How it Works

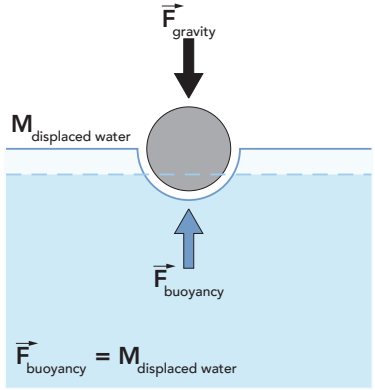
River and ground water are hydrologically linked, so during a flood here as the River Thames rises so too will the ground water beneath the surface. The dock fills gradually from the ground, gently raising the building, as the river level rises. When the water is just below the ground level the house becomes buoyant. The house can rise upto 2.7 m to cope with a 1 in 100 flood event. The guide posts extend almost 4 m above the ground level such that in the event of an even bigger flood the house would still be retained between the posts.

The flexible pipes are designed to extend up to 3m allowing all of the services to remain clean and operational during any flood event and crucially to allow the occupants to return to the property immediately after a flood, maximising the continuity of their daily lives.

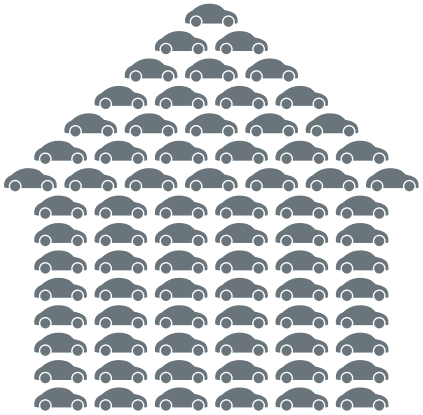
Maintenance

The Amphibious House is designed with minimal moving parts but like any house it requires maintenance and like a car or a boat it requires testing. The house may not float for several years therefore it is important to proactively test and maintain the can-float base and flotation system to ensure that the parts are in good working order, ready for when a flood occurs.

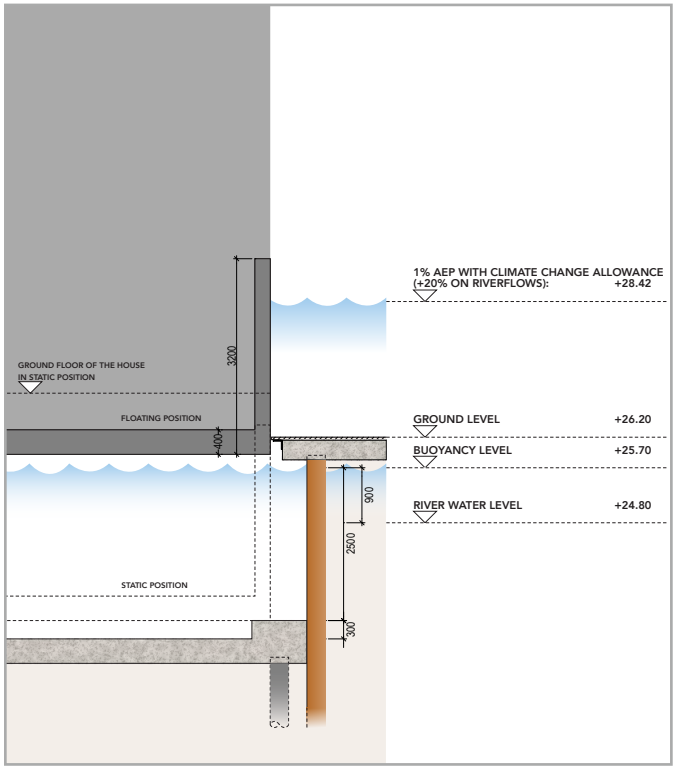
Every five years the dock will be pumped full of water to repeat the flotation test when the house will rise up to 50 cm to test the integrity and free movement, before the water is slowly released and the building allowed to touch down again.

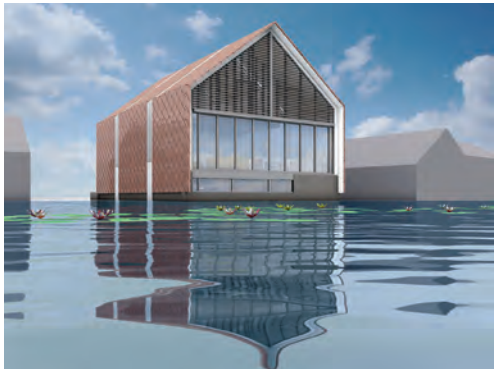


Archimedes Principle



The house is equal in weight to 170 cars





Formosa, The Amphibious House

ARCHITECTS baca