

**Table S1.** Location of all core samples.

Core code	Side	Deck	Location	Total MC% measurements
S1	Starboard	N/A	Stern end - low	18
S2	Starboard	N/A	Stern end - high	21
S3	Starboard	N/A	Centre - low	20
S4	Starboard	N/A	Centre - high	17
S5	Starboard	N/A	Bow end - low	18
S6	Starboard	N/A	Bow end - high	20
H1	Port	Hold	Internal plank - Stern end	20
H2	Port	Hold	Internal plank - Centre	17
H3	Port	Hold	Internal plank - Bow end	21
H4	Port	Hold	External plank - Stern end	15
H5	Port	Hold	External plank - Centre	15
H6	Port	Hold	External plank - Bow end	15
H7	Port	Hold	Beam - Stern end	4
H8	Port	Hold	Beam - Centre	4
H9	Port	Hold	Beam - Bow end	4
H10	Port	Hold	Keelson	3
O7	Port	Orlop	Internal side plank - Stern end	14
O8	Port	Orlop	Internal side plank - Centre	14
O9	Port	Orlop	Internal side plank - Bow end	15
O10	Port	Orlop	Knee - Stern end	3
O11	Port	Orlop	Knee - Centre	3
O12	Port	Orlop	Knee - Bow end	3
M1	Port	Main	Deck beam - Stern end	4
M2	Port	Main	Deck beam - Centre	4
M3	Port	Main	Deck beam - Bow end	4
M4	Port	Main	Plank - Stern end	4
M5	Port	Main	Plank - Centre	4
M6	Port	Main	Plank - Bow end	4
M7	Port	Main	Internal side plank - Stern end	18
M8	Port	Main	Internal side plank - Centre	19
M9	Port	Main	Internal side plank - Bow end	17
M10	Port	Main	Knee - Stern end	4
M11	Port	Main		4
M12	Port	Main		4
U1	Port	Upper	Beam - Stern end	3
U2	Port	Upper	Beam - Bow end	3
U3	Port	Upper	Plank - Stern end	3
U4	Port	Upper	Plank - Bow end	3

### *Algorithm for producing dynamic simulation of drying process*

The following pseudocode block summarises the computational approach to using empirical moisture content data for producing a best-fit simulation of the *Mary Rose* drying process.

Pseudo-code description of *Mary Rose* moisture content modelling

**for all** depths  $d = 0$  to 70 mm:

**group** moisture content sample data  $M$  from all ship locations at depth  $d$

**fit** inverse exponential curve  $\tilde{M}(t) = ae^{-bt} + c$  to moisture content values  $M$  from depth  $d$  using data from time  $t = 0$  to 1092 days

**group** moisture content sample data  $M$  from all ship locations at depth  $d+1$

**fit** inverse exponential curve  $\tilde{M}(t) = ae^{-bt} + c$  to moisture content values  $M$  from depth  $d+1$  using data from time  $t = 0$  to 1092 days

**for all** times  $t = 0$  to 1092 days:

**linearly interpolate** moisture content estimates  $\tilde{M}$  from depth  $d$  to  $d+1$

*Figure S1—Dynamic drying simulation*

In addition to being displayed statically in the main text, the change in *Mary Rose* moisture content over time can also be viewed in a video format. Here, while the horizontal axis still describes simulated sample depth, there is no vertical axis describing time; instead, playing the video progresses the simulation from the start of drying until the end. Drying is still apparent by a transition from dark blue to white, first at the surface but then steadily deeper in the simulated sample. As in the main text, the color bar to the right shows how the varying colors describe moisture content. In top left, time is tracked as simulation proceeds.



