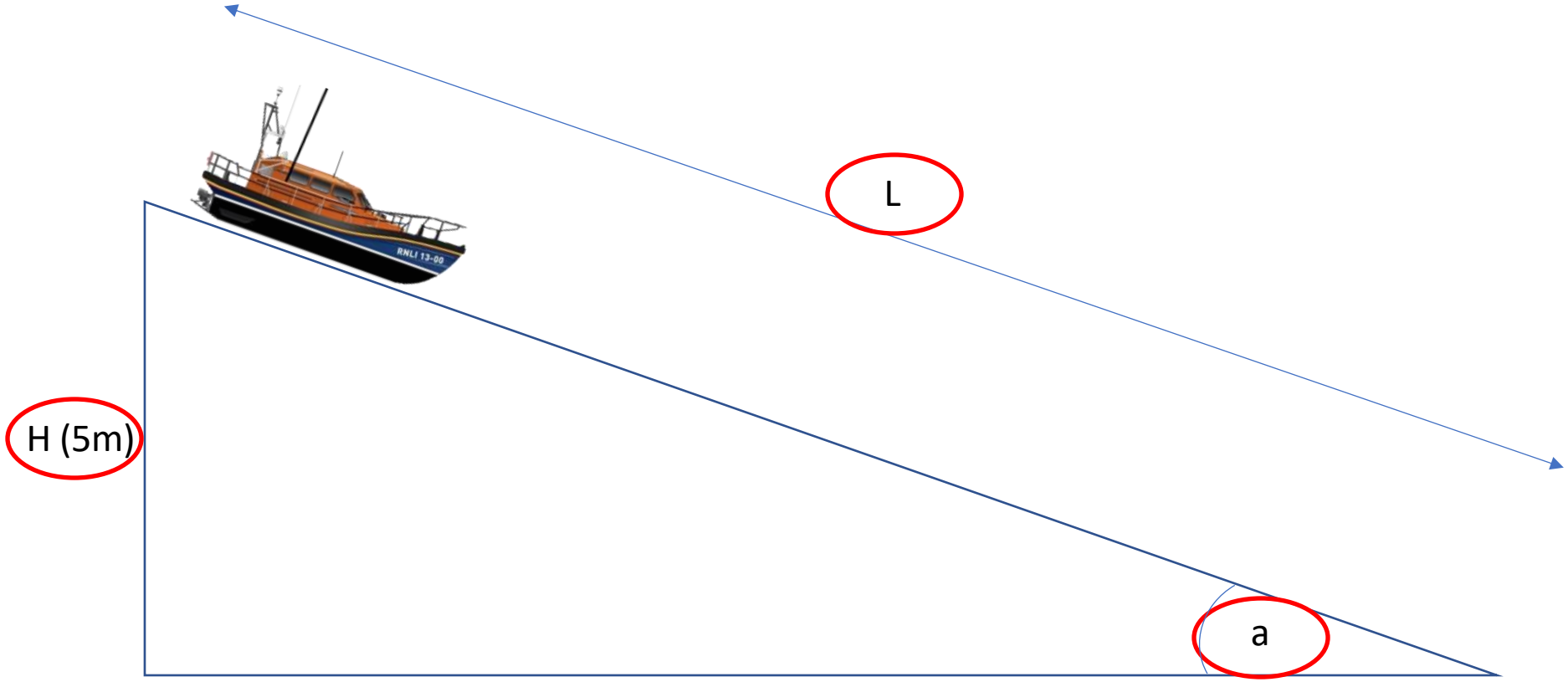
In Support of International National Women in Engineering Day

RNLI Women in Engineering 2021

Shannon Slipway Design

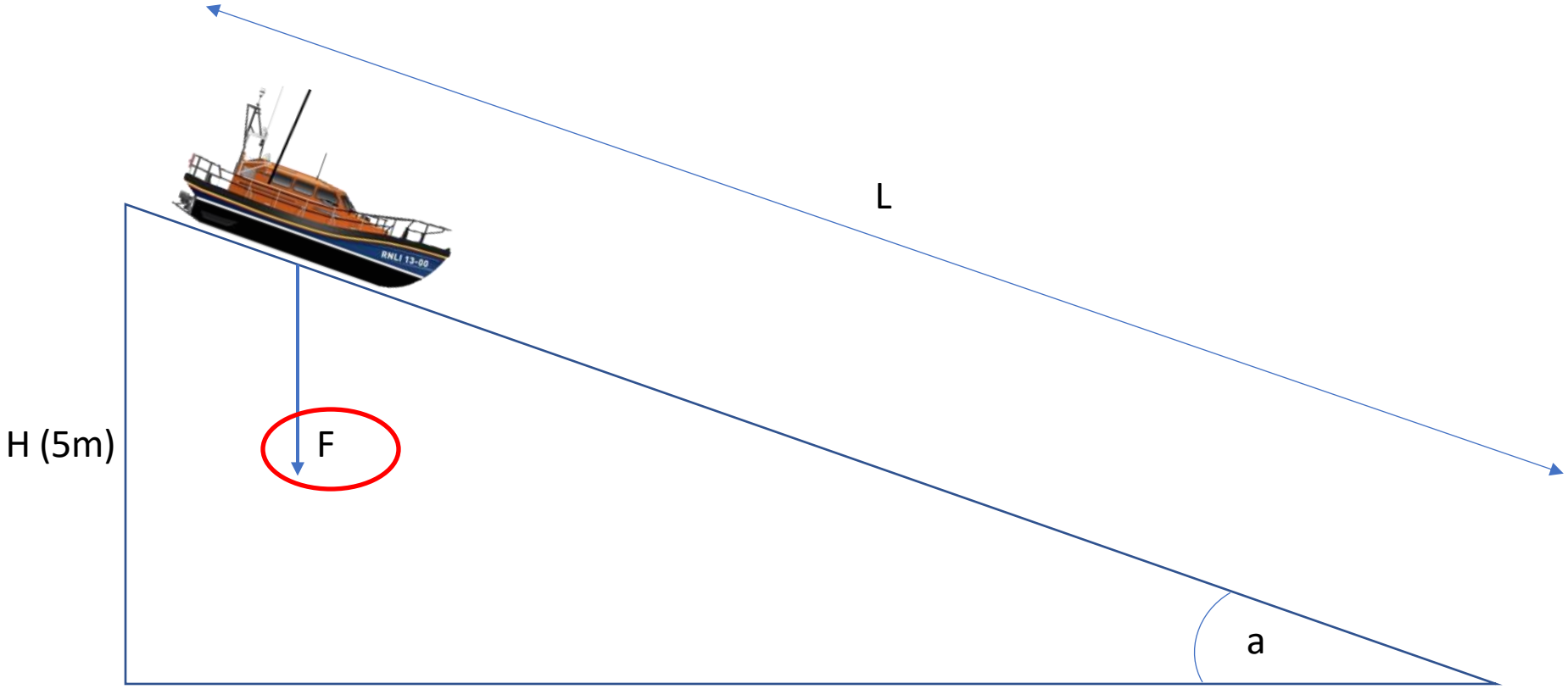
Lifeboats

Shannon Slipway Design



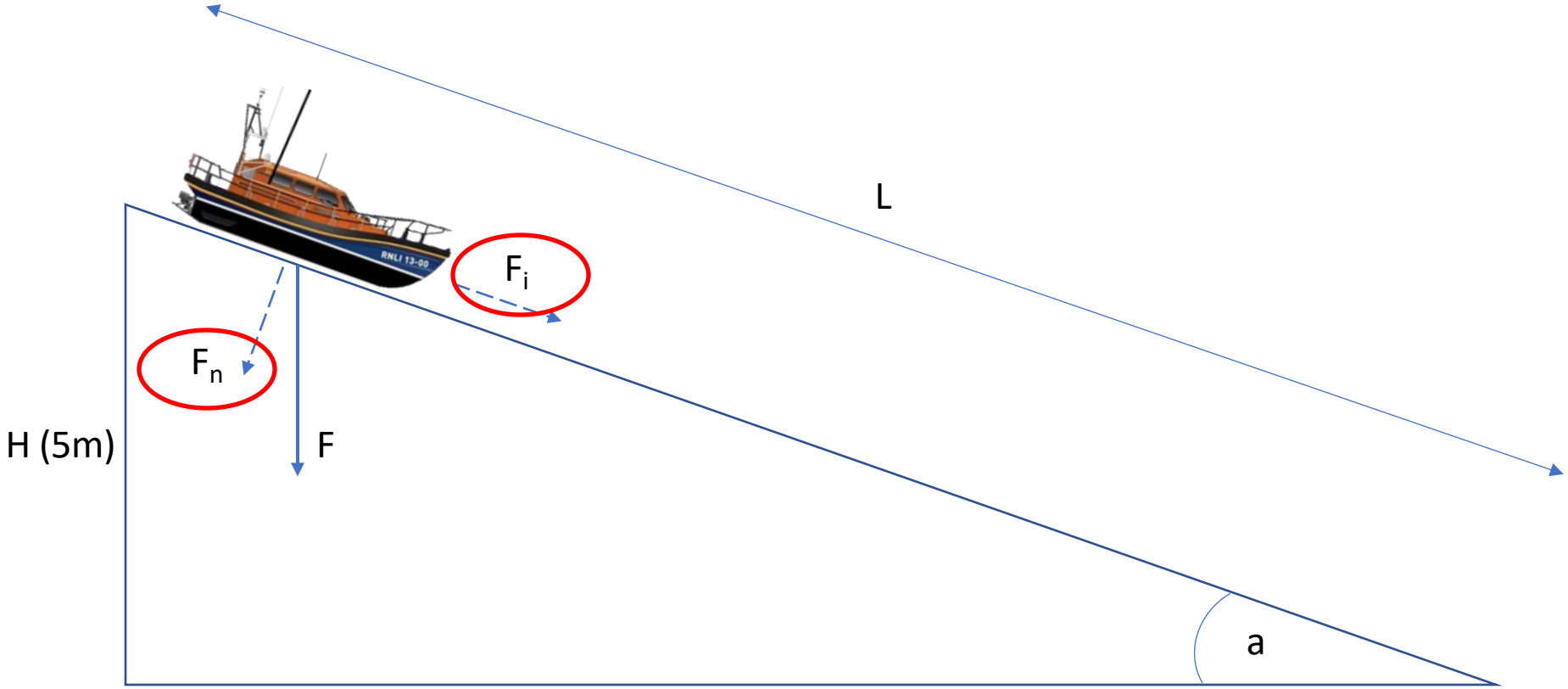
Your brand new Shannon class lifeboat is sitting proudly at the top of its slipway.
Your station is 5m above the waterline (H).
The angle of the slipway (a) is what we're looking for in degrees.
We'll also need to find out the length of the slipway which is shown by L.

Shannon Slipway Design



The force due to gravity exerted by the Shannon in Newtons is F.

Shannon Slipway Design



This force F can be split into two parts:

1. F_i - the force causing the Shannon to slide down the slipway and,
2. F_n - the force holding the Shannon on the slipway.

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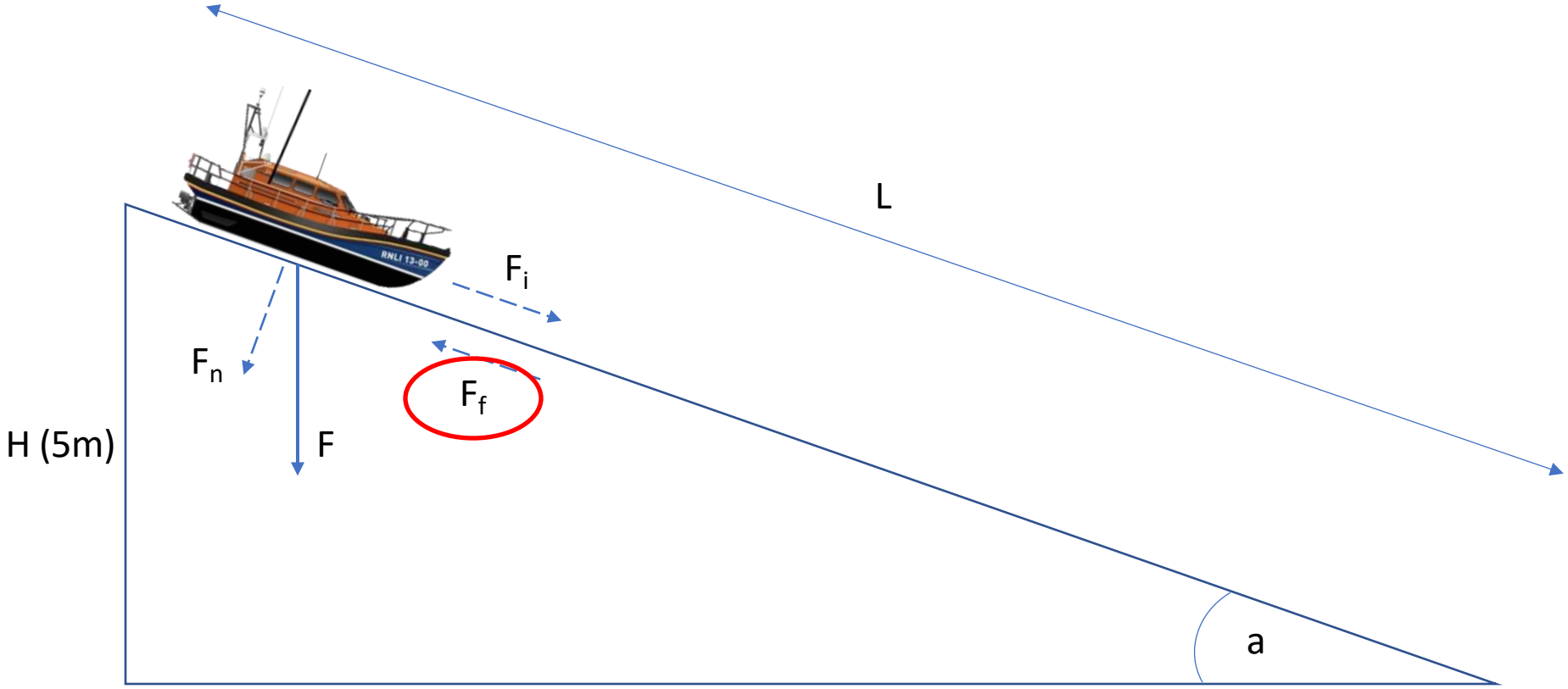

The last force is the one holding the Shannon back due to friction.
This one is called F_f and can be calculated from F_n.

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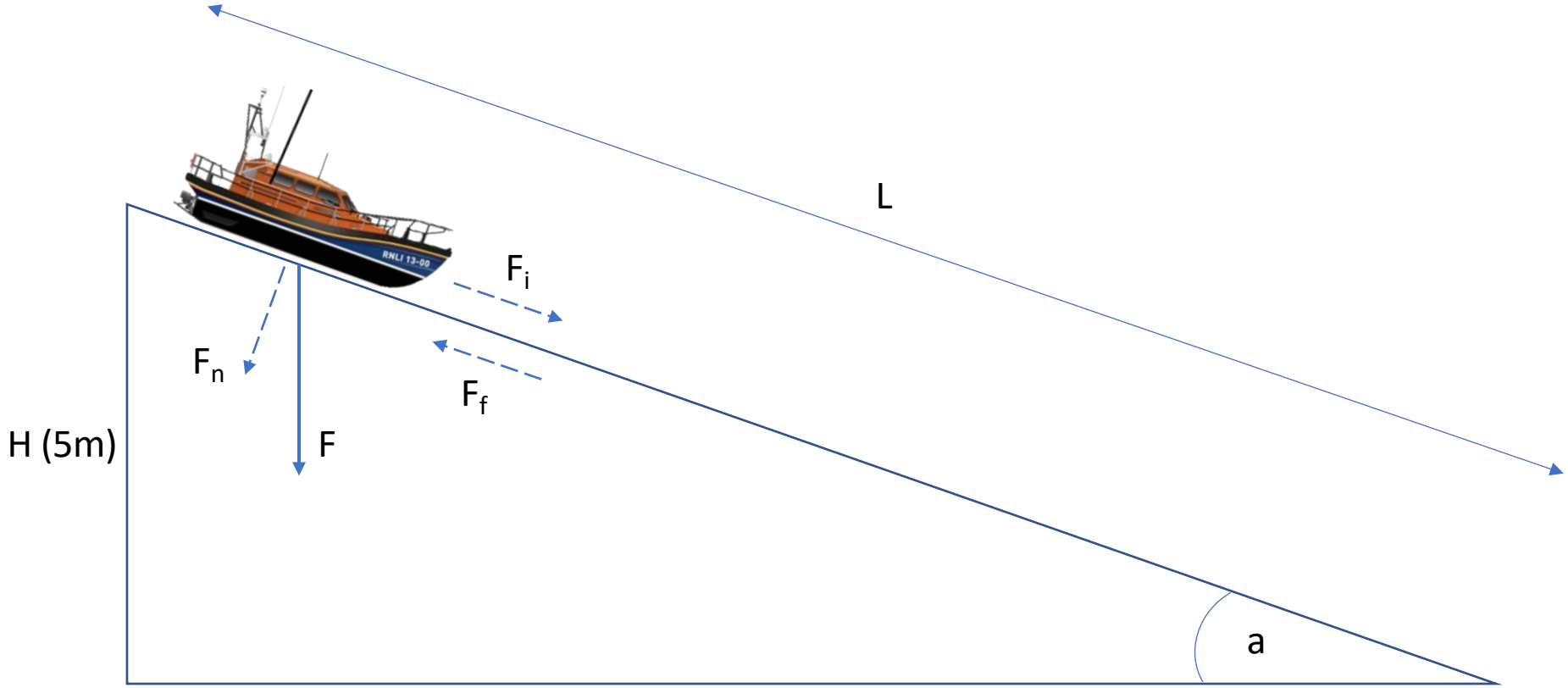
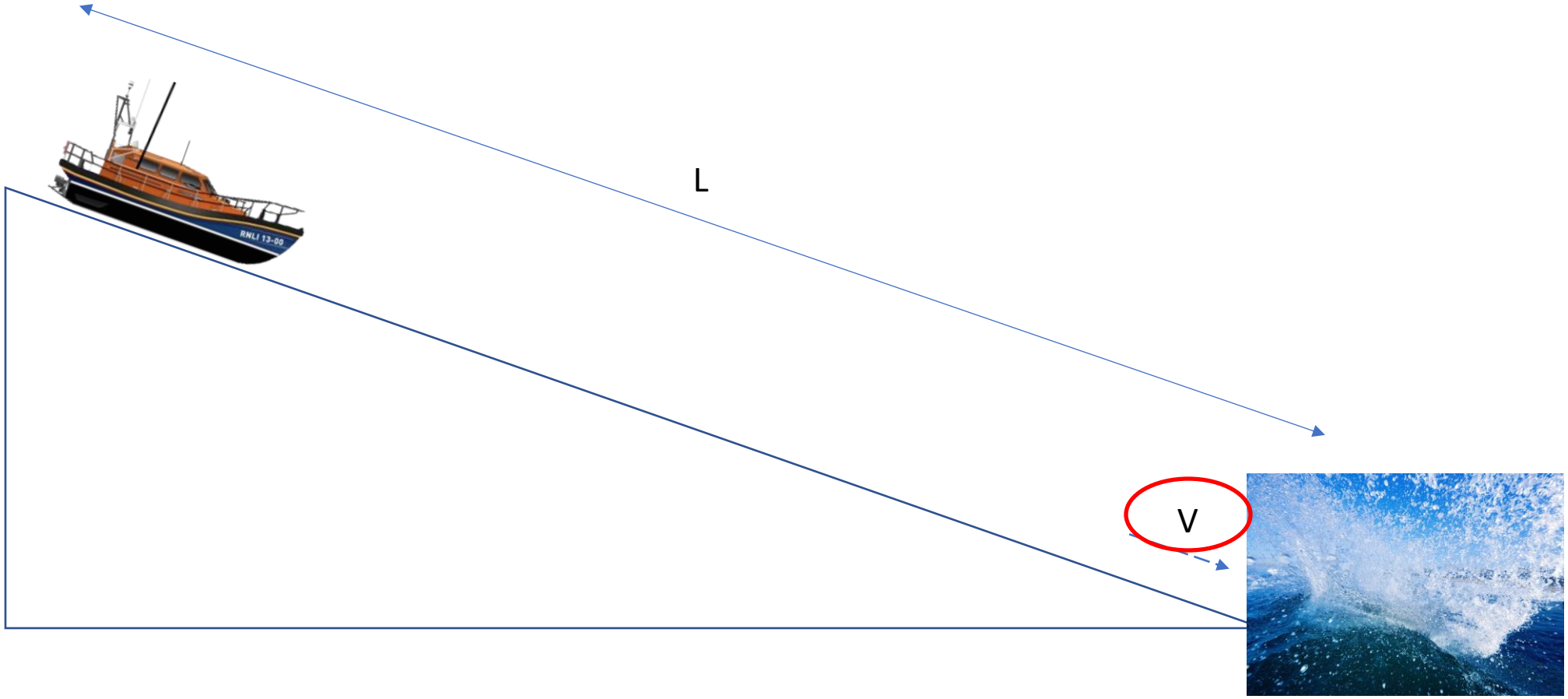


CLICK WHEN READY TO LAUNCH

Shannon Slipway Design



Finally, V is the speed at which the Shannon hits the water.
This is what we want to control.