

## **Kench: possible Flood Protection Proposals**

### **The flood reports and levels**

I think all chalet owners have been shocked by the flood on the 9<sup>th</sup> April. The report circulated by Mark on 25<sup>th</sup> April is extremely helpful. On the morning after the flood I went round the site and observed the highest tide marks and listened to various people's reports of the flood. I then considered these against the levels we have on the site from the Flood Plan (produced by the East Solent Coastal Partners now Coastal Partners). My analysis is similar to Mark's report although I believe the flood level was 3.15-3.2 AOD equating to a tide level of 5.8 or 5.9m although it is possible that the highest levels varied across the site due to the way the incursions happened.

It would be interesting to know which direction the flood water that entered the site through the West gate came from. Was the whole of the section of Ferry Road adjacent to our site flooded?

Beyond damage to chalets there was damage to landscape. It is noticeable that some plant types were killed by saltwater getting to their roots. The total herb garden was destroyed.

I haven't heard any reports regarding the flood's effect on the site's drainage system. It would be useful to know if any chalet experienced sewage backing up. By contrast with river flooding, which often continues for longer periods, I am not sure how much pressure a tidal flood, such as this, places on systems such as drainage.

I know areas of the lower green remained flooded through the next day but I haven't heard how long larger areas of the site were flooded. Was it an hour either side of high tide?

### **Future threats to site and infrastructure**

As there are going to be more regular incursions by high tides with rising sea levels and less stable climate such as we experienced, flooding will not only threaten chalet buildings but also the site infrastructure. Even those whose chalets are at higher levels will be affected as much as those at lower levels, if the site is damaged by more frequent flooding. It seems probable that all the Kench property has been significantly devalued by this flood.

I understand that the emphasis is on each chalet owner to protect their property but if the site and its infrastructure is gradually degraded, the Kench we know will be significantly different with a poorer environment to what we are used to and enjoy.

### **Hasn't some action got to be taken to protect the overall site?**

I read that the Committee believed that flood protection measures were prohibitively expensive but have not seen any proposals upon which this opinion was based. Unless some proposals are produced and costed how can it be possible to have an informed discussion what to do?

I believe we need to plan to protect the site. Below I suggest how this could be achieved at least to resist currently envisaged floods up to approximately 3.3 or 3.4 AOD tide level of around 6m. This could provide protection in the short to medium term but I believe we need a strategy for the longer term. These are just my initial thoughts to start the discussion.

### **Proposed protection to the site's perimeter**

The perimeter to the Kench takes many different forms. As we know flooding is now coming from the sea facing perimeter and from Ferry Road. I believe that we need to consider different protection solutions for each vulnerable section of the perimeter. On the attached aerial view I have drawn in coloured lines my thoughts of how different sections can be protected.

Red lines denote where a low blockwork wall could be added to the existing concrete sea walls to increase the heights to 3.3+ AOD. This would be for the seawall to East facing chalets 114-123, the South corner chalets 101-104, North facing chalets 22-28 and chalets North of the inlet 116-7. For simplicity and strength fair faced concrete blocks laid flat with mesh reinforcement would be adequate I believe. This would provide a wall 215mm thick. In most locations the wall would only need to be 3 to 4 blocks high, so 30-40 cm high. Access to the beach or Kench could be maintained either by steps over the wall or by leaving openings but protecting these with removable flood panels.

Purple lines show two areas where the ground level could be raised with additional earth mounding. One is in the South East near Keilah's 104 where the ground would need to be raised by approximately 40 cm. The second is the Bund where the height will need increasing by approximately 20-30 cm. The third is the Ferry Road boundary to the South of our East gateway where a bank of 50-60 cm would be needed.

Yellow lines show temporary flood barriers. This link shows an example <https://www.fluvial-innovations.co.uk/0-5m-high-flood-stop-barrier/> Temporary barriers could be deployed when there is a flood warning. These would be used across the three road access points and the slipway. Temporary barriers can be removed when not required. In the situation where some flood water did get into the site, they can be removed as the flood risk recedes to allow water to run out from the site. The issue of removal of flood water needs careful consideration with any plan. In the recent flood it appears that the flood water that remained on the lower green eventually seeped into the ground.

**If an approach like this was adopted there would be many challenges to overcome.**

**Surveys:**

There would need to be more detailed proposals drawn up. These would require gathering more detail on the perimeters including exact ground levels. This is likely to require some topographical survey work.

**Communication:**

Undoubtedly any flood protection is going to impact all of the chalet owners and users. Communication is therefore very important. It will by necessity create some changes to access points to the sea and flood protection will visually alter parts of the Kench. But surely these are issues which can be overcome if everyone recognises the importance of protecting the site and its value.

**Cost:**

If these proposals or something similar are to proceed, detailed costings will be needed. Some of the work may be able to be carried out by members/volunteers but most will require paying third parties. Once the costs are established proposals for funding could be considered. Could some of the HHS reserves be used to part fund this work with the remainder coming from the members? We could also investigate whether there are any grants available? I think that most members might accept, that to protect the site and its value, they would contribute an additional annual flood protection sum.

**Implementation:**

Although it is important to protect the site as soon as possible, works such as these could be implemented incrementally over a number of months or years to reduce disruption and spread the costs.

**Is this all too difficult or too greater challenge?**

Implementing flood protection is not going to be easy but can we just sit on our hands and leave our children or grandchildren with a Kench which is more regularly flooded, unusable at times and degraded, as opposed to the Kench we know and love?

There is quite a history of work by our HHS to protect our surroundings such as building breakwaters on the spit and moving shingle, building timber defence walls to the Kench and along Ferry Road and in the past having the foresight to build the 'bund' to protect the lower green, a major earth bank which has worked successfully.

Cannot we resolve to incrementally protect our site from future floods?

**Nic Allen**

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