THE DEVELOPMENT AND GROWTH OF THE THAMES A-RATER FLEET

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- The Thames A-Rater
- Project Aims
- Method
- Future Advances
THE THAMES A-RATER

Vessel Particulars

- Average length: 7.90m
- Average breadth: 2.10m
- Average depth: 0.45m
- Displacement (excluding the crew): 340kg
- Maximum sail area: 32.52m²
- Maximum mast height: 13.11m
- No. of crew: 3
History

- First designed in the late 1800s to be sailed on inland waters
- Designed to Dixon Kemps rating rule

\[
\text{Sail Area} \times \frac{\text{Length Waterline}}{6000}
\]

- Rule change to maintain the class aesthetic

“A new hull will only be considered to be an A class Rater hull if it is an exact replica of an existing Rater as defined above, taken from either an existing hull, or original lines, subject in both cases to a tolerance of one and one half inches.”

- More built in the 1980s from fibre reinforced plastic
SCAMP LINESPLAN 1903
• Create a Catalogue of linesplans

• Analyse each hull with performance analysis software

• Identify the fastest and most efficient hull

• Design a new wooden A-Rater
Hull Measuring

- Hull measured by hand
- Table of offsets created
- Point cloud created
- 3D hull model created
Hull Testing

- Designed sail set and rig
- Designed rudder and centreboard using aerofoil analysis
- Ran hulls through velocity prediction program (VPP)
- Final Hull was decided on
FUTURE ADVANCEMENTS

- Use a hand held 3D scanner to create models of existing boats at a higher rate

- Expand my catalogue of linesplans to include the entire fleet

- Build my A-Rater design using cold moulded mahogany
THANK YOU!

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