

UPPER TRIBUNAL (LANDS CHAMBER)



[2023] UKUT 00282 (LC)

UTLC Case Number: LC-2020-14
Royal Courts of Justice

TRIBUNALS, COURTS AND ENFORCEMENT ACT 2007

A NOTICE OF REFERENCE UNDER THE WATER RESOURCES ACT 1991

COMPENSATION – WATER – compensation under paragraph 5(1) of Schedule 21 to the Water Resources Act 1991 - flood prevention works – whether damage caused to a house – whether water table raised – hydrology evidence

BETWEEN:

ROGER AND SUZANNE BROOKHOUSE

Claimants

-and-

THE ENVIRONMENT AGENCY

Respondent

**Re: The King's Lodging,
Sandwich,
Kent, CT13 9EX**

Judge Elizabeth Cooke and Mrs Diane Martin MRICS FAAV
Royal Courts of Justice
2-5 May 2023 and 18 – 20 October 2023

Decision Date: 30 November 2023

Meyrick Lewis KC and Riaz Hussain KC for the claimants, instructed by Charles Russell Speechlys LLP
Galina Ward KC for the respondent, instructed by Sharpe Pritchard LLP

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Introduction

1. In 1520 King Henry VIII stood at the window of the building now known as The King's Lodging in Sandwich to review his fleet before setting sail for the Field of the Cloth of Gold. From the same window today the most striking feature is the wall between the property and the River Stour built by the respondent, the Environment Agency, as part of the Sandwich Town Tidal Defence Scheme. The claimants, Mr and Mrs Brookhouse, are the owners of The King's Lodging and they say that their property has been damaged, and will continue to be damaged, by raised groundwater levels caused by the respondent's works. They seek compensation under the Water Resources Act 1991.
2. This is the Tribunal's decision on the preliminary issue of causation. It will determine whether any compensation is payable, leaving the quantum of compensation for later agreement or determination.
3. The reference was heard on 2 to 4 May 2023, adjourned part-heard, and re-listed on 18 to 20 October 2023. At that second session we heard the expert evidence of the hydrologists. We gave notice to the parties that we would like them to give concurrent evidence.¹ We provided an agenda of topics beforehand, the two experts took the oath or made an affirmation at the start of the hearing, and we asked questions of them both. Counsel then each cross-examined the other's hydrology expert, largely avoiding topics already covered by the Tribunal's questions.
4. The claimants have been represented throughout by Mr Meyric Lewis KC, together with Mr Riaz Hussain KC who was instructed in response to the Tribunal's notice that it required the hydrologists to give concurrent evidence. The respondent was represented by Ms Galina Ward KC. We are grateful to them all. Together with Mr Lewis and Ms Ward we visited The King's Lodging on 27 April 2023, and we thank the claimants for allowing us access.

The claim and the preliminary issue summarised

5. The King's Lodging stands by the River Stour in Sandwich, and its garden is separated from the river by a wall. When the claimants purchased the property in 1991 and for some time before then the wall was of brick and concrete, and we refer to it as "the old wall". In 2014 as part of a flood defence programme the respondent constructed a steel sheet piling wall alongside the property about 1m further out into the river ("the new wall"), filled the space between the two walls with free-draining material, and capped the space between them with a concrete apron.
6. From early 2015 until 2019 on a number of occasions water appeared in the garden. From 2015 onwards the respondent carried out further work to prevent flooding in the garden, but nothing has been done since the last incident in January 2019. The house is centuries old and has a wooden frame. Surveys carried out before the work report it as being in satisfactory condition for its age, with a number of hairline cracks indoors and some areas of damp in walls and floors on the ground floor. Since the work has been done, some of those cracks have widened, more cracks have appeared, and the south-east front of the

¹ See Chancery Guide paragraph 9.42 onwards and PD 35 paragraph 11.

property bows outwards. New areas of dampness have occurred and there has been a deterioration of paint and plaster at the previous damp patches.

7. What the claimants say is that water levels in the ground have been raised as a result of the respondent's works so that the house has been damaged, and will deteriorate further, because its wooden frame is now standing in wet ground, and moreover that the garden has flooded and will continue to do so because of the respondent's works.
8. The respondent's case is that groundwater levels have not been changed by the works, that the house has not been damaged by the works and will not deteriorate in future as a result of the works. As to the flooding, the respondent's pleaded case was that the flooding problem has been solved, but its expert witness Mr Groves agrees with the claimants that inflows of water will recur at particularly high tides. However, he says that this will not be a problem for the garden or for the house.

The legal basis of the claim.

9. Section 165 of the Water Resources Act 1991 provides the respondent with a general power to carry out works relating to flood defence and drainage. Section 177 gives effect to Schedule 21 to the Act, of which paragraph 5 provides:

“(1) Where injury is sustained by any person by reason of the exercise by the appropriate agency of any powers under section 165(1) to (3) of this Act, the appropriate agency shall be liable to make full compensation to the injured party.

(2) In case of dispute, the amount of any compensation under sub-paragraph (1) above shall be determined by the Upper Tribunal.”

10. The respondent accepts that if the Tribunal finds that its works have caused damage to the claimants' property it is liable to pay compensation. As things stand, the respondent accepts liability for damage to the garden caused by the construction of the wall and has made an offer of £481,596.18 to meet the cost of reinstating the garden and for professional fees; what remains in issue is the claim for damage to the house.

The factual background

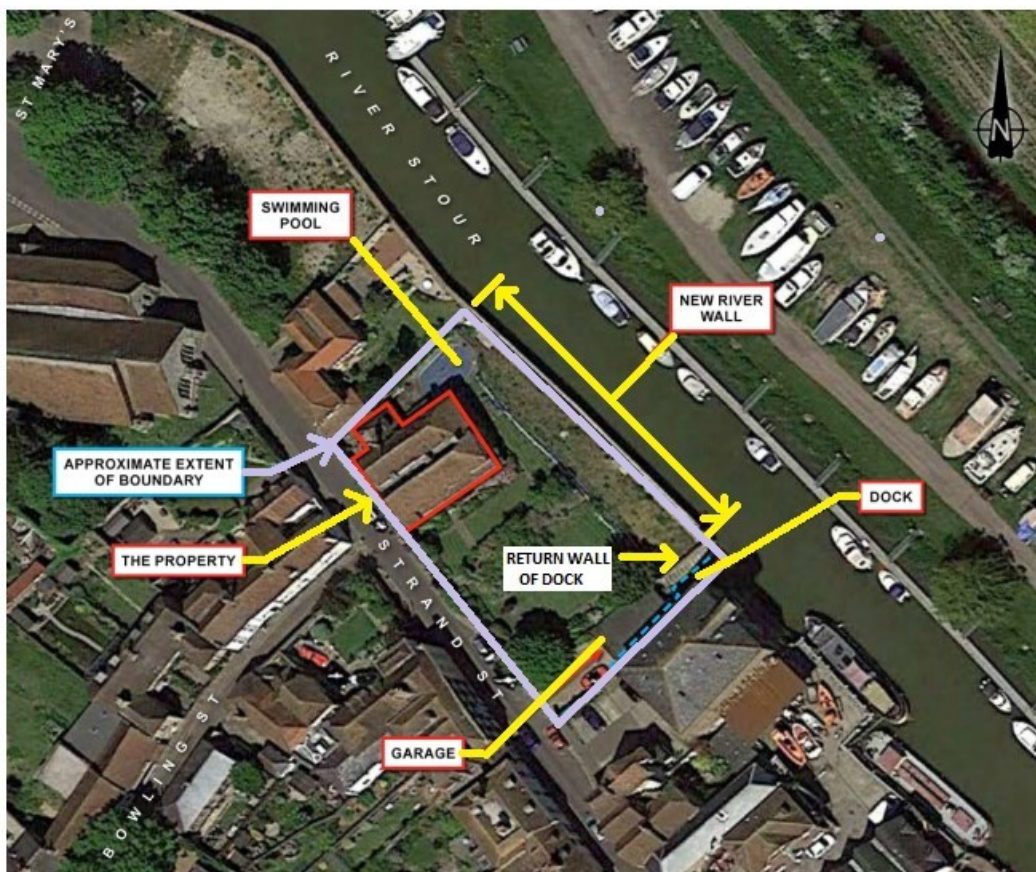
11. The account given here is taken from the parties' agreed chronology, from the factual evidence of Mr and Mrs Brookhouse (whose evidence was entirely unchallenged), and from the evidence of other witnesses, all of it unchallenged except where we say otherwise.

(1) The King's Lodging and its environment

12. The King's Lodging is a Grade II listed building. There has been a building on the site for nearly a thousand years, but the present structure dates from certainly the early sixteenth and possibly the fifteenth century. It stands in a third of an acre of ground; the house fronts directly on to Stour Street and there are gardens between the house and the river Stour

which runs roughly parallel to the street. There is a swimming pool at the north end of the garden. At the south end of the property is a garage, and on the river side of the garage is a dock. The building is beautiful, and is of course of great historical importance; the gardens are well kept and most attractive save for the former working strip parallel with the river wall, which has been left in a desolate state.

13. The following aerial photograph shows the orientation of the The King's Lodging and its garden from north-west to south-east, and shows how the river wall ends north of the eastern corner of the property; the wall on the north side of the dock is significant and we refer to it as the return wall of the dock.



14. The old wall is not a particularly old feature. A photograph from 1936 shows a timber wall, and the claimants' expert hydrology witness Mr Evans expressed the view that a line on the 1872 Ordnance Survey may indicate a yet earlier wall, closer still to the house.
15. The river Stour is tidal. Its water is therefore saline, and of course it rises and falls twice a day. Sandwich stands in the flood-plain of the river on low-lying ground, not far from the sea; roads are typically 2m or 3m above Ordnance Datum (or "AOD", meaning approximately above sea level²). Ground elevations at the base of the river wall are between 2.9m and 3.2m AOD, between 3.3 and 3.4m AOD on the lawn between the house and garage, and between 3.14m and 3.46m adjacent to the main building.

² Ordnance Datum in Great Britain is currently defined as the mean sea level recorded by the tidal gauge at Newlyn between 1915 and 1921.

16. In 2011 the claimants asked the respondent for a flood risk report for their insurers. The respondent's report in December 2011 said that the floodwall at the property boundary was "in quite bad condition, with some seepage occurring on high spring tides which does wet the garden. However this seepage is unlikely to directly flood the property". The report noted that the height of the flood wall was such that there was a 1/20 to 1/50 (meaning once in 20 or 50 years) flood risk as a result of the risk of overtopping at neighbouring properties.
17. In 2013 the Xaver tidal surge occurred.³ The claimants were not present at the property, but Mr Brookhouse was told by neighbours that water entered The King's Lodging from the neighbours' gardens and from Stour Street, and that the river wall was over-topped for a time. The claimants visited a few days later and found that water had entered the house. Mr Brookhouse said that Xaver was unique in the claimants' ownership; otherwise they had no problems with tidal ingress or flooding and their tenants did not report any (the claimants have occupied the property irregularly and at times it has been let, although not since before the start of the works). The gardens tended to be dry and the land was not boggy when they were in residence.

(2) The flood defence works at The King's Lodging in 2014

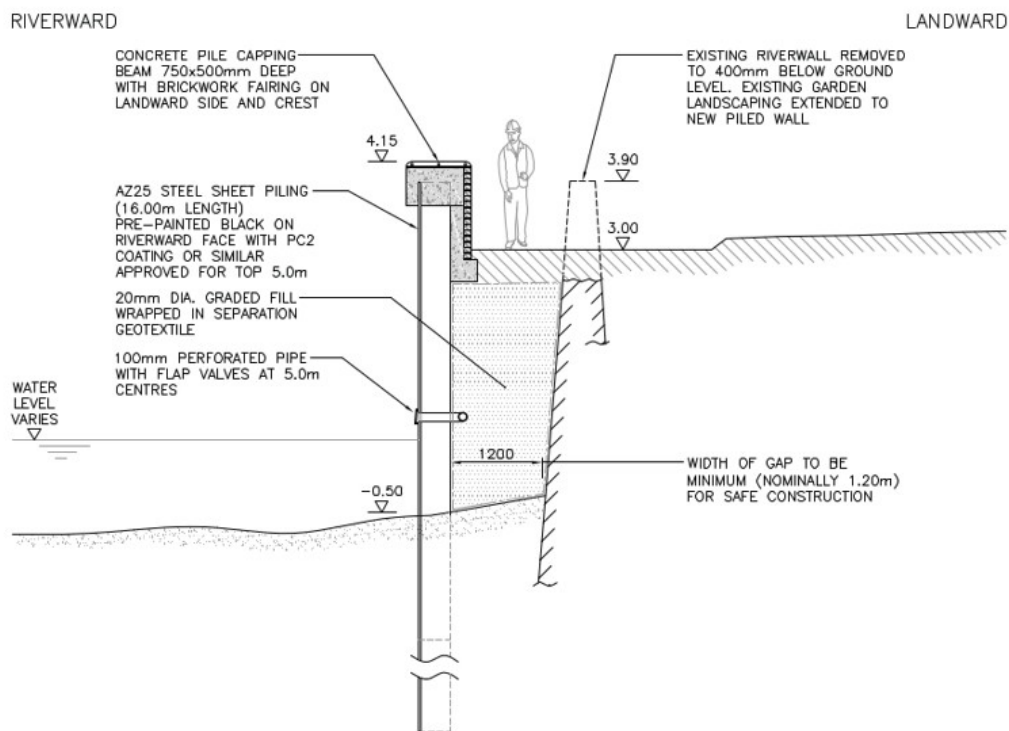
18. The Sandwich Town Tidal Defence Scheme was conceived as a result of the respondent's Strategy Approval Report for the Pegwell Bay to Kingsdown Flood and Erosion Risk Management Strategy in 2008, from which it emerged that the protection of Sandwich from flooding was a priority for the respondent because of the number of properties at risk of flooding from a "5% annual probability event" (meaning water levels rising to a level of which there is a 5% probability every year). So said Mr Ian Nunn, the respondent's Operations Manager for East Kent, who gave evidence of fact and provided a wealth of detail about the extent of the Sandwich scheme, which he described as the largest flood defence scheme in Kent for three decades, and about its planning and execution.
19. The river wall at the property before the works was described by Mr Nunn as "a timber retaining wall with random concrete cladding, ... in a poor condition with a high risk of failure"; the respondent considered that The King's Lodging was at substantial risk of flooding and needed to be included in the Sandwich scheme. Extensive planning and consultation preceded the work, and the necessary consents were sought, for example, a licence from the Marine Management Organisation, a licence from the Sandwich Port and Haven Commissioners, listed building consent and planning permission. From Mr Nunn's and Mr Brookhouse's evidence we learned that a number of discussions took place with the claimants and their concerns were listened to. CH2M (formerly Halcrow) were the engineering company appointed by the respondent to provide consulting, design, construction and operation services on the project, and they made a number of revisions to the plans following the discussions.
20. Mr Nunn explained that it is unusual for the respondent to enter into a deed of agreement with landowners but, in this case, the claimants wished to set out the agreed terms between

³ [Cyclone Xaver - Wikipedia](#): "Cyclone Xaver (or Storm Xaver), also known as the North Sea flood or tidal surge of 2013, was a winter storm that affected northern Europe. Force 12 winds and heavy snowfall were predicted along the storm's path, and there were warnings of a significant risk of storm surge leading to coastal flooding along the coasts of the North and Irish Seas."

them in a formal deed and the respondent considered it pragmatic to do so. The deed is dated 6 November 2014 and covers a number of matters including the claimants' consent to the installation of vibration monitors, and obligations on the respondent to carry out a "full drain survey" prior to entry for the works and to carry out landscaping works of restoration, including replacement planting.

21. The work commenced in November 2014. The new wall of steel sheet piles (SSPs) was installed about 1m outside the old wall, with a concrete wall or capping beam on top. The old wall was knocked down to below ground level, and the gap between the two walls was filled with free draining material to a depth approximately 0.75m below ground level. A 1.3m wide reinforced concrete slab or apron was added to bridge the gap between the old and new walls. This was described by Mr Jon Holland of CH2M, in his review of 19 October 2016, as a "...cut-off arrangement [is] to prevent significant seepage into the garden in the event that the free draining material does fill with water." The new wall was not intended to be impermeable and Mr Holland explained in the review "...the design aimed to retain a degree of connection, below garden level, of the tidal influence of the river with the natural groundwater regime in the garden subsoil." The clutches between the SSPs were left unsealed and flap valves were placed at intervals to ensure that water could flow out of the garden and into the river (as it was known to do through the old wall), albeit not at a rate that would cause the land to dry out. The work was completed in January 2015, save for the reinstatement of the garden. Mr Nunn explained that the river frontage at The King's Lodging is about 53m long, and so represents about 4% by length of the flood defences built as part of the scheme.

22. Below is a diagram showing the essence of the scheme in its early stages, without the concrete slab which now sits over the semi-permeable fill between the two walls.



23. The effect of the work was to extend the claimants' land by a short distance, by placing solid material where there had been water. The land under that water was part of the foreshore and so belonged to the Crown, and so in order to regularise ownership a strip of the foreshore was transferred to the claimants on 18 July 2016.
24. As we saw above (paragraph 13), the riverside edge of the claimants' garden turns inwards to the dock at its southern end. The sheet piling extended along the edge of the garden but did not turn inwards along the dock return wall. The junction of new and old in that corner was to prove a major headache in the months that followed the completion of the work.
25. The garden inevitably suffered as a result of the work; while much of it was untouched, a strip on the landward side of the old wall became a working corridor in the course of the works. Some of it has been excavated, and then the excavations filled. The plan is to add topsoil over both the corridor and the concrete apron itself, so that the garden extends to the new wall. This has not yet been done; the respondent proposed to do it in 2017 but the claimants did not allow it because of their continued concern about water ingress.

(3) Water ingress and remedial work from 2015 onwards

26. Over Christmas 2014 and in January 2015, around the time of completion of the works, Mr Brookhouse witnessed significant water ingress to the garden through the gap in the corner where the SSPs did not meet the return wall of the dock. Remedial work was carried out by CH2M to seal the corner using a concrete "gravity plug", meaning a block of concrete resting on the bed of the river in the gap between the dock wall and the SSPs.
27. However, water ingress continued and at a meeting on 25 March 2015 between Mr Brookhouse, Mr Nunn, and another of the respondent's officers it was acknowledged that the problem had not been resolved. Subsequent work in November 2015 included reinforcement of the tie-in between old and new walls by welding a steel plate at the junction and plugging the gap with cement grout.
28. In December 2015 Mr Brookhouse recorded "more water than ever pouring into the excavations". Water ingress occurred again in January and February 2016, which led to further investigations by the respondent and CH2M, and further remedial works in the corner to the dock wall in May and June 2016. These works involved welding, at low level in the river, gaps between piles and steel plates, and injecting cement grout into the free draining material over a length 5-10m north west of the dock corner and below the river bed level at the location of the tie-in. The pre-works sheet piling in the dock wall was reinforced with a concrete slab on its landward side.
29. By August 2016 the respondent was notified that water ingress was still happening at high tides. There followed yet another round of investigations and technical reviews by CH2M in the autumn of 2016. CH2M's technical review, produced after observations of the spring tide on 18 October, said:

“... measures implemented for the scheme should ensure river water does not enter the garden, even during extreme tidal flood events.”⁴

The review concluded that assumptions made about the level of water ingress through the SSPs had been optimistic, and that water ingress through the free draining material from the SSP clutches was greater than anticipated. CH2M took the view that the flap valves might not be operating correctly and that the hydrophilic seals between the SSPs and the outside of the concrete wall had failed.

30. In January 2017, water ingress occurred yet again and we saw a video of water flowing through a crack in the new concrete wall, immediately below its brick cladding to the landward side. Meanwhile, design proposals for the further remedial works were being drawn up. The proposals were to seal the apparent leakage path between the outside of the old wall and the base of the new reinforced concrete wall along its whole length by means of a proprietary waterproof membrane, above which would be a reinforced concrete slab. The membrane would extend at least 1m down the landward side of the old wall and be kept in place by compacted clay. The proposals also included the removal of some of the flap valves and improvement of others by use of ‘duck-bill’ valves. The work took place between May and July 2017. It is notable that no further work was done to seal the dock corner. By this stage Mr Evans, of Evans & Langford LLP, had been appointed as consulting engineer to the claimants; in a letter to Mr Nunn, dated 12 July 2017, Mr Evans said:

“...the implication is that the old wall, badly damaged during demolition, has become the actual defence and the new sheet piles will be doing little more than support the new capping.”

31. Mr Evans expressed concern at the time that the waterproof membrane would not work because it was placed against the rough and broken surface of the old wall and not against a smooth surface as specified by the manufacturer.
32. The respondent’s contractor’s on-site diary indicates that in the course of the works in May 2017 a section of the old wall (already taken down to below ground level) broke away leaving a gap below ground, and the diary includes photographs in which the gap is visible. It was temporarily covered with sheets of wood. The diary mentions a plan to concrete over the gap but there is no record that this was done.
33. A final water ingress event occurred in January 2019, which we also saw on video. Water was shown to be seeping from the new river wall, along the whole length of the garden adjacent to the river, at the interface between the brick cladding to the new wall and the concrete slab constructed in mid-2017. The water could be seen seeping out from various points, then running over the concrete apron to pool in the unrestored working corridor in the garden. Bubbling was evident in the standing pools.

⁴ This is a reference to the incidents of water ingress recounted above, which prompted the remedial works; it does not contradict the fact that some seepage was always to be expected through the flap valves, as described by Mr Holland (paragraph 21 above).

34. No further flooding has occurred since. The respondent's pleaded case was that the problem has been resolved and will not recur. However – to anticipate our discussion of the expert evidence below – the respondent's expert witness on hydrology concedes (and the claimants' expert agrees) that they will recur in future when the river levels at high tides exceed 3.1m AOD, which (significantly) they have not done since January 2019. We refer to those inflows caused by tides above 3.1m AOD as the “extra-high tidal inflows”, with apologies for the inelegant expression but it is vital to distinguish these inflows from the seepage that occurs regularly at high tide twice a day.

The condition of the building before and after the works

35. As we noted above it is the claimants' case that the condition of the building has deteriorated as a result of the respondent's works. Factual evidence about the condition of the building before and after the works has been given by the claimants themselves. Their evidence was entirely unchallenged (Ms Ward KC did not cross-examine them).
36. In very brief summary, the claimants' evidence was that after the works were carried out they observed increased levels of damp in the house, to the extent that the dining room (whose floor is below ground level) can no longer be used. They observed deterioration in the condition of floor slabs and pointing, and cracking – some of it new, some of it an increase in the width of previously existing cracks. A large crack appeared along the staircase from ground to first floor on the south-east side of the property. The external wall on the that side of the property now bows outwards, and did not do so before the works were carried out. Cracking in the garage has widened. The concrete around the swimming pool appears to the claimants to have moved, and they see a “large discrepancy” between the water levels at the two ends of the pool.
37. The claimants have been advised that their garden cannot be re-planted due to water levels and the salinity of the soil. They are concerned that their property has been rendered unmarketable because insurance renewal will be difficult and because it will be impossible to obtain a survey report that would be satisfactory to a mortgagee.
38. The claimants can of course give evidence only of fact. They are not expert witnesses (despite their considerable experience of historic buildings and their keen interest in conservation) and so cannot give evidence about either the severity or the likely cause of the changes they have observed in the condition of the building; accordingly this preliminary issue about causation turns on expert evidence.

The claimants' case and the Tribunal's approach

39. In light of the events we have summarised it will be clear that this reference to the Tribunal arises from the claimants' concerns about the condition of their property, both house and garden, and the repeated flooding between December 2014 and January 2019. As we have said, their case is that water levels in the ground have been raised and that this has damaged the house and will damage it further. As to the extra-high tidal inflows, as we shall see the expert witnesses on hydrology agree that these inflows will recur when river levels exceed about 3.1m AOD; the claimants say that this will put their property further at risk.

40. The claim therefore turns on expert evidence about the condition of the building and the effect of the respondent's works.
41. For the claimants Mr Lewis KC has mounted a number of arguments in an endeavour to persuade the Tribunal to adopt a different approach.
42. First, in opening and closing he invited the Tribunal to approach the claim on the basis that the facts speak for themselves, regardless of the scientific evidence: the house has deteriorated since the works began, and the only available cause is the works. Nothing else has happened in between. The thing speaks for itself, he said.
43. The difficulty with that argument is that it is not true that nothing else has happened in between. The other thing that has happened is that time has passed.
44. The King's Lodging is hundreds of years old. It was already exhibiting cracks before the works took place. If more cracks have appeared, or the existing cracks widened, after the commencement of the works that may simply be a continuation of the existing ageing process of the building. We noticed a number of cracks in the house that we were told were not relevant to the proceedings. With a building of this age it is not feasible to say, on the present facts, that the works are the only available cause of deterioration, when deterioration had taken place before the works and where the claimants do not seek to attribute all the visible deterioration to the works.
45. Accordingly we reject Mr Lewis KC's suggestion as to the approach the Tribunal should take and we decide the claim on the basis of the factual and scientific evidence.
46. Next the claimants have alleged bad faith on the part of the respondents. In his closing address Mr Lewis KC said:

"there seems to have been a mindset on the Respondent's part that there was not anything in the Claimants' claims and that whatever was done for them would not be enough to satisfy them."
47. We see no evidence of such a mindset. The respondent made repeated efforts to solve the problems of water ingress at The Kings Lodging, and made valiant and no doubt very expensive attempts to put things right. We were struck by Mr Nunn's conscientiousness and his determination not to abandon the problem at a time when a colleague was, understandably, wondering if the respondent had done all it was obliged to do. It is true that no further remedial work has been possible since the water ingress in January 2019, but we think that that is largely due to the deterioration in the relationship between the claimants and the respondent which perhaps by that stage was unsurprising. But we do not find any fault with the respondent's approach to the claim. As a public authority it is not in a position to make concessions and its case is that the works have not raised the water table and have not damaged the house. It has not acted improperly or unkindly in making that case.

48. We are equally unpersuaded by the claimants' endeavours to show that the respondent's work was negligent. Mr Lewis KC in cross-examining Mr Nunn strove to establish that the works were not properly designed in the first place. Essentially this argument is irrelevant. We imagine that it was put forward in order to advance the claimants' case under the "speaks for itself" approach; but as we have said, the facts do not speak for themselves and causation can only be decided on the basis of the evidence. As we shall see, the crucial issue is whether the works have raised the groundwater levels in the garden. If they have, then whether or not the works were properly designed is irrelevant; causation will be established. If they have not, then even if the works were poorly designed causation is not proved.
49. But in fairness to the respondent since its plans have been criticised we observe that the claimants have not shown that the work was poorly designed. CH2M were aware throughout of the need to take care with groundwater levels, as we know from the correspondence and from their calculations of the expected re-charge into the garden (when the worry was whether the work would dry the garden out). Clearly something went wrong – whether avoidably or not we do not know – with the work at the corner of the dock so that water flowed in at high tides. But there is no evidence whatsoever that the design of the work was negligent. We accept that there has been no demonstration that the contractor was expressly required to ensure that the garden of The King's Lodging did not flood, but we think as a matter of common sense that as Mr Nunn said the instruction was implicit in the design. CH2M did not need to be told not to execute the work in such a way that the garden would flood; and as we have seen (paragraph 30 above) CH2M was well aware of the need to put a stop to the flooding.
50. Whether the remedial work, rather than the original design, was competently executed it is not possible to say. The claimants have been critical of the respondent's efforts. They have pointed out that they warned the respondent about the danger of compromising the ancient foundations of the dock return wall, yet they say those warnings have been ignored. But considerable further technical evidence would have been required to prove that the respondent's remedial work was not competently carried out. The statutory cause of action on which the claimants rely does not require proof of negligence and the claimants have not proved negligence. This preliminary issue is about whether the respondent's works – whether negligent or not – have caused and will cause damage to the claimants' property.
51. And so we turn to the expert evidence.

The expert evidence (1): surveyors and structural engineers

52. The parties each instructed an expert building surveyor and a structural engineer to provide evidence to us on the condition of the house and the extent to which defects might have been caused by the works.
53. As will be seen the surveyors were agreed on all material points – neither was called for cross-examination – and there was very little between the structural engineers. Neither pair of experts takes things very far at all in terms of causation – which is to say that the claimants cannot prove their case on the basis of either the surveying or the structural

engineering evidence. So we can summarise what they had to say quite briefly, before turning to the evidence of the hydrologists on which the case turns.

The building surveyors

54. The claimants instructed Mr Daniel Martin BSc MA MRICS, a chartered building surveyor from Purcell Architects, who specialises in heritage buildings. The respondent instructed Mr John William Wates MA (Oxon) BSc FRICS, a chartered building surveyor from Fedalah Ltd. Mr Wates reported on 28 April 2022 and Mr Martin on 24 May 2022.
55. The surveyors were aware of the claimants' case, and Mr Evans' opinion, that groundwater levels had risen as a result of the respondent's work. Mr Martin's report explained why that was a cause for concern. Buildings of the age of The King's Lodging, which is essentially medieval in construction, have no in-built protection from damp. If the ground on which they stand becomes too wet, water will rise within the timber frame of the house and cause decay. Ground above the water table itself can become wet through capillary action, and sodden ground may then cause subsidence. We do not need to give further detail about these processes as the evidence is not disputed.
56. The surveyors of course inspected the property after the work was done; for information about the condition of the building prior to the works they relied on inspections carried out by The Morton Partnership ("TMP") for the claimants and by Ridge and Partners LLP ("Ridge") for the respondent. Mr Peter Corcoran of TMP (see below) had inspected on 21 August 2014 and produced a report on structural defects. Mr Keith Green of Ridge had inspected on 28 October 2014 and produced a photographic record of damp, cracks and building defects. In addition the surveyors had the benefit of comments made by Ridge following Mr Green's reinspection in October 2016. Both experts expressed disappointment at the lack of detail, particularly measurements of cracks and moisture levels, in the 2014 Ridge report.
57. The surveyors produced a joint statement, dated 18 August 2022, in which they stated their agreement as follows:

"It is agreed that levels of dampness on the ground floor of the property are higher than prior to the works undertaken by the Environment Agency having taken place and this is very likely to be attributable to works carried out by the EA.

Additional cracking to internal finishes has occurred since the work undertaken by the Environment Agency commenced in 2014 and this is very likely to be attributable to works carried out by the EA.

The external wall to the side of the main staircase rising from ground to first floor level has moved outwards since the work undertaken by the Environment Agency commenced in 2014 and this is very likely to be attributable to works carried out by the EA.

Solid floor finishes on the ground floor of the house have deteriorated as a result of salt crystallisation since the work carried out by the Environment Agency

commenced in 2014 and this is very likely to be attributable to works carried out by the EA.

The need for further investigations is agreed although the detailed scope of those investigations and who will undertake them remains to be agreed.

It is agreed that changes in the water table from its current position could result in significant further damage to the property beyond that which is currently visible. The change could be the result of water levels falling following remedial works to the flood defense wall.”

58. The surveyors agree that the deterioration “is very likely to be attributable” to the works. However, since the surveyors do not have the expertise to say how the works caused the deterioration, the Tribunal must look to the hydrology evidence for causation. If water levels have not risen then the surveyors’ agreement by itself would not provide sufficient evidence for a conclusion that the respondent’s works caused the deterioration.

The structural engineers

59. The structural engineers instructed by the parties had a much wider remit than the building surveyors. They were asked to consider, for all the structures at the property, whether damage had been caused by the works, including vibrations during construction. They were also asked to consider if damage was likely to be caused in future by the works, and to give recommendations for potential remedial works if appropriate. Finally, they were asked to give opinions specifically on the alternative assumptions that either the groundwater level at the site had risen, or had not.
60. The claimants instructed Mr Peter Corcoran BSc (Hons) CEng MICE, a chartered engineer from The Morton Partnership (TMP), who has over 25 years’ experience of inspecting and reviewing historic structures. As mentioned above, Mr Corcoran had previously advised the claimants and had provided them with a condition survey in August 2014. Observations in that report were updated in brief following a visit by TMP in August 2016. Mr Corcoran’s report, dated 20 May 2022, followed further inspections in December 2021 and February 2022. The report provided a tabulated comparison of observations on cracks and movement in 2014 (in the TMP and Ridge reports), in the 2016 update and following the 2021 inspection. Although the 2016 update contained only brief comments, and may not have been as thorough as the 2021 inspection, it is notable that many of the incidences of increased levels of cracking or movement in ground floor rooms were first noted in 2021.
61. The respondent instructed Mr Stuart Hookham, a chartered structural engineer from William J Marshall & Partners. He reviewed evidence available from earlier investigations and reports, including those of TMP and Ridge from 2014, and made an inspection in February 2022 with Mr Corcoran, before reporting his opinions in May 2022.
62. The engineers produced a joint statement dated 15 August 2022, in which they stated their agreement on a number of matters. It was agreed that the cracks evident in the house prior to the works, although unmeasured, were not considered to be structurally significant.

They agreed there was evidence of some minor movements between 2014 and 2022, shown by an increase in length and width of some cracks and by identification of new cracks. Whilst those movements did not appear to be structurally significant, the full effects of the works on the fabric of the building may not have been realised in that time period if the level of groundwater had changed. The potential movements appeared to be greatest near to the stairs to the south-east⁵ side of the property.

63. It was agreed that the methods of construction used in the works did generate vibrations, as evidenced by a technical memorandum on vibration assessment produced by CH2M, but that the recorded vibrations were not, or were unlikely to be, of sufficient strength to cause damage and/or movement to the property and associated structures. The one exception was Mr Hookham's opinion that it was possible the damage to the drainage system between the house and the river, evidenced by drainage surveys before and after the works, may have been caused by vibrations or by direct impact during construction of the works. Mr Corcoran's opinion was that damage to the drainage system was likely to have been caused by works traffic.
64. There was no baseline data of damp in the house prior to the works against which the engineers could judge whether the moisture content within the fabric of the house had increased since the works. Mr Corcoran noted that the surveyors had agreed that pre-existing areas of damp damage had increased in size, and deteriorated further, and that there were new areas of damp in the house. The engineers had read the reports of the hydrologists and it was Mr Corcoran's opinion that the new areas of damp were likely to have occurred as a consequence of changes in the ground water levels. In Mr Hookham's view it was unclear whether damp at the property had increased, although there was evidence that paint and plasterwork had deteriorated in isolated areas of damp between 2014 and 2022. In his opinion it was also unclear whether the underlying conditions that had led to this deterioration had changed between 2014 and 2022. It was possible that the amount of water entering the property had increased over that period, but it was also possible that the underlying damp conditions had remained constant.
65. The engineers agreed that the effect of the works on groundwater level at the site was a matter for the hydrological experts, but expressed their positions on the alternative assumptions that either Mr Evans was correct, that the works have caused the groundwater level to rise by 0.5 to 1.0 m, or that Mr Groves was correct, that the works have had no impact on groundwater level.
66. On the assumption that the groundwater has risen as a result of the works, the engineers agreed as follows as to whether that rise had caused damage:

“it is possible that damage may be caused to the [building] by increased and/or differential settlement of the foundations and/or an increase in moisture content in elements of the fabric that are in close proximity to the ground.”
67. However, the agreement is somewhat tentative. Unlike the surveyors the engineers were not confident in attributing existing deterioration to the respondent's works. They agreed that the detrimental effect of an increase in moisture content would be likely to manifest

⁵ The joint statement says west, which we believe to be a typographical error.

itself gradually over a period of time, with the full effects not yet realised. They agreed it was not clear that all existing observed changes in cracking could be attributed to a change in groundwater level as there would be normal cyclical and thermal effects in a building of this age.

68. It was Mr Corcoran's opinion that the movement in proximity to the stair was greater than would be expected from seasonal movement, likely to be attributable to a change in groundwater levels, and that some elements of the building structure had been damaged by additional areas of damp. That included load bearing masonry and possibly embedded timber members. Mr Hookham would not go that far.
69. As to future damage the engineers agreed:

“that the detrimental effects of an increase in moisture content in elements of the fabric ... will likely not occur immediately but will instead likely manifest gradually over a period of time”
70. However, the engineers were able to agree a schedule of remedial works to be considered should it be established that groundwater levels had risen and that damage and/or movement had been caused.
71. On the alternative assumption that the works have had no effect on groundwater level, the engineers agreed that it is unlikely the works have had a material impact on the condition of the house and also unlikely that there would be a material impact in future.

The surveying and engineering evidence: interim conclusions

72. The evidence of the surveyors and the engineers enables us to make the following findings.
73. We find, in line with the claimants' unchallenged evidence and the agreed evidence of the surveyors, that since the works were undertaken by the respondent there has been some deterioration to the house in terms of increased dampness in the ground floor walls, additional cracking to internal finishes, and movement outwards of the wall in the south-east face of the house leaving a gap between the wall and the stringer to the staircase. We also find that the pre-existing cracking and movement at the property was not significant, and that the movements observed between 2014 and 2022 are not structurally significant at the moment, with the possible exception of that on the south-east face. We note that the signs of deterioration have increased since initial post-works inspections in 2016, which would be consistent with a problem growing over time.
74. We find, in line with the engineers' agreed evidence, that although there were vibrations caused by construction of the works, vibrations have not damaged the house.
75. We find, in accordance both with the agreement of the surveyors about causation and with the more detailed agreement of the engineers, that if groundwater levels have risen as a result of the respondent's work then on the balance of probabilities the deterioration to the

house has been caused by the effect of that groundwater on the foundations and structure of the house, and that more damage will be caused in the future. We make no separate finding about the allegation of damage to the pool and we have not set out the evidence about it, which is ambiguous; we find that if the house has been damaged by the works then it is probable that the pool has been too.

76. If groundwater levels have not risen then the claimants' case on causation fails because there is nothing then to indicate how the observed changes to the fabric of the house could have been caused by the respondent.
77. Accordingly, our decision on the preliminary issue turns on the evidence of the expert witnesses on hydrology.

The expert evidence (2): the hydrologists

78. This section is structured as follows:
 - a. The two expert witnesses and their positions in summary
 - b. Hydrological processes in general.
 - c. The datasets available to the expert witnesses.
 - d. The drains.
 - e. Water levels pre-works.
 - f. Future inflows of water when river levels reach 3.1m AOD.
 - g. Conclusions about the hydrology evidence.

(a) The expert witnesses and their positions

79. Evidence about hydrology was given for the claimants by John Evans, consultant to and former managing partner of Evans & Langford LLP, Consulting Civil and Structural Engineers in Maidstone. He has worked on a number of large-scale projects involving dams and tidal defences. For the respondent evidence on hydrology was given by Alasdair Groves, Technical Director of Hydrogeology at Arcadis, an international company specialising in large infrastructure projects.
80. Ms Ward suggested that Mr Groves by virtue of his expertise in hydrogeology is better qualified than Mr Evans to express an opinion on the matters at issue here. We note that the two experts do not have identical expertise and experience; Mr Evans' experience in projects relating to dams, harbours and flood defences is extensive and we accept that both he and Mr Groves are eminently qualified to give evidence about hydrology of the ground surrounding The King's Lodging and the old and new walls. Both experts are of course

giving opinion evidence about matters that are outside the Tribunal's expertise, and we have assessed their opinions on the basis of the available data, and of their explanations of that data, rather than by weighing the qualifications of one against those of the other.

81. Mr Hussain KC in cross-examining Mr Groves suggested that he should have disclosed the framework agreement between Arcadis and the respondent, under which Arcadis has been engaged to support the respondent over a period of years. He appeared on occasion to suggest that Mr Groves had failed to take proper account of the data as a result of that contractual relationship. In closing he argued that while he does not suggest any impropriety on Mr Groves' part, his credibility should be regarded as impaired by the relationship his firm has with the respondent, and that "if it comes down to credibility" we should therefore prefer the evidence of Mr Evans.
82. We reject any suggestion of impropriety on Mr Groves' part. It would have been helpful to have the framework agreement disclosed, but we accept that the omission was innocent. Public authorities engage the services of experts by the use of such agreements; we do not regard the arrangement as being a source of bias on Mr Groves' part, any more than Mr Evans or Mr Corcoran are biased by their long involvement on the claimants' behalf before the reference to the Tribunal was made. And the Tribunal's decision will not "come down to credibility"; it is our task to make an objective assessment of the scientific evidence put forward by the experts, not to make a guess on the basis of conjecture about credibility.
83. Turning now to the expert evidence, Mr Evans and Mr Groves have exchanged reports in April 2022, supplemental reports in February 2023 and addendum reports in September 2023, as well as completing a joint report in August 2022, two rounds of questions and answers and finally a revised version of their joint report a week before the resumed hearing in October. The Tribunal was greatly assisted by the hydrologists' giving concurrent evidence (see paragraph 3 above), which enabled it to focus on the details of the physical data on which the experts have worked and to hear both their views together on each point in issue. Much time was saved by their being able to agree that certain points were irrelevant or not decisive (hence for example the brevity of our discussion of the drains, see below). We pay tribute to the measured and constructive way in which the two experts answered the Tribunal's questions.
84. Before we turn to the detail it may be helpful to summarise the positions of the two hydrology experts, as we understand them after the hearing.
85. Mr Evans' opinion is that the respondent's works have raised groundwater levels at the property, by between 0.5 and 0.9 metres, and he has suggested a mechanism which might cause that to happen and which we discuss below. He also says that the extra-high tidal inflows (see paragraph 34 above) will recur when river levels at high tide reach about 3.1m AOD in the future as a result of inflow through the new wall at the clutches (where SSPs are joined) and at the dock corner; it is not in dispute that the river has not reached that level since January 2019. Mr Evans' opinion is that the house is at risk primarily because water levels have risen but also because of future extra-high tidal inflows, and therefore that serious remedial work is still needed.

86. Mr Groves' position is that groundwater levels have not risen. He agrees that the extra-high tidal inflows will recur in the future (although they have been mitigated to some extent by the remedial works), but says that such inflows will drain away again and will not reach the house.
87. It will be apparent therefore that there are two potential sources of water damage. One is raised groundwater levels, which is the primary basis of the claimants' case. The other source of damage is future extra-high tidal inflows; if we find that groundwater levels have not risen then the question is whether these occasional inflows might cause damage, in particular to the garden.

(b) Hydrological processes

88. Both hydrologists provided helpful, and consistent, explanations about what generally happens to water in the ground close to rivers.
89. We said earlier that Sandwich stands in the flood plain of the River Stour and that all the land round about is at very low levels. The hydrologists agree that in these circumstances the groundwater levels near the river would be at or slightly higher than the level of the river. Mr Evans said at paragraph 14.1 of his first report:

“Ground water levels close to rivers would normally be expected to be at about mean river level, rising with distance from the river to give the hydraulic gradient that drives drainage to the river.”

90. Mr Groves at paragraph 51 of his first report said:

“The water table [at the property] can be expected to have been present at shallow depth and to have shown a slight variation around a mean elevation maintained slightly above mean river level, which will approximate to Mean Sea Level adjacent to the property, estimated to be approx. +1.2m AOD.”

91. That water level is, however, changeable, as Mr Groves explained at his paragraph 48:

“48. In most circumstances, when it rains at any site, a proportion of the water will be lost back to the atmosphere as water vapour, either through evaporation (caused by the action of sun and wind) or transpiration (by respiring vegetation). Hydrologists generally combine these two processes and refer to “evapotranspiration.” In most circumstances, a proportion will run over the surface of the land as runoff into ditches or other surface water features, leaving the residual proportion to infiltrate into the ground, from where it will move under gravity until it meets the water table, which is defined as the upper limit of the saturated zone. This causes the water table to rise in response, which induces a lateral movement of water. The water table slopes towards groundwater discharge zones, which are often surface water features. The slope of the water table is referred to as the hydraulic gradient.”

92. Turning to this particular property, importantly the hydrologists agree that before the respondent's works took place the old wall will have been permeable. Mr Groves put it this way at his paragraph 51:

“At times of higher river level, some leakage into the Property will have occurred through the imperfections within the river wall, causing the water table to rise locally. At lower river levels some drainage out of the ground will have occurred, causing it to fall. These changes will have been greatest immediately adjacent to the river wall and decreased progressively inland, the amount of leakage being controlled by the permeability of the river wall and the material immediately behind it. A seepage face will have been present at the river wall at times of falling river level.”

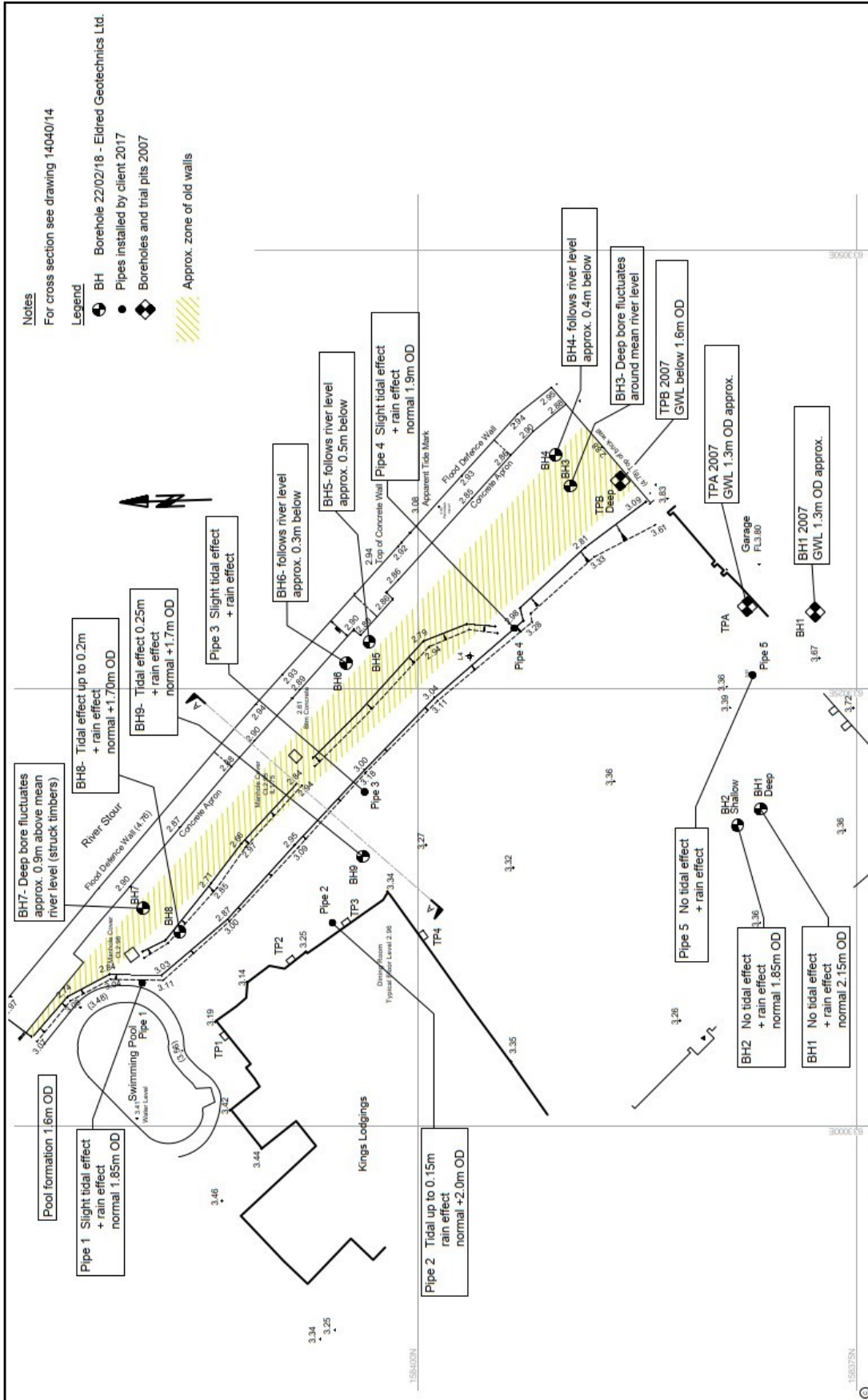
93. Because of that, one of the concerns expressed by the claimants and shared by CH2M before the works started was the risk that the new wall would cause the land at The King's Lodging to dry out. We have been shown one of the diagrams produced by CH2M at the planning stage from which it is clear that groundwater levels were assumed to be about 1m AOD; flap valves in the new wall were to be placed at about the same level so as to maintain that level within the property.

(c) The hydrological data

94. A number of reports, studies and events comprise the data that the experts took into consideration.
95. The earliest measurements were made by GL Martin Ltd, an engineering firm, in 2007. At that date the claimants were considering extending their garage by a first floor extension, and GL Martin were instructed to investigate the ground conditions prior to the structural design of the extension. The extension was never built; Mr Brookhouse explained that the project was postponed following publicity for the new tidal defence scheme. The study was particularly concerned with the consistency of the ground. It looked at whether the garage had been affected in the past by foundation movement problems, and at the possible consequences of putting an extension on top of it and whether it would cope with the additional load.
96. GL Martin made a borehole behind the garage, and two trial pits beside the garage known as TPA and TPB, shown on the diagram below⁶. Groundwater levels in the borehole and TPA were found to be at around 1.3m AOD, and no water was found in TPB at 1.6m AOD. GL Martin noted that that would not be a static level and would vary “due to seasonal or other effects”. Mr Evans reported the 1.3m level without discussion in his first report, perhaps on the basis that it was unsurprising in light of the general expectations about water levels in the area (see paragraphs 87 and 88 above), albeit perhaps a little higher than expected - we note that GL Martin regarded this as a “comparatively high water table” (GL Martin paragraph 5.1). We shall look in detail later at the reasons why Mr Groves does not agree that the findings of the GL Martin survey were accurate.

⁶ The label BH1 on the plan is confusing because there is also an Eldred BH1 (see paragraphs 96 and following below); the two are distinguished by symbols, and the GL Martin BH1 is behind the garage.

97. The claimants themselves installed a number of pipes to measure water levels in November 2017.



		Drawn: CAS Date: Feb 22	Checked: JOLE Date: Feb 22	Approved: SFR Date: Feb 22
		Scale: 1:200 A3	Dry No. 14040/13	
46 Strand Street Sandwich, CT13 9EX		Date: 11.04.22		
Site Investigation Layout		Revisions: A. Tridi Pit numbers amended.		
		Evans & Langford LUP • Structural & Civil Engineers • Land & Building Surveyors • Geo-Environmental Engineers • Project Managers • CDM Consultants • Contract Administrators Evans & Langford LLP, 91 King Street, Maidstone, Kent ME14 1BG Tel +44 (0) 1622 680720 mail@evanslangford.co.uk www.evanslangford.co.uk		

98. In January 2018, at the claimants' instigation and with the respondent's agreement, Eldred Geotechnics were instructed to carry out a study of the water levels in the garden; it will be recalled that by that date there had been a series of extra-high tidal inflows and a number of phases of remedial work. In February 2018 Eldred installed boreholes which were continuously monitored from 28 February to 9 May 2018. That exercise produced a rich dataset ("the Eldred data") showing the movement of water in the ground in response to the tide and to rainfall at various points in the garden. On the previous page is a diagram produced by Mr Evans which gives an indication of the thoroughness of the investigation.⁷
99. Eldred provided a series of plots showing the behaviour of each borehole and of the claimants' pipes throughout the monitoring period, on which both hydrologists commented in their first reports. Later Eldred provided them with the data on which those plots were based, which meant that the two expert witnesses were able to go into further detail. Because the Eldred data are of such good quality they have given rise to rather more agreement than disagreement, and so we do not need to rehearse all the detail studied by the experts. They agree that the boreholes were correctly placed and that (with some caveats about a couple of the boreholes) the Eldred data are an accurate measure of water levels during that period. They agree that water levels in all the boreholes rise and fall with the tides but do so to a far greater extent nearest the river (up to a maximum of 1m at boreholes 4, 5 and 6 at spring tides, according to Mr Groves) and that they all respond to rainfall.
100. Most importantly, they agree that the Eldred data showed groundwater levels near the house – in the area bounded by boreholes 1, 2 and 9 and by pipes 2, 3, 4 and 5 to be around 2m AOD during the period of monitoring. Mr Evans spelt that out further by saying that those boreholes and pipes 2 and 4 all show groundwater levels maintained above 1.75 to 2m AOD and rising to 2.5m AOD during periods of heavy rainfall.
101. That level of around 2m AOD is an important point of agreement; the central issue between the hydrologists is whether water levels near the property (where tidal response is weak) were at or near that level before the respondent's works commenced. The claimants' case is that levels were 0.5m to 0.9m lower, and the respondent says they were not.
102. A further point extracted from the Eldred data relates to the hydraulic gradient at the property. Hydraulic gradient is the slope of the water table (according to the glossary in Mr Groves' first report). Normally the gradient in land next to a river is expected to be towards the river. Mr Groves' view about the hydraulic gradient at the property changed in the course of the litigation. In his first report he concluded on the basis of the Eldred data that "There is no evidence within the data for the presence of a sustained hydraulic gradient towards the main King's Lodging building." In his supplemental report he said that the Eldred data indicated that there was a hydraulic gradient towards the building for 5.4% of the period of record, and that that occurred only at the highest tides. In his addendum report, after the release of the raw data on which the Eldred plots were based, he presented an analysis of levels around a high spring tide and found that the gradient was towards the house for about 20% of the time. That is not what the experts would have

⁷ Careful reference should be made to the key to the diagram, from which it can be seen that it shows not only the boreholes installed by Eldred but also the pipes installed by the claimants and GL Martin's 2007 borehole and trial pits.

expected to see on the basis of the hydrological processes normally at work in land next to a river.

103. There was some discussion about gradient at the hearing. The experts disagreed about the effect of underground structures in the garden which Mr Evans, if we have understood correctly, said must have the effect that hydrological gradient is not a straight line. At any rate on the basis of Mr Groves' evidence we can conclude that the Eldred data indicate that there was a hydraulic gradient towards the house for about 20% of the time during spring tides. Mr Groves was adamant that nevertheless river water was not able to reach the house; yet he agreed that water levels in the area of the house are directly affected by rising tides in the river, and that so far as any effect upon the house is concerned it does not matter whether that water comes directly from the river or is groundwater that has been pushed landwards and upwards by water from the river.
104. Finally in September 2022 Mr Groves re-measured the water levels in the boreholes at the property, in order to check the then current groundwater levels. Mr Evans declined to take part in the exercise because he regarded it as unreliable; he explained in his addendum report that it is likely that the boreholes will have silted up over time. He took the view that such data should have been collected by an independent technician, and surmised that that had not been done because no-one was willing to do it because of the inevitable inaccuracy. Mr Groves disagreed and expressed the view that the boreholes were well within their useful life.
105. It is not possible to know whether the data collected in September 2022 were accurate; but that turns out to be unimportant because the two experts agree that the water levels were considerably lower in September 2022 than they had been at the time of the Eldred data, and that that was because there was a prolonged drought that summer.
106. So those are the steps taken to measure water levels in the garden. Further evidence of those levels is provided by the swimming pool. The claimants have expressed the view that the swimming pool is of a type that cannot be installed if groundwater levels are above the level of the bottom of the pool, which is around 1.6m AOD. We discuss this further at paragraphs 127 and following below.

(d) The drains

107. The hydrology experts compiled their initial reports on the assumption that rainwater from the roof of the house and from hard surfaces in the garden went to soakaways, but it is now clear that that is not the case and that the property benefits from a combined drainage system taking rainwater and foul drainage to the sewer in Strand Street. The drains run around all sides of the building, and the foul drainage from The King's Lodging and from Giles Quay, the property immediately to the north, passes round the back of the house, across the lawn and out to Strand Street; there are also drains on the street side of the house which leave the property at the same place. A brief report for the claimant by The Drainage Team following an inspection in September 2014 reported that clay pipes had been damaged by ground movement and that if they were left unrepaired structural damage to the building could occur. The same firm carried out a further inspection in

August 2016 and again recommended remedial work, noting that roots had caused further damage to the pipes and that one of the manholes was blocked with rubble and silt.

108. In the autumn of 2022 further inspections of the drains were carried out, one in September which was not properly recorded and one in November by Thanet Drainage. It is not in dispute that the drains were found to be in poor condition with at least some blockages; unfortunately Thanet Drainage produced a report on the state of the drains after blockages had been cleared but provided no evidence of what they found when they initially inspected. The inspection was witnessed by Mr Evans, and by Mr Nicholas Paige who is a catchment engineer employed by the respondent. They both described what they saw. In short, Mr Paige's evidence was that the drainage system was "in a state of severe disrepair" and that "every drain run that was inspected was blocked ... there was evidence of significant joint displacement in the drainage as well." Mr Evans on the other hand regarded that as a gross exaggeration, although he agreed that some of the drainage runs were slow-moving.
109. Evidence about the state of the drains was heard from Mr Paige during the first part of the hearing in May 2023, and the hearing was then adjourned before we had heard from Mr Evans. It occurred to us at that stage that it was unlikely that if the drains had been totally blocked that would have gone unnoticed, unless the property had been empty for long periods. In answer to our question about this Mr Lewis confirmed at the hearing in October, on instructions, that the property had been lived in by the claimants (not by tenants) for most of the time from 2014 onwards; the longest period it had been unoccupied was one instance of two months. The respondent did not seek to challenge that information. The claimants also produced a letter from their neighbours at Giles Quay confirming, in September 2023, that they had not been aware of any fault with their shared drain since they moved in in 1987. That is helpful because if the foul drainage had not been getting through the drains in the garden of The King's Lodging we think it is inevitable that the neighbours at Giles Quay would have had problems.
110. It is not possible to say exactly how bad the state of the drains was before they were cleared in 2022. We accept that both Mr Evans and Mr Paige gave honest descriptions of what they saw, but we regard Mr Evans' description as the more likely to be accurate. That the system as a whole was entirely blocked is not plausible over a period when the house had been lived in for most of the time. Certainly some clearing was needed in 2022. Moreover, the report by The Drainage Team in 2017 certainly did not say that the system was totally blocked or mostly blocked, and we infer therefore that it was not totally or mostly blocked when the Eldred data were recorded.
111. In his supplemental report Mr Groves expressed the view that in light of recorded rainfall during the period when the Eldred data were gathered, rainfall could not explain the magnitude of the rise in water levels during the two very wet days of 28 and 29 April 2018. He concluded that the excess was accounted for by water running off the roof of the property and not being taken away by the faulty drains. It seemed at the hearing in May that the respondent might be arguing that water levels in the garden, insofar as they were higher than expected, were attributable to the state of the drains. If that position had been maintained we would have rejected it because we prefer the evidence of Mr Evans to that of Mr Paige for the reasons we have explained. In any event such an argument would have

been problematic because of the engineers' evidence that the drains may have been damaged by the respondent's work.

112. However, it became clear that that was not the respondent's case. In their revised joint statement of September 2023 the hydrology experts agreed that the condition of the drains was relevant to understanding the hydrological processes at work at the property but said that the condition of the drainage system did not "influence", by which we think they meant did not answer, what they had been asked, namely whether the respondent's works have caused a change in the groundwater levels at the Property. That must be right because the drains have been a constant feature; their condition was documented in 2014 and had not changed much by 2017.
113. Beyond that, the experts disagreed as to how much the condition of the drains influenced the ground water levels; Mr Evans thought hardly at all, Mr Groves expressed the view that "the drains were in poor condition and influenced groundwater levels beneath the property." Mr Evans produced a calculation to show (on the basis of rainfall records) that even if all the rainfall soaked into the garden rather than being carried away by the drains, that would not be sufficient to raise water levels from 1.3m to 2m AOD. Mr Groves had no specific criticism of that calculation beyond saying that it was "too average", and we therefore accept it.
114. However, even Mr Groves is not saying that the state of the drains could have caused groundwater levels to rise from 1.3m AOD (if that is indeed the pre-works level) to 2m AOD. The drains were therefore something of a red herring. They have been problematic and are now in a better condition than they were, but the respondent is not saying that, if groundwater levels were raised, the cause was the state of the drains.

(e) The pre-works groundwater levels

115. So we come to the crucial point of difference between the hydrologists: whether by the time the Eldred data were recorded the groundwater levels had risen as a result of the works. In this section we examine in detail the evidence that Mr Evans puts forward for his proposition that levels have risen, and Mr Groves' criticisms of that evidence. And that is all we can do, because of the evidential tragedy in this case which is that the respondent did not carry out a hydrological survey before the work commenced.
116. For the claimants it was said that it was a condition of the Listed Building Consent that the respondent do so, but that is not the case; the condition requires that the work be carried out in accordance with the Design and Access Statement submitted by the respondent, which recommended but did not require that such a study be carried out. The wisdom of carrying out a hydrological survey before starting work on an historic and sensitive property next to a river is obvious and the decision not to do so may now appear to be regrettable, but it was not a breach of any obligation on the part of the respondent.
117. The decision is in a way understandable because the respondent and CH2M took the view that groundwater levels at the property were likely to be at or not far above the river level. The topography and surrounding watercourses all pointed to a groundwater level of 1.1 or 1.2m AOD, the garden was thriving and mostly dry (according to Mr Brookhouse's

unchallenged evidence), GL Martin's measurements taken after a wet season showed a level of 1.3 which was regarded as high. We suspect that if anyone had suggested to CH2M in the autumn of 2014 that water levels at the property were generally in the region of 2m AOD the response would have been dismissive. The respondent is now in the uncomfortable position of arguing strenuously against the accuracy of the assumptions that it made and that its expert contractors made before starting work.

118. In the paragraphs that follow we look at the items of evidence relied upon by Mr Evans one by one, set out Mr Groves' view, and express our finding.
119. Mr Evans relies on eight items of evidence, which he and Mr Groves helpfully went through in the joint statement. The first three relate to the work done by GL Martin in 2007.
120. 1 - 3. The GL Martin borehole and trial pits As we said above, Mr Evans in his first report referred to the groundwater level of 1.3m AOD as found by GL Martin, and inferred from that that levels have risen as a result of the work. Later he was able to access rainfall records and reported in his addendum report in September 2023 that rainfall in the month before GL Martin carried out their investigation was 92mm; so it was not a dry period. He thought it likely therefore that the water table found by GL Martin was, if anything, slightly above normal. It will be seen from the diagram above that the GL Martin borehole is just slightly nearer the river than the Eldred boreholes 1 and 2 and at the same distance from the river as pipe 5, and therefore in an area where the tide has very little effect upon the water table.⁸
121. Mr Groves in his first report expressed the following misgivings about GL Martin's measurements. He took the view that measurements from the trial pits (extended by hand auger when digging by hand became impracticable) would be more accurate than those from the borehole because the type of auger used for the borehole would have disrupted the soil column and its structure. He pointed out that GL Martin reported the level at which water ingress occurred in the borehole and TPA but did not say whether drilling was suspended at that point nor whether water levels were monitored at regular five-minute intervals for a minimum of 20 minutes "which is standard industry practice".
122. The experts exchanged questions and answers in June and July 2022. Mr Evans asked Mr Groves if he had taken account of the fact that drilling was suspended in the borehole to carry out cone penetration tests and to take samples, and that time was taken when the trial pits were extended with a hand auger. Mr Groves said his position had not changed. He questioned whether the results could be extrapolated across the whole property; he repeated his misgiving about the type of auger used for the borehole, noted that it is difficult to assess the sequence of drilling operations, and conjectured (his word) that drilling operations in the borehole were only partially supervised because the supervising engineer would have been busy with the trial pits.

⁸ Eldred BH1 and BH2, and pipe 5, are stated on the plan to exhibit no tidal effect; Mr Evans in his supplemental report corrected this and said that they all show a very small response to spring tides. Whether that was the case in 2007 is not known (Mr Evans' view is that it would not have been and that the tidal response seen in 2018 is the result of the higher groundwater levels after the works). But at any rate, even if in 2007 there was a tidal effect, on the basis of the Eldred data it would not have been sufficient to matter; even if the level of 1.3m AOD was at low tide (and there is no evidence that it was), the high tide level will not have been more than a few centimetres higher.

123. Mr Groves further pointed out that groundwater was encountered at the junction between made ground (that is, ground that has been subject to human intervention) and clay; he would have expected a zone of saturation above the clay which could not have been detected by the unsophisticated drilling method used. A reliable equilibrium could only have been established by multiple readings. He suggested that measuring the water level properly “was not considered as a key objective by the driller as he was only 2.3m into his target drill depth of 15m and was pushed for time.”
124. At the hearing the Tribunal asked Mr Groves what his view would be if he knew that standard industry practice had been followed when the GL Martin measurements were taken, and he said that he would then accept that they indicated an equilibrium water level.
125. We are not persuaded by Mr Groves’ criticisms. They are largely speculative: perhaps standard industry practice was not followed, but why would it not have been? Perhaps the driller was pushed for time, but there is no evidence whatsoever to suggest that. Perhaps he was unsupervised, but again there is no of evidence to that effect beyond Mr Groves’ assertion that detailed records of the drilling were available for the trial pits. Perhaps measurement of water levels was “not a key objective”, but that is highly unlikely since GL Martin were instructed to study the consistency of the ground and its capacity to bear an extra load and it seems to us that water levels would have been central to that objective.
126. Aside from those conjectures, the only scientific point Mr Groves made was that he regarded it as unlikely that if there was water present in clay it would not have saturated the made ground above it. We were not shown any evidence or data or published work to substantiate that assertion and therefore, despite Mr Groves’ expertise, we are not able to rely upon it.
127. Mr Groves said at the hearing that the sort of inaccuracy he was alleging might make up to 20cm difference in levels. Accordingly, at highest, the level was 1.5m AOD. Mr Groves’ strongest point was that there might be all sorts of inaccuracies in the measurements and that they could not be taken to indicate a single static level across the property. That of course is right, but nothing like that is being claimed. What is claimed is they indicate a very different water level from that seen at nearby positions within the Eldred data.
128. In our judgment the GL Martin measurement of the groundwater level at their borehole and in TPA, and the absence of water in TPB, indicate that at those points, and on that date, the groundwater level was at about 1.3m AOD, plus or minus 0.2m. It is not claimed that that alone justifies the further inference that water levels across the property in 2007 were between 0.5m and 1m lower than that seen in the Eldred data, but that it is one of a number of items that justify that inference when taken together.
129. 4. The swimming pool The next item of evidence relates to the other end of the property around the swimming pool in the northern end of the garden. It was installed in the 1980s, and the claimants had it re-lined in 2004 by a firm then known as Hollingworth Pools and now Oasis, but in the same family ownership. Mr Brookhouse met with Mr Peter Hollingworth, the firm’s director, in June 2022 and has produced (and exhibited to his second witness statement) a note of his meeting. Mr Hollingworth recalled the re-lining, carried out in early May 2004. The bottom of the pool is at about 1.6m or possibly 1.5m

AOD. For the re-lining the pool had to be drained so that the shape could be measured, and was then left empty and unlined for three weeks while a new lining was made. No groundwater was seen in the pool during that time. The pool is of a construction that could not have been installed, nor drained for re-lining, had the water table been above the bottom of the pool.

130. Mr Groves initially refused to regard the evidence about the pool as significant in the absence of any direct evidence from Mr Hollingworth. Mr Brookhouse therefore also supplied a letter from Peter Hollingworth dated 24 January 2023 confirming the accuracy of those notes.
131. Mr Groves in his supplementary report in February 2023 then argued at his paragraphs 58 and 59 that the information about the pool could not be used to infer that water levels have risen at the property because the water table at the property is neither constant nor static, and that at a period of low rainfall water levels could have fallen to at least 0.35m below the pool base as they did in September 2022. In response to that Mr Evans pointed out that rainfall records for the period leading up to May 2004 show that rainfall was 114% above average, and that in the first ten days of May when the hole was open 51mm of rain fell, more than the average for the whole of May, and asked if he did not therefore regard Mr Hollingworth's evidence as indicating that water levels had risen. Mr Groves in response said that he was making only a general point about water levels varying.
132. It is difficult not to feel that Mr Groves ducked that question. No-one has called into question what Mr Hollingworth said about the impossibility of re-lining that sort of swimming pool if the water table was above the pool base. It was not above the pool base for three weeks in 2004. Mr Groves has not explained why that does not support Mr Evans' argument.
133. Mr Groves' comment about the pool in the revised joint statement in October 2023 was curious. He said:

“With respect to the swimming pool, he accepts the views of Mr Hollingworth regarding relining of the pool in 2004 but considers there to be an atypical response of the ground to rainfall in its immediate vicinity.”
134. That is puzzling. If the garden around the pool was a particularly dry area by contrast with other parts of the garden then that would support Mr Groves' reluctance to attach significance to the evidence about the pool. But the Eldred data show the corner of the property as a particularly wet corner. Even so, levels there were below 1.6m AOD in a wet May in 2004. It is difficult to understand how that casts any doubt on the inference Mr Evans seeks to draw from the evidence. When asked about this at the hearing, Mr Groves said that he accepted what Mr Hollingworth said about water levels in the ground when the pool was re-lined, but that because the Eldred data showed groundwater levels in the pool area rising too quickly and by too much in response to rainfall they therefore should not be regarded as a reliable indicator that water levels have risen.
135. That seems to miss the point. Even if the water levels in the Eldred data are less than reliable in the vicinity of the pool, the hydrologists agree that overall the Eldred data are

reliable and indicate groundwater levels of around 2m AOD near the house. What is at issue is what those levels were in 2004; and Mr Groves has nothing to say to counter the evidence that water levels in the ground where the pool is were below 1.6m AOD for three weeks when the pool was re-lined in 2004.

136. We note that this evidence is independent of, and consistent with, the evidence from the GL Martin investigations in 2007.

137. 5. The Ruskins letter In February 2018 Mr Keith Morley of Ruskins Trees and Landscapes visited the property with a view to re-planting the garden; it will be recalled that a strip of garden inside the river wall has had plants and topsoil removed and has been not only a working corridor for the respondent but also the site of considerable excavations in the course of the remedial works. Mr Morley said:

“It was clear from my visit that this site is wholly unsuitable for any replacement planting at present. The top soiling and seeding should not be undertaken until the structural drainage issues are resolved.

There is surface water over the entire site and the ground is too boggy to walk on. There is a slight green tinge over the soil that looks like algae and a smell to the soil, suggesting anaerobic conditions. Furthermore it appears from the previous documented history that this water has a high saline content that the agency had been trying to deal with by applying a clay cap to stem the leaching of the tidal water into this area.

I am concerned that the area is not free draining therefore planting of almost any tree or shrub will fail very quickly.”

138. It is the claimants’ unchallenged evidence that before the work was done the garden was thriving, there were no incursions of water and the ground was not water-logged; Mr Brookhouse said “the land was not boggy when we were in residence”. Mr Evans takes the condition of the garden as observed by Mr Morley in February 2018 as evidence that water levels have risen, because visibly raised water levels like this were not seen before the respondent’s work was done.

139. Mr Groves’ response is that this is not reliable evidence “because the statements made are unrepresentative of average conditions. This correspondence states that the ground immediately landward of the sea defence wall was saturated, conditions which were not present several weeks later or maintained since.”

140. This does not seem to us to answer the point. It is not being said that the water levels in February 2018 happen all the time or in average conditions; indeed, the garden had dried out considerably by the time the Eldred boreholes were installed at the beginning of March. But wet conditions happen every winter, and before the work was done the garden was not seen to respond in this way. The evidence supports the view that something has changed.

141. In further discussion at the hearing Mr Groves expressed the view that the conditions observed by Mr Morley were the result of the recent water incursion. But the parties' agreed chronology records the last water incursion before that date as being in May 2017; if the garden had been waterlogged from May 2017 to February 2018 we would doubtless have other evidence about that. We find that the state of the garden in February 2018 was caused by water levels in a wet period over the winter, which rose higher than they used to do before the respondent's works.
142. 6. The CH2M re-charge calculations
143. We mentioned above the work done by CH2M at the design stage when the concern was that the works would dry out the land, rather than making it wetter. Mr Evans relies on the estimate made by CH2M that the pre-existing water table was around 1m AOD. No measurement was taken. The plan produced by CH2M showed a water table sloping away from the river from a point around river level next to the wall, which cannot be right because for the most part the gradient would be towards the river as landward water drains towards it. Mr Groves' response to this point was that because CH2M's calculation contained "errors in the conceptualisation of the hydrology" it could not be relied upon.
144. Again that is to miss the point. The experts agree that the diagram is not right; but the fact remains that CH2M expected the groundwater level to be at or just above river level. As Mr Brookhouse said in his unchallenged evidence, that was the level the respondent (with its considerable expertise) and its contractor expected when it planned the works. It is also the level the hydrologists themselves would have expected absent any special feature (see paragraphs 87 and 88 above), and there is no evidence of any special feature before the works took place.
145. 7. The landward watercourses Next Mr Evans relies on a survey carried out by Evans & Langford of water courses near the property, which are maintained at a level of 1m or 1.1m AOD. His argument is therefore that it is difficult to see how water levels at the property could be higher. This gave rise to some debate at the hearing; Mr Groves accepts the measurements of the landward watercourses but surmises that water levels just outside the property in Strand Street may be higher.
146. Mr Groves accepted that it is *generally* right that the gradient of water runs towards the river and that levels in the garden of not far above 1m AOD would have been consistent with both river levels and levels in the nearby watercourses. His point was that localised features may have given rise to atypical levels at the property. That is also right but we have no evidence of any such features. We accept that the levels of local watercourses make it likely that groundwater levels at the property, before the respondents' works, were much nearer to 1m AOD than to 2m AOD.
147. 8. Mean river levels adjacent to the property The claimants have calculated, from open source data, that mean river levels adjacent to the property have been generally in the range of 0.9m to 1.1 m AOD. This is not in dispute. In the absence of any special features in the ground outside the property, this supports Mr Evans' view.

Our findings about pre-works groundwater levels

148. Of the items of evidence on which Mr Evans relies, the first three, from the GL Martin investigation, and the fourth, about the pool, point to water levels having been lower in 2004 and 2007, and are positive evidence of pre-works water levels. There is no longitudinal survey over time– the best we have is the three weeks when the pool was empty in May 2004 (and not, therefore, during a period of drought). There is no survey that covers the whole garden – but the GL Martin evidence at the south end and the evidence about the pool at the north end are independent of each other. As to the pool, Mr Groves said nothing to counter Mr Hollingworth’s and Mr Brookhouse’s evidence. As to the GL Martin data, Mr Groves’ comments were speculative and unevicenced. It would have been helpful to have more information about the procedures used by GL Martin; but if procedures for taking reliable measurements (such as testing every five minutes over a 20 minute period) are as Mr Groves said “industry standard” then it is more likely than not that they were followed. And Mr Groves produced nothing to justify his view that a water level recorded at the point where made ground gives way to clay cannot be accurate. We are not persuaded that the data levels recorded by GL Martin were not accurate.
149. The conditions in the garden seen by Mr Morley indicate that water levels were higher after the works, because such conditions had not been seen before the works. The other three items on which Mr Evans relies are all consistent with his view.
150. None of this is top quality evidence about the whole garden, although we regard the GL Martin measurements as good quality evidence about the area concerned. And on the other hand there is no evidence whatsoever that water levels were around 2m AOD before the works were commenced, and in light of the surrounding topography and of what is known about the nearby watercourses levels of 2m AOD would call for explanation; there would need to be an unusual feature in the nearby land to be causing such an anomaly.
151. Such evidence as we have indicates that levels were as expected before work commenced, and that the 1.3m seen by GL Martin is likely to be typical if on the high side. Even if that measurement was wrong by 20cm, at the limit of the margin for error that Mr Groves postulated, that would be half a metre below that seen in the Eldred data, which agrees with one end of Mr Evans’ range since he believes levels were 0.5 to 0.9m lower.
152. Mr Evans has provided a hypothesis about how water levels could have risen.
153. The old wall at the property is, as we said above, not very old. There is a photograph of a previous wooden wall in 1936 (when the property was advertised for sale in Country Life), and landward of that a line on a nineteenth century OS map may represent a still earlier structure. The riverside boundary of the property has moved outwards over the years, certainly in the last 150 years. Mr Evans suggests that the remains of earlier walls remain buried in the garden.
154. The old wall, while not impermeable, provided a reasonable defence; before the works there was no flooding save for the isolated instance of storm Xaver in 2013 (see paragraph 17 above). However, in the course of the respondent’s work the old wall has been taken down to below ground level and has been structurally compromised below ground too as we have seen (paragraph 32 above). It does not present the same barrier to water as it did before the work.

155. Mr Evans hypothesises that water flows at high tides into the material between the new wall and the old wall, and further penetrates the old wall (in its damaged condition) into the ground between the old wall and what he called the “buried revetment” – the remains of the supposed still older wall below the ground. He surmises that water overtops the buried revetment only at spring tides; at neap tides it does not do so. But once over the buried revetment it cannot flow back freely. There is no tide coming towards the river to lift it over, and the ground riverward of the revetment is under pressure of water from the river so it is only going to drain back through the buried revetment and then the old wall very slowly at extremely dry periods such as the drought of summer 2022 – hence the low water levels at that date. Mr Evans drew some support for his hypothesis from the consistently elevated levels in pipe 2 in the Eldred data; he explained that while borehole 6 goes up to 2.4m AOD at high tides and back down again to below 2m, pipe 2 (nearer the house) only oscillates between 1.9m and 2.1 or 2.2m. That led him to the view that something was stopping pipe 2 going down further.
156. Mr Groves’ only answer to this hypothesis is to maintain that water that flows into the property also flows out again. We accept that that may be largely true, but that is not inconsistent with the build-up of water underground by the mechanism that Mr Evans has suggested. If that is what is happening then what flows in flows out, but what is in effect stuck behind underground structures stays there, and therefore the overall water level is higher.
157. Mr Evans’ hypothesis places a lot of weight, metaphorically, on the supposed buried revetment. We do not know if it is there but the respondent has not argued that it is not. But there is evidence that there used to be a different wall, at least in the 1930s. It makes sense to suppose that if the garden was extended, older material might remain underneath the newly extended garden. Mr Groves has not explained why Mr Evans’ hypothesis does not work if the buried revetment is present. We find that there is probably material underground. We think that Mr Evans’ explanation is plausible on that basis. We do not need to make a finding of fact about the mechanism by which the water levels have risen; but the fact that there is a plausible explanation gives us further confidence in the evidence that water levels have risen.
158. In closing Ms Ward KC made the point that the buried revetment has always been there. So it has, but before the works were done the old wall had not been reduced in height and had not been damaged by the work. Far more water is able to get past it than was previously the case, and so there is more scope now for the process Mr Evans postulates.
159. In conclusion, such evidence as we have, together with the expectations of professionals about groundwater levels in land in the position of The King’s Lodging, and the explanation provided by Mr Evans, all lead us to find on the balance of probabilities that groundwater levels at The King’s Lodging were significantly lower before the respondent’s works were carried out than they were when the Eldred data were recorded. We can infer that they have been at similar levels to those in the Eldred data in similar conditions since then, which are likely to have been typical save in times of drought (when we know that water levels were lower). We can infer that they were higher when the extra-high tidal inflow occurred in 2019. No cause for the raised levels has been suggested other than the respondent’s works and we infer that the raised levels were caused by the works.

160. The claimants have made out their case that water levels have risen at The King's Lodging as a result of the respondent's works by somewhere between 0.5m and 1m, and probably nearer to 1m.

(f) The extra-high tidal inflows

161. In its statement of case the respondent said: "It is admitted that the [new wall] as originally constructed left a gap at the corner with the dock inlet at the Property. This was remedied by the insertion of the gravity plug referred to at paragraphs 15 and 16. It is denied that there is any ongoing tidal flooding of the garden." Yet the experts agree that the extra-high tidal inflows will recur when the river level exceeds 3.1m AOD (which it has not done since January 2019) – unsurprisingly since no remedial work has been done since the last occurrence.

162. The respondent also pleaded that "... the Respondent does not believe that the appearance of groundwater in the garden of the Property is a result of the Works. It is a natural phenomenon and was likely always occurring, but only now visible as the topsoil of the garden has been removed." We take that as a reference to the extra-high tidal inflows. It was a surprising assertion in light of the work the respondent has done to try to stop those inflows, and was at odds with the view of their own personnel and of CH2M during the period when the remedial works were carried out. In light of the hydrologists' agreed position the respondent's pleaded case was clearly incorrect on this point.

163. Mr Groves in his first report explained that there were "at least two leakage mechanisms" at work when these inflows occur:

"(a) chronic failure of the concrete 'seal' between the outside of the old river wall and the new RC between it and the SSP (and, by implication, the reinforcing works that were undertaken to prevent inflows in 2017) along the line of the wall and (b) through construction joints within the Works perpendicular to the line of the wall."

164. If we had concluded that groundwater levels at The King's Lodging had not risen since the works were undertaken, we would still have to consider whether the extra-high tidal inflows were likely to cause damage to the house in the future. As it is we have found that water levels have risen. Insofar as those raised levels have caused or are likely to cause problems for the structure of the house, then the future extra-high tidal inflows can only exacerbate that problem. And they are likely to become more frequent; Mr Evans pointed out that sea levels are predicted to rise, and that by 2057 normal high spring tides will be at 3.25 AOD, so what is currently extra high will become normal.

165. Mr Groves produced a calculation which he said demonstrated that river water cannot reach the house because its velocity, of a few millimetres per hour, will never be sufficient for it to do so before it flows out again. One of the variables in the calculation is the consistency of the ground, and the difficulty with that calculation is that the consistency of the ground is unknown; Mr Groves explained that he had done the calculation using different values for the ground, assuming maximum and minimum permeability. But of

course the ground is likely to contain subterranean structures between the house and the river and any calculation that assumes a uniform content is unlikely to be accurate. Another difficulty is that the calculation appears to be at odds with what has been observed at the property, both in the Eldred data which show water rising very fast indeed when tides are rising and in the videos of inflowing water which show the extra-high tidal inflows flooding in. Mr Groves' response to that was that vertical velocity is different from horizontal velocity; but he agreed that even if river water does not itself reach the house it will displace groundwater which will rise in response (see paragraph 101 above).

166. Mr Groves' calculations of horizontal velocity therefore offer no comfort; extra-high tidal inflows will continue to occur, will continue to introduce saline water into the garden, and will – however temporarily – further raise the groundwater levels in the garden and around and under the house. If Mr Evans' hypothesis about the cause of the raised groundwater levels is correct then extra-high tidal inflows will overtop any buried structures, as the spring tides do but more so. Even when the ground dries out, as it did in summer 2022, the raised levels will gradually be restored as wetter conditions recur, and that process will be hastened and reinforced by extra-high tidal inflows when they recur. And recur they will, with increasing frequency as sea-levels rise.

(g) Conclusions about the hydrology evidence

167. Our overall conclusions follow from the two previous sections and can be briefly stated; we have found that groundwater levels have risen at The King's Lodging after, and as a result of, the respondent's works. Any problems caused by the raised groundwater levels can only be exacerbated by extra-high tidal inflows.

Conclusions

168. The preliminary issue we have to decide is causation. The claimants' case is that damage to the house has been caused, and will be caused in future, by raised groundwater levels. We have accepted that groundwater levels have been raised. Mr Evans in his first report explained how that would affect the house:

“I believe the house foundations are generally at about 2.7m OD although a deeper one has been recorded. With a ground water table now between 1.7 and 2.0m OD I consider it reasonable to assume that capillary rise can result in soil at foundation level being permanently damp, at least in some areas of the house.
18.6.3 The effects this will have on the house will be covered in the other expert reports in these proceedings.”

169. We have already concluded that if Mr Evans was right, as a result of the evidence of those other experts the claimants' case on causation succeeds. It follows from our findings on the hydrology evidence that the claimants succeed on the preliminary issue; the building at The King's Lodging has been damaged by the respondent's works and will be further damaged in the future.

30 November 2023

Right of appeal

Any party has a right of appeal to the Court of Appeal on any point of law arising from this decision. The right of appeal may be exercised only with permission. An application for permission to appeal to the Court of Appeal must be sent or delivered to the Tribunal so that it is received within 1 month after the date on which this decision is sent to the parties (unless an application for costs is made within 14 days of the decision being sent to the parties, in which case an application for permission to appeal must be made within 1 month of the date on which the Tribunal's decision on costs is sent to the parties). An application for permission to appeal must identify the decision of the Tribunal to which it relates, identify the alleged error or errors of law in the decision, and state the result the party making the application is seeking. If the Tribunal refuses permission to appeal a further application may then be made to the Court of Appeal for permission.