

Comparative Analysis  
Princes Channel Wreck/ Gresham Ship

Find Features Date	Wreck	Mary Rose	Gresham Ship	Sea Venture	Warwick	San Juan	Nossa Senhora dos Mártires	Lomellina	Vejele Hafnia	B&W 1 (Verlanger)	Scheurrak SO1	Wittenbergen
		Built 1510	Built 1574/5	Wrecked 1609	Wrecked 1619	Wrecked 1565	Wrecked 1605	Wrecked 1516	Built 1567–77	Built 1582–84	Wrecked 1593?	Built 1571
Raw Material												
Timber Type	Oak	Oak	Oak	Oak	Oak	Oak/beechn (keel)	Cork oak/pine	Oak, pine (planking), etc.	Oak	Oak	Oak	Oak
Timber/Vessel Origin	England/England	England/England	England/England	NA/England	NA/England	NA/Basque Country	Portugal/ Portugal	Diverse/ Genoa	Dutch/NA	Western Germany, Sweden/Dutch	Lower Saxony/Dutch	Lower Saxony/NA
Dimensions												
Estimated Length (L) or Keel Length (KL)	KL 32 m	L 24.5 m	KL 22 m?	L 30–34 m?	L 22 m	L 40 m?	L 32 m	L 18 m	L 26 m	L 34 m	KL 22 m?	
Estimated Beam	B 12 m	B 7.85 m			B 7.75 m		B 12.5 m	B 5 m	B 6 m	B 9 m	NA	
Construction												
Construction Method	Frame-led	Skeleton-built	Frame-led	NA	Skeleton-built	Skeleton-built	Skeleton-built	Skeleton-built	Shell first?, spijkerpennen present	Shell first, spijkerpennen present	Shell first, spijkerpennen, double planking	Shell first?, spijkerpennen on one plank
Keel Type	Rabbeted beam keel	Rabbeted beam keel	Rabbeted beam keel	NA	Keel with incorporated garboards (except at bow and stern	Rabbeted beam keel	Rabbeted beam keel	Rabbeted beam keel	T-shaped keel	Rabbeted beam keel	Rabbeted beam keel (double rabbets)	NA
Joint between stempost and keel	Vertical scarf joint	Vertical scarf joint	Vertical scarf joint	NA	Vertical scarf joint	NA	NA	NA	Original keel: horizontal scarf joint	Composite post, keel end replaced, vertical lipped stempost, scarf and mortise for inner post	Yes	NA
Apron present?	Yes	Yes	NA	NA	No	Yes	NA	NA	No			NA
Framing System	Regular, floor timbers (in some cases) joined to first futtocks,	Regular, floor timbers joined to first futtocks, second futtocks between the ends of first futtocks, filling timbers at bilge	Regular, first futtocks between and overlapping floors, second futtocks above floors	NA	Regular, floor timbers fastened to first futtocks, second futtocks overlap first futtocks, third futtocks overlap second futtocks	Regular, floor timbers fastened to first futtocks	Regular, floors fastened to first futtocks, first futtocks fastened to second futtocks	Irregular	Irregular, presence of floor timbers, frame knees and futtocks	loose		NA
Connection between floor timbers and futtocks	Master frame, five forward and 15 aft (21), square and diagonal lap joints, knuckle joints	All visible frames connected with interlocked joints	No	NA	Master frame with two futtocks attached and 7 aft and 6 forward connected with dovetail joints (14)	Knuckle joints fastened with countersunk iron nails	Dovetail and knuckle joints	No	No	No		None, although a single futtock has a dovetail joint preserved
Connection between first and second futtocks	Yes in some cases (24)	No	No	NA	No	NA	Dovetail and knuckle joints	NA	NA	No		NA
Presence of filling timbers	Yes	Yes	No	NA	No	No	No	NA	Yes, here called frame knees	No		NA
Connection between outer hull planks	Butt joint	Vertical scarf joints	NA	Butt joint	Butt joint	Butt joint	Butt joints	Butt joints	Vertical scarf joint, garboard attached to keel with combination of rivets and small wooden nails	Diagonal nipped scarfs in most planks, a single vertical scarf joint in garboard strake	No	None, butt joints
Waterproofing of outer hull planks	Caulking, caulking battens on outside	Inlaid waterproofing in groove at bottom of plank	Caulking	NA	Caulking	Caulking with lead and oakum, seams sealed with lead strip	Caulking	Caulking	Caulking	Inlaid waterproofing (moss)	Caulking	Caulking, with caulking battens on inside
Fastening of plank/ frame joints	Trenails, caulked (3)	Trenails, irregular pattern below furring line, regular (2–3) above furring line, all caulked	Trenails in irregular pattern, caulked	Trenails (2–4)	Trenails/iron nails (2, 2)	Iron nails	Iron nails	Iron nails	Trenails	Trenails	Trenails	Trenails, some wedged
Fastening of plank butts/ joints/ hood ends	Iron nails	Trenails/iron nails	NA	NA	Trenails/iron nails	Iron nails	Iron nails	Iron nails	Trenails	Iron nails		Trenails/ Iron nails
Deck construction	(Orlop deck): beams lodged on beam shelf, standing knees on upper surface	Beams lodged on beam shelf and heads of futtocks, butt against outer planking, supported by standing knees	NA	Beams lodged on beam shelf and supported by lodging knees	Double beams resting on beam shelf, standing knees	NA	Doubled deck beams on top of each other with standing knees scarfed to the top, supported by beam shelves	NA	NA	Beams supported by hanging knees, joggled waterway		NA
Sources:	Marsden, 2009		Adams, 2003	Bojakowski and Custer-Bojakowski, 2011	Grenier <i>et al.</i> , 2007	Castro, 2003	Guérout <i>et al.</i> , 1989	pers. comm., Aoife Daly and Alexander Cattrysse	Lemée, 2006	pers. comm., Thijs Maarleveld	Stanek, 2011	

Table 8-1: Table of comparative sites; the Gresham Ship is marked in light grey (J. Auer)