The Threat to Portsmouth Harbour

Update

This update is provided in response to what are thought to be the ‘significant flaws’ [in my original paper] identified by the Defence Infrastructure Organisation to the National Audit Office. The Ministry of Defence have felt unable to share the original written information.

by

Christopher Donnithorne

© CHD Sept 2021
## Contents

Executive Summary iii

Threat to Portsmouth Harbour - Update 1

Identified Flaws and/or Individual Points

1. Pre-dredge Environmental Study 3

2. Natural Coastal Processes - General 4
   2a. Loss of Blockhouse Fort 5
   2b. Hamilton Bank - approach channel 6
   2c. Hamilton Bank - edge slope 6
   2d. Hamilton Bank - itself 7
   2e. Blockhouse Wall - erosion 9
   2f. Blockhouse Wall - tidal stream 9
   2g. Blockhouse Wall - 2014 repair 10
   2h. Climate Risk Assessment 11

3. Harbour Governance 11
   3a. Inconsistency 12
   3b. Dredge Slope 12
   3c. Haslar Lake 12
   3d. Blockhouse Sale 12
   3e. Harbour Works Group 13

4. Items raised in paper 13

5. Overall summary 14
Executive Summary

‘Significant flaws’ in my original paper were identified by the Defence Infrastructure Organisation [DIO] to the National Audit Office but the Ministry of Defence [MoD] have chosen not to share the written information with me. After meeting with the Naval Base Commander [NBC], the alleged flaws [in blue] are thought to have been:

1. **The pre-dredge environmental study was very thorough.** Comment - a lot of good work was done here but significant issues appear to have been missed. For example, known defects on Blockhouse Wall were ignored even though greater wave height was predicted at a vulnerable point.

2. **Natural processes and levels of erosion not sufficiently explored.** Comment - this was not intended as a technical paper, nor was I writing a book. Lack of detail did not, in my opinion, undermine or distort the central argument. Much of what I wrote turns out to have been true in spite of ‘flaw’ arguments to the contrary - for example, evidence suggests that Hamilton Bank is eroding as a result of the Carrier dredge, and loss of Blockhouse Fort would, indeed, lead to silting of the deepwater harbour.

3. **There are no issues with harbour governance.** Comment - lack of overall coherence or attention to detail are indicative of an issue yet to be fully explored. Additionally, subjects such as the intended sale of Blockhouse might raise legal questions.

4. **Everything raised in my paper was already being addressed.** Comment - many of the issues were already known, but the apparent complacency revealed an unwillingness to react in a serious situation. The statement is, in my opinion, demonstrably untrue.

Having reviewed the alleged ‘significant flaws’ I am unable to see a single convincing argument warranting a substantive change to my paper. Apart from Blockhouse Wall, where palliative repairs may happen in a couple of years or so, no action and little tangible interest is apparent regarding other issues raised. There seem to be elements of complacency and denial here and, in my opinion, we have a problem. The threat remains.

CHD Sept 2021

---

1 Christopher Donnithorne, *The Threat to Portsmouth Harbour*, Dec 2020 - [hereafter Threat].
The Threat to Portsmouth Harbour - Update

Given near universal support for my paper, it was the National Audit Office letter to the Defence Select Committee which gave the first indication of disagreement:

‘The paper has been examined by the Defence Infrastructure Organisation [DIO] specialists, who have identified what they consider to be a number of significant flaws in the detailed analysis. These relate to the explanation of the natural coastal processes and level of erosion in the area.’

The Ministry of Defence [MoD] remains unwilling to share this written information. Courtesy of Caroline Dinenage, three meetings have subsequently been held with the Naval Base Commander, two including the DIO’s Technical Services Principal Maritime Engineer. I am grateful for their time and the opportunity to establish at least some information regarding the ‘significant flaws’ and to listen carefully to counter-arguments.

I need to re-iterate that I am not a subject expert and some of these discussions have become very technical. I have read extensively into a number of opaque areas and this ‘update’ represents my interpretation of the many references provided and the meetings for which no formal minutes exist. If I have missed detail - mea culpa.

Many years of research have taught me to check personally every realistic avenue before reaching important conclusions. Within my limited resources, I have done just that, and would like to stress that I do not seek to impugn the integrity of those with whom I have been dealing when I reach views which may differ from theirs.

After the last meeting, I received, courtesy of the NBC, background information which is so caveated that I am unable to refer or comment on it without written consent. Such consent has been requested but withheld. Therefore the reader should be aware that there are a few areas where I have corroborating evidence to which I am not at liberty to refer.

Christopher Donnithorne, The Threat to Portsmouth Harbour, Dec 2020 - [hereafter 'Threat].

In this context it has not always been clear which subjects are identified ‘significant flaws’ and which may have been raised as ‘and another thing’ type issues.
Identified flaws and/or Individual Points.

1. Contention:

   The pre-dredge environmental study was very thorough.

What I said:

   “Inadequacies of the pre-dredge Environment Impact Assessment which failed to address fundamental issues.”

Comment: Considering a few examples:

a. There is a claim that erosion at the Blockhouse Wall has been recognised for some years yet it does not rate a mention in the pre-dredge survey. In this context, there were two pertinent references to the wall, both in regard to flood risk:

   “Upon inspection of the sea defences, it was found that there was no need to model the consequences of changes in wave heights at Location D [Blockhouse Wall], because the coastal defences here comprise walls that are sufficiently high to prevent overtopping and would clearly not be sensitive to the predicted range wave height change in this location (of +/- 0.04 to 0.12m). The defences and assets to the rear are also within the ownership of the MOD/DIO who are aware of, and accept, the predicted change in wave climate in this location”

   “The short lengths of changed wave climate along the Haslar (Gosport) frontage as a result of the proposed dredging have no flood risks consequences due to the presence of high defences to the rear”

Since it is claimed that the parlous state of the wall was known, this is tantamount to neglect, which is one reason why I questioned the thoroughness of the EIA. In practice, this is probably a classic failure of the box-ticking process, with two different organisations making unwarranted assumptions.

b. Considering wave heights, the EIA noted the potential of a 1 in 50 year wave of 1.5m to 2.0m [to the south of] Southsea Castle. In 2018, two experienced observers reported, to QHM, an unexplained wave of 3m in this position. No follow-up action was noted, which itself raises a number of questions.

c. The impact of increased tidal stream in Haslar Lake or on the northern point of Blockhouse, rated little mention. Likewise, there was no recognition or assessment of

---

4 Threat, p. 51.
6 Ibid., page 18.
7 Threat, p.31.
8 EIA, App.7.5, p.14 & fig. 22b,B.
the expected increased sediment transfer into the Lake. Haslar Lake had already been allowed to silt by 4 metres in the last 20 years, and this year, the maintained depth was reduced again9 - 6 metres of silting in a little over two decades - the shallowest in over a century. At the current rate of progression, the Lake might be expected to silt up completely within a decade or so, unless commercial interests pick up the dredging costs; this despite the fact that by law, it is ‘a main navigable channel’. NBC has noted the need to investigate this issue but no action to date.

d. Dredging of Fountain Lake was probably undertaken as much to support commercial interests as naval ones but the deficiencies of the process seemed to be laid bare by the caveat, in the Portsmouth Baseline Document,10 regarding the history of dredging in the port. Given the known history here,11 this seems rather less than ‘thorough’.

Cumulatively, the bureaucratic process was applied, with all the required boxes being suitably ticked, but important issues were still missed, either ignored or possibly falling between the responsibilities of two or more organisations.

2. Contention:

Failure to account for ‘natural coastal processes and levels of erosion in the area’.

What I said. The charge covers such a wide area that all I can do is give an example.

“At what stage, fed by the littoral drift, the shingle stopped rolling along from Stokes Bay and into the harbour, is difficult to pinpoint.... But it is possible that wider considerations were at play. Southampton has a similar history of reclamation and dredging. Likewise, dredging has been extensive in the western Solent; there will be others better qualified to explain the changes. However an equilibrium had been struck. While the seawall had been protected by the shingle, it was then covered by the massive fortifications on the Point. It is only now, with the rapidly reducing shoreline, that the vulnerability is exposed.”12

Comment:

With the benefit of detailed explanations offered by the DIO. I am now much better informed regarding processes in this complex field, and with the East Solent Sediment Regime. I made no pretension to being a subject expert and, bearing in mind the intended audience, I sought to provide a logical explanation of the perceived facts, reasonably introducing other factors, rather than embarking on a technically probing

---

9 Temporary/Preliminary NMs L6271(P)/19.5 No.1 jetty maintained depth reduced from 6 to 4m. Petrol Pier (north side) reduced from 5m to 4m; approaches to Hornet reduced from 3m to 2.5m. The inference is that the Boat Pool is no longer to be dredged.

10 Baseline Document for Maintenance Dredging in Portsmouth Harbour, Oct 2017, para 1.3.1 notes that under Maintenance Dredging Protocol, such documents should provide history of dredging. Para 2.1.1 seems to kick this into touch with the statement, ‘Records before 2004 are sparse and incomplete’.

11 Threat, p.9.

12 Ibid., p.10.
analysis. Even so, some detail was inevitable. To take the erosion example above, when I noted, ‘the hard structure of the Fort has provided protection for many years, all the time the shoreline has remained above foundation level,’ I was merely echoing what I later found to be perceived wisdom. In the context, I cannot help concluding that this is a case of ‘the kettle calling the pot black’ with the MoD claiming suitably vague deficiencies to divert attention from a failure to take timely action. The most recent MoD statement reads, ‘The impact of Carrier dredging has been studied and has proved that the impact is negligible’. I wish I could share such optimism. Below, is my [brief] response to such issues which have been loosely identified as ‘significant flaws’.

2a. Contention:

**Loss of Blockhouse Fort would not impact the harbour.**

What I said:

‘The greatest immediate threat is the undermining of Blockhouse Fort. Even a partial collapse would lead to a reduced tidal scour, silting and subsequent loss of deep water access.’

Comment:

It has now been agreed that my statement was true BUT we are invited to accept that swift action, at the first hint of trouble, would effectively negate any such risk. Given the MoD track record here, the minimum of a further two year delay to the DIO study report [originally promised to complete in March 2021], the apparent complacency regarding the cause of the current issues, and the diminished control implicit in the MoD aspiration to transfer all liabilities to a new owner, there should be little wonder that such a statement is treated with understandable incredulity and disbelief.

13 Ibid., p.33.

14 ‘These structures [Fortifications &c] should prevent the shoreline from eroding, unless the low water mark falls below the structures where erosion can contribute to sediment. Poor condition of flood defences may mean these start to breach ...’; EIA, App.7.2, p.7.

15 Threat, p.iii.

16 My understanding is that the study will be confined to repairs to the wall rather than any causes of the damage. The study will take about two years, at which stage a report will be produced giving up to three options, for consultation regarding the action to be taken. Such a scheme might suggest differently priced options, perhaps expecting the new owner to contribute towards a ‘better’ or long-lasting repair - I cannot conceive of a plan more likely to fail. No wonder MoD wishes to offload the liability as quickly as possible. It has also been claimed that the repairs will be ‘permanent’. It doesn’t work like that. As explained in the paper, no such permanency is achievable in such a situation. CHD
2b. Contention:

Hamilton Bank is not eroding [along approach channel].

What I said:

“Dredging for the new aircraft carriers, and the subsequent erosion of Hamilton Bank, immediately to the South of the old Fort, is the only apparent cause of the accelerating local seashore erosion.”

Comment:

The DIO claims that post-dredge surveys show no erosion along the [approach channel edge of] Hamilton Bank. Comparison of two sequential editions of an appropriate Admiralty Chart indicate otherwise. The theory, that Hamilton Bank continues to accrue sand and shingle, may have been true but, with very minor exceptions, evidence is lacking to suggest it still holds good. Erosion is happening on the western edge of the approach channel.

2c. Contention:

Hamilton Bank dredge did not result in ‘near vertical sides’ to the approach channel.

What I said:

“The result of the carrier dredge provided a wider and deeper channel than ever before, with near vertical sides, in a material largely composed of sand and shingle ...”

Comment:

The only evidence to hand at the time of writing the paper was the bathymetric post-dredge survey by HMS Gleaner in 2017 [fig.36]. With subsequent access to the pre-dredge assessments, the dredging slopes are noted with a planned 1:6 profile, except at the harbour entrance where this becomes 1:3.75.

17 Threat, p.iii.
18 Admiralty Chart 2625, Approaches to Portsmouth Harbour, editions 15 [issued 2018] and 16 [issued 2020 & updated to 10 Aug 2021], the relevant part over Hamilton Bank being based on surveys dated 2016-7 and 2019 respectively.
19 Threat, p32.
20 Ibid., fig.36, p.32.
21 Not available for the initial paper. I am most grateful to DEFRA for subsequently providing the reference.
22 EIA, File B11200-003-revPO.PDF.
The meetings have confirmed that the dredge was carried out with a slope of 1:5, apparently ‘as planned’. Lacking evidence that a 1:5 slope was ever authorized raises the question regarding the basis on which the licence was granted, or the reliability of the environmental assessment figures. Not knowing what was a stable slope in such conditions, I consulted a modern study which appeared to indicate that 1:6 was probably stable while 1:5 might be a bit steep; others are better placed and experienced to judge. However, the Gleaner data and the most recent chart indicate that, in a number of places, the approach channel slope exceeds 1:4, with all the appearance of instability.

Proposed change:

With more detailed information to hand, I would probably change my description to ‘a slope of 1:4 or steeper in places - most unlikely to prove stable.’

2d. Contention:

Hamilton Bank itself is not eroding.

What I said:

“In 1700, much of Hamilton Bank dried at low water [i.e. appeared at or just above the water]. Comparison using charts and photographs would suggest that this had reduced by perhaps two feet at the wall face by 2000. Since then it would appear to have dropped by another 2-3 feet [c. 1m], most since 2015.”

Comment:

Most worrying is the erosion across the bank from the south towards Blockhouse wall. Increased wave height was predicted here, post-dredge; ‘the zone of increased wave heights approach ... a narrow extent of the shoreline east of the tower of HMS Dolphin’. In practice, the associated figure indicates the shoreline to the east of the radar mast. It is being claimed that flow through this ‘natural channel’ has been the cause of damage to the wall for many years. I beg to differ while asking, if this was the case, why one vulnerable section of the wall was left unprotected by the repair work in 2020?

---

23 If so, I have yet to see the evidence.
25 Threat, p.33.
27 Ibid., App.7.5, fig.22b.B. See also figure 1, next page.
The presence [or remains] of piling, groynes and rock armour along the wall towards Monckton demonstrates that the wall has been damaged at many points along its length over the years, and maintained at significant cost. The whole wall is still vulnerable, and that this part has become more so over recent years may be a combination of factors such as shape, lack of piles and sparse maintenance. The historical record does not support the theory of onshore flow across the bank through some natural channel. Indeed, in the last century it appears the erosion was greater in front of Haslar than Blockhouse. Going back a little earlier, design of the late C19th piles would probably have been different if such a flow had been present.

Certainly there is a small finger of slightly deeper water which the DIO suggests, connected up with the Inner Swash way to form some sort of ‘small boat channel’. In passing, it should be noted that the Inner Swashway is not recommended for such use by QHM, and the ‘Small Boat Channel’ is delineated by law and does not run here.

Accepting sparse data based on chart information, it is obvious that there is, now, such a ‘finger’ which is growing rapidly. Following the notional one metre chart line, originally a natural sinuation of little significance, the nominal point has, post-dredge, extended over 200m further to the north, running roughly parallel with the main approach channel and now lies less that 50 m off the wall, almost opposite the boat pool. This erosion, following so closely the line of predicted post-dredge increased wave height, is difficult to attribute to anything else.

Figure 1 Area of interest - rough sketch - not to scale. 

- a. approx centre, finger of deeper water, based on the significant changes noted in the interpolated 1m sounding line on recent charts; 
- b. approx predicted line of increased wave height; 
- c. Inner Swash Way; 
- d. Small Boat Channel; CHD

In the 1980s it was generally accepted that the Haslar Wall, as a whole, cost in the region of £1 million/year to maintain.

See, for example, Threat, p.42 - the undermined piles at fig. 51.


“Small Boat Channel” means the channel within the approach channel shown on Admiralty charts whose northern extremity is at the Ballast and southern extremity is at No 4 Bar Buoy; *The Dockyard Port of Portsmouth Order 2005*, 2. Interpretation.
2e. Contention:

There has been no accelerated erosion at Blockhouse wall, post dredge.

What I said:

“... those working on the [2020] repairs suggest there has been a noticeable fall in the last year. This has to be, at best, a qualified estimate which makes it even more inexplicable why no effort has been made to establish an accurate record.”32

Comment:

Even though increased erosion was predicted here, post-dredge,33 the timescale has been challenged, claiming that the process started as early as 2004. Proof, claimed to exist but yet to be viewed, would be challenging to reconcile with my evidence. Equally, if this erosion had been recognised as such an important issue so much earlier, the lack of timely remedial action in inexplicable. There is still no obvious effort being made to establish an accurate record of what is happening at the wall.

2f. Contention:

There has been no tidal stream increase along the Blockhouse Wall post-dredge.

What I said:

“It is noticeable that stone has been washed along the extremity of the wall - old stone facings and some rock armour from the failing 2014 emergency repair. Undoubtedly some stone is already dropping into the channel at the harbour entrance.”34

Comment:

There has always been a stream here [drift]. Indeed, in 1735, it was strong enough to cause a differential level at Blockhouse, either side of the existing breakwater, higher by “18 inches to two feet” on the western side.35 Yet this is in a different league, with heavy material now being moved along the beach towards the harbour entrance.

Increased stream at the wall was predicted, post-dredge,36 but whether this alone explains what one yachtsman described ‘as almost a rip tide’ along the wall towards

32 Threat, p.33.
33 EIA, Appendix 27.1, fig. 17a. This was predicted as a ‘downstream’ impact of the Southampton to NAB dredge carried out between Jan and Oct 2014.
34 Threat, p.33.
35 TNA, ADM 106/869/78.
36 EIA, App. 7.5, fig.16.
the harbour entrance at some stages of the tide is more difficult to conclude, and there
have been big storms before without this sort of impact. Hence I have continued to
ask the question, but have to accept that establishing what is actually happening close
to the wall is apparently not considered a priority.

2g. Contention:

The 2014 wall repair is not failing.

What I said:

“Fig 47. The 2014 ‘temporary emergency repair’ after Storm Dennis, note how the rock
armour has been tossed around like marbles; the repair was failing”

Comment:

At the 10 June meeting, I was informed that this repair had not failed since it was still
protecting the wall. This seemed to totally disregard the erosion within the wall. Post
meeting, I forwarded the following for comment:

“Internal Wall Erosion.
The gradual erosion within the wall [and lack of maintenance] has been the most likely cause
of failures in 1986, 2006 and 2013. The latter’s repair undoubtedly reduced the wave force
and the consequent risk of a wall breach, but internal erosion undoubtedly continues. As the
rock armour here slips, the internal erosion process can only accelerate and hence my view
that the repair has/is failed/failing.

While the new berm, extended over the old sea wall will be playing its part in reducing wave
impact, to me it seems unlikely that it will do anything to address this issue. As to that part
covering the moat wall, my understanding is that loose stone was removed, and a membrane
put in place, followed by rock armour. With the integrity of the wall surface now
compromised, it, too, may now become prone to internal erosion.

As a matter of observation, I am unaware of any similar failure over any part of the wall
which has been piled. Superficially, the obvious conclusion is that, in principle, piling has
provided a more effective defence against this specific issue.’

I have yet to receive a response.

37 Threat, p.38
2h. Climate Risk Assessment

Climate Risk Assessment [CIRAM] has identified that Fort Blockhouse is at risk.

What I said:

“Rising sea levels and increased frequency of storms will only exacerbate the situation.”

Comment:

At the June 2021 meeting, I was informed that a full Climatic Risk Assessment [CIRAM] had been carried out which identified Blockhouse as at risk from sea level rise; the first mention of a study which I have yet to see, unless this is EIA, Appendix 26.1, dated Oct 2012, which, indeed, indicates a general increase in the risk of flooding. Important though this subject is, it was the introduction at this stage and the way it was put forward which leaves me with the unworthy thought that this is an attempt to close down these ‘discussions’, to limit the scope of the forthcoming survey to climate change matters, to leave current issues unaddressed and to divert all the blame [and cost] to climate change. In my opinion any attempt to ignore the cause of the existing issues would be short-sighted, potentially more expensive and increase the future risk to the harbour.

3. Contention:

There were no issues with harbour governance.

What did I say [paraphrasing]:

“Communication between harbour stakeholders is limited but does exist and is laudable. The relevant national organisations apply their own rules and regulations which are then used extensively as guidance or direction for other stakeholders which provides a framework but is not itself sufficient. Too often there is the appearance that, if potential changes or planning applications successfully pass through the system, every aspect will have been assessed, all boxes ticked and a satisfactory solution reached. All too often local views, dismissed at, perhaps, an initial planning stage, are lost by the time a specific scheme is subsequently assessed at a broader and potentially more encompassing level.

The result, in the unique harbour environment, is that such a box-ticking process can overlook the stresses placed on the harbour as a whole, and the effects are cumulative.”

Comment:

There has never been time to discuss this in detail, although the NBC has accepted that all is not ‘entirely’ satisfactory. Any suggestion, however, that overall control might change in view of, say, the Solent Freeport and increased commercial use of the
harbour, received a blank refusal, and the comment that inclusion of Portsmouth in the Solent Freeport should not be assumed. There are a number of strands to this issue and I do not propose to try to cover them all here. To take a few illustrative points.

3a. Consistency Issues
Since writing my paper, I have become aware of the proposal to build 3,500 to 4,000 new homes at Lennox Point [the old Tipner range &c] which would include the reclamation of more than 60 acres from the harbour - all within an existing RAMSAR site. Bearing in mind the political imperative for new houses, it is probable that something will go ahead here although perhaps on a reduced scale. To protect against flood risk, it is being proposed to plan for the accepted minimum period for such schemes, of 100 years.

Contrast this with the Alverstoke Flood Defence scheme. A scheme providing protection for 40 years has been adopted. A significant justification for dismissing a more cost-effective 100 year proposal, protecting more houses, was a supposedly inviolate rule preventing the driving of a handful of piles into a RAMSAR site. The inference would appear to be lack of consistency and an apparent democratic deficit.

3b. Dredge Slope - legal.
The actual dredge profile does not appear to be that on which the survey was based. Assuming the pre-dredge study was the basis for the issue of the Marine Licence, it might appear that there was a departure from the terms of the licence, unless there were other documents or variations of which I am unaware.

3c. Haslar Lake - legal
The law states than no vessel &c may ‘lie or be moored, grounded, deposited or run on shore in the fairways of the Harbour, the main navigable channels or the approach channel’. Haslar Lake, to seaward of Haslar Bridge is defined in the Act as a ‘main navigable channel’. At some stage, a Marina extension has been allowed to encroach into this space. The new proposal would narrow the channel even more. Some months after I had alerted NBC to this application, I was informed by him that ‘an objection against the proposed dredging of Haslar Lake had been made’. I was unaware that dredging was involved in this particular case. I am not sure what is happening here but it does not do a lot to inspire confidence.

3d. Sale of Blockhouse - legal
The law requires QHM to protect the port. Blockhouse wall is a key part of the port infrastructure, it having been agreed that failure here would lose the deep-water port for which the main beneficiaries are the Royal Navy and the Commercial Port [owned by Portsmouth City Council]. In their wisdom, the MoD aspires to sell the site with all liabilities transferring to the new owner. Not only might this be perceived as

40 Threat, p.46.
41 The Dockyard Port of Portsmouth Order 2005, 6 (e).
42 The Dockyard Ports Regulation Act 1865, 4.
illegal since QHM would be delegating his legal obligation to a third party; it might also threaten the future of the harbour given the swift action required [and promised] in the event of damage - see 2a. above. If such an arrangement were to go ahead, and given the increased commercial use of the harbour,43 this might be a reasonable and appropriate opportunity to review the whole issue of port governance which undoubtedly would benefit from improvements. Whether the Royal Navy should remain in overall [rather than just operational] control is a different matter.

3e. Harbour Works Group
I was informed by the NBC at the end of June that ‘the Harbour Works Group look at the combined effects of projects in different areas of the harbour ensuring deconfliction and a holistic view of issues’, it was unfortunate that I was unable to locate such a group. In the last few days, the NBC has informed me that:

‘The Harbour Works Group is an ad hoc approach to co-ordinating planning of harbour works across organisations. It is not a formal governance arrangement ...’

Rather sums up the whole situation, methinks!


Everything raised in my paper was already being addressed.

Comment.

I accept that many of the issues were already known. The idea that the full implications were appreciated, or that any action had been started or even contemplated, probably falls into the category of wishful thinking. The reason for putting pen to paper was apparent complacency and the lack of action for which reasons are not too difficult to identify - financial constraints and the political intention to sell are but two which readily spring to mind.

This was a serious situation, still is, but at least some temporary repairs have gained a little time in one particular area. The fact that in the autumn of 2019, it was to my dining room table that those involved came to be briefed on background information, as a precursor for planning such repairs, would indicate that my paper had provoked at least some action. The purpose of the statement is sad but understandable although, in my opinion, demonstrably untrue.

43 Earlier in the year, the 110,000 tonne cruise ship, *Scarlet Lady*, berthed in the commercial dock; significantly larger than the carriers.
5. Overall Summary

This update has sought to address the alleged ‘significant’ flaws apparently identified in my original paper. From the limited investigation possible, nothing sufficiently obvious has been revealed which might justify making any substantive changes.

The NBC considers my queries have been answered, even though informed to the contrary. The main points in my paper stand.

Harbour infrastructure at Blockhouse is under threat. Additionally, available evidence suggests that Hamilton Bank is eroding and Haslar Lake is silting fast.

Given the facts to hand, the latest MoD statement that, ‘the impact of Carrier dredging has been studied and has proved that the impact is negligible’ lacks credibility.

There is agreement that harbour governance needs attention, perhaps reinforcing my original view that now might be an appropriate time for a review and possible ‘change of the guard’. Reported uncertainty regarding the status of Portsmouth within the Solent Freeport has been noted.

Meetings have revealed a number of fresh issues and, where appropriate, these have been touched on here.

On the positive side, it is now possible to identify the MoD as the responsible agency.

That apart, it would appear that important matters are still failing to attract sufficient attention; perhaps there is an element of denial. It is my opinion that the threat, as outlined in my original paper, remains undiminished.