Fig. 3. Maximum and average tidal velocity in the final potential sites.

### 3.3. Power generated

The power output of an AR1500 turbine in the areas of highest maximum and average velocity was calculated for each of the respective locations. The efficiency, or power coefficient of this particular turbine is estimated to be 44% (Boretti, 2020) and the swept area of the turbine ($\pi 9^2$) is 63.62 m$^2$. As an example, the calculation for the power output at peak maximum velocity for the Western site, using the turbine power output equation, was calculated as follows:

$$P_{Device} = 0.5(1025 * 14 * 254.46 * 0.44)$$

$$P_{Device} = 754,227\ W\ or\ 754.23\ kW$$