

Guiding sustainability principles for yacht designers

DESIGNERS' PROTOCOL



WATER
REVOLUTION
FOUNDATION

I
N
F
L
U
E
N
C
E
S

I

Instigate an environmental ambition at the outset

Define the Client's ambition on a simple scale of 1-5.

It's more than just about emissions.

Building to a Classification Society ECO notation, whilst currently imperfect, shows a commitment and intent. Water Revolution is working closely with Class to strengthen the ECO notation framework.

N

Navigate hull form & propulsion options

Speed / power curve: optimisation for cruising, rather than top speed.

WRF-supporting studios are consulting on the optimum length to beam ratios for efficiency.

Advocate electric drive trains with fuel flexibility to be ready for the future.

F

Focus on life cycle (LCA)

Quantifying the environmental impact of a product, service or system across the whole lifecycle.

Interact with the shipyard (eg. the option of aluminium produced with renewable energy).

Use the YETI tool to help define, assess, and score ambition and progress.

L

Look at energy sources

Electric power to match shore power capability to minimise diesel generator use.

Prepare for future fuel flexibility.

Incorporate technical spaces to allow for future flexibility.

U

Understand operational profile

Discuss & understand the unpredictability of operational profiles.

Broadly speaking, up to 80% of a yacht's time is spent in port, or at anchor (reference de Figueriedo, Van Oos-sanen, Marine Traffic).

The client is the principle influencer.

E

Educate about the effects of a dark-painted hull

Explain why a dark hull increases on board temperature.

The downsides of durability and maintenance.

Requirement for additional insulation thickness.

N

Nudge towards alternative decking solutions

Teak from truly sustainable sources is increasingly hard to source.

The marine sector has been a major driver of illegal teak logging in Myanmar [EIA].

Encourage the move to alternatives.

C

Collaborate to specify sustainable materials & finishes

Favour suppliers with verifiable supply chain and ESG credentials.

Consider fast-growing species, recycled and reformed plastics.

‘Sustainable Luxury’, whilst not oxymoron-proof, can be a guiding philosophy.

E

Examine hotel load & AC

A/C is a large energy consumer onboard.

Are more ambitious A/C operating parameters really necessary?

Is exterior A/C really necessary or desirable?

S

Support options for glazing treatments

Greater use of glass increases the solar heat gain coefficient (SHGC).

Several technologies available to improve solar performance (frit, coatings, interlayers).

The selection of coatings is important for end of life.

Thank you to the participants of the Protocol!

BANNENBERG
ROWELL
DESIGN



R W D

VAN
GOSSAENE
NAVAL ARCHITECTS



VITRUVIUS
YACHTS

WINCH DESIGN

GET ONBOARD

www.waterrevolutionfoundation.org

info@waterrevolutionfoundation.org



WATER
REVOLUTION
FOUNDATION