	**7563.4**	**mortar**		**18,8**	**777**	**36**	**-13,09**	**-19,78**		
Suka 014.5	7563.5	mortar		27,8	819	33	-13,87	-19,47		
Suka 017.1	7564.1	mortar	5.9; 46-75	15,2	619	42	-24,69	22,49		
Suka 017.2	**7564.2**	**mortar**		**16,6**	**723**	**49**	**-15,13**	**-18,43**		
Suka 017.3	**7564.3**	**mortar**		**18,1**	**745**	**60**	**-18,84**	**-20,22**	**plateau**	
Suka 017.4	**7564.4**	**mortar**		**19,1**	**745**	**65**	**-20,22**	**-20,94**		
Suka 017.5	7564.5	mortar		31,1	[775]	65	-22,47	-20,64		
Suka 024.2.1	7567.2.1	mortar	6.9; 46-75	14,6	503	38	-18,01	-18,41		
Suka 024.2.2	**7567.2.2**	**mortar**		**19,8**	**675**	**35**	**-11,74**	**-17,81**		
Suka 024.2.3	**7567.2.3**	**mortar**		**21,9**	**735**	**38**	**-13,6**	**-19,87**	**(plateau)**	
Suka 024.2.4	**7567.2.4**	**mortar**		**20,4**	**669**	**28**	**-14,01**	**-19,57**		
Suka 024.2.5	7567.2.5	mortar		23,4	805	37	-14,25	-19,17		
Suka 025.1	7568.1	mortar	4.2; 46-75	17,1	242	47	-19,93	-17,29		
Suka 025.2	7568.2	mortar		22,4	450	50	-8,4	-16,42		
Suka 025.3	**7568.3**	**mortar**		**19,5**	**742**	**41**	**-10,63**	**-19,03**	**plateau**	
Suka 025.4	**7568.4**	**mortar**		**14,2**	**790**	**50**	**-11,81**	**-18,19**		
Suka 025.5	7568.5	mortar		26,7	[545]	75	-12,96	-19,98		
Suka 026-2.1	7569-2.1	mortar	5.3; 46-75	18,0	315	29	-16,01	-17,97		
Suka 026-2.2	**7569-2.2**	**mortar**		**20,1**	**732**	**33**	**-7,26**	**-16,2**	**CI, CII**	
Suka 026-2.3	**7569-2.3**	**mortar**		**20,6**	**790**	**30**	**-9,74**	**-17,79**		
Suka 026-2.4	7569-2.4	mortar		21,3	546	36	-11,4	-18,18		
Suka 026-2.5	7569-2.5	mortar		20,0	541	36	-12,25	-17,47		
Suka 002.1	*7559.1*	*mortar*	*4.0; 46-75*	*16,0*	*936*	*36*	*-24,95*	*-22,66*		
Suka 002.2	7559.2	mortar		13,6	938	38	-18,66	-20,1		
Suka 002.3	7559.3	mortar		70,4	916	35	-22,3	-23,51		
Suka 002.2.1	*7559.2.1*	*mortar*	*3.2; 46-75*	*15,4*	*992*	*34*	*-24,55*	*-22,71*		
Suka 002.2.2	*7559.2.2*	mortar		23,8	905	36	-20,22	-21,65		
Suka 002.2.3	*7559.2.3*	mortar		24,3	952	37	-22,13	-22,68		
Suka 002.2.4	*7559.2.4*	mortar		21,9	988	36	-22,43	-22,86		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
Suka 002.2.5	*7559.2.5*	mortar		10,8	979	37	-22,42	-22,68		
Suka 002C	*7598*	*charcoal*			*1555*	*38*	*-25,07*			
Suka 028.1	***8721.1***	***mortar***	***3.0; 46-75***	***24,6***	***246***	***43***	***[-12]***	*-15,84*		Estimated δ13C value
Suka 028.2	8721.2	mortar		26,2	697	34	-4,8	-17,12		
Suka 028.3	8721.3	mortar		24,2	1182	38	-8,81	-18,77		
Suka 028.4	8721.4	mortar		23,4	768	41	-10,79			
Suka 028.5	8721.5	mortar		1,7	lost					
Suka 028Li.1	***8722-2.1***	***mortar***	***9.6, 76-150***	***57,8***	***192***	***35***	***-10,61***	***-20,01***	***CI***	<probably dates
Suka 028Li.2	8722-2.2	mortar		28,3	219	40	-10,34	-19,95		documented repairs
Suka 028Li.3	8722-2.3	mortar		14,1	253	43	-9,28	-19,61		after fire>
Suka 028Li.5	8722-2.5	mortar		65,9	279	40	-10,26	-21,26		
Unit: west gable of nave, *(inconclusive)*										
Suka 019.1	7565.1	mortar	8.9; 46-75	0,26	497	36	-12,38	-17,98		
Suka 019.2	7565.2	mortar		0,36	602	36	-9,15	-17,97		
Suka 019.3	7565.3	mortar		0,38	660	31	-11,42	-18,72		
Suka 020.1	**7566.1**	**mortar**	**8.7; 46-75**	**0,24**	**695**	**36**	**-15,29**	**-18,47**		
Suka 020.2	**7566.2**	**mortar**		**0,34**	**625**	**35**	**-10,92**	**-18,15**		
Suka 020.3	**7566.3**	**mortar**		**0,41**	**610**	**37**	**-12,86**	**-19,05**		
Unit: tower *(conclusive)*										
Suka 001W	1475	wood			510	45	-24,8			
Suka 005W	7599	wood			623	38	-23,62			
Suka 007W	7600	wood			659	38	-24,61			
Suka 006.1	7560.1	mortar	6.2; 46-75	10,2	435	70	-16,34	-15,38		
Suka 006.2	**7560.2**	**mortar**		**14,3**	**509**	**40**	**-7,18**	**-12,61**	**plateau**	
Suka 006.3	**7560.3**	**mortar**		**13,4**	**679**	**33**	**-6,72**	**-12,21**		
Suka 006.4	7560.4	mortar		13,9	706	39	-10,58	-14,37		
Suka 006.5	7560.5	mortar		48,3	499	37	-11,2	-14,21		
Suka 027.1	8720.1	mortar	3.4; 46-75	27,6	325	37	-15,4	-17,83		
Suka 027.2	8720.2	mortar		22,5	1024	41	-8,4	-17,16		
Suka 027.3	8720.3	mortar		20,3	924	38	-10,7	-18,52		
Suka 027.4	8720.4	mortar		19,6	594	46	-11,97	-18,83		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	$\delta^{13}C$ ‰ VPDB	$\delta^{18}O$ ‰ VPDB	Criterion	Comments
Suka 027.5	8720.5	mortar		9,3	990	70	-12,29	-18,27		
Suka 038.1	7572.1	mortar	5.4; 46-75	17,5	580	150	-13,31	-16,88		
Suka 038.2	**7572.2**	**mortar**		**21,7**	**690**	**80**	**-7,81**	**-14,64**		
Suka 038.3	**7572.3**	**mortar**		**18,0**	**668**	**37**	**-11,05**	**-17,44**	**plateau**	
Suka 038.4	**7572.4**	**mortar**		**16,9**	**664**	**37**	**-11,37**	**-16,08**		
Suka 038.5	7572.5	mortar		26,0	744	41	-10,93	-16,76		
Suka 035.1	7571.1	mortar	6.2; 46-75	25,4	572	37	-14,45	-19,14		
Suka 035.2	7571.2	mortar		37,9	776	34	-8,14	-17,04		
Suka 035.3	7571.3	mortar		36,7	857	35	-10,71	-17,58		
Suka 040.1	7573.1	mortar	7.7; 46-75	25,4	630	37	-14,38	-15,32		
Suka 040.2	7573.2	mortar		39,5	904	36	-8,92	-13,19		
Suka 040.3	7573.3	mortar		35,0	1147	38	-10,73	-13,83		
Suka 044.1	7574.1	mortar	6.2; 46-75	24,6	290	33	-15,72	-15,11		
Suka 044.2	7574.2	mortar		35,7	605	39	-7,3	-15,27		
Suka 044.3	7574.3	mortar		39,7	585	31	-9,85	-14,59		
Unit: sacristy, burial chamber *(conclusive)*										
Suka 010.1	**7561.1**	**mortar**	**3.0; 46-75**	**21,3**	**354**	**36**	**-20,03**	**-23,3**	**CI**	
Suka 010.2	7561.2	mortar		25,0	420	55	-13,07	-15,69		
Suka 010.3	7561.3	mortar		27,3	318	39	-16,04	-19,11		
Suka 010.4	7561.4	mortar		22,6	385	37	-16,17	-17,83		
Suka 010.5	7561.5	mortar		3,8	548	45	[-17]			Estimated δ13C value
Unit: sacristy *(inconclusive)*										
Suka 013.2.1	7562.2.1	mortar	6.1; 46-75	16,0	189	34	-13,28	-15,28		<secondary repair
Suka 013.2.2	7562.2.2	mortar		19,6	399	39	-10,64	-14,6		in sacristy?>
Suka 013.2.3	7562.2.3	mortar		17,6	459	36	-11,93	-15,84		
Suka 013.2.4	7562.2.4	mortar		17,1	492	31	-12,17	-16,64		
Suka 013.2.5	7562.2.5	mortar		29,7	603	37	-12,05	-17,12		
Suka 015.1	9058.1	mortar	3.9; 46-75	18,1	627	37	-19,3	-20,6		
Suka 015.2	9058.2	mortar		17,2	794	38	-9,89	-15,29		
Suka 015.3	9058.3	mortar		17,4	888	37	-13,09	-16,06		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	δ^{13}C ‰ VPDB	δ^{18}O ‰ VPDB	Criterion	Comments
Suka 015.4	9058.4	mortar		17,1	886	29	-15,25	-18,86		
Suka 015.5	9058.5	mortar		30,8	987	46	-15,74	-18,72		
Suka 016.1	9059.1	mortar	3.7; 46-75	19	463	36	-12,76	-13,02		
Suka 016.2	9059.2	mortar		21,6	579	37	-7,88	-10,94		
Suka 016.3	9059.3	mortar		22,4	568	43	-11,56	-12,7		
Suka 016.4	9059.4	mortar		21,6	703	34	-12,77	-12,88		
Suka 016.5	9059.5	mortar		16,1	778	35	[-13]			Estimated δ13C value
Suka 016C	9057	charcoal			681	38	-24,98			
Suka 034.1	7570.1	mortar	4.6; 46-75	16,9	451	43	-13,5	-18,11		
Suka 034.2	7570.2	mortar		27,7	743	39	-8,06	-15,49		
Suka 034.3	7570.3	mortar		23,1	728	39	-10,11	-17,36		
Suka 034.4	7570.4	mortar		20,6	835	33	-10,74	-16,25		
Suka 034.5	7570.5	mortar		11,7	1275	38	-10,78	-16,14		
VÅRDÖ CHURCH										
Unit: nave, east gable *(conclusive)*										
Vaka 001.1	8947.1	mortar	4.9; 76-150	18,5	287	36	-21,01	-21,56		
Vaka 001.2	8947.2	mortar		17,1	857	40	-4,79	-16,16		
Vaka 001.3	8947.3	mortar		19,4	933	50	-11,06	-19		
Vaka 001.4	8947.4	mortar		17,1	905	55	-11,78	-19,36		
Vaka 001.3.1	8947.3.1	mortar	5.2; 46-75	9,5	331	37	-16,22	-20,64		
Vaka 001.3.2	8947.3.2	mortar		17,8	503	37	-12,61	-20,14		
Vaka 002.1	8948.1	mortar	5.0; 76-150	18,9	319	43	[-24.23]	[-29.52]		
Vaka 002.2	8948.2	mortar		18,2	979	45	[-2.35]	[-15.98]		
Vaka 002.3	8948.3	mortar		18,2	1274	47	-9,12	-18,65		
Vaka 002.4	8948.4	mortar		17,9	1258	42	-10,09	-19,15		
Vaka 002.5	8948.5	mortar		27,2	1167	44	-11,25	-19,26		
Vaka 002.3.1	8948.3.1	mortar	5.1; 46-75	10,3	524	31	-16,72	-20,86		
Vaka 002.3.2	8948.3.2	mortar		22,6	686	43	-11,04	-19,86		
Vaka 003.1	8949.1	mortar	3.8, 76-150	18,0	240	90	-16,36	-19,91		
Vaka 003.2	8949.2	mortar		21,4	1611	32	-2,88	-14,14		

Sample	Lab No. Aarhus (AAR-#)	Type	Carbon yield (%) and grain-size fraction (µm)	Fraction size (%)	^{14}C Age (BP)	d-Age 1 σ	$\delta^{13}C$ ‰ VPDB	$\delta^{18}O$ ‰ VPDB	Criterion	Comments
Vaka 003.3	8949.3	mortar		17,0	2181	36	-6,71	-15,6		
Vaka 003.4	8949.4	mortar		16,5	1586	36	-8,02	-16,8		
Vaka 003.5	8949.5	mortar		27,5	1495	55	-9,58	-17,13		
Vaka 005C	9056	charcoal			394	41	-26,04			
Vaka 005.1	**13006,1**	**mortar**	**4.0; 46-75µm**	**11,5**	**415**	**37**	**-20,34**	**-22,5**	**CIV**	<agrees with embedded charcoal (Vaka 005C)>
Vaka 005.2	13006,2	mortar		14,7	702	32	-9,24	-18,44		
Vaka 005.3	13006,3	mortar		13,3	1156	28	-7,78	-17,17		
Vaka 005.4	13006,4	mortar		27,7	1951	34	Age(BP)	-17,4		

Dendro: AD 1470-75