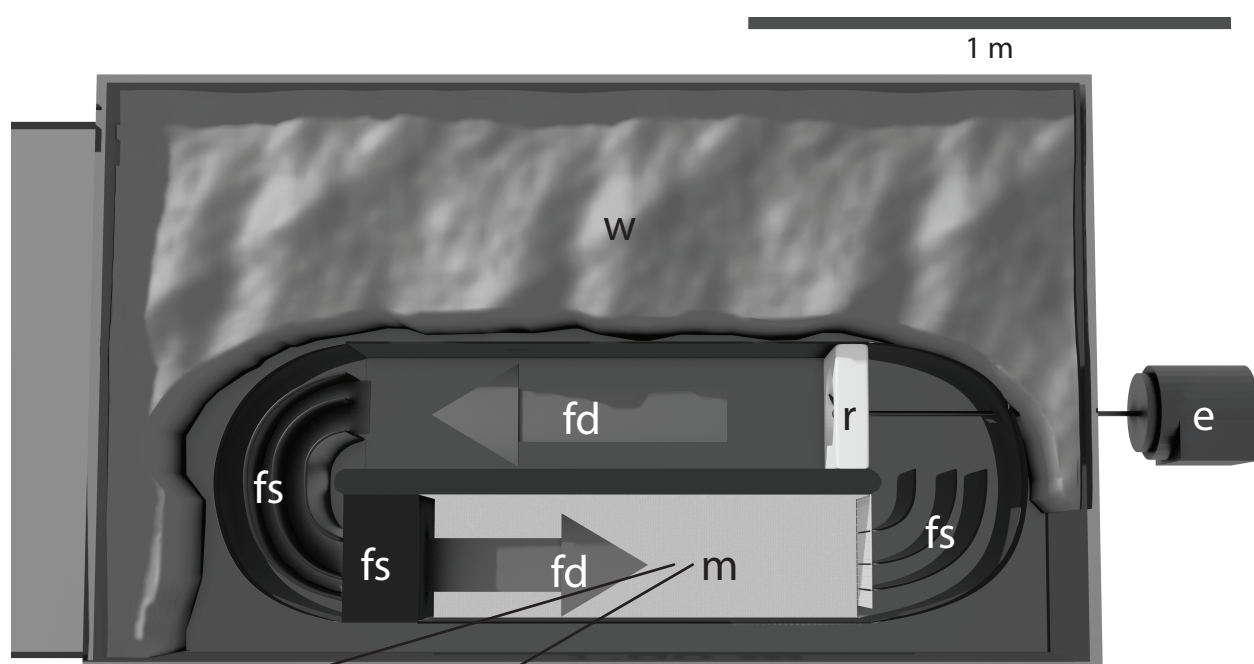


A flow channel

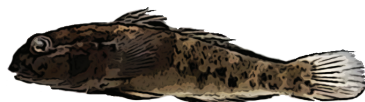


Paper I: Flow, force, behaviour under homogenised flow conditions



Question: How do the hydraulic forces and swimming behaviour differ between the fish under homogenised flow conditions?

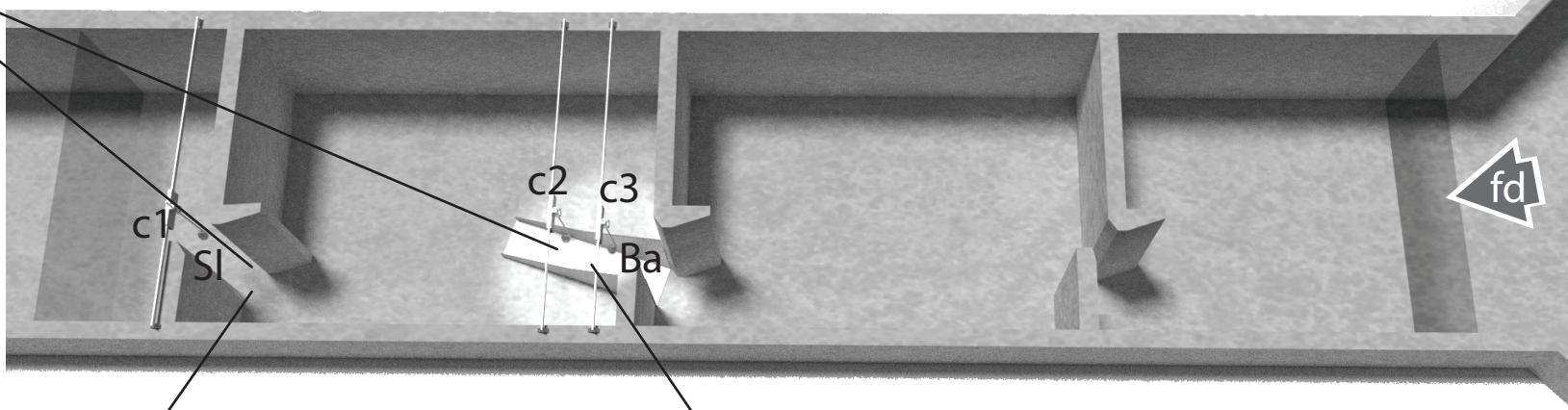
Paper II: Live fish swimming performance



Question: How do swimming styles and swimming performance differ between the test species?

1 m

B test rig



Paper III: Description of the prototype hydraulic barrier



Question: Has the prototype hydraulic barrier a selective effect on the passage behaviour of the three test species?

Paper IV: Hydraulic burden and passage behaviour at a vertical slot



Question: How do the hydraulic burden differ between species when passing a vertical slot and how do hydraulic burden affect the passage behaviour of the live fish?

Legend



Flow measurements with an acoustic Doppler velocimeter



Multi-axis, high frequency, force measurements using preserved fish



Swimming performance assessment using live fish



One-axis force measurements using preserved fish



Video tracking of live fish



Description of the passage behaviour of live fish