These cantilever cable stayed bridges are all examples of bridges with larger abutments on one side than the other side.

This green post is the pylon which supports the bridges load.

These are tensioned cables.

They counteract the compression forces of the walkway.

The black rectangle represents an abutment that supports the suspender (the green post), which supports the majority of the bridges weight.

This design is very suitable to this project as on the south bank there is a large amount of space, so large abutments can be built. These can then support larger pylons, which can take the weight of the footbridge. This also means that on the other side of the bridge, a large abutment is not needed which is perfect as there isn’t space for one.

These are tensioned cables. They counteract the compression forces of the pylon and help to keep it balanced. This cables have to have a lot of tension as otherwise the pylon would fall over due to the large clockwise moment that the weight of the bridge is creating.

The bridge deck will be constructed from steel, as it allows a degree of flexibility, withstands bad weather and has a long life expectancy of around 200+ years. This however depends on the grade of steel used.

The suspenders will also be constructed from steel. Different design of the pylon include these below.



Considering that the proposed bridge is for pedestrians, the live load that it must endure is not that great combined with small dynamic load considering London's mild weather, means that a single pylon, like in figure 5 would be sufficient.



This image shows some issues with designing a cable stayed bridge with fan cable design. However this is not a major issue as the proposed footbridge only has one pylon, and is for pedestrians, and so the live load won't increase massively at one time, eliminating this issue.