

Interim statement on Peterborough Transept Boards
Ian Tyers: September 2002

There are *c* 1350 boards in each transept ceiling. These are arranged in 140 rectangular grid squares with 4-12 boards set at angles within each setting, these are overall arranged to create a diamond like pattern. Around them is a number of boards creating a border between the walls and the diamond set panels. There are two types of board evident in the north and three types evident in the south. The following figures are based on initial surveys and have not been updated following various subsequent re-examinations. There are *c* 41 boards in the north transept which are termed 'original' by the conservation team, on the basis of their surface texture and other details. These come in three types, plain, those with a set of shallow grooves down the outer edge of the board, and those that are set with their grain running parallel to the walls as opposed to parallel to the diamond sets, all of these are also grooved but this is cross-grained rather than with the grain as per the others. In the north transept there are approx 16 plain, 24 grooved, and 1 cross-grained and grooved. They are oak, they are very straight grained and nearly all are radial boards, some are very wide, some heartwood/sapwood boundaries survive on the edges. The rest of the boards in the north (*c* 1300 boards) are termed 'modern' which are also oak, these are a uniform 225mm wide, but they are a mixture of radial and tangential conversions presumably from quarter sawing through largish trees. They are moderately even grained, with few knots. They are circular sawn on the backs and some also on the front, with the rest planed, possibly finished by machine planers, they have little or no sapwood present, and they have a distinctive bevelling and edge fillet in profile. These are thought to be 19th century but may just be 18th or 20th century.

Groups very similar to both these are present in the south transept. The equivalent 'original' material amounts to *c* 237 boards; 114 plain, 92 grooved and 21 cross-grained and grooved. These appear wider than the equivalents in the north. There must be around 1050 of the 'modern' boards with identical ranges of features. And there is a third group, the 'intermediate' boards. There are *c* 43 of these, they are oak, they are exceptionally wobbly grained, full of knots and are fairly fast grown, they tend to have pit-sawing marks on the backs and they are the most likely to have split and fragmented.

Almost all boards are trapezoidal in shape, with angled ends to form the mitred joints between the adjacent diamond panels. Because the panels are rectangular the boards have different angles at each end, *c* 33° and its reciprocal 57° at the other, the mitre joints are tight and this tightness and the overall thinness of the boards prevents an *in situ* recovery of the grain as was undertaken in the nave ceiling. The decision was taken to release specific boards and directly measure the ends. Panels providing particular board types were selected for this and a number of boards were released, measured and returned. For all except the 'cross-grained original' boards and the 'modern' boards the measured series were taken from the shortest, least distorted of the two angled ends. The rings width series were subsequently converted to true mm series as if measured in the original horizontal plane of the tree. The series from the cross-grained boards which have one proper radial edge were not subsequently modified, the modern boards that were analysed were eventually all chosen from the eight small square hatches that run down both transept edges, these each have 2 or 3 square ended boards and provided sufficient data without the need to select any of the diamond panel examples for removal.

A total of 39 boards were analysed, a further number of boards of all three types were released but not measured (4 in the north and 7 in the south) some were released in order to access selected boards, some were not measured after release because they had unsuitable ring sequences or were too fragile, one because it had an unusual paint survival, the release process revealed a number of interesting structural details and has involved some reclassification of numbers and types of boards from the original survey data. A very large number of modern board ends were seen in the hatches themselves, and in the ceiling where the hatch openings are (*c* 140!), as well as some of the drooping boards on the ceilings proper. There seems no particular reason to suppose that the hatches and the borders are different material from the 2000-odd 'modern' central panel boards but the selection process means that cannot be proven (once I identified that the same trees were used north and south there seemed little need to make the interventions that would have been necessary to further test this possibility).

Modern boards North and South

016	South hatch H/J west w28	225 x 15	143	1.57	Tree 2
017	South hatch H/J west w27	225 x 15	140	1.59	Tree 2
018	South hatch E/F east e20	225 x 15	119	1.78	Tree 2
019	South hatch B/C west w9	150 x 15	85	1.75	Tree 2
020	South hatch B/C west w7	225 x 16	134	1.67	Tree 2
021	South hatch B/C west w8	215 x 17	150	1.56	Tree 1
021r	Other end		99	1.35	Tree 1
022	South hatch B/C east e8	225 x 18	171	1.34	Tree 1
023	South hatch H/J east e33	225 x 16	138	1.61	Tree 2
024	South hatch H/J east e34	145 x 15	63	2.25	Not matched
108	North hatch C west w8	220 x 17	78	2.63	Not matched
109	North hatch C west w9	180 x 18	96	1.88	Not matched
110	North hatch E west w18	180 x 18	73	1.85	Not matched
111s	North hatch E east e16	180 x 18	15+104	1.45	Tree 1
111n	Other end		114	1.53	Tree 1
112	North hatch E east e17	225 x 17	20+82	1.68	Tree 1
113	North hatch C east e9	225 x 16	50+75	1.53	Tree 1
114	North hatch C east e8	170 x 13	106	1.57	Tree 2
115	North hatch C east e7	170 x 16	145	1.17	Tree 1

Tree 1 (or group 1 or whatever)

	021r	022	111n	111s	112	113	115
021	7.14	5.85	4.21	3.86	6.28	5.21	4.78
021r		7.44	5.21	5.58	5.86	5.90	8.12
022			7.86	8.50	9.78	5.95	10.41
111n				5.58	6.88	5.20	5.55
111s					10.91	7.19	3.56
112						6.81	5.71
113							-

Tree 2 (or group 2 etc)

	017	018	019	020	023	114
016	13.18	8.50	6.59	8.19	7.85	9.09
017		5.25	7.02	5.79	6.88	4.66
018			6.26	8.03	12.29	8.72
019				5.34	5.79	-
020					6.67	8.38
023						4.55

These create two sequences, 193 and 167 years long that so far haven't been dated.

Intermediate phase boards South only

008	South N9 board H	260 x 9	135	-	1.73	AD1482-AD1616	after AD1626
009	South N8 board K	190 x 10	72	-	2.72	AD1521-AD1592	after AD1602
010	South N8 board J	190 x 9	71	3	3.19	AD1577-AD1647	AD1654-90
011	South N9 board G	250 x 11	140	-	1.64	AD1503-AD1642	after AD1652
012	South N8 board H	195 x 11	56	-	2.66	AD1532-AD1587	after AD1597
013	South K8 board C	230 x 11	56	6+3s	3.67	AD1598-AD1653	AD1657-93
014	South K8 board D	410 x 11	114	16+2s	3.29	AD1543-AD1656	AD1658-86

These appear to be in two fairly distinctive but co-eval groupings, possibly two trees or two sources: The material is exceptionally bouncy and I probably need to build the mean slightly differently than the interim one used below

	009	011	012	010	013	014
008	11.46	11.20	7.38	-	-	3.31
009		7.96	8.21	-	\	-
011			5.08	-	-	-
012				\	\	-
010					4.57	6.00
013						8.24

The simple mean of the data dates OK, although certainly not really well, and it looks like a relatively local source (the matching to Beeleigh, Owston and Isaac Lord would be fairly unusual if it was from elsewhere), but we've neither got enough contemporary data nor is it a particularly good set of trees to be absolutely sure of that

Interim Mean of intermediate phase boards

	int_t7
	AD1482
	AD1656
Cambridgeshire Sutton-in-the-Isle Bellframe (Tyers 1995)	4.14
Derbyshire Riding School Bolsover Castle (NUTRDL unpubl. data)	4.86
East Midlands (Laxton and Litton 1988)	5.61
Essex Beeleigh Abbey nr Maldon (Tyers 2002a)	4.19
Greater Manchester Market Place Stockport (Tyers 1999d)	4.66
Herefordshire White House Vowchurch (Nayling 1999)	4.65
Leicestershire Owston Church Oakham (Howard <i>et al</i> 1999)	4.63
London Mermaid Door (Tyers 1992)	4.90
Staffordshire Black Ladies nr Brewood (Tyers 1999a)	5.02
Suffolk Isaac Lord 80-80A Fore Street Ipswich (Bridge 1999)	4.31
Wiltshire The Old Mansion Clarendon (Tyers 1999c)	4.29
Worcestershire Droitwich Upwich (Groves and Hillam 1997)	4.73
Wales Llanigon Lower Wenallt (Morgan 1980)	5.13

Original boards South – 3 plain, 4 grooved, 1 cross-grained

001	South M5 board B	243 x 10	129	-	1.84	Undated	-
002	South M6 board C	485 x 10	257	2	1.88	AD938-AD1194	AD1202-38
003	South K2 board E	232 x 11	107+90	-	2.13	AD921-AD1027	after AD1127
004	South M5 board D	356 x 10	10+226	-	1.44	AD968-AD1193	after AD1203
005	South M6 board A	290 x 10	50+82	-	1.81	Undated	-
006	South K8 board D	340 x 14	35+140	+HS	1.64	AD1051-AD1190	AD1200-36
007	South M5 board G	490 x 10	221+20	-	2.05	AD936-AD1156	after AD1186
015	South K2 board F	405 x 10	214+10	+HS	1.80	AD962-AD1175	AD1195-1231

These form a consistent group, and examples of all three types match, one pair are definitely same tree, I had thought there would be more

	003	004	006	007	015
002	4.22	8.00	4.32	19.99	7.63
003		4.29	\	4.75	3.67
004			3.44	7.22	6.29
006				4.29	3.89
007					8.48

The chronology of these is dated really well, and is a major find, these boards are English and possibly fairly local and early 13th century, and perhaps it also proves the usefulness of the nave coring project all that time ago. You know the 'provenancing' aspect is all 'if, but, and maybe' but the Peterborough, East Midlands, Barton, & Beverley matches would have us thinking in terms of Fens or East Midlands or something like that for origin, the Willaston match is slightly less expected - and then you need to follow this up with the North boards comments further down!

	origs_t6
	AD921
	AD1194
Cambridgeshire Peterborough Cathedral (Tyers 1999b)	13.48
Cheshire Nantwich; Bowers Row (Hillam unpubl)	8.81
Cheshire Willaston nr Nantwich (Groves 1990)	11.38
East Midlands (Laxton and Litton 1988)	13.66
Lincolnshire Barton Coffins (Tyers 2001)	10.50
Shropshire Great Oxenbold (Miles <i>et al</i> 1993)	8.72
Staffordshire Stafford St Marys & Eastgate (Groves 1987a; Groves 1987b)	9.75
Yorkshire Beverley Eastgate (Groves 1992)	10.08
Yorkshire Beverley Lurk Lane (Groves and Hillam 1991)	9.45
Yorkshire Whiston Manorial Barn Rotherham (Tyers 2002b)	8.44

Original boards North – 3 plain, 3 grooved, 1 cross-grained

101	North C1 board A	190 x 10	121	-	1.54	AD1028-AD1148	after AD1158
102	North E2 board G	190 x 13	99	-	1.57	undated	-
103	North E1 board D	245 x 19	144+8	-	1.33	AD1031-AD1174	after AD1192
104	North E0 board C	260 x 13	10+128	+HS	1.71	AD1052-AD1179	AD1189-1225
105	North E1 board C	240 x 12	172	-	1.35	undated	-
106	North C1 board C	250 x 12	152	-	1.53	AD1002-AD1153	after AD1163
107	North C1 board K	320 x 13	168	+HS	1.95	AD1023-AD1190	AD1200-36

Three are clearly derived from same trees, and this means 1 grooved and 2 plain are from a single tree

	103	104	106	107
101	7.36	5.24	7.08	6.24
103		4.54	13.01	17.13
104			3.92	5.51
106				12.78

But no strong individual links indicate any use of the same trees used in the South transept boards

	101	103	104	106	107
002	5.24	5.66	4.78	5.34	6.01
003	\	\	\	-	\
004	5.71	4.16	7.27	3.97	4.29
006	-	3.23	3.42	-	-
007	5.63	5.84	4.87	6.27	6.11
015	5.70	4.91	5.12	5.18	4.20

This group dates perfectly well and despite their slightly different character compared to the south they are of same date and broadly similar source, certainly English, and the high match to the South transept boards mean they are certainly likely to be of some similarity of source but the higher matching to Nantwich and Willaston is a different pattern compared with the south boards. This is by no means positive but the lower matches of this group to Peterborough roof, East Midlands and Barton would probably be higher if they are from the Fens. It's difficult to be positive here because its got less trees and it's quite a bit shorter than the southern group so its not truly comparable?

	origin_t5
	AD1002
	AD1190
Cambridgeshire Peterborough Cathedral south transept boards	9.16
Cambridgeshire Peterborough Cathedral Roof (Tyers 1999b)	6.23
Cheshire Nantwich (Leggett 1980)	7.74
Cheshire Willaston nr Nantwich (Groves 1990)	9.69
East Midlands (Laxton and Litton 1988)	6.56
Herefordshire Yarpole Bell Tower (Tyers 2002c)	5.36
Lincolnshire Barton Coffins (Tyers 2001)	5.31
Yorkshire Beverley Eastgate (Groves 1992)	6.06
Yorkshire Holme Stray Farm (Hillam 1989)	5.41
Yorkshire York Coppergate (Groves in press?)	5.97

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