Output motor requires 5V 2A to run, therefore need P = 5\*2=10W plus other things 15W. Assume power conversion about 80% efficient, therefore need approximately 19W.

Using Power equation taken from: <http://www.oup.com/uk/orc/bin/9780199281121/andrews_ch04f.pdf>

Assume efficiency of turbine = 0.3 given Betz Limits of 0.6. Density of water 1000, gravity 9.81m/s.

V is velocity, about 3 knots = 1.54 m/s

Diameter of Turbine needs to be 17.5cm.