Neutral Citation Number: [2023] EWHC 1207 (Comm)

Case Nos: CL-2020-705 and CL-2021-536

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
COMMERCIAL COURT (KBD)

Royal Courts of Justice, Rolls Building
Fetter Lane, London, EC4A 1NL

Date: Double-click to add Judgment date
Offered For Hand Down: 22 May 2023

Before :

HIS HONOUR JUDGE PELLING KC
SITTING AS A JUDGE OF THE HIGH COURT

- -

Between :

SKY UK LIMITED	**Claimant (705 Claim)**
MACE LIMITED	**Claimant (536 Claim)**
- and –	
(1) **RIVERSTONE MANAGING AGENCY LIMITED** (2) **THE UNDERWRITING MEMBERS OF LLOYD'S SYNDICATE 3210 FOR THE 2014 YEAR OF ACCOUNT SUBSCRIBING TO POLICY B0509DD190814** (3) **OLD COMPANY 18 LIMITED** (4) **ASPEN INSURANCE UK LIMITED** (5) **ROYAL & SUN ALLIANCE INSURANCE PLC** (6) **HSB ENGINEERING INSURANCE LIMITED** (7) **BERKSHIRE HATHAWAY INTERNATIONAL INSURANCE LIMITED** (8) **MSI CORPORATE CAPITAL LIMITED**	**Defendants**

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Anneliese Day KC, Crispin Winser KC and **Simon Kerr** (instructed by **Herbert Smith Freehills LLP**) for the **Claimant in the 705 Claim**
Paul Reed KC, Ebony Alleyne and James Shaw (instructed by Clyde & Co LLP) for the Claimant in the 536 Claim
Andrew Rigney KC, Simon Goldstone and **Patrick Maxwell** (instructed by **DAC Beachcroft LLP**) for the **Defendants**

Hearing dates: 16, 17, 18, 19. 23, 24, 25, 26, 30 and 31 January, 1, 2, 6, 7, 8, and 9 February 2023 (Evidence), 15 and 16 February 2023 (Closing oral submissions) and 23 February, 9 March and 19 May 2023 (Additional written submissions).

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Approved Judgment

I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

HIS HONOUR JUDGE PELLING KC SITTING AS A JUDGE OF THE HIGH COURT.

HH Judge Pelling KC:

Introduction

1. This is the trial of claims by Sky UK Limited ("Sky") and Mace Limited ("Mace") against the underwriters of a syndicated construction all risks ("CAR") policy ("Policy") in relation to loss and damage allegedly suffered as the result of what is now the widespread failure of the roof of Sky's global headquarters building, known as "Sky Central", which is located on the Sky Campus in Hounslow in West London. There are disputes between the parties concerning the scope and effect of the Policy, as to the technical reasons for the failure of the roof, the scope and cost of the work necessary to remedy the failure and the date at, or date range within, which that is to be assessed.

2. In reality, although most of the trial and all of the evidence has been taken up with the causes of failure of the Sky Central roof, what remedial work needs (or needed) to be carried out for any damage to which the Policy responds and the quantum associated with that work, in reality the determination of this dispute turns principally on the true meaning and effect of the Policy. In retrospect at least, it is unfortunate that these issues were not considered by the parties to be appropriate for preliminary determination since it is likely that such a determination would have been completed in no more than 3-4 days and reduced significantly the scope of the trial relating to technical cause and effect, remedy and remedial scheme cost and may even have enabled these issues to be resolved by settlement. It is equally unfortunate that the liability and causation issues were not separated for trial from the quantum issues since unless I conclude that one or other remedial scheme ought reasonably to be adopted in its entirety, quantum cannot be resolved, although the applicable principles can be.

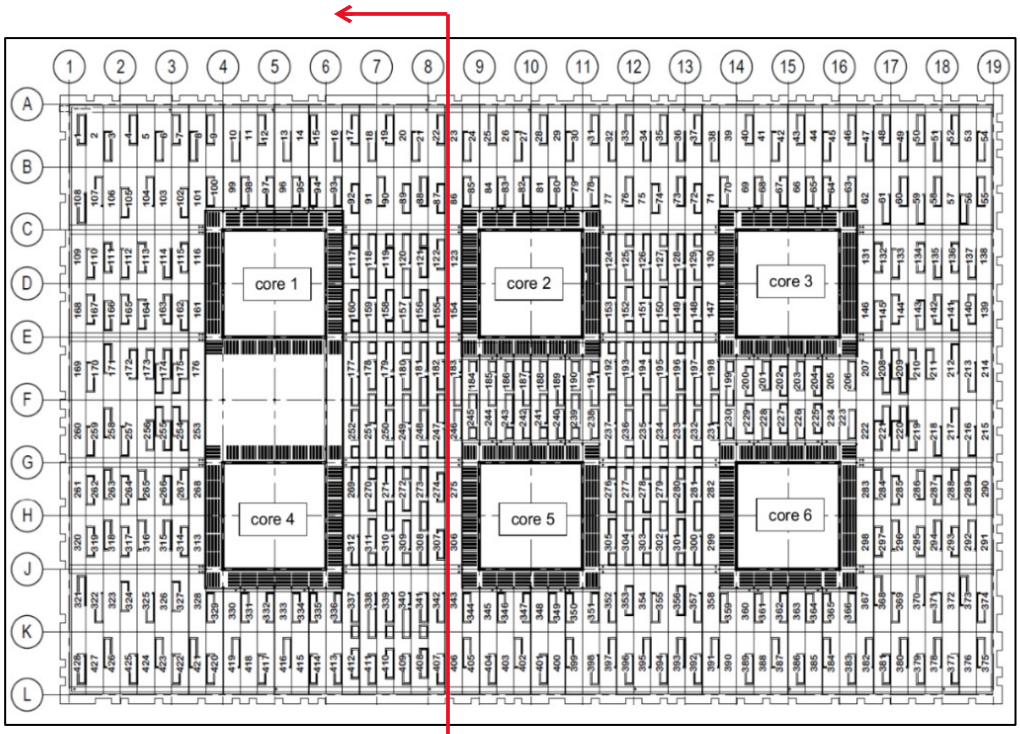
3. Sky Central has a total floor area of about 41,000 square metres set out on three floors and is the hub of Sky's business activity. Between 3500 and 4000 Sky employees are based in the building, which houses Sky News, Sky's Consumer Services, Legal, Finance and Technology Groups, together with Sky's technical support and one of its key datacentres. It consists of open plan office space, a major events space, an innovation space, a cinema, meeting centre suite, multiple catering outlets, a high-volume catering kitchen, a Waitrose convenience store and a glass-walled news studio in the atrium, suspended between the first floor and mezzanine. The large number of employees who work in the building and its central importance to Sky's business activities are reasons why it contends that its remedial scheme is the one that should be adopted, rather than that proposed by Mace, because its scheme will take less time to complete, will be less disruptive as well as costing less, although (as is common ground) in material respects it does not involve like for like replacement or repair of the defective parts of the roof structure.

4. Sky Central's roof ("Roof") covers an area of about 16,000 square metres and is said to be the largest timber flat roof in Europe. The aerial view of Sky Central reproduced below shows the roof with the south-western end at the upper left side and the north-eastern end at lower right side.

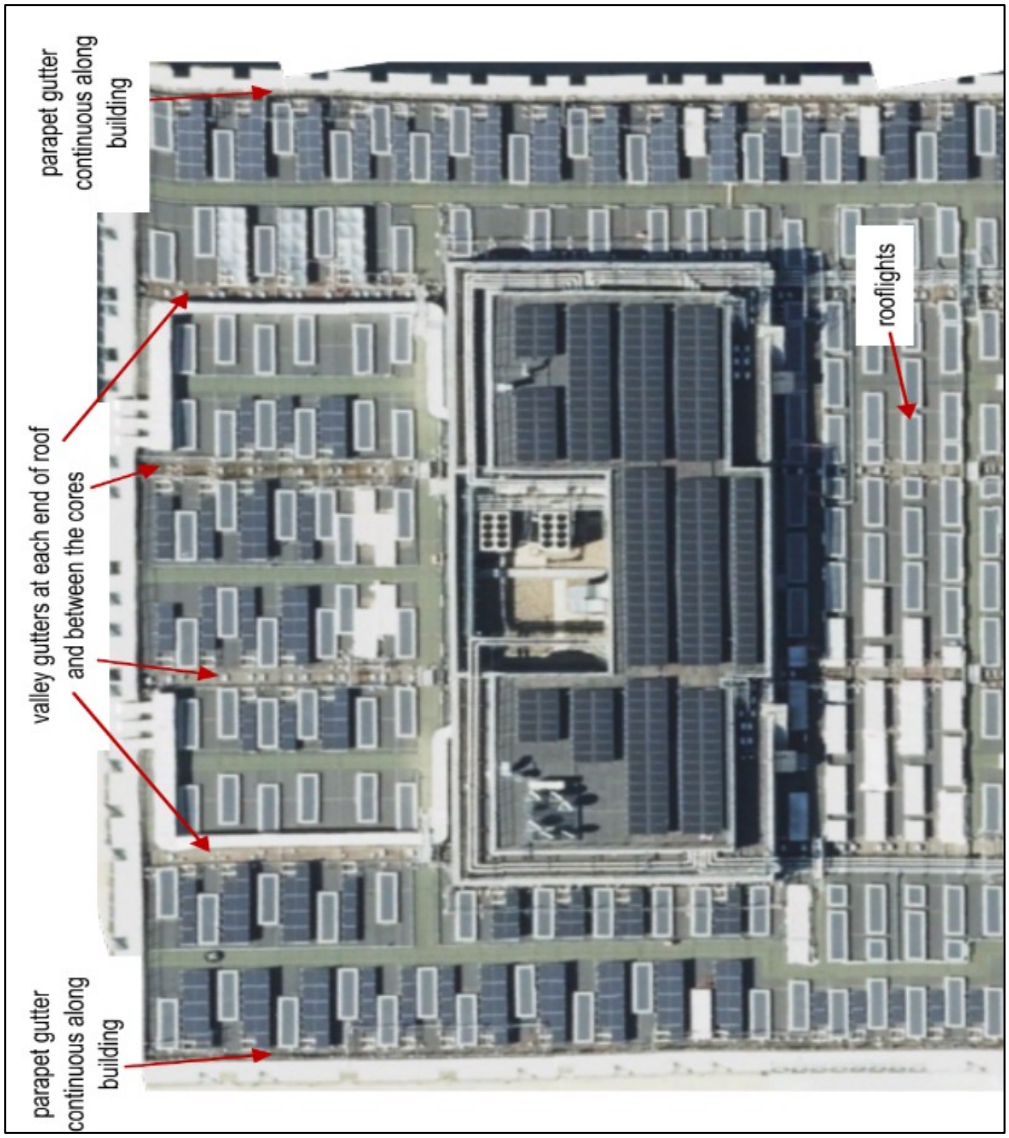
5. The Roof consists of a series of glue laminated timber beams (known as "Glulams") on which have been placed a total of 472 cassettes, each located on a north-western / south-eastern axis. Each cassette measures 10.5 metres in length, 3 metres in breadth and 45 cm in depth. Each weighs about 3.5 metric tons and consists broadly of a softwood timber frame with a base deck made of Oriented Strand Board 3 ("OSB"), which is 10 mm thick and an upper deck made of OSB 4, which is 22 mm thick. Most of the cassettes have a lightwell allowing natural light to enter the building. The lightwells are the oblong shapes appearing outlined in white in the photograph reproduced above. The underside of the cassettes comprises acoustic insulation and a perforated metal liner.

6. Each cassette contains a layer of material known as the vapour control layer ("VCL") located below the lower OSB deck. The Roof is a "cold" roof meaning that the upper surface of the cassettes is exposed to the atmosphere. In consequence, but for the VCL, warm moist air rising within the building would come into contact with the cold roof resulting in the formation of condensation leading to the growth of mould. The VCL prevents this from happening. Each of the cells within the cassette is filled with mineral wool insulation. The cassettes are referred to in these proceedings collectively as the "secondary roof structure".

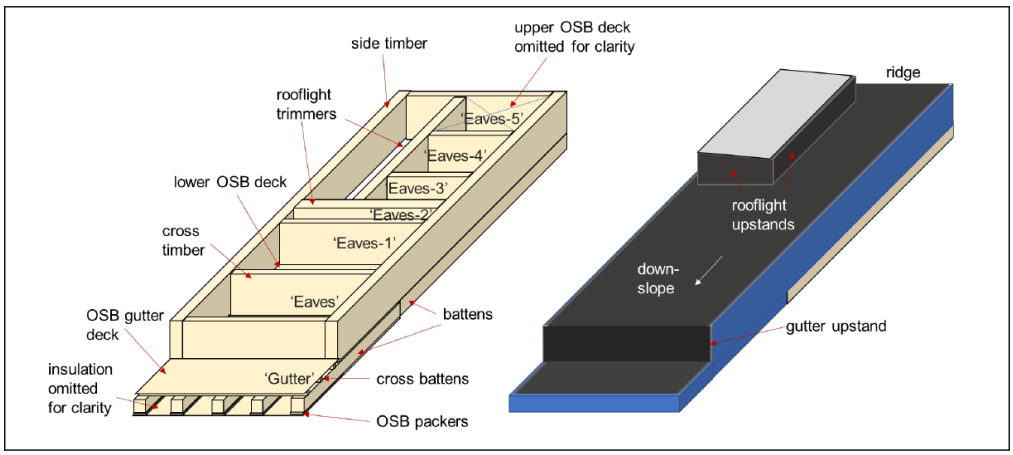
7. The secondary roof structure is shown as built on the plan below, which is oriented in the same way as the photograph above with the south-western end at the left side and the north-eastern end at right side.



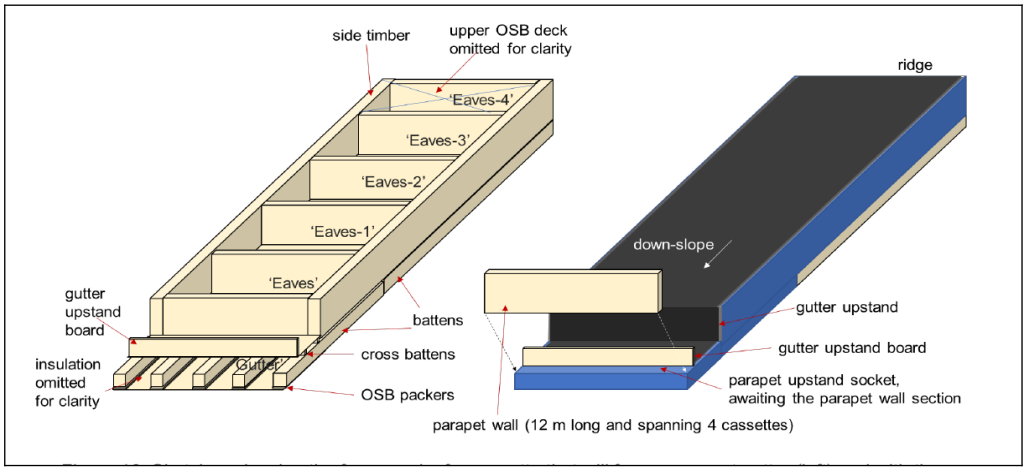
The secondary roof structure consists of rows of cassettes placed side by side, each joined at its apex end to another cassette. This link is at Rows B, D, F, H and K in the plan above. The roof is drained by a series of valley and parapet gutters. The valley gutters are at rows C, E, G and J on the plan and run on a northeast-southwest axis along the length of the roof between rows 1-19. The parapet gutters run on a similar axis at Rows A 1-19 and L 1-19. The lower end of each cassette forms an integral part of the valley or parapet gutter concerned. The as built location of the valley and parapet gutters are shown in more detail on the photograph below. The photograph shows the section of the roof to the left of the red line that appears on the plan above.



8. The gutters are drained using a siphonic drainage system. That system requires water to pool in the gutters in order to enable the syphon to form in the drainpipes thereby allowing large quantities of rainwater to drain away at speed through a relatively small number of small diameter drain pipes, located within the building. Once the cassettes had been placed on the Glulam beams, the gutters were designed to be made permanently weatherproof by coating them with a single Derbigum membrane, which was attached to the cassette surfaces by heating the surface of the membrane. The drawings below show typical cassettes. The drawing immediately below shows a cassette designed to form an integral part of one of the valley gutters. The left side drawing shows the typical internal layout of such a cassette and the right side drawing is as the cassette would appear after the membrane has been completed.



The drawing below represents a typical cassette without a rooflight that was designed to drain to one of the perimeter gutters.



The drawings show most of the constituent parts of the cassettes to which it will be necessary to refer in this judgment. As will be apparent from the drawings above, the first and lowest compartment is the gutter, shown at the bottom of each drawing, with each subsequent compartment (known as eaves) moving upwards towards the apex of the cassette, shown at the top of each drawing. As will be apparent from this structure, a gutter cannot operate as such until a complete row of cassettes has been completed and linked to the siphonic drainage system.

9. Sky Central was constructed in 2014-2015 by Mace under a JCT Design and Build Contract dated 17 March 2014 ("construction contract"). It will be necessary to refer to that contract in more detail below because it is common ground between the parties that it is the sole factual matrix relevant to the true construction of the Policy and for the purpose of ascertaining the intention of the parties in entering into the Policy.

10. Mace sub-contracted the design, supply and construction of the Sky Central roof to Prater Limited ("Prater") under an amended JCT Design and Build Sub-Contract dated 21 August 2015. Prater in turn sub-contracted the manufacture, supply and installation of the cassette system within the roof structure to B & K Structures Limited ("BKS"). BKS in turn sub-contracted the manufacture and supply of the cassettes to Rubner Holzbau GmbH ("Rubner"). Following installation of the cassettes, it was necessary as I have explained to permanently seal the roof externally

using a waterproof membrane. The Derbigum membrane used was supplied by Alumasc Exterior Building Products Ltd ("Alumasc") and installed by Prater.

11. The cassettes were manufactured by Rubner at its factory in Austria and delivered wrapped with weather protection materials. Following delivery to a yard close to the Sky Campus, each cassette was finished by installing the rooflights and coating them with Derbigum before they were shipped to the Sky Central site under weatherproof tarpaulins. They were then lifted onto the Sky Central roof using tower cranes that were connected to the cassettes by six lifting strops that had been installed during the manufacturing process as an integral part of each cassette. After the cassette had been lifted into place the strops were cut from the cassette using a Stanley knife. The effect of this was to leave a hole in the Derbigum coating of the upper surface of the cassette that remained open to the weather until patched with Derbigum. The gutter sections of each cassette were also exposed to the weather until they could be permanently sealed with Derbigum, as were the apex joints. This exposure to the weather could have been eliminated by use of a temporary roof structure until after installation of the permanent weather proofing but no such structure was installed during the construction process, nor specified as part of the design of the roof.

12. The secondary roof structure was constructed between December 2014 and May 2015. The numbers of each cassette are shown on the plan above. In summary, Zone 1 comprised cassette numbers 1-15, 94-116, 161-168, 429, 430, 431 and 433, which were installed on the roof between December 2014 and January 2015 by BKS. Zones 2 and 3 comprised cassette numbers 16-30, 79-93, 117-123, 154-160, 169-176, 253-268, 313-335, 414-428, 432, 434, 435, 437, 439, 440, 441, 442, 443 and 445 and were installed by BKS between January and February 2015. Zones 4 and 5 comprised cassette numbers 31-45, 64-78, 124-130, 147-153, 177-190, 239-252, 269-275, 306-312, 336-350, 399-413, 436, 438, 444.446, 447, 448, 449, 450, 451, 453, 455, 456 457, 458, 459 and 46, which were installed by BKS between February and March 2015. Zone 6, consisted of cassette numbers 191-205, 224-238, 276-282, 299-305, 351-365, 384-398, 452, 454, 463, 464 465, 466, 467, 469, 471 and 472, which were installed by BKS between March and April 2015. Zone 7 consisted of cassette numbers 46-63, 131-146, 460 and 462, which were installed by BKS during the same period. Finally, between April and May 2015, BKS installed cassette numbers 206-223, 283-298, 366-383, 468 and 470, which together constituted Zone 8.

13. Following installation, the cassettes were left waiting for permanent waterproofing by Prater. That this would happen was foreseeable since for the most part the delay occurred because of the need to secure perimeter fencing in order to protect the work force working on the perimeter gutters from falling from the roof. It was also foreseeable that the cassettes would be exposed to substantial rainfall over the weeks or months between installation on the roof and completion of the permanent waterproofing because the work was being undertaken in the depths of winter and early spring. Records of rainfall during the period when the cassettes were installed on the roof show that in excess of 1mm of rain fell on 73 out of 274 days. The unchallenged opinion of Dr Pool, the materials scientist instructed to provide causation evidence on behalf of Mace, was that at or above this depth of daily rainfall, water would start to flow down the Derbigum covered surface of the cassettes over the spaces left by the severed lifting strops to the gutter area. I accept this evidence. Notwithstanding this, no temporary weather protection was provided during this

period. This is so even though no one suggests that the provision of temporary roofing was in any way unusual or novel, although no doubt expensive and in some ways difficult to install and move and thus capable of slowing down the installation works. It is noteworthy that the remedial schemes contended for by each of the parties make provision for such a system.

14. It became apparent from an early stage that rainwater was entering the cassettes after they were installed on the roof by BKS. By March 2015 (after the installation of the Zone 1 and 2 cassettes and either during or after the installation of the Zone 4 and 5 cassettes), standing water was found inside the gutter compartments of 27 cassettes. This is evidenced by an email from BKS to Prater dated 7 April 2015 referring to four inspections on 11, 24-25 and 26-30 March 2015, which was in these terms:

> "We note that the majority of all gutter cassettes have suffered water ingress and do have standing water within the insulation layer.
>
> Following advice from Rubner, to avoid the cassettes suffering irreparable damage, the following remedial works must take place prior to the cassette up-stand installation continuing:
>
> • Remove the 22mm OSB top layer (the felt needs to be removed and replaced where required)
>
> • Remove the wet insulation material and drain the cassette completely.
>
> • Inspect the VCL before re-instating the insulation
>
> • Re-instate the insulation and OSB board.
>
> • Re-instate the derbigum layer to the gutter in a manner that the cassette is safe from water ingress at all times.
>
> These actions need to be carried out by Prater immediately to avoid any more long term damage to the cassettes.
>
> Rubner do require urgent confirmation from yourselves that the above will be completed in a timely manner, along with the appropriate audit documentation (Proposed procedures and programme etc...) to bring the cassette's back in line with the specification.
>
> Rubner have advised BKS that they will step out of the warranty if the said remedial works are not carried out in reasonable time and manner."

By 2 April 2015, BKS had informed Prater by email that:

> "… video recording attached at GL L, which does demonstrate standing water within the gutter cassettes. Please note, this does

> show standing water after the holes have been drilled to release the standing water!
>
> Please also see photos of unfinished seams (Cassette Joint Locations) at GL L. This issue of standing water is probably not isolated to the areas at GL A & L, it is a certainty that other gutter locations will have a similar problem and we seriously advise that these areas are also inspected by Rubner, in particular the internal gutter locations, as these areas are not fully felted to date and I would expect the gutters holding standing water will certainly be exposed to water ingress."

Some drying out works were attempted between April and June 2015 and again between August 2015 and April 2016. It is common ground that at best these were only partially successful. Practical Completion occurred on 4 April 2016, without this issue having been resolved. No attempt was made to ascertain comprehensively the degree to which water had penetrated the cassettes or what damage had been suffered as a result. According to paragraph 14 of Ms Foxlee's statement (which I accept) Sky Central opened (by which I understand her to mean was occupied by Sky's staff) in August 2016. A third attempt to dry out the cassettes took place between June 2018 and August 2019. As I explain in more detail below, it was common ground by the end of the trial that these works arrested decay within the cassettes caused by the continued presence of moisture that had not been dried out by the previously attempted drying out work.

15. The claimants' case, supported by Dr Pool's evidence, as to the principal means by which water was able to enter concerns the way in which the gutter sections had been constructed. In summary, construction of the gutters involved folding 3 mm thick Derbigum underlay into the 90° corners at the bottom of the upstand of the gutter that the claimants allege left a gap beneath the underlay which was not made watertight until the application of the final waterproofing, which was delayed as described above. It is common ground that once rainwater entered the cassettes it was unable to dissipate naturally because the cassettes were not ventilated. It was this in the form of water (or water vapour resulting from it) which the claimants maintain resulted over time in swelling, decay and loss of strength of the OSB roof deck. Over time some of the moisture evaporated within compromised cassettes but was unable to escape which resulted in it condensing in eaves compartments above the gutter cells in the compromised cassettes resulting in mould growth and fungal decay. The claimants' case is that a side effect of the water entering the roof was that the insulation within the cells of the affected cassettes became soaked causing it to compress thereby permanently reducing its thermal performance.

16. Although on the claimants' case this mechanism was the main route by which water entered the cassettes, they contend that there were other although subsidiary sources of water ingress. Of these the most important were the holes in the cassettes that had contained the lifting strops by which the cassettes had been lifted by tower crane to the roof and which had then been cut off. The resulting holes had been sealed temporarily by tape. The claimants maintain that this was ineffective and that this permitted water running down the cassettes from apex to gutter to enter the cassettes at eaves cells nearer to the apex of each cassette than the gutter sections.

17. The claimants' case is that none of this would have occurred but for a fundamental flaw in what it maintains was the design of the roof by failing to so design the roofing works as to require the erection of a temporary roof to protect the partially installed cassettes until the gutters could be completed and the final Derbigum layer laid across the roof. It is this single failure that the claimants maintain is the single event or occurrence by which their retained liability under the Policy is to be ascertained – an issue that I return to in much more detail below.

18. It will be necessary to return to the rival remedial schemes proposed by each claimant and the defendants later in this judgment. In essence however both Sky and Mace contend that in the circumstances set out above it will be necessary to replace the existing roof either in essence like for like (the Mace scheme) or with a less expensive and time-consuming scheme involving the replacement of the wood cassettes with steel ones (the Sky scheme). The defendants maintain that their liability is confined to remediating the (but only the) damage that is proved to have occurred in the period of insurance under the Policy, they deny that any relevant damage has been proved to have occurred during this period beyond that which they maintain could have been remedied by what they call their 2017 remedial scheme but in any event, what is recoverable is capped by the insureds' "*Retained Liability*" under the Policy. They deny that the failure to specify the use of a temporary roof during the installation process is capable, as a matter of law or construction of the Policy, of limiting the claimants' Retained Liability under the Policy to one deductible of £150,000 as the claimants allege and maintain that as a matter of construction of the Policy any damage to each cassette is to be treated as a separate event attracting a separate deductible of £150,000. If right this will drastically reduce the sums otherwise recoverable under the Policy in respect of Sky and Mace's claims. In consequence therefore they deny any liability to fund either the Mace or the Sky schemes. In addition, the defendants maintain that in the events that have happened Mace is not insured at all or alternatively is insured only down to Practical Completion and there being no evidence of what if any damage had occurred by that date Mace is not entitled to recover anything under the Policy with Sky being the only insured with a tenable claim.

19. Whilst the defendants have devised two remedial schemes (known respectively as the 2017 scheme and the 2018-9 scheme), no one suggests that either will ever be built. It is for that reason that complaints by both Sky and Mace that the underwriters' schemes are incapable of remediating the current actual level of damage to the roof are correct but immaterial. The defendants' scheme has been devised simply as a means of quantifying what the defendants maintain is their liability for the damage they maintain can be shown to have occurred during the period they say they were on risk under the Policy. This leads to the conclusion that the true cost on the defendants' case of remediating the damage for which they maintain they are liable is between about £29m and £38.3m whereas the Mace and Sky schemes will cost in excess of £100m.

20. A difficulty may arise if I come to the conclusion that the defendants are correct to assert they are only liable for the cost of making good the damage that can be shown or inferred to have occurred during the Period of Insurance under the Policy, but the scheme they have devised is an unrealistic attempt to quantify the cost of making good that loss. This is an issue because neither Sky nor Mace have addressed that

possibility in the alternative to their respective primary cases. None of the parties were willing to engage with this issue when I raised it during the trial. This would not have been a problem if the parties had sought the determination of all liability issues (either instead of or in addition to the construction preliminary issue hearing I suggested earlier might sensibly have been adopted) ahead of a quantum hearing. However, all parties have been content to proceed with a unitary trial of all the issues that arise. That is unfortunate, at least in retrospect. I return to this issue at the end of this judgment.

Scheme of the Judgment

21. There are very significant issues between the parties concerning the true meaning and effect of the Policy. No one suggests that there is any factual matrix evidence that is material other than the terms of the construction contract that Sky entered into with Mace. Accordingly, I set out the terms of the Policy and the applicable framework principles that apply to its construction below. I then turn to the issues that arise concerning the true meaning and effect of the Policy before then turning to the factual and technical issues that arise and matter in light of the conclusions I reach on the construction issues.

The Policy

22. The Policy was underwritten on the basis of the information referred to under the subheading "*Information*" in the "*Risk Details*" sheet prepared by Marsh Limited ("Marsh") (Sky's brokers) for consideration by underwriters ("Risk Details Document"). That information included the tender submitted by Mace by which it was appointed management contractor for the design and construction of Sky Central.

23. Whilst the construction contract was entered into between Sky and Mace after the Policy, it was common ground that the contents of the construction contract is part of the factual matrix that has to be considered when construing the Policy on the basis that all parties were aware of the terms of the construction contract at the time when the Policy was underwritten even though the construction contract had not been formally executed at that stage. I was told and it is not in dispute that all the material terms of the construction contract were apparent from the tender information that was supplied to underwriters in the course of the broking of the Policy.

24. The basis of the construction contract was the JCT Design and Build Contract 2011 form, which however had been heavily amended by the parties in the course of the tender process. This is very common in construction industry contracts, as is the occurrence of an (often lengthy) delay between commencement of work and the signature of the formal contract under which the construction work is being undertaken. No one suggests that there was any material difference between the information available to the parties prior to the inception of the Policy and the contents of the construction contact and thus no material point that arises from the fact that the construction contract had not been formally executed by the date when the Policy incepted. The parties all proceeded on the basis that there would be a construction contract between Sky and Mace in the terms of the contract that was eventually executed.

25. The terms of the Policy were set out in a document prepared by Marsh entitled "*CONTRACT WORKS AND SPECIAL PROVISION TERRORISM INSURANCE for BSKYB Ltd in connection with Sky Building 2 and the Believe in Better Building and all ancillary work connected therewith at Sky Campus, Osterley, TW7 5QD*" I refer to this document below as the "Policy Terms Document" where it is necessary to distinguish it from the Risk Details document.

26. The Policy Terms Document incorporated by reference various definitions and other operative provisions that were set out in the Risk Details Document. The Policy Terms Document together with such parts of the Risks Details Document as were incorporated by reference into the Policy Terms Document constituted the Policy.

27. The "*Insured*" and "*Period of Insurance*" were as stated in the Risk Details Document. The "*Insured*" were defined as being:

> "(a) The Principal and/or associated and/or subsidiary companies - British Sky Broadcasting Ltd
>
> (b) The contractor - Mace Ltd
>
> (c) All other contractors and/or sub-contractors of any tier and others engaged to provide goods or services in connection with the Project insured hereunder.
>
> (d) Consultants, suppliers and vendors, all of any tier, whilst carrying out physical work associated with the Project on or about the Project Site or caused by their physical presence on or movement about the Project Site
>
> (e) The employees, directors or officers of any of the above
>
> (f) Including all such parties, whether named hereunder or not, or whether appointed prior to inception of the Contract of Insurance or subsequently.
>
> Each for their respective rights and interests."

The "*Period of Insurance*" was defined as being:

> "Initial Period of Insurance
>
> The whole period of the Project estimated to be 23 months from 18 February 2014 to 31 December 2015 from 00.01 am local standard time at the Project Site including testing and commissioning, and thereafter automatically held covered for further periods if required at additional premium to be agreed by Leading Insurer only but not to exceed pro rata temporis.
>
> Maintenance Period of Insurance
>
> 12 months commencing from the date of expiry of the Initial Period of Insurance"

It is common ground that the Period of Insurance was in the end 1 February 2014 to 15 July 2017. Insurers are content for the purposes of these claims to treat the Period of Insurance as being the whole of this period without distinguishing between the initial and maintenance period of insurance. Although the parties have been a little coy about this issue, broadly it is to avoid prejudicing any of the parties' positions in litigation which it is anticipated will or may follow these proceedings. For the purposes of these claims however, wherever I refer to the Period of Insurance I am referring to the whole of the period between 1 February 2014 to 15 July 2017.

28. Section 1 of the Policy Terms Document provided that the underwriters would:

> "… indemnify the Insured against physical loss or damage to Property Insured, occurring during the Period of Insurance, from any cause whatsoever whilst within the Geographical Limits including whilst in transit (other than by sea or air) including loading and unloading and/or temporary off-site storage."

The "*Property Insured*" was defined in the Risk Details Document as being:

> "Permanent works, materials (including those supplied free to the Project by or on behalf of the Principal, provided the value is included in the Contract Works Sum Insured), temporary works, equipment, machinery, supplies, temporary buildings and the contents thereof, camps and the contents thereof and all other property used for or in connection with the Project."

The basis on which claims were to be settled was set out in the Policy Terms Document under the sub-heading "*Basis of Settlement*" as being:

> "In settlement of claims under this Section of the Contract of Insurance the Insurers shall, subject to the terms and conditions of the Contract of Insurance, indemnify the Insured on the basis of the full cost of repairing, reinstating or replacing property lost or damaged (including the costs of any additional operational testing, commissioning as a result of the physical loss or damage which is indemnifiable hereunder) even though such costs may vary from the original construction costs and shall Include all taxes and import duties even if they have been varied or imposed subsequent to the inception of the Contract of Insurance.
>
> In the calculation of the costs of restoration or replacement of works, those elements of cost for which provision is made in the computation of the Sum Insured or the original building or trade contract price will be taken into account. In the case of a claim by an Insured party in respect of repairs or replacement undertaken by that Insured party that Insured party shall be entitled to charge an amount for overheads and profit equivalent to that included in the original building or trade contract price or value.

> In circumstances where a claim is indemnifiable under this Section of the Contract of Insurance the Insurers agree to make reasonable interim payments on account at the request of the Insured and if recommended by the loss adjuster pending finalisation of the claim settlement.
>
> The Property Insured may be reinstated or replaced upon any other site wheresoever situate at the absolute discretion of the Principal and in any form or manner suitable to the requirements of the Principal subject to the liability of the Insurers not being thereby increased."

29. The Policy was made subject to a number of exclusions and exceptions. That which is material to this claim was set out in Paragraph 1 of the Exclusions to Section 1 within the Policy Terms Document and has been referred to by the parties and is referred to below as "*DE5*". DE5 is in these terms:

> "The Insurers shall not be liable for:
>
> 1. **Design Exclusion 5 (DE5) Design improvement Exclusion**
>
> (a) The cost necessary to replace repair or rectify any Property Insured which is defective in design plan specification materials or workmanship
>
> (b) Loss or damage to the Property Insured caused to enable replacement repair or rectification of such defective property
>
> But should damage to the Property Insured (other than damage as defined in (b) above) result from such a defect this exclusion shall be limited to the costs of additional work resulting from and the additional costs of improvements to the original design plan specification materials or workmanship.
>
> For the purpose of this Contract of Insurance and not merely this Exclusion the Property Insured shall not be regarded as lost or damaged solely by virtue of the existence of any defect in design plan specification materials or workmanship in the Property Insured or any part thereof."

Although the language is convoluted, the effect of the provision is reasonably clear: if any Property Insured is defective in any of the ways defined in (a), the Policy will not respond unless loss or damage to the defective Property Insured is caused by that defect, in which case the Policy will respond but subject to a more limited exclusion from recoverability of the additional cost of and incidental to any improvements to the original design plan specification materials or workmanship of the relevant defective Property Insured.

30. The reason for this formulation is clear: the purpose of the Policy was to insure against physical loss or damage to Property Insured occurring during the Period of Insurance, not against the existence of any defect in design, plan, specification,

materials or workmanship in the Property Insured, which is left to be resolved (if at all) by other means including but not necessarily limited to claims against the main contractor or (in an appropriate case) any relevant sub-contractor or consultant.

31. A special deductible applied to claims to which DE5 applied. The deductibles applicable under the Policy were defined in the Risks Details Document as being the "*Insured's Retained Liability*", which definition was incorporated into the Policy Terms Document by reference. The Insured's Retained Liability was defined to be:

> "GBP 10,000 each and every loss,
>
> However in respect of defective design, materials or workmanship the following will apply where option is selected by the Principal: -
>
> GBP 150,000 any one event but this will only apply to those claims which are recoverable under DE5 but not under DE3…" [Emphasis supplied]

The £150,000 deductible applies therefore to claims that would be excluded but for the inclusion of DE5 within the Policy.

32. The effect and applicability of the £150,000 any one event deductible was expanded upon by the Policy Terms Document in these terms:

> "For the purpose of determining the application of the Insured's Retained Liability under DE5 1995 Design Improvement Exclusion, the following definition is included:
>
> **Design Exclusion 3 (DE3) Design, Plan, Specification, Materials or Workmanship " Consequences "**
>
> Damage to and the cost necessary to replace repair or rectify
>
> (a) Property Insured which is in a defective condition due to a defect in design plan specification materials or workmanship of such Property Insured or any part thereof
>
> (b) Property Insured lost or damaged to enable replacement repair or rectification of Property Insured excluded by (a) above
>
> Exclusion (a) above shall not apply to other Property Insured which is free of the defective condition but is damaged in consequence thereof.
>
> For the purpose of the Contract of Insurance and not merely this Exclusion the Property Insured shall not be regarded as lost or damaged solely by virtue of the existence of any defect in design plan specification materials or workmanship in the Property Insured or any part thereof. [Emphasis supplied]

Although, again, the language is unnecessarily convoluted, as I read these provisions their combined effect is to confine the applicability of the £150,000 any one event deductible to claims which are recoverable under DE5 but not under DE3. Although it is not at all clear from the language used, as I read these provisions, their combined effect is that a claim for the cost necessary to repair or replace Property Insured which is free of the defective condition but is damaged as a consequence of it will be subject to the £10,000 any one loss deductible but a claim for the cost of replacing or repairing any Property Insured damaged as a result of a defect in design plan specification materials or workmanship is subject to the £150,000 any one event deductible.

33. In relation to what is capable of constituting an "*event*" for the purpose of the £150,000 any one event deductible, underwriters place some reliance on Memorandum 12 of the "*Memoranda to Section 1*" contained in the Policy terms Document, which is in the following terms:

> "**72 hour clause**
>
> For the purpose of the application of the Insured's Retained Liability it is agreed that any damage to the Property Insured or liability for damage arising during any one period of seventy-two consecutive hours and caused by storm, tempest, flood, water damage, subsidence, collapse or earthquake shall be deemed to be a single event and therefore to constitute one occurrence. For the purpose of the foregoing the commencement of any such seventy-two hour period shall be decided at the discretion of the Insured, it being understood and agreed, however, that there shall be no overlapping in any two or more such seventy-two hour periods in the event of damage occurring over an extended period of time."

Although it is an issue I will return to below, as a matter of language, whatever conceptually is capable of constituting an "*event"* (there being a dispute between the parties as to whether as a matter of law an event is capable of including design decisions) in this policy the single unifying event must be an error or omission in the design plan specification materials or workmanship of the property Insured that has suffered damage as a result of such defect. This may be problematic in the circumstances of this case because the damage is alleged by the claimants to have occurred either to part of the permanent works (being the roof structure after the cassettes had been placed on the Glulams but before they were permanently waterproofed) or materials (if the cassettes are to be regarded as not part of the permanent works at that stage) whereas the single unifying event relied on by the claimants is an error or omission in relation to the design of temporary weatherproofing pending completion of the permanent waterproofing of the secondary roof structure.

Framework Principles Applicable to the Construction of the Policy.

34. The framework principles that apply to the construction of an insurance contract are those that apply to the construction of any other contract – see FCA v. Arch Insurance (UK) Limited and others [2021] UKSC 1 *per* Lords Hamblen and Leggatt (with

whom Lord Reed agreed) at [47]. Those principles are now well established. In summary:

i) The court construes the relevant words of a contract in its documentary, factual and commercial context, assessed in the light of (a) the natural and ordinary meaning of the provision being construed, (b) any other relevant provisions of the contract being construed, (c) the overall purpose of the provision being construed and the contract in which it is contained, (d) the facts and circumstances known or assumed by the parties at the time that the document was executed, and (e) commercial common sense, but (f) disregarding subjective evidence of any party's intentions – see Arnold v Britton [2015] UKSC 36 [2015] AC 1619 per Lord Neuberger PSC at paragraph 15 and the earlier cases he refers to in that paragraph;

ii) A court can only consider facts or circumstances known or reasonably available to both parties that existed at the time that the contract or order was made - see Arnold v Britton (ibid.) per Lord Neuberger PSC at paragraph 21;

iii) In arriving at the true meaning and effect of a contract, the departure point in most cases will be the language used by the parties because (a) the parties have control over the language they use in a contract; and (b) the parties must have been specifically focussing on the issue covered by the disputed clause or clauses when agreeing the wording of that provision – see Arnold v Britton (ibid.) per Lord Neuberger PSC at paragraph 17;

iv) Where the parties have used unambiguous language, the court must apply it – see Rainy Sky SA v Kookmin Bank [2011] UKSC 50 [2011] 1 WLR 2900 per Lord Clarke JSC at paragraph 23;

v) Where the language used by the parties is unclear the court can properly depart from its natural meaning where the context suggests that an alternative meaning more accurately reflects what a reasonable person with the parties' actual and presumed knowledge would conclude the parties had meant by the language they used but that does not justify the court searching for drafting infelicities in order to facilitate a departure from the natural meaning of the language used – see Arnold v Britton (ibid.) per Lord Neuberger PSC at paragraph 18;

vi) If there are two possible constructions, the court is entitled to prefer the construction which is consistent with business common sense and to reject the other – see Rainy Sky SA v Kookmin Bank (ibid.) per Lord Clarke JSC at paragraph 21 - but commercial common sense is relevant only to the extent of how matters would have been perceived by reasonable people in the position of the parties, as at the date that the contract was made – see Arnold v Britton (ibid.) per Lord Neuberger PSC at paragraph 19;

vii) In striking a balance between the indications given by the language and those arising contextually, the court must consider the quality of drafting of the clause and the agreement in which it appears – see Wood v Capita Insurance Services Limited [2017] UKSC 24 per Lord Hodge JSC at paragraph 11. Sophisticated, complex agreements drafted by skilled professionals are likely

to be interpreted principally by textual analysis unless a provision lacks clarity or is apparently illogical or incoherent – see Wood v Capita Insurance Services Limited (ibid.) per Lord Hodge JSC at paragraph 13 and National Bank of Kazakhstan v Bank of New York Mellon [2018] EWCA Civ 1390 per Hamblen LJ at paragraphs 39-40;

viii) A court should not reject the natural meaning of a provision as incorrect simply because it appears to be a very imprudent term for one of the parties to have agreed, even ignoring the benefit of wisdom of hindsight, because it is not the function of a court when interpreting an agreement to relieve a party from a bad bargain - see Arnold v Britton (ibid.) per Lord Neuberger PSC at paragraph 20 and Wood v Capita Insurance Services Limited (ibid.) per Lord Hodge JSC at paragraph 11; and

ix) language used by the parties should not generally be treated as surplus but *"(i)t is well established law that the presumption against surplusage is of little value in the interpretation of commercial contracts…*" – see The Eurus [1998] 1 Lloyds Rep 351 per Staughton LJ (as he then was) at 357, approving Royal Greek Government v. MoT (1949) 83 Ll.L.R 228 per Devlin J (as he then was) at 235 and Chandris v. Isbrandtsen-Moller Co Inc [1951] 1 KB 240 per Devlin J at 245.

Is Mace Insured in any Relevant Sense?

35. The defendant underwriters contend that "… *Mace is not insured in respect of any of the sums for which it claims indemnity. Its claim is misconceived, ought never to have been brought, and falls to be dismissed*". Mace contend that this is not so, that there is a fundamental distinction between an entity that is named as an insured under a policy such as the Policy and one that is not but falls within a defined class of persons insured under such a policy and that it is entitled to an indemnity for the damage that occurred in the Period of Insurance under the Policy or at any rate down to the date of practical completion.

36. It is common ground that Mace is an insured under the Policy- see paragraph (b) of the definition of Insured under the Policy. Equally either it is not in dispute or should not be that the only contracting party to the Policy (other than underwriters) is Sky, which is expressly defined in the definition of insured as the Principal Insured.

37. Although Mr Reed KC submitted on behalf of Mace that there was a distinction to be drawn between a named and unnamed non-contractual insured, I reject that submission as unprincipled and unsupported by the authorities which draw a consistent distinction between the contractual or principal assured on the one hand and those who are assured by agreement between those who are contractual parties to the relevant insurance contract on the other. This issue was addressed by Eyre J in paragraph 86 of his judgment in The Rugby Football Union v Clark Smith Partnership [2022] EWHC 956 (TCC); [2022] BLR 381, where he stated:

> "Being named as an insured does not without more make a person a party to the insurance contract. A person who is named as an insured but who is not otherwise a party to the insurance contract does not become a party to the contract

> simply by reason of having been named in it. That person remains a third party unless and until it becomes a party in a way recognised as constituting it in law a party to the insurance contract or obtains the benefit of the policy in question in some other way. … Similarly, the editors of Colinvaux rightly say at 15-018 "the mere fact that a policy states that it covers the interests of named or identifiable third parties does not of itself give those third parties the right to enforce the contract or to rely upon its terms (eg the benefit of a waiver of subrogation clause)"."

I respectfully agree. In my judgment the true distinction that matters in this context is between a contractual (whether or not called the "principal") assured on the one hand (in this case Sky) and all those named whether individually or as part of a defined class of non-party insureds on the other. In consequence whether Mace is named as such a non-party assured (as in fact it was) or was a member of a defined but otherwise unidentified class of non-party assureds is immaterial. I refer to this latter category hereafter as the "*third party insured*" as a convenient collective label and for no more technical reason. In my judgment adopting the analysis set out above, Mace was a third party insured under the Policy[1].

38. Where a third party insured becomes an insured by agreement between an insurer and a Principal or contractual insured, the scope of the cover the third party insured enjoys under the policy depends on the intention of the parties to be gathered from the terms of the Policy and the terms of any contract between the contractual assured (here Sky) and the relevant third party insured (here Mace) concerning in particular the scope of the cover it had been agreed as between the contractual insured and the third party insured would be provided for the benefit of the third party insured – see Boston Fruit Co v British and Foreign Marine Insurance Co [1906] AC 336 (HL), followed in Stone Vickers Ltd v Appledore Ferguson Shipbuilders Ltd [1992] 2 Lloyd's Rep 578, where at 584 Parker LJ said that "... *for the purposes of ascertaining intention one may look not only at the policy documents but also at the contract between the assured and the alleged co-assured* …" and most recently in Haberdashers' Aske's Federation Trust Ltd v Lakehouse Contracts Ltd [2018] EWHC 558 (TCC); [2018] 1 Lloyds Rep 382 *per* Fraser J at [35] and [38][2].

39. As I have noted already, the construction contract between Sky and Mace was signed and took effect after, not before, the Policy incepted. However, that is immaterial in my judgment, because all relevant parties were aware of the material terms on which the construction contract was to be entered into as I explained earlier when setting out

[1] Since this part of the judgment was written in draft, the Court of Appeal has handed down its judgment in FM Conway Limited v The Rugby Football Union [2023] EWCA Civ 418, the appeal from the judgment of Eyre J I refer to, which was upheld. As I read Coulson LJ's judgment he did not overrule or reject paragraph 86 of Eyre J's judgment. In consequence I accept Mr Rigney KC's submission that there is nothing in the Court of Appeal's judgment that should lead me to reject the proposition that a person who is named as an insured but who is not otherwise a party to the insurance contract does not become a party to the contract simply by reason of having been named in it, nor that I should approach an assessment of the scope of cover by reference to the contents of the construction contract.

[2] An approach endorsed by Coulson LJ in FM Conway Limited v The Rugby Football Union (ibid.) at [67] and that is so whether the contract was subsequent to the inception of the Policy or not, where the issue was (as here) one of intention rather than construction – see Coulson LJ at [85].

the terms of the Policy and the documents relied on by underwriters when deciding whether to underwrite the Policy. That information was therefore part of the facts and circumstances known by the parties at the time the Policy incepted, and the assumption of all parties was that Mace and Sky would enter into a construction contract that incorporated the terms set out in the information made available to the underwriters by Sky and its brokers[3]. Neither Sky or Mace suggested that the chronological sequence was material to the issue I have to decide even though I drew attention to the point in the course of the defendant's closing submissions as potentially relevant.

40. Underwriters submit that a third party insured is only insured to the extent intended by the principal insured and the insurer. I agree. Most of the authorities cited by underwriters in support of this proposition were concerned with the question whether the third party insured was insured at all, usually for the purpose of deciding whether the Insurer was entitled to bring a subrogated claim against the third party insured. However, I accept Mr Rigney KC's submission on behalf of the underwriters that the principles identified in these authorities apply by extension for the purpose of ascertaining the scope of such cover. This approach is supported by the decision of Colman J in National Oilwell v Davy Offshore Limited [1993] 2 Lloyds Rep 582, where the issue was the period the Principal Insured intended the third party insured to be insured under a construction all risks policy, which he decided by reference to the terms of the contract between the Principal Insured and the third party insured. That this is the approach to be adopted was put beyond doubt by the same judge in BP Exploration Operating Co Ltd v Kvaerner Oilfield Products Ltd [2005] 1 Lloyd's Rep 307 *per* Colman J at [99], where he said:

> ""In my judgment, … (s)ince National Oilwell v Davy … it is settled law …that in order for a contractor not identified as a principal co-assured in a CAR policy to be entitled to the benefit of cover as another assured under such policy, *the insured operator must have assumed a contractual obligation to such contractor to procure the benefit of cover for him*… Consequently, when an underwriter insures under a CAR policy, a Principal Assured and an unidentified Other Assured, the cover to which he agrees extends only to that which is given by the policy to the Principal Assured *and to those Other Assureds with whom the Principal Assured has contracted and will contract to procure cover* and only to the extent to which such cover is by the terms of the contract to be procured." [Underlining emphasis supplied]

Although this was the subject of significant criticism by counsel for the second defendant in Haberdashers' Aske's Federation Trust Ltd v Lakehouse Contracts Ltd (ibid.) Fraser J at [51] rejected that criticism and concluded that Colman J's reasoning was correct and, although *obiter*, was "… *persuasive, and highly persuasive at that* …" A similar approach was adopted by Eyre J in The Rugby Football Union v Clark Smith Partnership [2022] EWHC 956 (TCC); [2022] BLR 381, where at [74][4], he

[3] See further footnote 2 above.

[4] I am authorised by Eyre J to say that there is a typographical error in [74] and the word "so" should appear between the word "if" and the word "to" in the 5th line of the paragraph.

summarised the position as being that where the issue to be determined is either whether a policy affected by an employer under a construction contract applies to a contractor at all or to what extent such a policy applies to a contractor, it is necessary to consider the terms of the contract between the employer and contractor by which the employer agreed to procure the relevant cover[5].

41. There is now therefore ample authority to be found in BP Exploration Operating Co Ltd v Kvaerner Oilfield Products Ltd (ibid.), Haberdashers' Aske's Federation Trust Ltd v Lakehouse Contracts Ltd (ibid.) and The Rugby Football Union v Clark Smith Partnership (ibid.)[6] for the proposition that in deciding the scope or extent of cover available to a third party insured under a construction all risks policy, it is necessary to consider the scope of cover the principal insured has agreed to procure under its contact with the third party insured and generally the cover available under such a policy to the third party insured wont extend beyond that which the principal insured has agreed to procure because that is what the parties intended should be provided. Those are decisions that I should follow unless a powerful reason has been identified for not doing so – see Haberdashers' Aske's Federation Trust Ltd v Lakehouse Contracts Ltd (ibid.) *per* Fraser J at [50]. No such reasons have been identified by the claimants in this case[7].

42. There is a further particular factor that mandates this approach in this case – as is apparent from the quoted definition of Insured set out earlier, the definition concludes with the sentence *"(e)ach for their respective rights and interests*." As Mr Rigney KC submits on behalf of underwriters, the "… *nature, extent, and durations of an insured's 'rights' and 'interests' in the Property Insured cannot be discerned from the Policy: they are an incident of and arise under the Building Contract*". I agree. The relationship between Sky and Mace is exclusively contractual and is to be found in the construction contract to which both are parties and not in the Policy to which Mace is not a party.

43. Underwriters make two submissions by reference to the terms of the construction contract. Firstly, they submit that Mace was only insured in respect of loss and damage to the Works down to the date of Practical Completion and, secondly, that it was only insured in respect of such loss and damage to the extent that it remediated such loss and damage during the period ending at Practical Completion. It is only if underwriters are able to establish the second of these two points that its submission that "… *Mace is not insured in respect of any of the sums for which it claims indemnity …"* can succeed.

44. In the construction contract, Sky is defined as the "*Employer*" and Mace the "*Contractor*". In so far as is material, the construction contract provided that:

> " Contractor's Obligations

[5] My understanding of Coulson LJ's judgment is that he endorsed this approach in FM Conway Limited v The Rugby Football Union (ibid.).
[6] And now see also FM Conway Limited v The Rugby Football Union (ibid.).
[7] If, as Mr Reed KC submitted in his written submissions the relevant parts of Coulson LJ's judgment in FM Conway Limited v The Rugby Football Union (ibid.) are *obiter* that does not alter the applicability of this provision but emphasises all the more the need for a powerful reason for not following the modern trend of authority on the issue. In my view there is no principled reason for not so doing.

> ..
>
> Materials, Goods and workmanship
>
> ...
>
> 2.2.7.1 All materials plant and equipment for incorporation into the Works[8] shall become the property of the Employer (whether or not they have been delivered to the site) upon payment in full of any amount due to the Contractor in respect of such materials, plant and equipment. …
>
> 2.2.7.4 The risk in the Works and in all materials plant and equipment shall remain with the Contractor until the date of practical completion of the Works."
>
> Possession
>
> …
>
> 2.3 On the Date of Possession, possession of the site … shall be given to the Contractor who shall thereupon begin construction of the Works … For the purposes of the Works insurances the Contractor shall retain possession …
>
> .1 of the site and the Works up to and including the date of issue of the Practical Completion Statement …
>
> and, subject to clause 2·30 and section 8, the Employer shall not be entitled to take possession of any part or parts of the Works or Section until such date."

45. The effect of clauses 2.2.7.4 and 2.3 is that risk and possession of the roof structure (including the parts alleged to be damaged but which had not been repaired) passed to Sky on Practical Completion. Property in the cassettes at least will have passed to Sky prior to that as a result of payments made in the course of the construction contract. Mace admits in its Reply that '*following practical completion Mace did not have a proprietary or possessory interest in the roof*', which on Practical Completion became Sky's property. These admissions were inevitable given the terms of the parts of clauses 2.2 and 2.3 quoted above. It follows as I see it that whether Mace retained any relevant interest after Practical Completion is a matter to be inferred from the terms of the construction contract and in my judgment it did not. It was insured under the Policy in respect of its "*... rights and interests ...*" It has no relevant rights or interests after Practical Completion, other than to the extent that it had continued liability in respect of work done prior to Practical Completion.

[8] "Works" is defined in the construction contact amendments as being "*the design and construction of Sky Building 2 (office accommodation, production space and staff amenities), an energy centre and associated hard and soft landscaping at Grant way Isleworth, Middlesex …*" – which is what is now known as Sky Central.

46. Section 6 of the construction contract is concerned with "*Injury Damage and Insurance"*. Clause 6.2 is entitled "*Liability of Contractor - injury or damage to property*" and by clause 6.2:

> "The Contractor shall be liable for, and shall indemnify the Employer against, any expense, liability, loss, claim or proceedings in respect of any loss, injury or damage whatsoever to any property real or personal in so far as such loss, injury or damage arises out of or in the course of or by reason of the carrying out of the Works and to the extent that the same is due to any negligence, breach of statutory duty, omission or default of the Contractor or of any of the Contractor's Persons. This liability and indemnity is subject to clause 6·3 …" [Emphasis supplied]

The phrase "*Contractor's Persons*" is defined by clause 1.1 to mean "… *the Contractor's employees and agents, all other persons employed or engaged on or in connection with the Works or any part of them and any other person properly on the site in connection. therewith, excluding the Employer, Employer's Persons and any Statutory Undertaker*". By clause 6.4,

> "Without prejudice to his obligation to indemnify the Employer under clauses 6.1 and 6.2, the Contractor shall take out and maintain insurance in respect of claims arising out of his liability referred to in clauses … 6.2 …"

The effect of clauses 6.2 and 6.4 is entirely clear – Mace is liable to Sky in respect of all the liabilities referred to in clause 6.2 (other than those that are expressly excluded by clause 6.3) and Mace is obliged to take out its own insurance in respect of those liabilities by operation of clause 6.4.

47. Clause 6.3 provides:

> "…the reference in clause 6·2 to 'property real or personal' does not include the Works, work executed and/or Site Materials up to and including whichever is the earlier of:
>
> · 1 the date of issue of the Practical Completion Statement; or
>
> ·2 the date of termination of the Contractor's employment."

48. The liabilities excluded by operation of clause 6.3 were required to be insured against under a different insurance regime from that referred to in clause 6.4. Clause 6.7 identifies three different types of insurance that could be selected by the parties to the construction contract to cover the excluded liabilities referred to in clause 6.3. It provided that the choice of the parties would be set out in the Particulars at the head of the construction contract and in Schedule 3 to it. The option chosen by the parties was set out in the schedule of amendments as being "…

From and including 1 February 2014, Insurance Option B (New Buildings All Risk s Insurance of the Works by the Employer) applies …"

49. Option B is the subject of clause B.1 and following of schedule 3. By clause B1 of Schedule 3:

> "The Employer shall take out and maintain a Joint Names Policy for All Risks Insurance with cover no less than that specified in clause 6·8 for the full reinstatement value (save for any deductibles or excesses)[9] of the Works or (where applicable) Sections (plus the percentage, if any, stated in the Contract Particulars to cover professional fees including site materials[10] and (subject to clause 2·33) shall maintain such Joint Names Policy up to and including the date of issue of the Practical Completion Statement or, if earlier, the date of termination of the Contractor's employment (whether or not the validity of that termination is contested)."

Other than as set out above, this provision was not varied by the schedule of amendments attached to the construction contract.

50. What is a Joint Names Policy is defined in clause 6.8 of the construction contact as being "… *a policy of insurance which includes the Employer and the Contractor as composite insured and under which the insurers have no right of recourse against any person named as an insured, or, pursuant to clause 6·9, recognised as an insured thereunder*". By clause 6.9:

> "The Contractor … and the Employer, where Insurance Option B … applies, shall ensure that the Joint Names Policy referred to in paragraph … B·1 of Schedule 3 shall either:
>
> ·1 provide for recognition of each sub-contractor as an insured under the relevant Joint Names Policy; or
>
> ·2 include a waiver by the relevant insurers of any right of subrogation which they may have against any such sub-contractor
>
> in respect of loss or damage by the Specified Perils to the Works or relevant Section, work executed and Site Materials and that this recognition or waiver shall continue up to and including the date of issue of any statement or other document which states that in relation to the Works, the sub-contractor's works are practically complete or, if earlier, the date of termination of the sub-contractor's employment."

Neither clause 6.8 or 6.9 as set out in the standard terms was varied by the schedule of amendments in any way that was material for present purposes. Thus, from the perspective of all third party insureds (including Mace), aside from the cost

[9] The words in parentheses were inserted by the schedule of amendments attached to the construction contract.
[10]

consequences of any loss or damage occurring prior to Practical Completion being insured under the Policy, it was expressly agreed that no claim could be brought against them in respect of such loss or damage.

51. Clause B.3.4 of schedule 3 was replaced by the schedule of amendments so that it read:

> "Any monies payable pursuant to a Joint Names Policy referred to in paragraph B1 … shall be paid to the Employer and the Contractor hereby authorises and shall procure that each of the Contractor's Persons who is insured under the relevant Joint Names Policy shall authorise the insurers to pay all (if any) monies from such insurance in respect of the relevant loss or damage to the Employer, whether or not the Employer shall require such loss or damage to be restored, replaced or repaired."

By clause B.3.5 of schedule 3, as amended by the schedule of amendments:

> "The restoration, replacement or repair of such loss or damage and (when required) the removal and disposal of debris shall be treated as a Change but, subject always to paragraphs B.3.6 and B.3.7, the Contractor shall not be entitled to make any claim, whether pursuant to clause 4.20 or otherwise, for the reimbursement of any loss or expense suffered or incurred in consequence of such loss or damage or the restoration, replacement or repair thereof or (when required) the removal and disposal of debris."

The word "*Change*" is defined in clause 5.1 as amended by the schedule of amendments in ways that are not material for present purposes. The point that matters is that generally the Employer would be liable for the cost of any Change to be calculated as set out in clause 5.2 and 5.3 (as amended by the schedule of amendments) but not in relation to anything deemed to be a Change by operation of clause B.3.5. This is so because the schedule of amendments added a clause B.3.6, which disentitled the Contractor from "… *any addition to the Contract Sum in consequence of any such loss or damage or in respect of the restoration, replacement or repair thereof ... in excess of the monies received under any insurance effected pursuant to paragraph B.1* …"

52. By clause B.3.7.1 the Contractor was made responsible for all deductibles or excesses that apply to any insurance effected pursuant to paragraph B.1 and the Employer was permitted to recover an equivalent sum from the Contractor by deduction from any sum due to the Employer or as a debt from the Contractor. Thus, the intention of Sky and Mace was that any deductible that as a matter of construction of the Policy the underwriters are entitled to treat as a Retained Liability was nonetheless ultimately to be paid by Mace by entitling Sky to recover the amount of any retained Liability from Mace either by set off or as a debt. In practice this meant that if relevant loss and damage occurred, Mace would be required to rectify it and was entitled to payment for that work limited to the sum received by Sky from the underwriter defendants

under the Policy. This would leave Mace bearing the amount of any deductible as provided for by clause B.3.7.1.

53. The defendant underwriters submit that as matter of the true construction of the Policy read in the context of the provisions within the construction contract set out above, Sky and Mace intended that Mace would be covered under the Policy only in respect of damage which occurred prior to Practical Completion and then only in relation to remedial works that were carried out prior to Practical Completion but not thereafter and that Sky alone was covered in respect of property loss and damage occurring after Practical Completion but within the Period of Insurance. The underwriters maintain that the contractual scheme created by the provisions of the construction contract summarised above was to limit Sky's remedy for loss and damage occurring prior to Practical Completion to the right to require Mace to perform the reinstatement works against the release by Sky of the insurance monies it received pursuant to the Policy in respect of such loss and damage, by way of payment for such works. In support of that proposition, the underwriters rely on the decision of the House of Lords in Cooperative Retail Services Ltd v Taylor Young Partnership Ltd [2002] Lloyd's Rep IR 555 ("CRS"). Since underwriters place significant weight on this authority it is necessary to consider that authority in some detail.

54. In CRS, the building owner (Sky in this litigation ("O")) entered into a standard form building contract with a main contractor (Mace in this litigation ("MC")). MC entered into various sub-contracts. Under the main contract, liability for damage to the works before Practical Completion which was due to MC's negligence or breach of statutory duty was excluded, the contractors being required to take out and maintain a joint names policy for the benefit of O, MC and MC's relevant sub-contractors ("SC"), providing cover against loss or damage to the works prior to practical completion in respect of specified perils including fire. Under the main contract, by clause 22A, the occurrence of such loss or damage was to be disregarded in computing any amounts payable to the contractors. The cost of reinstatement, and associated professional fees was to be met from money paid by the insurers, and not otherwise. Money paid under the policy by insurers was to be paid on the contractors' authority to the building owner and the contractors were to be given an extension of time in respect of delay relating to the reinstatement and completion of the works.

55. Returning to CRS, before practical completion a fire caused damage to the site, the works were restored by MC in accordance with the contract and thereafter O brought an action against SC, claiming damages for losses not recovered by it under the CAR insurance. The defendants wanted to commence contribution proceedings against the architects and consulting engineers who were also beneficiaries of the CAR policy, but on a preliminary issue all courts up to and including the House of Lords concluded that was not open to the defendants. Lord Bingham identified the two questions that arose as being (1) whether the contingency that, on the assumed facts, had arisen was one for which O, MC and SC made express provision in the contracts into which they entered; and (2) If so, whether the effect of that provision was such as to preclude, on the assumed facts, a claim for compensation by O against MC or SC.

56. As to the first question Lord Bingham held at [5] (following Lord Hope who decided the same point in the same way at greater length in the lead judgment):

> "the answer to question (1) is plainly "Yes". Fire was one of the specified perils defined in clause 1.3 of the main contract against which [MC] was obliged by clauses 22A.1 and 22.3.1 to take out and maintain all risks insurance providing cover or protection for (among others) itself and [SC]. Clause 22A made detailed provision for investigating, repairing and paying for damage caused by fire to the works included in the main contract and clause 25 provided for time to be extended to allow for delay thereby caused. No doubt because fire is not a rare or unforeseen event, the standard forms of contract used by [O], [MC] and [SC] made detailed arrangements to govern the consequences if it should unhappily occur."

As to the second question, Lord Bingham held at [6] (again following Lord Hope) that:

> "Under clause 20 of the main contract [MC] accepted a liability against which (by clause 21) it was obliged to insure. But damage to the new works to be carried out under the main contract was expressly excluded from the scope of clause 20, and clauses 22 and 22A applied to such damage a markedly different contractual regime. If damage were caused to the new main contract works by fire [MC] was obliged to make it good (clause 22A.4.3) and was to be paid for doing so out of a fund provided by insurers under the joint names policy (clause 22A.4.4) and not otherwise (clause 22A.4.5). The contractual scheme did not protect [O] and [MC] (or [MC's] sub-contractors) against the possibility of loss if damage was caused to the new works by fire. Such fire damage would in all probability lead (as in this case it did) to an extension of the contract period, which would be a source of loss to [O] for which it could not recover liquidated damages. The extension would also involve expense for [MC] and its sub-contactors for which they would not be fully compensated. Thus the contract provided for loss to be shared between [O], [MC] and [MC's] sub-contactors. But it plainly precluded any claim for compensation by [O] against [MC] or a sub-contractor such as [SC]: their duty was to make good, not to compensate."

57. Although there are differences in the detail of the contractual scheme in this case when compared with that in CRS, the fundamentals are similar. The scheme is a risk management scheme within the construction contract by which the risks associated with loss or damage occurring prior to Practical Completion were distributed between Sky as owner and Mace as main contractor with the financial consequences being managed by insurance in the form of the Policy and otherwise excluded. As in CRS, Mace was under an obligation to make good. Sky was under an obligation to pay for that work (if it required it to be carried out) but only up to but not in excess of "… *the monies received under any insurance effected pursuant to paragraph B.1…*" with Mace being responsible for the equivalent of any applicable deductible - see clause 3.7 of Schedule 3 to the construction contract.

58. On this analysis if relevant loss and damage occurred prior to Practical Completion (a) Sky became entitled to recover under the Policy (subject to any relevant deductible or excess) irrespective of whether it required Mace to remediate that loss or damage; (b) neither Sky nor the underwriters were entitled to recover anything from Mace in respect of such loss and damage other than that Sky was entitled to recover any deductible or excess imposed by the Policy on the sum recovered by Sky under the policy; (c) Mace was required to remediate the loss and damage if required to do so by Sky but was not entitled to any sum in respect of such remedial works in excess of the net sum recovered by Sky from the underwriters; and (d) if Mace was required but failed or refused to carry out remedial works, it would become liable to Sky for breach of its contractual obligation to carry out the remediation. The scheme within the construction contract was of benefit to Mace because it excluded liability for it and its sub-contractors for any loss or damage occurring prior to Practical Completion (other than, in Mace's case, for any deductibles) and the scheme expressly provided that Sky and the underwriters would not have recourse against Mace or its sub-contractors for any such loss or damage other than requiring Mace to make good any loss and damage in return for payment of the sums received from the underwriters.

59. I have no difficulty in concluding therefore that Mace was intended to be insured under the Policy in respect of loss or damage in the period while it had a possessory interest in Sky Central – that is down to Practical Completion. In my judgment as a matter of contract between Sky and Mace it had no relevant interest thereafter. Whilst it is difficult to see in what circumstances Mace could sensibly make a claim under the Policy but Sky could not, in any event any such claim by Mace would be confined to loss and damage occurring before Practical Completion.

60. However, Mr Rigney KC goes further and submits that Mace is covered only in respect of remedial work carried out prior to Practical Completion. In my judgment that does not follow from anything that is said in CRS or for that matter in Haberdashers' Aske's Federation Trust Ltd v Lakehouse Contracts Ltd (ibid.). That Mace was only insured down to Practical Completion does not necessarily support the conclusion that it was only insured in respect of remedying such loss and damage if it is carried out prior to Practical Completion. The one does not follow necessarily from the other.

61. Mr Rigney KC submits however that I should conclude that Mace was not insured in respect of remedial work carried out after Practical Completion even in respect of damage occurring prior to that event because it is to be understood from the terms of the construction contract that Sky and Mace intended that the Joint Names Policy would fund only such remedial works as might be necessary to enable damaged property to be repaired and to reach Practical Completion. In support of that proposition, Mr Rigney KC relies primarily on clause B.3.3 of the construction contract, which provides

> "After any inspection required by the insurers in respect of a claim under the Joint Names Policy has been completed, the Contractor shall with due diligence restore the damaged work, replace or repair any lost or damaged Site Materials, remove and dispose of any debris and proceed with the carrying out and completion of the Works." [Emphasis supplied]

Mr Rigney also relies on the Involuntary Betterment in Memorandum 26 in the Policy, which is in these terms:

> "**Involuntary betterment**
>
> Where Property Insured is damaged and requires replacement by similar property within the terms of reinstatement but that is not obtainable the insurer agrees:
>
> a) to accept without deduction for betterment replacement property which is as similar as possible and which is capable of performing the same function;
>
> b) to pay the cost of purchasing and Installing technologically current equipment which is necessitated by incompatibility between:
>
> i) the equipment installed to replace damaged equipment; and
>
> ii) undamaged existing equipment at the same or interdependent location;
>
> except that the insurer shall not be liable to pay more than the amount sufficient to enable the insured to resume construction in substantially the same manner as before the damage." [Emphasis supplied]

62. Mr Rigney KC submits that clause B.3.3 "*... contemplates ... that Mace is only insured in respect of those works that it carries out in advance of practical completion to repair damage …*" and in consequence the claim by Mace must fail because "*… Mace doesn't claim any such costs ... (s)o there is simply no claim at all in respect of those sums and that's all it is insured for*." Mr Rigney KC submits that the final three lines of Memorandum 26 is similarly consistent with Mace only being insured in respect of remedial work carried out in the period down to Practical Completion because the phrase "*… resume construction ...*" can only reasonably be construed as meaning resuming construction before Practical Completion.

63. In my judgment that is not the effect of what the parties agreed or intended. The fundamental core of what the parties agreed was only that they would apply a self-contained compensatory or risk management scheme to loss and damage due to acts or omissions by Mace and its sub-contractors occurring prior to Practical Completion. Clause B.3.3 of the construction contract is certainly consistent with the Policy responding in respect of remedial work carried out prior to Practical Completion but does not purport to bar cover in respect of work carried out after Practical Completion. Similarly, the final exception to Memorandum 26 of the Policy does not have that effect either. To be clear, at the time the Policy was entered into, the likely scenarios to which the Policy would be expected to respond would have been anticipated to be more self-contained than the loss and damage suffered to the roof of Sky Central and ones that would be corrected at speed and moderate cost prior to Practical Completion. However, that does not lead to the conclusion that as a matter of construction the Policy only covers Mace in respect of work carried on in that

period, not least because that is not consistent with the structure of the scheme which is to bar recourse against Mace for damage occurring prior to Practical Completion, irrespective of when or whether it is rectified. In my judgment if the parties had intended Mace to be covered only in respect of remedial work carried out by it prior to Practical Completion, the parties could and would have used clear express words in the construction contract to make that clear.

64. Mr Rigney KC did not argue that the incorporation into the scheme of the requirement for a Change as the trigger for remedial work to be undertaken had the effect of limiting Mace's cover to work undertaken prior to Practical Completion. He was correct not to do so. The effect of Practical Completion of a construction contract depends upon the express provisions of the contract. A Change for present purposes is a variation to the scope of the work, the subject of the construction contract. Generally therefore, a purported Change after Practical Completion is not something that a contractor can be required to comply with but there is no reason why a contractor cannot agree to undertake such a Change if it is willing. If it is willing, I do not see why Mace would be insured in respect of that work before but not after Practical Completion. If that was the position, the risk management scheme would not work or would work arbitrarily or incompletely, whereas it works in a way that is entirely coherent if it operates as I have set out above.

65. Finally, in my judgment Mr Rigney KC's analysis is inconsistent with the terms of clause 6.3 of the construction contract. Mr Rigney KC maintains that the "… *parties agreed that once Mace had performed such works as were necessary to achieve Practical Completion, it would fall to Mace (and, by implication, the underwriters of such insurance as it had been obliged to arrange) to fund any liability arising from defects or damage to the property that by then had been incorporated into the completed building*." However, that again is to misconstrue the agreement between the parties. The construction contract distinguishes between loss and damage to "*Works, work executed and/or Site Materials up to and including … the date of issue of the Practical Completion Statement* …" which was covered by the CAR regime within the contract and other loss and damage, which was not. Loss and damage occurring prior to Practical Completion comes within clause 6.3 and is covered by the Policy whenever it is repaired. I am not therefore able to accept as Mr Rigney KC submits that Mace's claim fails *in limine* on the basis that Mace ceased to be insured after Practical Completion.

66. I accept Mr Rigney KC's narrower submission however that Mace is entitled to cover under the Policy only in respect of loss and damage occurring down to Practical Completion. That is so for the reasons already explained but in summary because (a) Mace is insured only in respect of its interest; (b) its proprietary and possessory interest ended with Practical Completion; (c) this was the intention of both Sky and Mace on the one hand and Sky and the underwriters on the other because the construction contract distinguishes very clearly between loss and damage occurring prior to Practical Completion and loss and damage occurring thereafter and the Policy makes clear that Mace is insured only in respect of rights and interests, which ended with Practical Completion; and (e) this analysis is consistent with the way in which the construction contract required Mace to insure in respect of its liabilities and Mace ceased to be entitled to the benefit of the Policy and the liability exclusions that went with it.

67. Mr Rigney KC relies on the fact that Mace has not either pleaded or proved that any of the damage for which an indemnity is sought under the Policy had been suffered down to the date of Practical Completion. That leads Mr Rigney KC to submit that I ought to dismiss Mace's claim. It is true to say that Mace has not sought to limit its claim in this way. Whether that should lead to the dismissal of its claim must await my determination of the post inception factual issues I address below because of the submissions made by both Mace and Sky concerning the extended meaning they seek for the concept of damage and the effect they maintain is to be given to the Period of Insurance. I am bound to say at this stage however that I question the proportionality and practical utility of having two parties in the form of Mace and Sky making largely common cause in relation to most of the material issues that have arisen in circumstances where what Mace is claiming by way of indemnity is and can only be either the same or a more confined sub set of the indemnity that Sky is seeking, where anything recovered by Mace would have to be paid by the defendants to Sky under the terms of the Policy in any event and where no attempt has been made by Mace to identify what if any benefit it will derive from declarations to the effect claimed in paragraph 42 of its Amended Particulars of Claim. It may be that this issue will become more important as and when the question of the costs of these proceedings come to be decided even if the Mace claim is not dismissed for the reason identified by Mr Rigney KC.

Period of Insurance

68. In principle, this issue should not be a matter of controversy. It is not in dispute that Section 1 of the Policy Terms Document provided that the defendant underwriters were liable to indemnify the Insured against physical loss or damage to the Property Insured, occurring during the Period of Insurance. The Period of Insurance was defined by reference to an initial period of insurance running from 1 February 2014 to 15 July 2016 and a Maintenance Period of Insurance, which ran from 15 July 2016 to 15 July 2017. The indemnity obligation for the Maintenance Period was "… *solely in respect of physical loss and damage to the Property insured occurring as a result of: i) a cause occurring prior to the commencement of the Maintenance Period or, ii) operations carried out by any contractor or subcontractor for the purpose of complying with the conditions… governing the execution of their contracts or subcontracts*…". As I have said however, the defendants have been content to treat this as a single Period of Insurance ending on 15 July 2017, an approach which benefits the claimants.

69. The main focus of attention of the claimants had not been on the Period of Insurance itself (which in my judgment is put beyond argument by the language in which the terms of the Policy are expressed) but on what loss and damage must be suffered within that period or which is covered even though occurring after the end of that period.

70. Broadly, the claimants contend that the indemnity provided by the Policy includes loss and damage occurring after the end of the Period of Insurance (a) during the period when the cause of the damage or its extent is being ascertained; (b) during the period when the remedial works are being designed, approved and procured and (c) any damage that began within the Period of Insurance and developed thereafter. The defendant underwriters maintain this is heterodox and wrong in principle because its

effect is to "… *denude the Period of Insurance of all effect*" and that the "… *Claimants' case is impossible as a matter of language, and gives rise to an absurd commercial outcome*…" because *"(d)amage occurring after the end of the agreed Period of Insurance falls to be covered elsewhere*". They conclude this part of their submissions by stating:

> "To paraphrase Cardozo J's famous dictum in a different context in Ultarameres v Touche 174 NE 441 (1932), [the claimants' approach] exposes Insurers to an indeterminate liability for indeterminate damage for an indeterminate time, in circumstances where the Claimants have not identified any relevant workable control mechanism. It places Insurers at the mercy of squabbling insureds who cannot agree on how to remedy damage which may be continuing. On the Claimants' case, the Policy would still be providing cover for damage to the roof which occurs even now, more than five years after the expiry of the Maintenance Period of Insurance. There is no commercial justification for extending the scope of cover in this way and unnecessarily blurring the clear boundaries drawn by the Policy's express terms."

71. Before turning to the authorities, it is necessary to remember the nature of this policy. Most policies are concerned with identified perils (for example fire or the stranding of a ship) whereas the "peril" identified in the Policy is simply loss and damage due to any negligence, breach of statutory duty, omission or default of Mace or its sub-contractors. The commercial purpose of such insurance is to provide funds for the reinstatement of the works in the event of their being damaged up to and including a specific date or event – see CRS *per* Lord Hope at [46]. It is necessary that this point is borne in mind when considering the authorities.

72. It is common ground that the issue I am now considering was resolved by the House of Lords in Wasa International Insurance Co Ltd v. Lexington Insurance Co and others [2009] UKHL 40; [2010] 1 AC 180 ("Wasa"). The difficulty is that the parties cannot agree on what the House of Lords determined. Sky maintains that its effect is that a loss is to be attributed to the year in which the loss was caused and thus that there can be no cut off to the effect contended for by the defendant underwriters. In my judgment this is not its effect for the following reasons.

73. Wasa was concerned with a reinsurance policy by which London reinsurers reinsured a risk under a property damage policy that was governed by the laws of Pennsylvania, under which the insurer was liable for damage occurring both before and during the policy period. The insurers sought reimbursement from the reinsurers, who commenced proceedings for a declaration that they were not liable to indemnify in respect of damage occurring before the reinsurance policy period. The House of Lords held that English law applied to the reinsurance policies and there was no principled basis for treating the three-year term of the reinsurance policy as covering losses arising outside the period specified by the underlying insurance policy.

74. It had been submitted on behalf of the reinsurers that as a matter of English law, under an insurance or reinsurance contract providing cover for loss or damage to property

on an occurrence basis, the (re)insurer will be liable to indemnify the (re)insured in respect of loss and damage which occurs within the period of cover but will not be liable to indemnify the (re)insured in respect of loss and damage which occurs either before inception or after expiry of the risk – see Wasa [2010] 1 AC at 183B-C. It was essentially this submission that was accepted. It was common ground that under English principles of construction, the reinsurance covered only damage to property caused during the period of the cover – see Lord Philips at [3]. As Lord Philips added at [4]:

> "The principle of the English law of construction that confines recovery to damage occurring during the period covered by the policy is no more nor less than the fundamental principle that the words of a contract should normally be given the meaning that they naturally bear."

As Lord Brown summarised the law at [13]:

> "Under English law nothing could be clearer than that a contract providing cover for loss and damage occurring only during a specified three-year period could not be construed as covering in addition damage occurring before (or for that matter after) that three-year period."

He added at [15]:

> "Given the fundamental importance under English law of the temporal scope of a time policy, I find it impossible to construe the reinsurance contracts in the way contended for…."

Lord Mance expressed himself in equally clear terms at [38]:

> "The only property damage which the reinsurance, construed according to purely English law principles, covers is property damage occurring during the three-year reinsurance period. This is under English law clear beyond argument upon its wording. It insures property against risks during a stated period."

and at [39] he approved the summary by Hobhouse LJ (as he then was) in Municipal Mutual Insurance Ltd v Sea Insurance Co Ltd [1998] Lloyds Rep IR 421, 435—436 that:

> "When the relevant cover is placed on a time basis, the stated period of time is fundamental and must be given effect to. It is for that period of risk that the premium payable is assessed. This is so whether the cover is defined as in the present case by reference to when the physical loss or damage occurred, or by reference to when a liability was incurred or a claim made. Contracts of insurance (including reinsurance) are or can be sophisticated instruments containing a wide variety of

> provisions, but the definition of the period of cover is basic and clear."

Lord Collins agreed – see [58(8)] and [74]. He also approved the quotation from Hobhouse LJ's judgment quoted above. As will be apparent from what I have said already, the Policy provided insurance against loss and damage within a defined period and it is that which Hobhouse LJ described and Lords Collins and Mance agreed was fundamental and must be given effect to.

75. All this leads me to conclude that Mr Rigney KC's submission on the issue I am now considering should be accepted and firmly adhered to. The claimants' reliance on the concept of loss being attributable to the policy year in which it was caused not that in which it was capable of quantification is misplaced not least because the concept actually provides support for the point that Mr Rigney KC makes. He does not maintain that loss suffered in the period of cover but only capable of quantification thereafter is not recoverable. His submission based on Wasa is that what is not recoverable is loss suffered after expiry of the period of cover. On the facts of this case I do not agree with the claimants' submission that if Mr Rigney KC's submission is accepted it follows either that there would be no cover for damage caused after expiry of the Period of Insurance. The intention of the parties apparent from the terms of the construction contract was that there would be cover for relevant loss or damage occurring after the end of the Period of Insurance under the policy Mace was obliged to procure by operation of clauses 6.2 and 6.4 of the construction contract. That being so there would be cover (or should be providing Mace has complied with its insuring obligation) but not under the Policy.

76. Some reliance is placed by Sky on Knight v. Faith (1850) 15 QB 649 and on the decision of the Supreme Court in The Renos [2019] 2 Lloyd's Rep. 78. In my judgment this too is mistaken. The Renos (ibid.) was a case concerning an insured peril under a marine hull and machinery policy, where the issue was whether the vessel was a constructive total loss and how that was to be ascertained. In that case it was held that the loss under a hull and machinery policy occurred at the time of the casualty (in that a case a fire that occurred during the Period of Insurance) so that the fact that the policy expired before the loss had fully developed did not affect the right to recover in full, unless there was a second casualty that broke the chain of causation between the first casualty and the loss. However, that case was concerned with a single event – a fire that occurred during the period of insurance. In this case, the "casualty" to which the Policy responds is loss or damage occurring from whatever cause during the Period of Insurance. In my judgment therefore there is nothing in the reasoning in The Renos (ibid.) that impacts adversely on the conclusions I have reached so far on the issue I am now considering.

77. Knight v. Faith (ibid.) does not assist the claimants either. It too concerned whether in the events that had happened a ship was properly to be regarded as a constructive total loss. In that case the period of insurance ended on 23 September 1846. The casualty insured against (the stranding of the ship) occurred on 16 September 1846 but the ship was sold on the basis that she was incapable of economic repair in October 1846, following a survey that took place after the end of the period of insurance. Owners claimed on the basis the vessel was a constructive total loss but failed because notice of abandonment had not been given. In consequence, the assureds were entitled to

recover for partial loss by stranding prior to 23 September though that loss could not be ascertained until a survey could be carried out after that date. The relevant principle was stated by Lord Campbell CJ at 677, where he rejected the submission on behalf of insurers that nothing was recoverable, saying of that submission that it was:

> " … contrary to the principle of insurance law, that the insurer is liable for a loss actually sustained from a peril insured against during the continuance of the risk: and, if a ship, insured for time, during the time receives damage from the perils of the sea, although the amount of it be not ascertained till the expiration of that time, and she is kept afloat till then, upon the assured taking proper steps by giving notice of abandonment or by obtaining evidence of the sum which would be required to repair the damage sustained, there does not appear any good reason why they may not, according to the facts, proceed against the insurers for a total or for a partial loss."

78. There is a plain distinction to be drawn between the occurrence of a single insured against event – for example a grounding as in Knight v. Faith (ibid.) or a fire as in The Renos (ibid.) – that occurs during the period of insurance with damage being ascertained after expiry of the period of insurance as in Knight v. Faith (ibid.) or that developed after the end of that period as in The Renos (ibid.) (where the whole of the loss suffered will be recoverable irrespective of whether it developed during or after the period of insurance) and a case such as this, where what is insured against is the occurrence of loss and damage during the Period of Insurance. In such a case, in my judgment the policy responds to the loss and damage that can be shown to have occurred during the period of insurance and not otherwise. That is entirely consistent for example with Lord Campbell's formulation in Knight v. Faith (ibid.) that "*... the insurer is liable for a loss actually sustained from a peril insured against during the continuance of the risk*". The Policy is concerned with and provided for an indemnity only in respect of "… *physical ... damage to Property Insured, occurring during the Period of Insurance".* That is the peril insured against. If hypothetically, the loss and damage suffered during the Period of Insurance could only be ascertained after the end of the Period of Insurance that would not make any difference because what the ascertainment would be concerned with is loss and damage occurring during the Period of Insurance not loss and damage occurring afterwards.

The Meaning of Damage

79. As set out above, the indemnity provided by the Policy is "… *against physical loss or damage to Property Insured, occurring during the Period of Insurance".* It is not alleged that any "*loss"* has occurred and the sole issue is whether and if so what "*... physical ... damage ..."* occurred "… *during the Period of Insurance ...".* The next construction issue that arises is what constitutes " *... physical ... damage ...",* which is not a contractually defined term.

80. The defendants' case on this issue as pleaded in paragraph 48 of their Reamended Defence is:

> "… damage' to Property Insured means physical change which so compromises the performance of an individual cassette that, in order to perform the function for which it was intended, it requires repair. Without prejudice to the generality of the foregoing, such damage cannot occur unless the moisture content of the cassette in question has passed the Trigger Point."

What the defendants mean by "*Trigger Point*" is set out in paragraph 17 of the Reamended Defence in these terms:

> "17.1 … Without prejudice to the generality of the foregoing, the moisture content of the timber during the assembly of the cassettes was maintained at between 6% and 15%;
>
> 17.2 It is denied that, in order to 'function properly' (the meaning of which is not explained) and/or to retain their structural performance and/or integrity, the cassettes needed to be free from moisture. On the contrary, the timber in the cassettes could tolerate a moisture content of up to 25% before decay/rot capable of causing impairment of structural performance or integrity could be triggered ('the Trigger Point'); and if the moisture content of the timber fell below 20% any existing decay would cease to progress."

81. The claimants do not accept the defendants' analysis as correct. They maintain that any physical alteration that is harmful even if invisible and temporary is sufficient and may include the cost of investigation, restoration and cleaning. In summary, the claimants allege that all the forms of damage allegedly sustained by the roof during the period of cover qualify as insured 'damage': – "… *irrecoverable swelling of OSB; incipient – early – established – advanced decay of timber and OSB; water damage to insulation; mould. Wetting of the cassettes itself amounts to damage since it reasonably requires drying*." They describe the defendants' case on this issue as "… *unjustifiably narrow and prescriptive* …" that is "… *wrong as a matter of law*".

82. At this stage it is necessary to remember that the principles concerning the construction of the Policy that I must apply are those that apply in relation to any other contract. Those principles are summarised in paragraph 34 above. All parties rely to an extent on what they characterise as commercial common sense but all parties focus primarily on the language used by the parties in the Agreement. That means that the construction issues that arise will depend on the principles summarised in sub-paragraphs (i) (a), (b), (c) and (e), (iii). (iv), (v) and (vi) in that summary. In reaching the conclusions set out below I have done so applying these principles.

83. In my judgment, applying the principles set out above, for damage to have occurred there must usually have been a changed physical state, a conclusion which is emphasised by the language used by the parties in the Policy, which as I have explained refers not merely to damage but to "*... physical ... damage ...*" – see Promet Engineering (Singapore) Pte Limited v. Sturge [1997] 2 Lloyd's Rep 146, where, as Hobhouse LJ put it (in relation to a marine insurance policy which provided cover for the cost of repairing or replacing a relevant defective part "*... which had*

caused loss or damage to the vessel …") at 151:" … *the assured has to prove some change in the physical state of the vessel"* and Pilkington United Kingdom Limited v. CGU Insurance Plc [2004] BLR 97 *per* Potter LJ at [50] where he said that "*... for the purposes of indemnity it will normally be necessary to demonstrate that physical change has occurred to the property damaged ...".* As he added at [51], where (as in that case and this) the relevant policy *"... is designed to protect the insured against liability for physical damage to physical property* …", the:

> "… damage requires some altered state, the relevant alteration being harmful in the commercial context"

84. Although the test that applies has been formulated in different language by different judges, I have found Potter LJ's formulation the clearest statement of general principle. I would add that many of the cases relied on by the parties are only particular applications of that general principle to the particular facts in dispute in those cases. To that extent they add relatively little to the resolution of the construction issue I am now considering other than as illustrations of its application to particular facts. Although a significant part of the closing submissions were taken up with considering these authorities, in my judgment it was relevant to do so only to the extent that any general principle can be derived from them since each is concerned with a factual situation and legal context that is very different to those that arise in this case.

85. On this basis it is unsurprising that Langley J concluded in Tioxide Europe Ltd v CGU International Insurance Plc [2005] Lloyd's Rep IR 114 that an unwanted change of colour was in ordinary language a ''physical'' change and, if it impaired the value of the product it was a 'physical injury' within the policy being considered there. It is equally unsurprising that where physical contamination has occurred resulting in some alteration of the physical characteristics of the property concerned, which renders it less valuable or less useful, then that will be treated as physical damage – see Hunter v. Canary Wharf Limited [1997] AC 655 *per* Pill LJ at 676 E-G; Blue Circle Industries Plc v. MoD [1999] Ch 289 and the authority relied on by the defendants, The Orjula [1995] 2 Lloyd's Rep 395 *per* Mance J as he then was, who held that relevant considerations included "… *whether there has been 'injury impairing value and usefulness' of the property in question, and the need for work and the expenditure of money to restore the property to its former usable condition is material*".

86. The general point that is apparent from these authorities, which in any event is the result of applying the general principles of construction referred to earlier, is that if the claimants are to succeed in showing that "*... physical ... damage ...*" occurred during the period of cover they must show a tangible physical change has occurred to the property insured (irrespective of whether that is visible or not) that has impaired the commercial value of that property in the sense of rendering it less valuable or of less utility than would have been the case had it not sustained the damage complained of.

87. This approach derives further support in this case from the terms of the Basis of Settlement provision, which provides that settlement is to be on the basis of the full cost of repairing, reinstating or replacing the property lost or damaged. If

hypothetically, a timber roof cassette has not been materially impaired in the function it performs (including in an appropriate case any visual or aesthetic purpose), repairing or replacing it because it had suffered a tangible physical change even though the effect of the change has not impaired the commercial value or utility of the property affected in the ways described above would not be what a reasonable person with the parties' actual and presumed knowledge would conclude the parties had meant by the language they used and would not be a commercially sensible outcome even when judged at the time when the contract was entered into.

88. In relation to the cassettes, the defendants submit that no part of the cassette is visible and no aesthetic issue arises even on the claimants' case. I accept that submission, so that aesthetics are not material for present purposes. The cassettes have no intrinsic commercial value in the sense that an antique table or picture by Rembrandt would have. In this case therefore the sole focus is and must be on the utility of the cassettes and the impact that the ingress of water into them had on that utility.

89. It is accepted by the defendants that physical changes that materially impair any of the functions of the cassettes including the provision of structural support or environmental integrity or the provision of thermal or acoustic insulation would constitute physical damage as would changes that would or might impact on the health or safety of visitors to or those employed at the building or the intended longevity of the cassette, subject to the physical damage having this effect occurring during the Period of Insurance.

90. The need for physical damage to have occurred during the Period of Insurance impacts on the question whether as a matter of construction the cost of investigation is recoverable as part of the "*... full cost ...*" of repairing such damage. The defendants submit that they are not liable to indemnify for the costs of investigations save insofar as those investigations revealed physical damage (as the use of that phrase in the Policy is to be understood) that occurred during the Period of Insurance. The claimants submit that this is wrong and that therefore they are entitled to recover all the costs of opening up each of the cassettes (referred to in this case as "lifting the lid") in order to discover whether each has suffered physical damage (irrespective of whether such opening up reveals any physical damage to the cassette being opened up) and incurring the cost of cleaning the internal surface of the cassettes opened up irrespective of whether the dampness and mould (if any) that was present would constitute physical damage in the sense set out above.

91. In my judgment the defendants' approach is to be preferred. My reasons for reaching this conclusion are as follows.

92. Although Sky relies on the decision of the Court of Appeal in Jan de Nul v. Axa [2002] 1 Lloyds Rep 583, in my judgment that is misplaced. As I have emphasised care must be taken to distinguish between statements of general principle and conclusions that depend upon the wording of the particular policy under consideration in the authority being relied on. The Policy is in materially different terms to that under consideration in Jan de Nul (ibid.), which permitted recovery of financial loss resulting from property damage – see paragraphs 22 and 84 of Schiemann LJ's judgment. The claim was concerned with investigations reasonably undertaken by a third party by whom a claim had been brought against the insured. Key to the

conclusion reached in that case was the finding that the phrase "property damage" in the policy in issue in that case had been "*... used in a wider sense than its literal one which would not embrace [the] loss ...*" Having concluded that the deposit of silt on the third party's land constituted "property damage" the court then concluded that the third party's cost incurred by the investigations was a financial loss resulting from the deposit of the silt. None of this applies on the facts of this case. In this case there is no contextual (or wider textual) basis for departing from the literal meaning of the phrase "*... physical ... damage ...*" nor does this case involve the recovery of the costs of meeting extra contractual liabilities to third parties.

93. In my judgment therefore Jan de Nul v. Axa (ibid.) does not provide authority for the proposition for which Sky cited it. This approach gains some support from sub paragraph (b) of DE5 because it excludes from recovery loss and damage to the Property Insured caused to enable replacement repair or rectification to take place. The cost of opening up a cassette in order to see whether it has suffered damage by water ingress is more remote even than that which has been expressly excluded. It would be inconsistent for the parties to have excluded such loss whilst at the same time intending to have included speculative opening up works.

94. In my judgment therefore Sky is limited to recovering the full cost of repairing, reinstating or replacing that part of the Property Insured (as defined) that suffered physical damage during the Period of Insurance (that is down to 15 July 2017), subject to its Retained Liability. To the extent that it has any practical real world impact on this claim, Mace would be limited in recovering for such costs (net of Sky's Retained Liability) in respect of any physical damage proved to have been suffered down to the date of Practical Completion (that is down to 4 April 2016). All physical damage suffered outside that period is recoverable as provided for in clause 6.2 of the construction contract, which Mace either has or should have insured against in accordance with clause 6.4 of the construction contract although as I have said Sky is entitled to be indemnified in respect of any physical damage proved to have been suffered down to 15 July 2017, net of any applicable Retained Liability.

Retained Liability

95. As I have explained already, the Policy defined the Insured's Retained Liability under Section 1 of the Policy as being "*GBP 10.000 each and every loss"* save and except in relation to claims recoverable under DE5, where the Retained Liability was defined as being "*GBP 150,000 any one event ...*". It is common ground that the claim which is the subject of these proceedings is recoverable only under DE5. It follows – and again this is common ground – that the claim is subject to a Retained Liability of "*GBP 150,000 any one event ...*". There all common ground in relation to this issue ends.

96. The claimants submit that the Retained Liability of "*GBP 150,000 any one event ...*" is an aggregation provision. The defendants submit that this is wrong, that the provision does not anywhere contain any "*... language of aggregation ...*" and that "*… having set out from an erroneous point of departure, [the claimants] both arrive at the wrong destination*." For the reasons that I explain below, I regard the debate as to whether the clause is an aggregation provision or one that can have aggregating effects depending on the facts is an ultimately arid and unhelpful one. The only real

question that matters is what as a matter of construction does the phrase "*... any one event ...*" mean applying the principles of construction referred to earlier.

97. The defendants submit that the word "*event*" as used in the definition of Retained Liability for the purposes of section 1 of the Policy, is to be construed as it was in Axa Reinsurance (UK) plc v Field [1996] 1 WLR 1026, one of the leading authorities on aggregation provisions in insurance policies. In that case the contrast was not between "*loss*" on the one hand and "*event*" on the other (as is the case here) but between "*... originating cause ...*" as used in another policy considered in another authority on the one hand and *"event"* on the other – see Axa Reinsurance (UK) plc v Field (ibid.) *per* Lord Mustill at 1035F-G. Lord Mustill concluded at 1035G-H that:

> "In ordinary speech, an event is something which happens at a particular time, at a particular place, in a particular way. I believe that this is how the Court of Appeal understood the word. A cause is to my mind something altogether less constricted. It can be a continuing state of affairs; it can be the absence of something happening."

This approach to the effect of use of the word "event" has been consistently adopted since Lord Mustill delivered his judgment.

98. However, it is worth emphasising that the contrast that is relevant in this case is not between the phrase "*... originating cause ...*" on the one hand and the word *"event"* on the other, but between two different words used in the Policy, both in the context of defining Retained Liability, being "*loss"* on the one hand and "*event*" on the other. The argument in Axa that had succeeded at all levels below the House of Lords was that the phrase "*... originating cause ...*" and "*... one event ...*" in essence meant the same thing. This was rejected by Lord Mustill, who concluded that the effect of this choice of language was that the parties "*… thereby accepted the possibility that although in some combinations of facts the outcomes might be the same, in others they might not*." In my judgment that applies with equal if not greater force in relation to this part of the Policy I am now considering. In my judgment, loss and event may - not must - amount to the same thing or for that matter different things. This is so because an "*event*" is something out of which a loss or series of losses arises – see Caudle v. Sharp [1995] Lloyds Rep IR 433 *per* Nourse LJ at 443 LHC. In the context in which the word "event" is used in the Retained Liability section of the Policy that I am now considering, that interpretation is plainly appropriate as a matter of principle. In this regard I am not adopting any different approach from that identified by Rix J as he then was in Kuwait Airways Corporation v Kuwait Insurance Co [1996] 1 Lloyd's Rep. 664. On the contrary that was precisely the point he was making at 686 RHC where he said:

> "An "occurrence" (which is not materially different from an event or happening, unless perchance the contractual context requires some distinction to be made) is not the same as a loss, for one occurrence may embrace a plurality of losses. Nevertheless, the losses' circumstances must be scrutinized to see whether they involve such a degree of unity as to justify their being described as, or as arising out of, one occurrence.

> The matter must be scrutinised from the point of view of an informed observer placed in the position of the insured. … on the basis of the true facts as at that time."

Midland Mainline & Ors v Commercial Union Assurance Co Ltd & Ors [2003] EWHC 1771 (Comm) is to similar effect.

99. In his closing submissions, Mr Rigney KC submitted that "*occurrence*" is a synonym of "*event".* Whilst I hesitate to conclude that this will always be so since in every case the question is one of construction of the particular contract being considered, I agree that will usually be the case, not least because that is what Lords Hamblin and Leggatt concluded in FCA v Arch Insurance (UK) Limited and others [2021] UKSC 1 at paragraph 67 (as did Rix J in Kuwait Airways Corporation v Kuwait Insurance Co (ibid.) and David Steele J in Midland Mainline & Ors v Commercial Union Assurance Co Ltd & Ors (ibid.)) but also because the parties have expressly agreed to treat the concept of a single event and a single occurrence as synonymous for the purpose of the "72 hour clause" inserted into the Policy by Memorandum 12, the full text of which I have set out above. It is improbable that the parties would have intended a different approach to be adopted to the same word when used in the context of Retained Liability in the absence of an express provision to that effect. There is no relevant contextual evidence or matter that is relevant to this issue other than the need to read the Policy as a whole, in its commercial context and against the background of the previous decisions that I have referred to, which can be taken to be known to the underwriters and more particularly those who draft or approve wording on their behalf.

100. I agree therefore that in the context in which the word "*event"* is used in the provision of the Policy I am now considering, applying the principles of construction set out above and acknowledging that the word "*event"* has a usual meaning in an insurance context, being that set out by Lord Mustill in Axa, it means something that happens at a particular time, at a particular place and in a particular way. To that extent, I agree that the use of the word has potentially aggregating effect in relation to the deductible that applies to claims that are only covered under the Policy by operation of DE5.

101. In my judgment, whether the Retained Liability provision I am now considering imposes a single Retained Liability for a particular series of losses is a factual issue which is to be resolved applying the approach identified by Rix J in Kuwait Airways Corporation v Kuwait Insurance Co (ibid.) at 684-5. Applying that approach, what may be an event in the context that word is used in the DE5 provision within the Policy "*... must take colour from the contractual context, including the perils insured against and must be ..."* a single occurrence that is "*… causally relevant to the loss or losses in question –* see Kuwait Airways Corporation v Kuwait Insurance Co (ibid.) *per* Rix J "*... scrutinised from the point of view of an informed observer placed in the position of the insured. ... on the basis of the true facts as at that time.*"

Acts Capable of being a Single Event

102. The claimants maintain that the single proximate cause of the damage occurring during the Period of Insurance was the failure by the designers and contractor to specify the need for or provide temporary roofing or other effective waterproofing arrangements. There is no dispute about this – such protection could have been but

was not provided. As the defendants' causation expert witness put it in his expert report: "*... I would have expected temporary roofing to have been used so that incomplete works were not exposed to rainwater or other forms of precipitation*." It is the claimants' undisputed case that a proper temporary waterproofing design would have ensured that water ingress was avoided during construction. I return to these factual issues in more detail and to the extent necessary below. For present purposes it is necessary to note only that the claimants' case is that on a proper construction of the Policy, the event for the purposes of the claim was "*… the decision to build to the defective design or, alternatively, the instruction to install the roof in accordance with the defective design, which caused damage to the roof*." Leaving to one side the factual issues that arise (because they occurred after the Policy incepted and so cannot be relevant to the construction of it), the defendants maintain that in law, a decision cannot constitute an event or occurrence applying the decision of David Steele J in Midland Mainline & Ors v Commercial Union Assurance Co Ltd & Ors (ibid.). In consequence, the defendants submit, there is no single event that caused the damage for which an indemnity is sought, that the damage each cassette suffered must be treated as a separate event and that the DE5 Retained Liability of £150,000 applies to the cost of remediating each cassette which it is proved has been damaged during the Period of Insurance.

103. Midland Mainline & Ors v Commercial Union Assurance Co Ltd & Ors (ibid.) was concerned with physical damage and business interruption insurance subject to a deductible in respect of loss or damage arising from a single event. Having held that the relevant insured peril was the prevention or hindrance of use of the track caused prior to expiry of cover, David Steele J then considered whether the measures taken by Railtrack constituted an occurrence and concluded they did not in these terms:

> "97. A decision or a plan cannot constitute an event or occurrence. It is the promulgation and application of the programme that might. Since the insured peril is only brought about in the event of a prevention or hindrance, it is the ESRs[11] that has to constitute the occurrence or event. It is in this context that the claimants assert that the "die was cast" ie that there was a single but continuing prevent[ion]. But each ESR related to a specific incidence of GCC, prevented access to a specific length of track and prevented its unrestricted use for a specific period. No individual ESR was the natural or necessary consequence of any other. If, contrary to my view there was a Railtrack Programme in any singular and coherent sense, its existence simply led to the situation that a large number of ESRs were likely to be imposed across the network for many months.
>
> 98. Eagle Star's approach was to assert that the imposition of the ESR's was a "continuing state of affairs" caused by the adoption and the implementation of the Railtrack programme. But even on the assumption that there was a Railtrack Programme, a continuing state of affairs is not an "event".

[11] Emergency Speed Restrictions

> 99. These impressions are confirmed when regard is had to the degree of unity of time, of place, of cause and of intent as it would appear to an informed observer. On the face of it:
>
> (i) There is no unity of time. The ESR's were imposed over a long period running into months if not years. Indeed, on one view, they continue to be imposed today.
>
> (ii) There is no unity of location. The ESRs were imposed at hundreds if not thousands of different locations over the entire network.
>
> 100. Whilst there is a degree of unity of cause and intent in the form of the adoption and implementation of instructions issued in the aftermath of the derailment, yet, as has been explained, the response to Hatfield was incremental and variable. The justification for the ESRs was the discovery of individual incidents of GCC of sufficient severity to call for action under the instruction then in force, not by way of imposition of a unitary programme issued on a particular day."

104. The defendants maintain that the design decisions relied on by the claimants were not material because the Policy insures against damage to property not the "*... issuance by contractors of instructions to implement a design that was defective insofar as its imperfect execution might lead to the property being vulnerable to damage by water ingress*.". They maintain that the design did not cause the damage, which was caused by the ingress of water into the cassettes. The defendants argue that this approach gains some support from the conclusions of the majority of the Court of Appeal in Seele Austria v Tokyo Marine Europe Insurance [2008] EWCA Civ 441 set out by Moore-Bick LJ at [57]. In my judgment that is mistaken. That case was concerned with damage caused in connection with some remedial work. It is true to say that Moore-Bick LJ rejected the suggestion that the decision to carry out the programme of remedial works was an aggregating event. However, that was not a conclusion reached on the basis that a decision to embark on a single programme of remedial work could not ever be such an event (in essence the defendants' submission in this case) but rather that whilst that decision was a "*unifying factor of a kind ...*" the insurers' submissions were to be rejected on the basis that:

> "… I do not think that either the decision to carry out a programme of remedial work or the implementation of that programme amounts to an event of the kind contemplated by the clause. The remedial work provided the context in which the damage was caused, but was not itself the underlying cause of it. That lay in the defects which gave rise to the need for it. In these circumstances I do not think that it is possible to identify a single event that can be regarded as the underlying cause of all the access damage required to enable the defective sealing membranes to be renewed."

On the claimants' case in this claim, that is simply not so.

105. The claimants submit that the defendants' submission that a decision or a plan cannot in law constitute an event or occurrence is wrong. I agree - see Stonegate v MS Amlin [2022] EWHC 2548 (Comm) per Butcher J at [175] and following. Having referred to the relevant part of David Steele J's judgment in Midland Mainline & Ors v Commercial Union Assurance Co Ltd & Ors (ibid.) set out above, Butcher J said:

> "176. For my part, I do not consider that there can be any general rule that the taking of a decision cannot be an occurrence. It might be that in a particular insurance policy the context and wording indicates that a decision will not count as an occurrence. Furthermore, in any event, whether a decision is an occurrence would depend on the facts, and in particular the nature of the decision and the way it was made. But it seems to me that there may be little difficulty in describing some decisions as occurrences. I would consider that to be the case, for example, in relation to a resolution of a Board of Directors of a company. I do not see, equally, why a decision taken in a Cabinet meeting (or a COBR meeting) cannot be an occurrence. These are matters which happen at a particular time, at a particular place, in a particular way, and as a matter of ordinary speech can be said to have been occurrences.
>
> …
>
> 178. In Midland Mainline David Steel J had found that there was in fact no single decision at all: see at [90]. What had happened was that there had simply been a range of measures incrementally brought into play in reaction and response to the derailment. Furthermore, what was said at [97] was in the specific context of the construction of the Denial of Access extension, and not the construction of an aggregation clause (as David Steel J pointed out at [73]). I do not read what was said in the first sentence of paragraph [97] as seeking to make any general statement as to what might constitute an occurrence for the purposes of aggregation provisions. If it was, it was obiter dicta, which, with respect, I do not consider to be correct.
>
> 179. In the present case, I regard the decision taken at the COBR meeting on 16 March 2020 that the public should be advised to avoid pubs, restaurants and clubs as being an occurrence. It satisfied the unities. There is to my mind nothing in the context of the Policy which indicates that such a decision cannot count as an occurrence. Judging the matter from the perspective of an informed observer in the position of the insured, it is to be regarded as a single occurrence." [Emphasis supplied]

106. Butcher J's approach receives *obiter* support from Moore-Bick LJ in Seele Austria v Tokyo Marine Europe Insurance (ibid.) at [56], where he said:

> "I am prepared to assume for present purposes that in each case the same mistakes were made. However, there is no evidence that those mistakes were attributable to a single event, such as giving the workmen wrong instructions which they then conscientiously followed so as to produce a series of similar defects. Again, had that been the case, it might have been possible to argue that giving faulty instructions was the unifying event, but the judge's findings point to the conclusion that the defects were simply the result of poor workmanship repeated over and over again."

107. In those circumstances, I conclude that David Steele J's judgment in Midland Mainline & Ors v Commercial Union Assurance Co Ltd & Ors (ibid.) is not authority for the general rule of law for which the defendants contend and that the true principle is that the question is one of fact as Butcher J concluded in Stonegate v MS Amlin (ibid.), which is consistent with the *obiter* comments of Moore-Bick LJ in Seele Austria v Tokyo Marine Europe Insurance (ibid.) set out above.

108. What factually was the cause of the water ingress is something I turn to below. However, I accept in principle that if at least an effective cause of the damage that occurred during the Period of Insurance was the decision not to take any temporary waterproofing measures after placement of the cassettes on the Glulams but before final waterproofing works were carried out then that will sufficiently satisfy the unities of time place and cause that must be satisfied applying the principles set out above when tested by reference to an informed observer in the position of the insureds in these claims with knowledge of the true facts.

109. On that basis, the damage for which the defendants would otherwise be responsible would attract a single Retained Liability of £150,000 rather than £150,000 for each cassette that suffered damage during the Period of Insurance.

Factual Issues

Introduction

110. As will be apparent from the outline summary of the issues that arise set out above, these claims are concerned with events that took place in excess of 8 years ago. Inevitably this has an impact on the reliability of recollection of the witnesses of fact who gave evidence, a number of whom had been retired for significant periods prior to the start of the trial. In those circumstances, to the extent that it matters, I have tested the oral evidence of each of the witnesses of fact, wherever possible, against such contemporary documentation as there is, admitted and inconvertible facts and inherent probabilities. This is an entirely conventional approach – see Onassis and Calogeropoulos v. Vergottis [1968] 2 Lloyds Rep 403 at 407 and 413. It is of course necessary to consider all of the evidence – see Kogan v. Martin [2019] EWCA Civ 164 per Floyd LJ at paragraphs 88-89. There is however nothing either in this authority or the requirement to consider all of the evidence that prevents the evaluation of oral evidence using the techniques I have referred to. In my judgment the use of such techniques is all the more appropriate having regard to the passage of time since the events with which this case is concerned – see Gestmin SGPS SA v.

Credit Suisse (UK) Limited [2013] EWHC 3560 (Comm) per Leggatt J (as he then was) at paragraphs 15-22.

111. I heard oral evidence from the following witnesses of fact:

i) Mace

a) Kevin Foley, one of Mace's associate directors who led for Mace in relation to the roofing works at Sky Central;

b) Alan Henderson, who was employed by Mace from 2014 until he retired in 2016 as a Package Manager;

c) Alan Robinson, Mace's Operations Director, and the commercial lead of the Sky project;

d) Nic Hamlin, one of Mace's Construction Operations Directors who became involved with the Sky Central project in May 2018 to investigate leaks, but later to manage remedial works;

e) Ian Elliott, a Chartered Civil Engineer employed by Mott MacDonald appointed by Mace to investigate the extent of damage to the roof;

f) Eric Hardie, one of Mace's Project Directors responsible for the Mace remedial Scheme; and

g) Colin McGown, one of Mace's Commercial Operations Directors, who has overall responsibility for commercial activities on the Sky project.

ii) Sky

a) Gregory Moor, a partner of Sandberg LLP, who was appointed by Sky to advise to provide advice in connection with the Sky Central roof issues;

b) Diana Foxlee, the Director of Sky's property department;

c) Dereck Anthony, who is employed by Sky's property department and is responsible for remedial works to the roof.

d) Wayne Spiller, Sky's Head of Accommodation Strategy.

e) Steven Barker, a Principal of Avison Young, who assisted Sky in costing the Sky remedial scheme.

f) Adrian Bates, the Commercial Head of Sky's "Workplace Team".

iii) Defendant underwriters

a) Robert Grinter, a Quality Supervisor employed by Prater, who was responsible for drying out works that were carried out in 2015-2016.

In addition, witness statements were admitted as evidence on behalf of:

iv) Mace from:

a) Peter Elms dated 8 April 2022, one of Mace's associate directors involved in investigating leaks from 2018;

b) Tim Roberts, a Fire Engineer employed by Arup, who gave evidence concerning the fire strategy of the Mace remedial Scheme; and

c) Steve Stockton; and

v) Sky from:

a) Chris Stylianou, the former Chief Operating Officer of Sky;

b) Alison Currie, the Group People Services Delivery Director; and

c) James Davis, a quantity surveyor employed by Evaluation Consultants Ltd who was involved in costing the MEP elements of the Sky Scheme.

112. I heard oral evidence from the following expert witnesses:

i) Wood Science

a) Matthew Wellesley-Smith, instructed by Sky & Mace; and

b) James Coulson, instructed by defendant underwriters

ii) Causation

a) Rupert Pool, instructed by Sky & Mace; and

b) Robert Jessep, instructed by defendant underwriters

iii) Structural Engineering/Architecture

a) Simon Murray & William Davies, instructed by Sky;

b) John Rushton, instructed by Mace; and

c) Robert Jessep, instructed by defendant underwriters.

iv) Construction Management/Buildability

a) Tim Baillie, instructed by Sky;

b) Keith Strutt, instructed by Mace; and

c) John Howie, instructed by defendant underwriters.

v) MEP

a) David Sworder, instructed by Sky;

b) Nicholas Hart, instructed by Mace; and

c) David Rollason, instructed by defendant underwriters

vi) Quantum

a) Liam Holder, instructed by Sky;

b) Ronan Champion, instructed by Mace; and

c) Danny Large, instructed by defendant underwriters.

113. Given the conclusions that I have reached so far concerning the scope and effect of the Policy, it will be necessary for me to refer in detail only to a limited number of the witnesses who gave evidence or who provided unchallenged witness statements.

114. Where I have concluded that a witness of fact gave oral evidence that I cannot safely rely on, I make clear at this stage that this is not because I consider any of those witnesses have set out to mislead me but simply because their lack of recollection by reason of the passage of time is such that I cannot safely rely on what they say other than to the extent their evidence is corroborated by reliable evidence or is admitted or is contrary to their interests or those of the party adducing their evidence. Rather than attempting to explain why this is so as a freestanding element of this judgment, I explain below how and why I have come to these conclusions by reference to the events that are material to resolution of this claim. In relation to the expert evidence, many of the witnesses were challenged, particularly by Mr Rigney KC, on the basis that they were advocates on behalf of the parties who called them. Other than to the extent I make findings to that effect below, I reject those challenges.

Relevant Damage

115. As I have indicated, Sky is entitled to recover in respect of physical damage occurring between 1 February 2014 and 15 July 2017. Although there might have been points available to the defendants in relation to the period between 15 July 2016 and 15 July 2017, in fact the defendants have not taken any such points. Mace is entitled to cover in respect of such damage occurring down to the date of Practical Completion under the building contract (but not thereafter) for the reasons set out earlier. It is not in dispute that Sky is entitled to cover for relevant damage occurring during the whole of the Period of Insurance.

116. The defendants deny that the mere entry of water into the cassettes prior to 15 July 2017 constitutes damage within the meaning of the Policy. The claimants maintain that it does.

117. The cassettes were manufactured and delivered to the Sky Central site free of any internal moisture and were designed and intended to remain in that condition for the remainder of their useable life. In those circumstances, the entry of moisture into the cassettes during the Period of Insurance is in my view a tangible physical change to the cassette as long as the presence of the water, if left unattended, would affect the

structural stability, strength or functionality or useable life of the cassettes during the Period of Insurance or would do so if left unremedied. That is so because water that entered the cassettes that had that effect would obviously diminish the commercial value of the cassettes because they would thereby become less valuable or less usable than would have been the case had they not sustained the damage complained of.

118. The defendants maintain that this formulation confuses actual with prospective damage. In my judgment that analysis is mistaken. The entry of water into the cassettes, which would have caused physical deterioration if not remedied is itself physical damage that reasonably required to be remedied, just as much as, and in addition to, any actual deterioration caused by the ingress of water that occurred down to 15 July 2017. This is not therefore a case of installing a component that is not suffering from damage and does not suffer damage at any stage during the Period of Insurance but might thereafter – the issue commented upon by Jonathan Parker LJ in Pilkington v CGU (ibid.) at [49]. This approach is consistent with Hobhouse LJ's analysis in The Nukila (ibid.). I reject as wrong therefore the submission of the defendants that the ingress of water is not of itself sufficient to give rise to a cause of action unless that water caused actual damage to the fabric of the cassettes prior to 15 July 2017 if the effect of leaving the ingress of water unremedied would have resulted in deterioration over time including after expiry of the Period of Insurance. I accept that mere ingress of water which did not or would not have these effects is not damage.

119. Had a condition survey been undertaken on or shortly before the expiry of the Period of Insurance, as in retrospect at least it ought to have been, it would have been easier to arrive at conclusions as to what physical damage in the sense identified above had been suffered at that date than in fact it is. However, ingress of water into the cassettes was not the primary focus of attention at that time - see the cross examination of Mr Robinson, where he said:

> "… And so the position at this stage was that you were focusing on the leaks, as opposed to investigating the interior of the cassettes; is that correct?
>
> A. That is correct."

The leaks here referred to were leaks entering the building (largely through gaps between the cassettes) rather than water entering the cassettes but not the building. It is not suggested that water that entered the cassettes then entered the building. This leads Ms Day KC to accept that evidence of the exact damage as at July 2017 does not currently exist but to nonetheless submit that "… *the roof had (as predicted) suffered severe and widespread damage by July 2017 based on the detailed investigation reports and photographs from 2018 as well as the discovery of extensive soft spots*."

120. In those circumstances, what damage was suffered if any down to the end of the Period of Insurance depends primarily (but not exclusively) on the opinion evidence of the two wood science experts – Mr Wellesley-Smith, instructed by Sky and Mace; and Mr Coulson, instructed by the defendants – based on a secondary analysis primarily of the photographs and reports referred to by Ms Day KC. I say "primarily" because in my judgment the extent to which damage has been suffered also depends

upon the structural engineering evidence I consider later in this judgment. Although the defendants' case is that Mr Coulson is regularly consulted by such engineers whereas Mr Wellesley-Smith's practice is to consult such engineers where he judges it necessary to do so in my judgment that is not the point. Mr Coulson is not a structural engineer and in my judgment risks posed to the structural integrity of the built environment is essentially a matter for structural engineers taking such advice from wood scientists, not the other way round.

121. The claimants also rely on the observations of Mr Elliott of Mott Macdonald, who carried out some examinations of some cassettes during or very shortly after the end of the Period of Insurance. The defendants maintain that most of that evidence has been invalidated because his reports (in the form of so called RAG[12] reports by which he sought to grade those cassettes that had suffered what he characterised as damage and those that had not) were prepared under the guidance of Mr Wellesley-Smith and the defendants maintain his evidence is either to be rejected as inadmissible or in any event because Mr Coulson' s evidence is to be preferred.

Admissibility of Mr Wellesley-Smith's Evidence

122. The defendants have mounted a very serious challenge to the admissibility of Mr Wellesley-Smith's evidence on the basis that he does not have the relevant expertise. The forensic reasons for that challenge are obvious – if it succeeds the claimants will have no or very limited expert evidence to support their case as to damage occurring on or prior to 15 July 2017. It is an issue that I must necessarily consider therefore before turning to the evidence itself.

123. As with much else in this litigation, this issue has been litigated with uncompromising hostility, with Ms Day KC criticising Mr Rigney KC for what she characterises as an "… *unnecessarily aggressive …"* cross examination of Mr Wellesley-Smith whilst herself criticising Mr Coulson for not attending site and not undertaking joint inspections and ignoring some evidence that is available all for the purpose of advancing "… *Insurers' interests in minimising insured damage, but not … considering evidence which would be adverse to those interests*." As with much else in this case there is substance in both points. Whilst the challenges advanced against Mr Wellesley-Smith were ones that needed to be tested in cross examination, it was unnecessary for them to be advanced in the hostile and aggressive manner in which they were deployed. If the points are good ones, they do not require to be advanced in that way and if they are not good points they are not improved by being advanced in that manner. All that such conduct achieves is to add to the heat of the litigation process, which may result in stress led errors and omissions by expert witnesses, without generating any light and for that reason is likely to be counter-productive.

124. There is no dispute in this case that the evidence of Mr Wellesley-Smith and Mr Coulson is on a subject on which expert evidence is admissible. That is obvious from my summary of the evidence available in relation to the occurrence of damage during the Period of Insurance. No one suggests otherwise.

125. The sole focus of attention was on whether Mr Wellesley-Smith had acquired by study or experience sufficient knowledge of the subject to render his opinion of value

[12] Red, Amber, Green

in resolving the issues before the court – see R v Bonython (1984) 38 SASR 45, approved by the Supreme Court in Kennedy v Cordia (Services) LLP [2016] UKSC 6. On this issue, Lords Reed and Hodge stated (and all other members of the panel agreed) that

> "The skilled witness must demonstrate to the court that he or she has relevant knowledge and experience to give … opinion evidence. Where the skilled witness establishes such knowledge and experience, he or she can draw on the general body of knowledge and understanding of the relevant expertise …"

If a challenge to the expertise of the supposed expert succeeds then the party who has instructed that expert "*... will simply find themselves without expert evidence as a result* …"- see Bop-Me Ltd v S.S. Health and Social Care [2021] EWHC 1817 (TCC) *per* Fraser J at [20]. That being so, it strikes me that some caution needs to be exercised before concluding that an expert witness's evidence is inadmissible and such a conclusion should generally be reached only in cases where it can be shown that the witness concerned has no relevant qualifications or no relevant experience and therefore has no expertise in relation to the subjects for which permission has been given. Anything falling short of this should generally be left as a submission going to the weight of the evidence offered. This approach is justified on the case law which I have so far referred to and that which I refer to below. Such an approach will have the salutary effect of limiting such challenges to cases where the point really matters, thereby shortening trial lengths and, therefore, reducing cost and ensuring that a no more than proportionate amount of public resource is made available to particular disputes.

126. The defendants' case as to why I should find that Mr Wellesley-Smith has not established that he has the qualifications, experience and expertise to provide opinion evidence in relation to any of the areas for which permission to adduce wood science evidence was given - that is evidence concerning damp, decay and rot in timber roofs - in summary is that he is at best a building surveyor with limited experience and is not a wood science expert. In my judgment this submission is misplaced and I reject it.

127. A significant amount of time was taken up criticising Mr Wellesley-Smith because he had qualified and worked in different areas prior to commencing work at Hutton & Rostron, his current employer, as a historic building surveyor, in January 2018. Of itself this is immaterial if the person concerned nevertheless has the relevant qualifications, experience and expertise. An accountant who becomes a market gardener is not any less qualified to give an opinion on market gardening based on his or her experience as such by reason of having previously qualified or practiced as an accountant.

128. The defendants maintain that Mr Wellesley-Smith has no formal qualifications in the relevant expertise. That is so. His first degree was in American Studies and he has two masters degrees – one in Advanced Environmental and Energy Studies and the other in historic building conservation. Mr Wellesley-Smith did not and has not suggested otherwise.

129. In relation to the acquisition of expertise by experience, the defendants maintain that Mr Wellesley-Smith has no relevant experience either because prior to starting work at Hutton & Rostron, he was employed variously as a farm manager in Brazil, by a construction company specialising in mansion block refurbishments and between 2013-2017 as an energy surveyor, an acquisitions manager, a company director and as a retrofit manager for Natural Building Technologies. The defendants maintain that none of this constitutes experience and expertise in the science of damp, decay and rot in wood generally or timber roofs in new buildings in particular. Again I agree. Mr Wellesley-Smith did not suggest otherwise in the course of his cross examination. His evidence was and always had been that he has acquired experience of (and some limited training concerning) the effect of wood decay in the course of his employment by Hutton & Rostron. This is evidence that I accept.

130. Mr Wellesley-Smith accepted that there was no mention of "*wood science*" in his CV - see T6/91/13-22. His evidence in his supplemental report was that '*My understanding of how Wood Destroying Fungi establish themselves and grow in buildings has formed over the last five years whilst working for H+R…*' In the course of his cross examination and when pressed on this issue, unsurprisingly he did not rely on his employment history prior to commencing work at Hutton & Rostron and then said:

> "I'm not a wood scientist, I'm a timber decay surveyor. As a result of becoming a timber decay surveyor, I've become a wood scientist by virtue of experience and understanding of how decay progresses in buildings."

He added a little later that:

> "I have no experience of timber strength grading, apart from internal CPDs, where we are given a kind of brief introduction to the topic from one of my more experienced colleagues in timber strength grading almost as an overview. I didn't really see that it was relevant to this case, as I have not been asked to assess the strength of the timber. It wasn't really relevant in determining what was damaged or what was not damaged in my mind because that was going to be determined further down the line by a structural engineer, who understood the context and the tolerances of this particular building, which I do not.

131. On this basis, the defendants submitted that Mr Wellesley-Smith could legitimately claim to be employed, and to have acquired expertise as a result of being employed, as a historic building surveyor with about 2½ years' experience when he was first instructed and about 5 years' experience by the date the trial started. In relation to this, Mr Wellesley-Smith claimed to have acquired expertise in wood decay and he accepted that he was still "*learning on the job".* As is obvious, if this experience is relevant experience then it cannot be said that Mr Wellesley-Smith has no experience but only that his experience was limited – an issue that goes to weight not admissibility.

132. In his reports, Mr Wellesley-Smith placed very heavy reliance on the academic research and writing of others to support his opinions. This was criticised both of

itself and because it was maintained this material had at least in part been misunderstood by Mr Wellesley-Smith. In my judgment this is of itself immaterial to whether a professed expert has established he has the necessary expertise. It is only where "… *the skilled witness establishes such knowledge and experience, he or she can draw on the general body of knowledge and understanding of the relevant expertise*…" – see Kennedy v Cordia (Services) LLP (ibid.). Whilst reliance on such material may not demonstrate the necessary skill and experience, reliance on it does not demonstrate that the witness has no such skill or experience. Whether having established the relevant expertise, an expert then draws on but misinterprets or misunderstands the general body of knowledge, is an issue that goes to weight not admissibility. It is the absence of relevant expertise that affects admissibility, unless, perhaps, the level of misunderstanding is such as to support the inference that the witness concerned has no relevant expertise. In my judgment the criticisms made by the defendants in relation to Mr Wellesley-Smith's understanding of the relevant literature is not so extreme as to support such a conclusion.

133. In my judgment, the defendants' submissions fall short of establishing that Mr Wellesley-Smith has no relevant experience or expertise to the level that would justify ruling his evidence to be inadmissible. The authorities relied on by the defendants in relation to this point do not assist them. Leading evidence from a structural engineer as to the tortious standard to be expected from a surveyor, when the critical issue was whether a structural surveyor had been negligent in failing to notice cracks in a building - as in Sansom v Metcalfe Hambleton & Co [1998] PNLR 542 - is plainly different from this case and is properly characterised as a not relevant, as opposed to a limited, expertise case. In my judgment the circumstances of this case are equally far removed from those considered by Rimer J as he then was in SPE International v Professional Preparation Contracts Ltd [2002] EWHC 881 (Ch). Although not cited by the defendants, the real basis for the judge's conclusion that the evidence of the supposed expert in that case was not admissible is set out at [72] of the judgment:

> "The reality is that he was simply someone chosen by SPE to act on its behalf as an advocate of its case. To the extent that he advanced and purported to prove factual matters in his report, his evidence was largely hearsay, going to matters of which he has no first hand knowledge, and in respect of which no admissions had been made by PPC. To the extent that he expressed opinions, they were on matters in respect of which he had no relevant expertise. I hold that this evidence is inadmissible." [Emphasis supplied]

The witness in that case was called in order to give evidence as to quantum. At [69] the judge had concluded that the witness had expressed opinions as to practice in the relevant industry that he had no qualifications, experience or expertise to express and further did not have any relevant qualifications or experience that qualified him to express any view as to the approach to be adopted in calculating damages in that case. Thus, that case, like Sansom v Metcalfe Hambleton & Co (ibid.), was a case where the witness had no qualifications, experience or expertise not one like this where Mr Wellesley-Smith has limited experience and, arguably, very limited experience. In my judgment, that does not merit Mr Wellesley-Smith's experience or expertise acquired as a result being described as non-existent. Whether this means that only limited

weight can be given to it when weighed against the evidence of Mr Coulson is a different question.

134. In those circumstances, I reject the submission by the defendants that I should hold Mr Wellesley-Smith's evidence to be inadmissible. What weight should be accorded to it and whether it should prevail where it differs from that of Mr Coulson are different issues to which I turn below.

Water Damage Down To 15 July 2017

135. Mr Wellesley-Smith's evidence is based on visits that he made to Sky Central initially on 29 June 2020 and thereafter on three occasions in April-May 2021 and on 9 July 2022. He concludes that:

> "The degree of the damage evident within the policy period is indicated by the discovery of damage in widespread areas of the gutters (in the form of "soft spots") beginning in September 2016 and progressing in degree and extent over the following year. The soft spots were caused by a combination of swelling of the OSB and decay by wood destroying fungi (WDF). These fungi are distinct from moulds, which rot timber by digesting the structural component of wood."

His opinion is that the best evidence relating to timing emerges from the nature of the damage that was apparent to him:

> "2.9 The timing and extent of the emergence of soft spots is critical to understanding the progression of decay in the roof structure during the policy period. It is the most important evidence directly from site of the timing of damage to timber. The means by which the damage was discovered through the relatively strong waterproof membrane; and the terms used to describe it by those at the time, indicate that near total loss of structural integrity of the board, was present, and thus that damage had occurred around 6 months prior to its discovery.
>
> 2.10 Damage to solid softwood timber from WDF[13] is also present in the roof. Considering the progressive nature of decay and the effects of early growth of brown rot fungi to timber; the evidence of widespread damage to gutter boards in 2016, and the poor condition of the roof when finally investigated thoroughly in 2018/2019, demonstrate that damage from WDF occurred to solid softwood prior to the 15 July 2017. This is consistent with my experience of the time lag for discovery of damage to similar structures following water ingress during construction at 12-24 months; and with evidence from a cassette (251) on the Sky roof which serves as a site-specific test case for timing of advanced decay in the roof."

[13] Wood Destroying Fungus

He concludes that "(*d)amage from WDF in gutter areas was arrested as a result of opening up and drying works undertaken in 2018/2019*" but that:

> "The process of inspection of the roof is ongoing, but widespread damage to timber has been revealed since inspections of the roof structure began in 2018. Damage is present in the majority of gutter areas of the roof (88% of gutter compartments). The extent of the timber damage now evident in these areas is indicative of the extent of damage that would have been present in the policy period, but not the degree/severity of that damage."

136. Mr Wellesley-Smith relies for his conclusions of what if any damage had been suffered by the roof to 15 July 2017 on observations made by others on or before that date and his opinion as to the speed with which primarily wood destroying fungus will take to structurally damage softwood timber and OSB. His conclusions concerning the effect of the drying out works in 2018-9 are ones that I accept. Indeed, as I understand it ultimately both wood science experts were agreed that the drying out work that occurred in 2018-9 arrested any further decay. It is likely therefore that any damage that occurred thereafter was caused by water ingress that occurred after those works had been completed, and which by definition could not be damage that occurred during the Period of Insurance or be caused by the events occurring during that period. It seems to me therefore that the physical damage suffered down to the completion of the 2018-9 works is the maximum to which the Policy can sensibly respond.

137. It is common ground but in any event I find that the cassettes were installed on the roof between December 2014 and May 2015. The detail concerning which cassette was installed when is set out at the outset of this judgment. The claimants' case is that following placement on the Glulam Beams, the cassettes were left without final waterproofing being applied for long periods (of necessity differing from cassette to cassette given the sectional installation described earlier) during which rain fell and ran over the main bodies of the cassettes, over the tape covered lifting strop holes, and pooled in the gutter elements at a time when on the claimants' case there was a gap between the layers of material making up the gutter that allowed water to enter the inside of the cassette at that level until the final waterproofing was applied, an issue I return to below.

138. Unsurprisingly, therefore Mr Wellesley-Smith starts his assessment with the email of 7 April 2015, quoted earlier, which records the inspection of cassettes 12, 14. 15, 421-428, 93-100, and 329-336. It records that "*... the majority of all gutter cassettes have suffered water ingress and do have standing water within the insulation layer ...*". It advised on the steps needed "*... to avoid the cassettes suffering irreparable damage ...*" that included the removal and replacement where necessary of the top layer of OSB, the removal of wet insulation and drainage of each cassette followed by the replacement of the insulation and OSB and sealing with Derbigum. Mr Wellesley-Smith also relies on investigations by Rubner in 2015 showing the majority of valley gutter compartments with elevated moisture content above 25% - the trigger point for damage to be caused by the presence of moisture in the type of wood the cassettes were manufactured from.

139. Mr Wellesley-Smith also relied on a report relating to an inspection carried out on 15 August 2016 by Alumasc Exterior Building Products Limited ("Alumasc") set out in its report of 22 August 2016. That report is relied on specifically in relation to damage to the upper layer of OSB. The report records part of the gutter as having "*... rotted and collapsed ...*" and that the "*deck*" had "*... just crumbled away and felt dry ...*". Mr Reed KC submits that the fact the material was reported to be dry means that the particular area must have been subjected to exposure to water sufficient to cause the reported damage for a period ending not earlier than this date. It was common ground that OSB decays faster than sold timber and Mr Coulson accepted in cross examination that for OSB to have got to the condition reported it must have been exposed to water for between nine months to a year prior. In fact my understanding is that initially in his cross examination he said it would take between a year and 18 months for OSB to be affected in this way.

140. Even on the basis that Mr Coulson is the wood science expert on whom I can place most reliance, I consider it would be wrong to rely on anything other than the full span of the period he identified. In truth the speed at which OSB decays will depend on all sorts of unknowns including when the relevant cassette was first installed and first exposed to the ingress of water and climatic conditions thereafter. In my judgment the correct range is between nine months and 18 months or in the case of the component referred to in the 22 August report somewhere between February 2015 and November 2015. I consider it much more inherently probable that this panel was first exposed to water ingress at the earlier (i.e. February 2015) end of the range. I consider that to be so because the reported damage appeared to be long standing and because inevitably the longer the exposure the more likely is advanced degenerative change such as was reported.

141. Having considered the Mott MacDonald reports and the photographs taken in the course of their preparation, Mr Wellesley-Smith concedes that:

> "… the timing of progression of decay by WDF in the roof is difficult to accurately determine but timing can be estimated based on the available evidence and my experience."

He concludes:

> "It is my opinion that decay by WDF had become established by the summer of 2016 in some areas of the roof and was contributory to the damage that became evident in gutters that Autumn, and by the early summer of 2017 was likely to have occurred to varying degrees in the majority of gutter areas and elsewhere."

He bases this analysis on his opinion that decay caused by wood destroying fungus would have commenced within between 6-12 weeks of the wood gaining a moisture content of 30% and decay resulting in a mass loss sufficient to compromise structural strength was likely to have occurred within 6-12 months thereafter with decay sufficient to compromise structural integrity occurring within 3 years of initial water ingress if moisture remained entrapped within the cassettes. Mr Wellesley-Smith considers the advanced state of decay identified during the summer of 2018 suggests decay had been ongoing for a period of in excess of a year prior to that. In relation to

decay of the solid wood elements, I do not understand it to be in dispute that it would take of the order of 18 months for decay other than incipient decay to manifest itself during which time the moisture level to which the timber is exposed must have been maintained at least at the trigger point level identified by the defendants in their pleadings.

142. Mr Coulson's initial approach to an assessment of the likely level of physical damage as at 15 July 2017, was to review the photographic and documentary evidence available for each cassette. I agree with him that this is likely to be the only way of arriving at an informed opinion as to the level of likely damage as at the relevant date. However, that comes with two major caveats. Firstly, the photographs will generally only show damage that has become patent in the form of the presence of mould, fungus and decay. Secondly, the photographic material that is available is not comprehensive – as Mr Coulson says in his initial report, **"***(t)here are a great many pictures of these gully areas, plus some photographs of the immediately adjacent cassette bays. There are very few pictures of the other areas of the cassettes on the roof*."

143. The work that enabled the photographs to be taken was undertaken in 2018 by or on behalf of Prater. It involved:

> "… removing insulation and photographing the internal elements of each of the gulley bays (and many of the adjacent bays) and taking a series of moisture content readings. This work was done in a number of months through 2018 and into 2019. The survey only focused on the gully (and some immediately adjacent) areas. In fact, the majority of the other bays in cassettes across the roof have not ever been opened up and inspected beyond the drainage gully and immediately adjacent areas, so far as I am aware."

Mr Coulson's evidence (which I accept) as to his methodology is:

> "1.6 To assess the condition of each bay within all 428 cassettes, I have therefore focused on the Prater investigation and drying out records, falling between 2018 and 2019. Whilst this information is later than July 2017, it provides me with a good history from which to provide an Expert opinion. I reviewed the available Prater photographs by enhancing/enlarging the images, in order to see them in as much detail as possible. My opinion of the damage in the cassettes was also formed using the documentary evidence with which I have been provided, including the reports and surveys as prepared by Sandberg and Mott MacDonald.
>
> 1.7 By analysing all of this information, I have been able to develop an opinion on what the probable condition of most of the (photographed) cassette bays were; particularly in the gully areas, up to the point of at the end of the Rectification Period."

The result of this activity led Mr Coulson to conclude that the likely condition of the cassette bays at 15 July 2017 was as follows:

i) There was likely to have been decay damage to the timbers and damage to the upper OSB layer in 112 of the cassette bays;

ii) There was likely to have been damage to the upper OSB layer only in 122 of the cassette bays; and

iii) There may have been decay damage to timbers and / or damage to the upper OSB layer in a further 58 cassette bays.

The obvious limitation of this as a basis for reaching an overall conclusion is that on any view and as Mr Coulson accepted expressly in his report, there was no photographic or other evidence that enabled Mr Coulson to express a view about at least 4213 bays across the Sky Central roof.

144. It is necessary now for me to decide on the weight that I should give to the evidence of Mr Wellesley-Smith on the one hand and Mr Coulson on the other. I have read and re-read the reports and evidence of each. I accept that Mr Coulson is by far the more experienced expert in this highly specialist area. He is highly qualified academically in this particular area in a way that Mr Wellesley-Smith is not. It is necessary only to refer to the first three quarters of the first page of Mr Coulson's CV to see that is so. I do not propose to set that out at length but in summary he has had a lifelong professional interest in timber science that has resulted in him not only being qualified specifically in relation to timber science but also being a member of various professional and accreditation authorities concerned with timber science in a time spread between 1975 and 2016. He was a visiting lecturer at Durham and Newcastle Universities, teaching undergraduate architects and engineers about wood. Currently he teaches courses on the theory and practice of wood use in construction. He is the author of a number of textbooks relevant to the use of timber in construction. His practical experience includes the investigation of hundreds of timber related construction issues including decay issues in numerous historic buildings. He says and I accept that

> "I am very used to assessing decay damage in buildings of all types and making recommendations as to whether timber members may need either repair or replacement; or whether any decay is not significant and thus such members may safely be left in place."

Although it was suggested that Mr Coulson had limited expertise in timber cassette roofs, it was plain from his evidence that he had undertaken inspections on a number of buildings with cassette roofs including a number of schools and a hospital. No doubt the buildings were smaller than Sky Central but no one suggests sensibly that can make any difference. I accept also that Mr Coulson's experience of grading timber will be important to an assessment by him of the likely progress of decay dues to water ingress.

145. In principle I accept that Mr Coulson is much the better qualified of the two experts both by reason of his qualifications and experience. I accept too that Mr Coulson's

approach to the issue I am now considering – that is examining the photographical or other observation evidence available for each cassette with a view to deciding whether it had suffered physical damage as that phrase is to be understood during the period ending on 15 July 2017 - is preferable as a matter of principle.

146. Whilst generally I consider Mr Coulson's evidence is the most probative, I am not able to accept his evidence without qualification. The definition of "*physical damage*" that Mr Coulson has applied was, unsurprisingly, the one for which the defendants contend – that is one that requires the presence of structural change of such severity as to require replacement of the affected timber or the whole of the cassette to be present during the period of cover (i.e. down to 15 July 2017) if the Policy is to respond. Leaving to one side my view that what needs to be replaced is substantially a structural engineering rather than a wood science issue, as I have explained already, that is an impermissibly narrow construction because it excludes from the scope of "*physical damage*" those cassettes with a moisture content that if unremedied will result in structural change that ultimately will require replacement of the affected timber. This applies *a fortiori* to cells where there is incipient decay that will worsen with time unless remedied. However, this is not what Mr Coulson has done. He had:

> "… looked at the timber to say, if I can work backwards from the amount of decay or fungal material that I can or may see, then I've got to think would that have been less advanced 18 months or so before the photograph I'm looking at, and if I think it would have still been there, then I've given it a red rating or a possible amber rating for 2017. If I think that the decay is not very far advanced, then I've assumed, in my opinion and based on my experience -- is that the decay would not have been progressed to the point where it would have structurally affected the timber member in 2017."

147. The significance of this was apparent from one of his answers in cross examination, where he was asked about the concept of incipient decay. He explained that concept in these terms:

> "… that's where I judge it to possibly have some level of decay purely on the surface. I think I've said in my report that incipient decay, in my opinion, is purely a surface phenomenon. If it's progressed beyond incipient decay to where I can see either multiple longitudinal cracks close together or, more importantly, cross-grain cracks, then that's what I regard as being decay but even then it depends how much of that there is as to whether I regard the timber to be beyond repair and need replacement."

Two points arise from this – firstly, Mr Coulson fails to consider whether incipient decay was present in any and if so how many cassettes prior to 15 July 2017 that would develop into the sort of decay that will require the replacement of the timber affected unless it was addressed while it is incipient and secondly he appears to test damage only by whether the timber affected is beyond repair and needs replacement. Again this is too narrow and is the result of him applying the test I referred to earlier.

He fails to give any consideration to whether timber affected by incipient decay (assuming that is physical damage) could be remedied by work short of replacement – as for example removing the insulation from the cassette, drying the timber and replacing for example the upper deck (which it is common ground is more easily affected by moisture than the softwood timber framing) and then sealing up the repaired cassette. Thus whilst it may be as the defendants submit, that Mr Coulson was not challenged on his opinion that wood will not suffer loss of strength so as to require repair or replacement until 18 months after it was first exposed to moisture above the trigger level, that is not the point if the timber had in fact been exposed to that level of moisture within the Period of Insurance and would decay to the point at which it would require repair or replacement unless the problem was addressed.

148. In my judgment the question that Mr Coulson ought to have asked himself was whether working backwards, the evidence contained in the photographs provided evidence of damage on or before the end of the Period of Insurance that <u>if left uncorrected</u> would develop progressively until it compromised the structural integrity of the cassette concerned.

149. All of that said however, (a) I accept Mr Coulson's assessment of the photographs as correct applying the test he identified in his oral evidence; and (b) I am not critical of Mr Coulson for the test he applied. He was bound to be guided in the test that he applied by the lawyers who instructed him since the test he had to apply depended on the correct construction of the Policy. I reject therefore the notion that by adopting this approach, Mr Coulson converted himself from expert witness to advocate. An added factor to be borne in mind in coming to a view about the presence of physical damage is the one accepted by Mr Coulson in the course of his cross examination entirely fairly and candidly – namely that in reviewing a vast number of photographs he may have missed one or two showing damage as he had been asked to define it. However, that is likely to be of limited effect. In cross examination he was shown one photograph falling within this category. In my judgment this factor has at most a minor impact in the overall assessment but I cannot dismiss it as *de minimis*.

150. I am less sanguine about his evidence concerning continuing water ingress. The defendants' case is that water continued to enter the roof after completion of the permanent waterproofing following installation of the cassettes. The defendants' case is that this is relevant to the claimants' causation case. He was criticised for expressing a view on that and in my judgment counsel was correct to do so. Mr Coulson was called to give evidence about wood science, which he was very well qualified to give, not evidence about the capacity of flat roofs to leak which he was not at all qualified to comment on and which is the subject of evidence from other witnesses. His ability to draw conclusions about the effectiveness of various repairs evident on the surface of the roof was in my view limited at best and I attach no weight to it.

151. Finally, I should address albeit briefly the question of mould. I accept Mr Coulson's evidence that of itself mould does not pose a structural risk. It has no effect on aesthetics because it is not visible unless a cassette is opened up and only then from the top of the roof, not externally from the ground. Mould inside the cassettes is not visible in any circumstances from inside the building. Although there were some rather generalised suggestions that mould poses a risk to health, there was no evidence

from someone qualified to give it that this was so and in any event it is difficult to see how it could enter the building from the underside of the sealed cassettes. If the claimants wished to make good a case that the presence of mould constituted damage by reason of it posing a health risk to employees, contractors and other visitors to Sky Central then they should have adduced evidence to that effect. They did not. I conclude therefore that it has not been proved that the presence of mould constituted physical damage as that term is to be construed. It is only material to the extent that it demonstrates that the inside of a cassette with mould is suffering from moisture ingress that if unremedied will cause structural decay.

152. The defendants' quantum expert had identified two schemes each of which was designed notionally to remedy the defects that had developed in the roof down to 15 July 2017. The first scheme (known as the 2017 scheme) assumed that three types of repairs would have had to be carried out to a total of 258 cassettes. The detail of this is set out in Appendix 2 to Mr Jessep's Remedial Works report. In essence the defendants submit that I can only safely proceed on the basis of this analysis since the only attempt to identify the damage suffered down to 15 July 2017 is Mr Coulson's and the only scheme that attempts to identify what repair would be required to the defects that Mr Coulson opines would have been present on that date is Mr Jessep's 2017 scheme.

153. By her post trial submissions letter to me dated 16 February 2023, Ms Day KC summarised Sky's case in relation to damage as being that that the roof was a total loss by the end of the Period of Insurance as a result of physical damage suffered down to 15 July 2017. On that basis, it is for Sky to prove that the roof was a total loss by that date or what damage had been suffered by then if that was not the case. For the reasons set out above, I accept Ms Day KC's submission that the damage suffered down to 15 July 2017 is potentially more extensive than the defendants accept because too narrow a test of damage has been used by the defendants and because contemporary photographic or examination reports for all the bays of all relevant cassettes is not available although the evidence available to correct this is limited and inferential. Ms Day KC's alternative submission that "… *Sky is entitled to and does claim for any deterioration (after 15 July 2017) of that damage which existed as at 15 July 2017*" is one I have rejected for the reasons set out above. The Policy responds only in respect of physical damage as it was down to the 15 July 2017.

154. The claimants'case is that drying out works performed in 2018-2019 were a successful mitigation that arrested further deterioration. As I accepted earlier, by the end of the trial, this was common ground between the relevant experts. By the end of the trial, it appeared to be accepted that an earlier drying out scheme had been only partly successful. This was something that was explored in some detail by Mr Reed KC with Mr Jessep in cross examination. In the course of his cross examination, Mr Jessep accepted that by the time the opening up works carried out in 2018-9 that led to the successful drying out works there were "… *widespread problems in the gutter bays* …" and that following the drying out works in 2015-6, moisture was likely to have been retained in at least some of those cassettes and in particular the perimeter gutters. He was also of the view that where water remained it would contribute to "*later deterioration"*. He confirmed his view that in relation to the perimeter gutters he was not satisfied that the drying out works in 2015 were effective but those carried out in 2018-9 were. Clearly therefore in at least some cassettes damage understood in

the way I have concluded it should be understood had been suffered down to 15 July 2017, which has not been taken into account by Mr Coulson. That is so because of (a) the impermissibly narrow view he had been advised to take concerning the meaning of damage and (b) the relatively high number of bays for which there was no photographic evidence available.

155. Doing the best I can with the meagre material that is available I accept that by the time the drying out work had been concluded in 2018-9, 383 cassettes required repair, being the number of cassettes that were identified as requiring repair by insurers' 2018 scheme. Ms Day KC submits that on that basis I should conclude that not less than 383 cassettes were damaged during the Period of Insurance. Ms Day KC adds that *"(i)t is accepted that existing damage from July 2017 may have been subject to some limited deterioration until 2018-2019, but the Claimants' case is that there was no new damage and that such deterioration would not alter the type, scale nor cost of the remedial scheme*."

156. I find that the number of cassettes requiring repair under the defendants' 2018 scheme represents the correct starting point for ascertaining the number of cassettes that required repair as at 15 July 2017 on the assumption that no additional damage was suffered in the period between 15 July 2017 and the end of the drying out works in 2018-19. I return to that issue when considering causation below. I find that it is probable that there was some additional deterioration that occurred in the period between 15 July 2017 and the completion of the subsequent drying out work. This much is obvious once it is understood that wood decay is progressive unless arrested and that the only way of arresting it is by drying out the affected timber until the concentration of moisture is lower than that required for decay to continue. Mr Wellesley-Smith acknowledges that the severity and extent of damage will have worsened in the period between 15 July 2017 and when the compartments were opened for drying in 2018-9 – see paragraph 3.2.1(b) of his supplemental report.

157. The difficulty about this is that there is no evidence that the work identified as necessary following the 2018-9 drying out works would be any different from that which would have been required at the end of the Period of Insurance. That being so I accept Ms Day KC's submission that any such deterioration between 15 July 2017 and when the compartments were opened for drying in 2018-9 would (probably) not alter the type, scale or cost of the remedial work reasonably required. Whilst it is possible that some cassettes would have required less remedial work in July 2017 than they did following the drying out work in 2018-9, there is no evidence that enables me to assess what that might have been, once it is accepted that Mr Coulson approached the question of what constituted "*physical damage*" in an impermissibly narrow way.

Causation of the Physical Damage sustained down to 15 July 2017.

158. It is common ground that the damage to the cassettes that occurred down to 15 July 2017 was caused by water ingress. However, there is a dispute as to how, why and when the water that caused the damage entered the cassettes. The claimants' case is that the, or at any rate the main, cause of the water entering the cassettes were construction defects that allowed very substantial quantities of water to enter the cassettes prior to permanent sealing, when the secondary roof structure was either wholly or inadequately unprotected from rain fall.

159. The principal route by which water entered the cassettes on the claimants' case was via a gap between the membrane and the bottom of the gutter upstand where standing water could accumulate. The gutters had been designed to work in conjunction with a siphonic drainage system as explained at the start of this judgment and that required a head of water to accumulate and be maintained in the gutters. Water was able to accumulate and remain in the gutter area prior to permanent sealing with water being unable to drain away until the guttering had been connected to the drainage downpipes. The claimants maintain that this explains why the majority of the most serious damage has been suffered in these locations. This is a significant point because Dr Pool's evidence is that the gutter compartments have been affected across the roof including not merely the parapet gutter compartments on the east and west elevations of the building (see the plans and photograph at the head of the judgment) but within the valley gutters. This suggests a common or near common problem and route of entry for the water. In my judgment, this sort of systemic effect is not consistent with water entry having been caused by a myriad of different workmanship failings occurring at random times and places after as well as before installation of the permanent waterproofing, as the defendants alleged. The claimants allege there were subsidiary routes of entry as well – principally along the edges of the Derbigum membrane before the final strips of Derbigum cap sheet were applied and along the edge of the Derbigum where lifting-strop holes were present and at other small discontinuities in the interface between the Derbigum and the butyl tape.

160. The claimants' case is that none (or hardly any) of the water that entered the cassettes via these routes would have done so had a temporary roof system been used pending the installation of the permanent Derbigum cap sheet membrane across the parts of the structure affected. Dr Pool summarises this point at paragraph 9.2.6 of his initial report in these terms:

> "The design of the roof, including the sequencing of the installation, did not provide temporary protection to the cassettes prior to the application of the final strips of cap sheet, such as a scaffolding roof or other form of sheeting over the works. The design did not include any warnings that the cassettes were vulnerable to water until the final strips of cap sheet were applied. It did not include any method to protect the vulnerable locations on the cassettes. It did not include any warning about installing the cassettes during inclement weather, leaving the cassettes in the vulnerable condition overnight or installation during winter and spring. The design required the cassettes to be exposed to the weather during the installation sequence."

161. That these works required the use of a temporary roof structure is not seriously in dispute. Mr Jessep gave evidence on behalf of the defendants on the issue I am now considering and he acknowledged in paragraph 7.34 of his report that "… *I would have expected temporary roofing to have been used so that incomplete works were not exposed to rainwater or other forms of precipitation*." This is significant because once it is acknowledged that this was an obvious requirement, then the different causes of water entering the cassettes prior to permanent sealing ceases to matter

because water would not have gained access via any of them had a temporary roof been installed.

162. There is a dispute as to whether this was a workmanship defect or a design defect. Dr Pool's opinion is that this was not a workmanship issue that could be improved by a roof contractor once work commenced because the construction of a temporary roof would have been as he put it "*... a considerable undertaking ...*" and as such was an issue for the designers. In consequence:

> "… the exposure of the vulnerable details to rainfall, during the construction works until the final waterproofing was complete, was a consequence of the design of the roof and was not a workmanship defect. I consider that the design was defective as it did not adequately protect the roof structure during construction as recommended in BS 8217, which is referred to in the Alumasc Specification."

163. The defendants submit that this approach is wrong and should be rejected. The main bases for this central submission are that the main route identified by Dr Pool as the route by which water entered the cassettes described earlier cannot have been ubiquitous because not all the gutter sections were damaged and in any event the problem would have been avoided by a higher standard of workmanship being adopted when forming the 90-degree junction between the bottom of a gutter and its adjacent upstand.

164. In my judgment both these points are unpersuasive. As to the first, no one suggests that the problem occurred in every gutter. Dr Pool's explanation for the very substantial water ingress at gutter level is that the defect he identifies (which is a workmanship defect) occurred in a large number of cases. Mock ups of the work where Dr Pool found the defect he maintains is the likely route of water ingress have shown that only a minority of operatives were able to avoid creating this problem. Secondly, whilst it is no doubt the case that had operatives been aware of the potential problem it could have been addressed by as Mr Rigney KC put it inserting a "bleed" of bitumen into the gap referred to by Dr Pool, that too misses the point. The work that was being done at this stage was not meant to achieve a permanent waterproofing solution. That was to come from the final overlay of Derbigum. The problem or problems caused by water ingress would not have been problems at all had the installation design incorporated a temporary roof structure to protect the installation until the overlay of Derbigum to the relevant part of the roof had been completed.

165. Although Mr Rigney KC submits there is no compelling evidence that the defect identified by Dr Pool existed, in my judgment that ignores the substantial number of cassettes that have suffered damage at gutter level. As I have said already, that level of similar damage is consistent with a substantial number but not all cassettes suffering a similar defect at gutter level and is not consistent with the quantity of water coming from multiple different defects in different cassettes at different locations across the roof structure. The mock up works demonstrated that the defect identified by Dr Pool occurred in most but not all cases.

166. Had I concluded that Sky was entitled to an indemnity in respect of all damage suffered to date and that will be suffered hereafter until final completion of the Sky

remedial scheme, it would have been necessary to undertake a detailed analysis of cause and effect for damage suffered after the end of the Period of Insurance. However, as I have made clear the claimants are not entitled to an indemnity for any damage suffered outside the Period of Insurance and any continuing physical damage caused by water ingress during that period came to an end with the 2018-9 drying out works. As I explained already, water ingress is of itself damage if and to the extent that it would result in decay and other damage to the timber or OSB elements of the cassettes unless removed.

167. By the end of the trial, the defendants accepted (but in any event I find) that significant water ingress occurred during construction and I find that most if not all the water ingress occurred using the route identified by Dr Pool. That such ingress had occurred is supported by the contemporary documentary evidence – see the email from BKS to Prater quoted earlier with its reference to '… *the majority of all gutter cassettes have suffered water ingress and do have standing water within the insulation layer* …' and by the video shown at the trial showing standing water at the same time (April 2015) in the perimeter gutter. These two pieces of evidence provide strong support for Dr Pool's analysis. To similar effect is the internal Mace email of 27 May 2015 which referred to an examination of six cassettes at gutter level, one of which contained standing water, another of which was "*very damp*", two others which were "*slightly damp"* and two others suffered from no identifiable defect. This is consistent with inspections by Rubner where one of the cassettes (267) examined contained 8mm of standing water and significantly raised moisture levels in others. By 11 July 2015, some cassettes were described as "sweaty" but others (246 and 275) as being soaking with standing water present. By 24 July Prater needed 310 ventilation cowls to commence the drying out works which in the end were at best partially successful, suggesting that by then 310 cassettes had been identified where drying out work was required – see the BKS email of 24 July and Rubner had classified 176 valley guttered as being moist or containing standing water and requiring drying – see its drying plan. Dr Pool's analysis is further supported by the systemic damage suffered to the gutter areas of a large number of the cassettes that had been examined and is further supported by the occurrence of soft sports in the upper (OSB) decks in the gutter areas of some of the cassettes.

168. I am satisfied that the concentration of damage in this area coupled with the copious evidence of pooling of water in gutter areas during the construction process points firmly towards the primary cause of water ingress being the mechanism described by Dr Pool. As I have said, had it been explained by a series of random construction errors and localised damage caused by for example localised clamping of one cassette to another during installation then the instances of water ingress would have been fewer and less extensive than in fact occurred and would not have been concentrated in the areas I have mentioned. Indeed, many of these allegations did not survive the cross examination of Mr Jessep – see Transcript, Day 9 page 141. These potential causes are at best just that – potential. There is no evidence that any one or more of them were a cause of water ingress. They were as Sky put in in their closing submissions "*theoretical possibilities"*.

169. The final point relevant to the issue I am now considering is that Dr Pool undertook some mock up testing. I have referred to some of those tests earlier. In relation to the random factors that Mr Jessep was asked about, Dr Pool reported:

> "… testing that I have undertaken indicates that any punctures or unsealed laps could not have allowed sufficient water to enter the roof to result in the standing water that was observed within Gutter compartments or to result in the damage that has been seen, as I showed in section 8 above. Consequently, I consider that the locations of punctures or unsealed laps are not relevant to the overwhelming majority of the damage."

170. In summary therefore, I reject Mr Jessep's analysis of the cause of water ingress during the relevant period. I do so because I found Dr Pool's explanation much the more convincing and I accept his evidence on these issues.

171. Firstly, Mr Jessep's main alternative explanation was that water entry occurred through defective laps at joints between cassettes. As he put it in the course of his oral evidence "… *fundamentally, the actual reason why water has got through that single layer, in the main, the primary issue, as far as I'm concerned, is defects in the laps on the Derbigum membrane*." This work was part of the permanent waterproofing work. If this theory was right, then a temporary roof structure would not have assisted. However, Mr Jessep acknowledged that " … *for any particular bay I can't say precisely how the water got in* ..." so that at best the lap theory is an untested and unproved hypothesis. No tests or reconstructions were even attempted by Mr Jessep to demonstrate that this hypothesis was even a practical possibility of water ingress of the sort I am concerned with. When pressed with this point, Mr Jessep maintained that in his view the only safe way of testing the theory was to carry out an intrusive examination of the roof by " … *peeling back the layers to expose areas, if you could see defects, then you could do a water test and if you had a window into the bay of concern, you could see whether water came in or not.*" The difficulty about that from Mr Jessep's point of view, as he accepted in cross examination, is that (a) he did not at any stage request the carrying out of such a test; (b) he did not mention any such proposal to Dr Pool or the reasons for it and (c) he had not mentioned the desirability of such a test to anyone in the 18 months prior to the start of the trial. He did not suggest testing this theory as a practical possibility by mock up testing nor did he carry out such testing himself. This is to be compared and contrasted with Dr Pool's approach.

172. I am satisfied that Dr Pool's explanation is the more probable at any rate for the period that is relevant because his explanation is supported by intrusive investigation that demonstrates the presence and effect of the defect to which he refers. As he said in his evidence the defect he had identified was present in each joint he examined. That such a defect was likely to arise in most but not all cases where the joint was made was established by the carrying out of such works in controlled and experimental conditions, where most of the time such a gap resulted. As Dr Pool said and I accept:

> "… in my opinion, having looked at the cassettes we have already discussed on the roof, having seen how the membranes were installed on these mock-ups, knowing how reinforced bituminous membranes are applied generally, I consider it highly likely that that gap would have been present at the majority of the gutter upstands."

Mr Jessp made no attempt to interrogate these findings, whether by asking for additional photographs or by asking for additional opening up to be undertaken either by Dr Pool (or under his supervision) or by him (or under his supervision). Further Dr Pool proved the defect as a potential cause for water ingress in the areas where water was found by the mock up experiments he has conducted, which demonstrated that significant quantities of water could enter cassettes by this route before final waterproofing was applied. As he says and I accept, it is the most likely route that could account for the large quantities of water in the majority of the cassette gutters to have accumulated at the base of the gutter upstands. His explanation provides a systemic explanation for what in my judgment was a systemic problem.

173. In any event, Mr Jessep's explanation is implausible for at least the following reasons.

174. First and as I have said, he was not able to identify any specific instance where ingress into a cassette was caused by the route he suggested.

175. Secondly, it is inherently more likely that water penetrating the joint between two cassettes would leak into the building in the gap that the water had penetrated. As Dr Pool put it:

> "… a poorly sealed lap joint between the strip of membrane along the joint and the field sheets could allow a small amount of water to reach the joint but such water would pass between the cassettes and into the building. If the path of such water coincided with a rip in the VCL (none of which were observed during construction), water could enter the cassette, but I consider this would be an insignificant amount.'"

I accept this evidence from which two points emerge. Firstly, it is much more probable that water entering in this manner would leak into the building not the cassettes and secondly, any water that penetrated the cassettes using this route would require a particular coincidence of conditions and would not explain the quantities of water that had entered. As Dr Pool put it in cross examination:

> "… As I said previously, for water to enter a cassette via that route, it would need the coincidence of a weakness or a defect in the joint between the field sheet and the capping strip as well as a weakness -- a weak point in the joint between the Butyl tape and the Derbigum field sheet. I consider the probability of those two things coinciding to be very low, which is why the evidence that I've seen does not suggest that this occurred in more than a handful of places."

He was willing to accept that this had to his knowledge and from his investigations occurred only on 4 occasions to cassettes 248, 339, 260 and 270. Mr Jessep relied on many more but the common theme of his supplemental report is that these occurred after the period that I consider the relevant period largely in a period between March 2020 and April 2022, after the drying out work in 2018-9 when it is accepted that the damage caused by water ingress during the Period of Insurance was brought to an end and did not concern the edge of a cassette, which on Dr Pool's analysis was where

ingress had to occur if Mr Jessep's ingress explanation was to apply, but concerned patch repair and vent housings that all post-date the end of the Period of Insurance.

176. Thirdly, the pattern of damage is not in my view consistent with penetration occurring in the way described by Mr Jessep. Dr Pool's evidence was that "… *the majority of the Gutter compartments contain damaged timber and that this has spread up the slope of the cassettes to cause further damage in the Eaves compartment*…" Mr Jessep agreed in the course of his cross examination "… *that the majority of the damage was in the gutter compartments* …" His evidence was that water entering at the joints to which I have referred above would have flowed down the slope of the cassette to accumulate at the gutter end of the cassette concerned. However, that is not consistent with what Mr Jessep accepted was visible on examination. In the course of his cross examination he accepted that that he had not seen any evidence of water "… *having flowed down underneath the cap sheet into the gutter* …" and he also accepted that he had not seen any evidence of water running down the inside of cassettes.

177. Finally in relation to the temporary roof solution, it is not seriously in dispute, but in any event I find, that had a temporary roof been installed then the entry of water into the cassettes as a result of rain fall occurring after the cassettes had been placed on the roof and before final waterproofing had been completed would not have occurred. Furthermore, it would appear to be common ground and certainly Mr Jessep accepted that this would have been an appropriate solution. In the course of his oral evidence he said that he would have expected a temporary roof to have been used and he reported that he had been informed by Prater that such a roof would have been used for any remedial works. As he put it, "*...(f)or the chosen sequence back in the original construction, I would have expected a temporary roof to be used* …" He had put the same point more clearly in his first report where he stated at paragraph 7.34: "… *I would have expected temporary roofing to have been used so that incomplete works were not exposed to rainwater or other forms of precipitation*." Dr Pool was entirely clear about the need for a temporary roof and the reasons why it was a necessity:

> "The design of the roof, including the sequencing of the installation, did not provide temporary protection to the cassettes prior to the application of the final strips of capsheet, such as a scaffolding roof or other form of sheeting over the works. The design did not include any warnings that the cassettes were vulnerable to water until the final strips of capsheet were applied. It did not include any method to protect the vulnerable locations on the cassettes. It did not include any warning about installing the cassettes during inclement weather, leaving the cassettes in the vulnerable condition overnight or installation during winter and spring. The design required the cassettes to be exposed to the weather during the installation sequence.
>
> 9.2.7 The installation sequence led to some cassettes being exposed to weather for longer periods than other cassettes. But until the final strips of capsheet had been applied over the

> cassette-to-cassette joints around each cassette, that part of the roof would remain vulnerable to water ingress."

178. The dispute between Mr Jessep and the claimants was that in his view utilising a temporary roof was a contractor's working method not a design solution. In my judgment that is evidence that I must reject for the following reasons. Dr Pool addressed this issue at some length in his second report at Section 2.4 and following. I accept that evidence largely because when what he said was put to Mr Jessep in cross examination he had no answer to the point made or the answers he gave were unpersuasive.

179. In order to support his evidence, Mr Jessep referred to BS 8217: 2005 (Reinforced bitumen membranes for roofing—Code of practice). He had implied that Section 6 was concerned with workmanship rather than design but had neglected to point out that the section was headed "*General design considerations*". Dr Pool says and I accept that these parts of BS 8217 are intended to be considered by designers of the roof not roofing contractors. I regard this as close to obvious and as Dr Pool says in his report

> "These clauses in BS 8217 make it clear that the need to protect the roof from water ingress during construction should be considered at the design stage and not left for the roofing contractor to try to implement as the works proceed."

He adds and again I accept that:

> "The inability to protect the vulnerable joints from rain was a feature of the design … it was not something that could be influenced by the roofing contractor as work proceeded … Clearly, the construction of a temporary roof over the works would have been a considerable undertaking, bearing in mind the size of the building, and therefore could not be considered to be a workmanship matter but a consideration for the designers at an earlier stage. … I consider that the exposure of the vulnerable details to rainfall, during the construction works until the final waterproofing was complete, was a consequence of the design of the roof and was not a workmanship defect. I consider that the design was defective as it did not adequately protect the roof structure during construction as recommended in BS 8217,"

Mr Jessep was cross examined on this and whilst initially he maintained that the provision of a temporary room was part of the roofing contractor's working method, he then retreated from that position. When Mr Reed KC asked Mr Jessep about this issue the following exchanges took place:

> "Q. Can we agree it's a design solution?
>
> A. No, I think it's a contractor's working method.
>
> Q. It's still design, isn't it, how to go about it?

> A. I think it's part of the contractor's working methods.
>
> Q. You see, I'm going to put it to you, you show a marked reluctance to use the word "design" when it obviously is, a design, a temporary roof?
>
> A. Clearly to actually come up, if you were going to use a temporary roof, that would have to be designed but it could be a bespoke product, such as a tent that's just blown up and is off the shelf, in which case you wouldn't need a design, you would just specify it in your method statement, but if you were doing a bespoke structure, then that would need a design prepared for it.
>
> Q. And to put a bouncy castle on the roof, we would need to know what the windage is, how it was to be held down and so forth, wouldn't we?
>
> A. Yes.
>
> Q. That's all part of the design, isn't it?
>
> A. The design of the temporary works to facilitate the construction."

As I read this, Mr Jessep ended up accepting that provision of a temporary roof was a design question as Dr Pool had maintained all along. I am bound to say that Mr Jessep's approach to this issue set out above undermined my confidence in the reliability of his evidence.

180. It is necessary now to return to the conclusions I reached earlier concerning the true construction of the Policy. In the end it is not necessary to carry out any in depth analysis of the various routes by which water entered the cassettes prior to permanent waterproofing taking place because I have concluded that on the balance of probability the entry of water all occurred prior to that as a result of the failure to utilise a temporary roof to protect the cassettes until the permanent waterproofing works could be carried out. The cause of water entering the cassettes during this period was the absence of temporary protection against the entirely foreseeable risk of water ingress which could and should have been prevented by the utilisation of a temporary roof. On any common sense analysis of the facts the entry of water into the cassettes was caused by the failure to protect the cassettes with a temporary roof pending permanent waterproofing of the roof. It was the absence of this protection that led inevitably to the entry of water into the cassettes because without such protection they were exposed to the weather for a substantial period during the winter, when it was reasonably to be expected there would be substantial rainfall.

181. Returning to the Policy, the issue to be resolved is whether in the events that have happened there is "… *one event* …" that can be said to have resulted in the damage to the roof cassettes occurring during the Period of Insurance. Applying the conclusions on construction reached earlier in this judgment, I have no difficulty whatsoever in concluding that the decision to design the Sky Central roof without incorporating the

use of a temporary roof until permanent waterproofing had taken place was an event in the sense of it being an occurrence at a particular time and place and that was arrived at in a particular way which caused the damage suffered and thus the losses caused by such damage suffered during the Period of Insurance. I conclude therefore that the sums otherwise recoverable by Sky under the Policy are subject to a single deductible of £150,000.

Quantum

182. In many ways this is the most difficult part of this claim as things currently stand. Starting with the Basis of Settlement clause in the Policy, fully set out at the start of this judgment, the defendants are required to provide an indemnity on the basis of the full cost of repairing reinstating or replacing the property damaged. The difficulty that arises is that the Sky and Mace schemes assume that all the damage suffered to date and to be suffered hereafter until repair and replacement can be completed should be remedied at the cost of the defendants, whereas I have held that this is wrong on a true construction of the Policy and that the defendants' liability arises only in respect of damage suffered down to the end of the Period of Insurance. Thus, each scheme simply does not address how I should assess the sum due to Sky under the Policy as it is properly to be construed.

183. By the same token the only attempt to quantify the cost of repairing or replacing that which was damaged down to the end of the Period of Insurance is the Insurers' 2017 Scheme or their 2018-9 scheme, neither of which it is contended should in fact be carried out (because the state of the roof is now much worse than it was at the end of the Period of Insurance and so requires significantly more work than is contemplated by the defendants' schemes). The defendants maintain that their liability should be assessed exclusively by reference to the 2017 scheme but that is wrong as well because it assumes that the only damage in respect of which the Policy responds is damage in the sense Mr Coulson has defined it, which for the reasons set out above is significantly too reductive a definition. I am satisfied that of the various schemes discussed in the evidence the 2018-9 scheme most closely approximates to the work necessary in order to rectify the damage suffered down to the end of the Period of Insurance because it is that scheme which the defendants' advisors have devised that addresses the damage that remained after the extensive drying out work in 2018-9.

184. However, that is only the start of the quantification exercise since it is necessary to identify and include in the assessment the reasonable and recoverable cost of all work in connection with the repair and replacement work that comes within the scope of the indemnity. The indemnity is for the "*full cost"* of repairing or replacing the damaged property. On any view that includes the full cost of the temporary work necessary in order to facilitate the repair or replacement work. The biggest element of these temporary works relates to the design, construction and removal of the temporary roof and the installation and removal of crash decks underneath the roof inside the building. In addition, there are issues as to whether the cost of decanting Sky employees during the works and/or the additional cost of working outside normal working hours is recoverable as part of the "*full cost"* of repairing the damaged roof.

185. The one thing that all parties are agreed about is that a temporary roof will be required whatever scheme is adopted, as will crash decks. However, the claimants maintain

that the defendants' proposals concerning the temporary roof and crash decks are neither reasonable or practicable and may even be positively unsafe. In my judgment this issue needs resolving at this stage and the evidence to enable me to do so was deployed at the trial.

186. Given the conclusions I reach below, I intend to hand down this judgment and then invite further submissions as to the quantum consequences that ought to follow from the conclusions that I have reached. I will then if necessary deliver a further judgment dealing with quantification taking account of any further submissions provided although I hope that on the basis of the findings set out below, the parties will now be able to agree the financial effect of the conclusions that I have reached. I regret having to adopt this course but I see no other fair alternative in the circumstances. In reaching that conclusion I record Mr Rigney KC's submission in the course of his closing submissions that if I did not accept the 2017 scheme, then on the findings I have made the only available finding is that Sky (and Mace) have not proved the sum to which it or they are entitled under the Policy and that the claims should fail in their entirety. Whilst that is a possible outcome my provisional view is that it is an improbable one. It is counter intuitive that an insured who has proved some damage to which an insurance policy responds should find itself without any remedy at all.

Temporary Roof

187. As I have said, the common feature of all the schemes is that a temporary roof will be required while whatever works of replacement or repair are being carried out and would have been necessary if notionally the 2018-9 scheme had been carried out. There is however a very significant difference between the defendants on the one hand and the claimants on the other as to what constitutes a reasonable temporary roof solution. It goes without saying that there is a significant cost difference between the proposed solutions. Broadly the differences between on the one hand the claimants' solutions and that proposed by Mr Howie on behalf of the defendants is that Mr Howie's solution transmits the loads imposed by the temporary roof onto the cassettes themselves whereas the claimants' solutions bypass the cassettes by transmitting the loads either to the permanent existing vertical structure of the building or to scaffolding located externally to the building. I accept the claimants' submission that Mr Howie's solution is problematic and should be rejected as a reasonable solution. I reach that conclusion for the following reasons.

188. Whether placing loads directly onto cassettes provides a safe solution depends amongst other things on the structural soundness of the cassette concerned. Mr Jessep accepted there was a legitimate concern about bearing down onto wood which was decayed or partly decayed and that if Mr Howie's solution was adopted then an "... *intrusive survey would be required of the locations of the proposed temporary roof and local modifications might be required ...*" – see Transcript, Day 11, page 123, lines 20-25. He also accepted that at some stage the entirety of the roof would have a temporary roof on it and that therefore an intrusive survey would have to be undertaken of the whole roof – see Transcript, Day 11, page 12, lines 14-20. As it was put to him and he accepted:

> "Q. But the point is that the investigative survey, which needs to be an intrusive survey, you say, needs to be a survey of every

single cassette on the roof, doesn't it?

A. Yes, it would have to be."

189. As Mr Jessep also accepted, this would itself require either temporary weatherproofing or "… *you would only be able to do it on the days when it was dry* …" Patch repair would then have to be carried out pending the arrival of the temporary roof and the completion of the permanent repairs. Mr Howie attempted to address this point in his second report, where at paragraph 2.11 and in answer expressly to the point I am now considering he stated *"the ARC Structures temporary roof column supports do not encroach in any areas that would be subject to deterioration."*. The difficulty about this is that there are and would have been in 2017 or 2018, a large number of cassettes where the internal condition had not been investigated and therefore was unknown. His evidence on this point was tested in cross examination where the following answers emerged. Having been invited to comment on the part of his second report quoted above, Mr Howie then gave an answer that runs to close to a page and half of the transcript culminating with: "… *I'm fairly comfortable that we have covered all eventualities that could possibly compromise the fixing of the temporary roof*." There then followed a failure by Mr Howie to engage with the questions he was being asked on the point I am now considering. It lasted for some time but the following exchange indicates the nature of the problem:

> "Q. It's a very simple question. It should be capable of a yes or no answer. Does your scheme include provision for a survey of the roof to check the condition of the timber where your temporary roof is going to bear?
>
> A. No, because I believe others will be doing that.
>
> Q. What others do you believe will be doing that?
>
> A. Well, Mace would like to remove the entire Derbigum and OSB from the entire roof and it would become obvious where there is damage.
>
> Q. What's that got to do with your scheme?
>
> A. Well, I've already stated that I don't believe there is any damage where my temporary structure or the insurers' temporary structure is going to bear.
>
> Q. And because of that belief, you make no provision for any survey to check the condition of the timber where your roof will bear?
>
> A. In hindsight, I believe the point you make is very valid and indeed perhaps it should be tested. It's a very simple test. It requires putting a screw through the timber to see that the timber is compressibly and structurally sound because we are using it in bearing. It's something we could include.

> Q. It is a necessary element of a sensible scheme that a full survey is carried out to check that the locations where your temporary roof will be bearing are safe to bear on?"

Following an interruption from Mr Rigney KC and a clarification from me, Mr Howie then added:

> "… the 2017, 2018 remediation schemes proved that there was no damage within the zone of the temporary roof that's proposed."

However, that is wrong. It did not do any such thing for the reason I have given – there had been no comprehensive survey leading to either scheme. As Sky puts it in its closing submissions and I accept:

> "His approach is misconceived, as it amounts to nothing more than an assertion that none of his temporary roof feet need to bear on areas identified as red. It ignores the fact that all areas coloured white have not been inspected – i.e. he has considered only known areas of damage, and ignored the unknown areas of damage.
>
> 181. To paraphrase Donald Rumsfeld, there are known unknowns; (i.e. we know that most of the roof has not yet been surveyed), and there are unknown unknowns (i.e. we also know that there is likely to be extensive damage in those areas that have not been surveyed (and are therefore uncoloured on Mr Smith's RAG diagram …, to which Mr Howie expressly referred)."

190. These exchanges and the way this point developed undermined my confidence in the veracity of Mr Howie's evidence. In particular it leads me to conclude that it would be entirely unreasonable to approach the location of a temporary roof in the manner he describes. I do not accept Sky's submission that Mr Rigney KC was wrong to intervene in the course of this exchange in order to make clear that the questions should be premised on either what was required currently or what was required to carry the 2017 or 2018-9 schemes into effect at or about the end of the Period of Insurance. If the evidence established that then a temporary roof could be propped safely and practically in the manner described by Mr Howie in 2018-9 that would be different but it doesn't for the reasons identified in Sky submission set out above. Neither the 2017 or the 2018-9 scheme provide for the sort of survey that Mr Jessep accepted would be necessary and therefore the cost and time that would be involved in carrying out such a survey has not been included within the costs for either such scheme.

191. Similar considerations applied to the lifting of the temporary roof structure to the roof of Sky Central. I do not want to lengthen this judgment unnecessarily. However, in summary, Mr Howie's scheme required that the temporary roof structure he advocated for would be pre-assembled at ground level and then hoisted to the roof by crane. Mr Rushton (Mace's structural engineer expert) commented on this in his addendum report as follows:

> "There are three tent types in the Insurers' scheme: a duo pitch, a lean-to and an arch. They are framed using light box or circular sections and braced with 6mm diameter wires. There is not an obvious group of these members that could be defined as a truss, or feasibly be connected at ground level and hoisted.
>
> 3.4 Pre-assembly at ground level and hoisting into position requires a lifting beam with multiple connections to the "truss/frame" to ensure it does not buckle during the lifting operation. The truss/frame would need to be held by the crane until members such as ridge, purlins and eaves beams were connected out of plane for stability. This time would need to be allowed for in the works programme."

Mr Howie had said in paragraph 4.4.2(b) of his initial report that this scheme had been developed to "*Stages 3-4 with … Temporary Roofing fabrication drawings having been completed* …". Stage 3 is an advanced stage of design such as the Sky and Mace schemes. When Mr Howie was cross examined about the point made by Mr Rushton it elicited the following answers:

> "Q … Where do you set out, in your reports, any analysis of what part of the temporary roof frame can be safely lifted in one piece?
>
> A. I have to rely on the ARC Structures method statement, which is in the latter part of my (inaudible) report, supplementary report.
>
> Q. Are you saying that the ARC Structures method statement contains an analysis of a part that can be safely lifted in one piece?
>
> A. It describes the structural frames being fabricated on the ground and lifted up. The detail of that would be something that would come later in a series of RAMs, method statements, risk assessments. We are not even at Stage 3 yet with this scheme. There is still more work to do as I believe all parties agree." {Emphasis supplied]

This inconsistency further undermines my confidence in Mr Howie's evidence. The reality is that I cannot safely conclude that the temporary roof solution for which Mr Howie contends could safely and practically be delivered to the roof of Sky Central in the manner he contends or at any rate could be at the price and with the speed that is implicit in his solution. It is also questionable how many times the temporary roof would have to be moved given that the structure is a ridge tent shape with unsafe working at low level of the roof plane.

192. Pulling all this together, I am unpersuaded that Mr Howie's temporary roof solution would provide a reasonably safe and practical solution for the temporary roofing that would be required had the 2017 or the 2018-9 schemes been carried out either at or about the end of the Period of Insurance or otherwise. It provides limited headroom

and poor access, even for the purpose of carrying out the 2018-9 works, it does not address satisfactorily the distribution and handling of materials issues. Mr Strutt's assessment was that the materials to be used notionally in carrying into effect the 2018-9 scheme are too heavy to enable them to be handled manually. Heavy lifting will have to be done prior to installation of the roof or with it being removed to allow access for such materials. This creates the risk of work being exposed unless such operations are confined to periods of fine weather. This will give rise to an obvious risk of uneconomic working that will increase cost and the time needed to complete the work.

193. It is next necessary to reach a conclusion as to which of the Sky or Mace temporary roof solutions represents the most reasonable solution to the problem. It is true to say that each is premised on the work actually required now being carried out and thus is much more easily justified by reference to either the Sky or Mace scheme than the notional execution of the more limited 2018-9 Scheme. The difficulty about that however is that having rejected as a reasonable solution Mr Howie's temporary roof scheme, there are only two alternatives left open - the Mace proposal or the Sky proposal.

194. The Mace scheme is described by Mr Strutt in his report in these terms:

> "The temporary works are a fully enclosed roof working area, using a temporary roof spanning from the existing – but newly reinforced – cores, to a full hight external scaffold independent of the building structure. The temporary roof incorporates a lifting facility, removing the need to open the temporary roof to allow cranes to lift components to roof level."

195. Sky's temporary roof solution was initially an inflatable structure on rails that transmitted the loadings caused by the temporary structure to the steel frame of Sky Central. All lifting operations would have to be performed by crane or other external vertical transportation system with movements of the temporary roof as necessary to accommodate the delivery or removal of material to and from the roof. In the face of sustained criticism about the vulnerability of the proposed inflatable structure, Sky altered its temporary roof solution. Essentially the revised scheme involves providing a profiled metal roof with scaffold sheeting sides supported on aluminium frames with loads transmitted as before.

196. Mr Strutt says of the Mace scheme that it adopts a "... *minimum risk/ maximum production approach* …" that permits lifting and distribution of materials under a complete fully enclosed temporary roof. He says however, in my view correctly, that its approach is both complex and more costly but eliminates to the fullest extent possible the risk of water penetration into the building during the works (or in relation to the 2018-9 scheme notional works) together with "... *robust protection to the timber cassettes before they are repaired and fully re-sealed"*. This is clearly a major concern and would have been a major concern in 2018 had the notional scheme been carried into effect at that stage. In assessing which of the two alternative temporary roof schemes is the more reasonable it is necessary to balance the need to reduce cost with the need to ensure that the notional repair and replacement work is done to a standard that in the case of the notional 2018-9 scheme eliminates fully the notional

risk that the damage being hypothetically remediated is repeated as a result of ingress of rainwater during the notional remedial works.

197. In relation to the Sky scheme, its principal disadvantage was said to be that the originally proposed inflatable structure would require to be deflated when the wind load exceeds 38 mph. That has been addressed by the revisions to the scheme at a minimal increase in cost of about £257,000. No specific criticism of this as a solution is advanced to this variation and I am satisfied that a reasonable temporary roof solution necessary for carrying out the 2018-9 scheme is the revised structure proposed by Sky and that quantum should be calculated on that basis.

Crash Decks

198. The crash desks are temporary structures located underneath the cassettes inside the building. The purpose of these structures is to prevent injury or damage, to provide temporary support for services attached to the roof cassettes while repairs are being carried out and to facilitate work to the cassettes above the platforms.

199. In summary the Mace scheme provides for crash decking using internal scaffolding supported primarily from the second floor level to form a crash deck below gutter areas where remedial works are to be carried out and using temporary scaffolding towers within the atrium areas, supported primarily from the ground floor to form a crash deck for remedial works to roof cassettes in these areas. No one suggests that this scheme suffers from any technical defects.

200. Mr Howie's scheme is designed to remove the need for (and, therefore the cost of) internal scaffolding to support crash decks by hanging the decks he considers appropriate from the Glulam beams that form part of the roof structure of the building. In order to ensure that weight loads can be borne by the roof it is necessary that the decks be light weight and it is necessary to reduce other loads on the roof by removing rooflights and solar panels. Mr Howie's proposal was not tested with mock ups until just before the trial and he did not ask either Mr Strutt or Mr Baillie to attend or inspect the mock ups and he did not video record the construction or erecting process.

201. In the result the reasonableness and practicability of Mr Howie's scheme could not be tested effectively at the trial. The explanation for all this was entirely unsatisfactory. Mr Howie acknowledged in the course of cross examination that the mock up exercise he carried out was late in the day, which he explained as being because:

> "… The introduction of the winched beam arrangement was a late addition due to Mr Strutt and Mr Baillie's commentary, which I took on board, and we revisited. So that had to be designed and manufactured, and it was a very busy week. It was as early as we could do it, sadly."

He then acknowledged that he had not asked Mr Strutt or Mr Baillie to attend and when asked why not he replied:

> " … I assumed they wouldn't be interested.

> Q. You assumed they wouldn't be interested?
>
> A. It didn't cross my mind."

Regrettably I am not able to accept that answer as either full or frank. Having acknowledged that the changes being made were to address criticisms made by Mr Strutt and Mr Baillie, it simply makes no sense and is inherently improbable that it would not cross Mr Howie's mind that they would be interested in his answer to their criticisms. That becomes all the more obvious when it is remembered that these issues arose in a hotly contested claim where Mr Howie's solutions were coming under very close scrutiny and the trial was due to start less than 10 days later. Mr Howie is an experienced construction professional and his answers to these questions did him no credit. His responses further undermine my confidence in his evidence.

202. There are a number of fundamental defects with Mr Howie's scheme, aside from the fact that the mock up did not accurately reflect the actual conditions to be found in the building. It was not at the same height as would be involved in actuality (it was 3 m from the ground whereas the distance from the ground to the underside of the cassettes is about 18 m), the material to which attachments had been made was not glulam but as Mr Howie accepted in cross examination marine plywood reinforced by further timber structures that are not visible and therefore could not be challenged effectively as not accurately representing the conditions that existed in the building and he accepted that it would take two operatives to install it.

203. This leads to the fundamental weakness in Mr Howie's solution. It depends on being installed by the two operatives on a mobile elevating work platform ("MEWP"). However, that depends on a MEWP of the relevant capacity being able to operate safely within Sky Central and the operatives being able to move from the MEWP to the crash deck in order to complete installation.

204. In relation to the movement of the operatives, Mr Howie accepted that to attempt to move from the MEWP to the platform would be "*... a sackable offence ...*" because it is manifestly unsafe, particularly if attempted 18 m above the ground. More fundamentally, the MEWP that Mr Howie used for his mock up was (as it had to be) a two person MEWP. It weighed 1,456Kg and applied a floor loading pressure of 1,386 Kg/square metre. This was in excess of the loading permitted for the platform flooring installed in the building. It is not suggested that this flooring would not have been present when the notional 2018-9 works were carried out. No explanation as to how this issue is to be avoided was offered. Mr Howie maintained this had been checked as feasible by Mr Jessep but if that is so it does not appear in Mr Jessep's reports.

205. Aside from these points, there are areas within the building which cannot be accessed in this way. Mr Howie's response in the face of photographs and plans that made this point good was:

> "Q. Are you suggesting a MEWP could be used to install your style of crash decks in this location?
>
> A. I'm not saying anything. It could be either by MEWP, scaffold tower or scaffolding. One of the three would do the job.

> Q. Yes, but what I'm putting to you is that here, because you need to bridge over this fixed furniture, you need to have fixed scaffold. You can't use a MEWP?
>
> A. I don't know without surveying it myself. MEWPs have telescopic cradles that may be able to reach all of that from both sides. Either way, Mace got up there, they installed that blue cassette and if they can get up there, anybody else can get up there.
>
> Q. The point is how. Mace used a fixed scaffold, as described here.
>
> A. Fine. So at least we know it can be done with scaffolding. It could possibly be done with a MEWP or with a tower, if there is sufficient room and it's surveyed properly."

These answers were wholly unsatisfactory in my judgment and show a lack of attention to detail of the issues that matter if I am to be persuaded that Mr Howie's scheme should be accepted as a suitable proxy for the real costs that would have been incurred if the 2018-9 scheme had been carried into effect. In the end Mr Howie was driven to accept that MEWPs could not be used in at least parts of the building – see Transcript, Day 13, page 100 *passim*. He then claimed that he had always proposed installation using a mixture of MEWPs, mobile scaffold towers or scaffolding:

> Q: … How would MEWPs install crash decks where there are fixtures in the way?
>
> A. But I've said MEWPs, towers or scaffolding.
>
> Q. So you accept that it can't all be done with MEWPs.
>
> A. That's why I said scaffolding and towers as well.

Later in his cross examination this exchange took place:

> "Q. Are you suggesting that your crash decks in these locations could be installed using MEWPs?
>
> A. No, I'm suggesting it can be installed, as I've said in my report, with either a MEWP, a scaffold tower or a scaffolding."

However, he had said no such thing in his report. What he had said was:

> "The units can be installed by a small battery powered scissor lift which can be raised to the 2nd Floor by the Service lifts or by larger 22.5 m reach cherry pickers from the Ground Floor to those cassettes within the Atrium that are not accessible from the 2nd Floor."

These exchanges further undermine my confidence in Mr Howie's evidence, as evidence that I can safely rely on. The impression I was left with was that at this point

he was driven to say what he did because it was apparent to him that the solution that he had been advocating was impractical, ill thought out and the result of either a want of attention to detail or a willingness to advocate a scheme that he knew would never have been carried into effect for the purpose of attempting to persuade me that the notional work necessary could be performed more cheaply than was reasonable or practical. I have concluded that in relation to the issue I am now considering, I cannot accept Mr Howie's evidence and I reject it.

206. Aside from these points, there are other substantive problems posed by Mr Howie's solution. These have all been identified by Sky and Mace in their closing submissions and it is not necessary to set them out at length. They include that there is insufficient headroom to stand up when working on the platform and no method for evacuating operatives in the event of an emergency. More fundamentally, Mr Howie's deck solution cannot be used for propping damaged cassettes. This is necessary in order to protect operatives working from above on damaged cassettes. This led to the following exchange during Mr Howie's cross examination:

> "Q. We will come on to explore that. The third reason why the Mace mock-ups are not directly applicable is that there are very different approaches to temporary propping, aren't there?
>
> A. You are talking about the liner sheet, I believe.
>
> Q. I'm talking about the temporary props to support the cassettes while they are being worked on, that are part and parcel of the Mace scheme, are very different from what you propose in your scheme?
>
> A. Again that's not a simple question. From what I believe, Mace are supporting the liner sheet below --which is the bottom portion of the cassette, and are not intending to remove that, and they've devised a cushioned lattice that they are propping underneath from their crash deck, below …
>
> Q. But of course, if you are going to carry out remedial works on these cassettes, you will need not only to walk on top of them, you will have to have people actively working above them, won't you?
>
> A. No, you won't. I don't agree with that. The works that are carried out are to remove the damaged timber, the OSB, the joists, the 100x100s, the 160s and the 280 by 60 joists that are in distress and replace them with new. So therefore you would not be standing on something that, one, is hazardous and, secondly, you are going to remove in any event. The operatives, as my first report, will be wearing harnesses, fall arrest systems, and they will have a crash deck underneath the working space, so they will be able to conduct the works safely and in accordance with a method statement that's yet to be drafted in detail, to carry out that work."

However, Mr Jessep had accepted that operatives would have to work on the top of damaged cassettes when dismantling them. As I explained at the outset of this judgment each cassette is 3m wide. A human being cannot reach 3m. I find that the remedial works cannot be completed without putting additional weight or load on the damaged cassettes. This is common sense and is obvious. It follows in my view that temporary propping of the cassettes while they are being remediated is reasonably necessary for the safe and efficient conduct of remedial work to individual cassettes. Mr Jessep accepted that his remedial work would require temporary propping of the underside of cassettes being worked on. He was reluctant to concede that could not be done using the crash decks designed by Mr Howie maintaining that this issue was to be taken care of using a "Unistrut". However, it was not the purpose of this element to support the weight of workers, tools and materials on defective cassettes.

207. Where does this leave me? Mr Reed KC submitted in his closing submissions that *"(t)he Court is placed in the invidious position of having to consider a core aspect of the temporary works with very little to go on except Mr Howie's best intentions. This is wholly unacceptable*." In my judgment the Sky scheme does not assist for the purpose of resolving the issue I am now considering because as I have said it involves replacing the entire roof and replacing it with an entirely new structure.

208. In the circumstances the only safe conclusion to reach is that in principle in order to carry out the remedial works necessary in respect of the damage likely to have been suffered down to the end of the Period of Insurance it would be necessary to construct temporary crash decks using the methodology adopted by Mace but with its extensiveness adjusted to take account at least potentially of the fact that less work would be required to carry out the defendants' notional scheme than would be required to carry out the Mace scheme, because the Mace scheme is concerned with rectifying damage as it now is and is not confined to rectifying the damage (as defined by the Policy) existing at the end of the Period of Insurance.

Decanting and Out of Hours Working Costs

209. The defendants submit that the Policy is a property insurance policy and therefore the cost of decanting and moving Sky employees to temporary accommodation or different buildings on the Sky campus while the notional work was being carried out is irrecoverable as is the additional cost of working out of ordinary business hours, which it is submitted is consequential loss that has been excluded from the scope of cover. Ultimately this is a question of construction.

210. The chronological events that impact on this issue are those noted already. The second drying out works took place between August 2015 and April 2016. Sky occupied Sky Central in August 2016 – see paragraph 14 of Ms Foxlee's witness statement - and the Period of Insurance ended on 15 July 2017. On this chronology it is impossible to see how the remedial work that remained necessary to repair the damage that had occurred down to when it was arrested by the second drying out works could have been completed between April and August 2016. It follows that notionally the work of repair and replacement that the defendants are responsible for could not have been commenced or at any rate the vast majority of those works could not have been commenced or completed before the building was occupied. I accept therefore the

premise that the defendants' notional work would have been carried out at a time when the building was occupied by Sky's staff.

211. I reject the notion that it would have been practical to have carried out the remedial work identified by the defendants during working hours for all the reasons identified by Sky. That the noise and other adverse environmental effects caused by the work being done to the roof was likely to render work in at least parts of the building at least impractical is apparent from the effect of other less intrusive roof works during the life of the building. As Mr Howie accepted, to minimise disruption by noise vibration and dust was an important consideration – see Transcript. Day 13. page 101, lines 3-5. Having drawn Mr Howie's attention to the fact that for that reason he had specified that all internal work was to be done outside normal working hours, he was then asked about the external work, when the following exchange took place:

> "Q: And you propose that all external and roof works be carried out in normal working hours.
>
> A. That's subject to test, as we agreed in the joint experts' statement. It was all subject to being tested and proven that it didn't disrupt Sky. That's the decision of the three experts."

He then said however that the purpose of this testing was for the purpose of demonstrating to Sky that they can work underneath the crash deck without having to worry about noise. I do not accept the premise of this observation – it is not for Mr Howie to demonstrate anything on this issue to Sky. In my judgment Sky are correct when they submit that ultimately that would be a decision for its management not those carrying out the remedial work.

212. At one point when being pressed on this issue, Mr Howie observed that there had been significant work on the roof carried out previously. This led to him being asked if he was arguing that this work had been carried out without complaint. He maintained that he was not aware of complaints. However, the evidence is of extensive complaints by Sky employees attempting to work while work was being carried out on the roof. It is contained in the evidence of Mr Anthony, the Programme Head within Sky's property department. The point he makes in his statement (aside from pointing out that by 2023 there will be three studios in Sky central not one as is the position now and was the position down to this year) is that the work of creating the new studios would be carried on " ... *outside of normal working hours, minimising disruption to colleague experience and ensuring the visible impact of the works is reduced where possible with suitable and appropriate branding. Critical infrastructure services will be required to be maintained at all times* …" and that a similar approach would be required in respect of roof remediation work. He says and I accept that normal working hours within Sky central are from 0900 to 1730 and he adds (and I accept) that:

> "All construction works to Sky Central are carried out outside of normal working hours. In my experience it is completely normal, in the context of office space, that any construction works, which inevitably generate noise and cause disruption, would not be carried out during normal working hours … [because] … we have health and safety obligations to both

> colleagues and operatives, and further we need to maintain BAU[14] within the building as a live office and broadcasting space, which is not consistent with the noise, disruption, or shutting down of services which are an unavoidable consequence of construction work."

Specifically in relation to past roof remediation work he says and again I accept that:

> "Over the years of dealing with the roof remediation, we have received multiple complaints from Sky colleagues. As part of Mott MacDonald carrying out opening-up works to investigate the condition of the roof, which meant using hand tools to cut holes into the upper surface of the roof of no more than 150mm by 150mm, we received a number of emails from Sky colleagues trying to work underneath complaining about the noise and the reverberation, and therefore all of the survey works had to be completed outside of normal working hours.
>
> 40. Even leaving to one side the roof remediation works, most other activities such as maintenance, cleaning or desk moves, are carried out outside of normal working hours, and this usual in my experience. Separately to BAU activities, it is common for Sky to receive important visitors or be filming within the building for example from the mezzanine floors above Sky Street. On these occasions the General Managers will send notices out to say that we are unable to carry out even fairly minor maintenance or cleaning activities in the area, to avoid disruption."

213. This leads me to conclude that Sky would have insisted that the work to the permanent structure carried on externally would be carried on outside business hours.

214. Decanting is used in the sense of accommodating part of the staff elsewhere while their normal workspace is physically unavailable by reason of the scaffolding required to accommodate the crash decking. Whilst this issue may not have arisen (or arisen to the same extent) had I been persuaded that Mr Howie's suspended crash deck solution was feasible, it arises once it is accepted that the Mace crash deck scheme (reduced if possible to accommodate the reduced scope of the 2018-9 scheme works) is the only realistic internal crash deck solution for the work that notionally would have been carried out under the 2018-9 scheme.

215. In order to accommodate the Mace scheme a carefully structured plan had been arrived at which involved accommodating some staff in other buildings on the Sky campus. It is possible that the amount of "swing space" required would be less in respect of the 2018-9 scheme than would be required for the Mace scheme and therefore the costs would be lower. However, on the defendants' case this cost is not part of the costs of repairing the damage to the Permanent Works but is a consequential loss to which the Policy does not respond. Before turning to the construction issues that arise, I should say that it was in my judgment reasonably

[14] Business As Usual

foreseeable that the Policy would be required to respond to damage that had to be rectified after Practical Completion and therefore that repair works would have to be carried out at a time when the building had been occupied. This follows from the fact that the Period of Insurance consisted of an Initial Period which covered "*(t)he whole period of the Project .... Including testing and commissioning ...*" and then for a "*Maintenance Period*" of "*… 12 months commencing from the date of expiry of the Initial Period of Insurance.*"

216. The defendants submit that there is no express provision which extends the scope of the Policy to any damage other than that of repairing reinstating or replacing the or any part of the Property Insured that is damaged. It is submitted that the cost of carrying out the necessary work out of hours and the incidental cost of decanting Sky staff in the way described above is consequential loss, the recovery of which is excluded by clause 8 within the policy exclusions, which expressly excludes the recovery of "*... any consequential loss whatsoever ...*" The defendants maintain that Memorandum 16 within the Policy is significant in relation to the construction issue I am now considering, even though that provision is not relied on by Sky and the defendants do not contend that they are entitled to. It provides:

> "Extra Expense
>
> The Insurers shall indemnify the Insured for costs and expenses (Extra Expense) incurred by the Insured, if at any time during the Period of Insurance any, or all the Property Insured, suffers physical loss or damage indemnifiable under this Section of the Contract of Insurance,
>
> Extra Expense includes:
>
> (i) the reasonable extra expenses, incurred temporarily to continue the Project as nearly normal as practicable;
>
> (ii) the reasonable extra costs of temporarily using property or facilities of the Insured or others. Any value remaining in property obtained in connection with (i) or (ii), above, shall be taken into consideration in the determination of the physical loss or damage indemnifiable hereunder.
>
> In no event shall Extra Expense include:
>
> (i) loss or expenses indemnifiable elsewhere in this Contract of Insurance, (ii) costs which normally would have been incurred in completing the Project, during the same period, had no physical loss or damage indemnifiable hereunder occurred,
>
> (iii) the cost of permanent repair or replacement of property that has been physically lost or damaged.
>
> The Insured agrees to use any suitable property, or service owned or controlled by the Insured, or reasonably obtainable

> from other sources, to reduce the Extra Expense incurred under this Section.
>
> The indemnity provided by this Memorandum shall not exceed the Sub Limit stated in the Risk Details for this item."

This provision applies to expense arising during the Period of Insurance and the sub-limit is fixed at £2.5m.

217. The defendants submit that the point that emerges from Memorandum 16 is that where the parties intended to make provision for losses suffered by Sky that were consequential on loss and damage in respect of which it was otherwise entitled to an indemnity under the Policy then they made express provision for it. The combination of the exclusion of consequential loss and the limited effect of the extra expense provision is submitted to lead to the conclusion that the decant or out of business hours element of Sky's claim does not fall within the scope of cover provided by the Policy. It is submitted that these conclusions derive further support from Memorandum 2, which extends cover to include construction and legal professional fees "*... necessarily incurred in the repair ... or replacement of such Property Insured consequential upon indemnifiable physical loss or damage ...*".

218. In my judgment this construction must be rejected applying the principles of construction referred to earlier in this judgment. My reasons for reaching that conclusion are as follows. Firstly, the Policy responds to the full cost of remediating the damage to which the Policy responds. Secondly it was or ought reasonably to have been within the contemplation of the parties as a fact or circumstance known or assumed by the parties at the time that the document was executed that the Policy might be required to respond in relation to remediation taking place after Sky had occupied the building. It follows as a matter of commercial common sense that the parties would have considered that the concept of the "*full cost"* of remediating damage to which the Policy responded included the cost of accommodating Sky's business activities while such work was being carried out and moving its staff in order to accommodate the carrying out of the works where that was necessary. Thirdly neither the decant or out of ordinary business hours working elements of Sky's claim is consequential loss. Consequential loss in the context of a policy, such as the Policy, is concerned with such claims as for loss of income or other business interruption claims or the cost of renting alternative accommodation while remedial work is being carried out. It is not the cost of moving staff around Sky Central while their normal workspace is physically unavailable by reason of the scaffolding required to accommodate the crash decking or moving staff from Sky Central to another building on the Sky campus for similar reasons. Had the claim been for the cost of using a building that might otherwise have generated income then that would have been consequential loss other than to the extent that it came within the scope of the phrase "*… reasonable extra costs of temporarily using property or facilities of the Insured or others…*" in Memorandum 16 quoted above. This analysis applies *a fortiori* to the extra cost of working out of hours.

219. I accept the factual and expert evidence adduced by the claimants that in principle decanting staff and/or out of hours working is reasonable and necessary "*... having regard to the physical extent of the works, including scaffolding inside the building,*

as well as the health and safety of the occupants and Sky's television and commercial operations in the building …" and is recoverable on a proper construction of the Policy as part of the full cost of carrying out the notional remedial scheme once it is accepted that it was reasonably foreseeable at the time the Policy and building contract were entered into that remedial work might have to be carried out after the building had been occupied.

Conclusions on Quantum

220. In my judgment in principle Sky is entitled to recover from the defendants the correctly quantified costs of carrying out the 2018-9 scheme but incorporating Sky's reasonable decant costs, the costs of working out of business hours, with the revised temporary roof that Sky contends for and the crash deck solution for which Mace contended with such alterations in each case as are appropriate because the scope of the 2018-9 works are less wide ranging than the costs of the Mace or Sky schemes. The parties are directed to agree the sum which gives effect to these conclusions or identify what further findings need to be made in order to conclude quantification. If agreement cannot be reached, then there will have to be a further hearing and/or further submissions that address these issues followed by a further judgment determining them.

221. In reaching that conclusion, I acknowledge Sky's submission that the 2018-9 scheme does not "... *address the actual assured damage ...*" as it now is. However, that is not a legitimate point. It was for Sky to prove what damage had been suffered down to the end of the Period of Insurance but it has not attempted to do so. The only attempt to do so was by the defendants first by reference to the 2017 scheme and then the 2018-9 scheme. It may well be that there is additional damage to which the Policy responds on its proper construction during the Period of Insurance but it is not open to Sky or Mace to complain about that in the absence of a coherent evidential case that addresses that issue. Saying that in 2023 the roof is so extensively damaged as to require replacement does not come close to showing what damage had been suffered down to the end of the Period of Insurance and neither attempted to argue an alternative secondary case that addressed these points.

222. Although it was submitted by Sky that the schemes could not "*...safely be mixed and matched ...*" I do not see why that is so, at any rate in the way I have done. This submission ignores the fact that the defendants' scheme is simply a method of attempting to quantify its liability under the Policy when properly construed. Giving effect to the 2018-9 scheme but with temporary roofing and crash decking taken respectively from the Sky and Mace schemes does not compromise but enhances safety on the assumption the scheme had been carried into effect. Neither of these changes increases the load on the roof but on the contrary reduces it. The Sky temporary roof is heavier than that advocated for by the defendants but its loads are transmitted through the vertical planes of the building. Similar considerations apply to the Mace decking, where the loads are transmitted via scaffolding. Neither increase materially the load on the roof.

223. Likewise it is not open to Sky and Mace to complain that Mr Jessep does not have the experience to design a remedial scheme for an occupied building "… *including television studios …*" Aside from the fact that Sky Central contains (currently) only

one studio (in the Atrium) and is otherwise a large, albeit sophisticated flagship, office building, the point remains that it was open to Mace and Sky to have engaged with the defendants' case in the alternative to their primary cases (or apply for directions postponing quantification until all liability and causation issues had been resolved) but they chose not to do so. They can hardly complain therefore when having reached the conclusions I have concerning the true construction of the Policy, I have at least started with the defendants' attempt to address the issue, given that neither of the other parties have attempted to grapple with the consequences that follow from the defendants being largely right in their submission that their exposure is limited to damage occurring during the Period of Insurance.

224. Sky and Mace complain that the 2018-9 scheme is "...*entirely theoretical …"*. It is but that was all but inevitable once it is accepted that the roof has suffered further severe deterioration after the end of the Period of Insurance and after the drying out works that it is now accepted would have arrested the deterioration resulting from water ingress occurring down to the end of the Policy of Insurance. In retrospect at least, Sky or Sky and Mace together with the defendants should have arranged a comprehensive inspection of the whole of the roof to coincide with the end of the Period of Insurance. Had that been done most if not all of the enormous evidential difficulty and uncertainty that permeates this case would have been avoided.

225. It may well be as Mr Rigney KC submitted at one point that this litigation has been driven by a hidden dispute between two sections of the London Insurance market (the underwriters of Mace's PI policy on the one side and the defendants on the other) and if that is right, it may explain why both Sky and Mace have been so keen to advance a claim for remediation of the entire roof in its current state and not to countenance the possibility that the defendants might be correct in their construction of the Policy. As things stand the only issue that arises is what contribution the defendants can properly be required to pay towards what in fact will be built, which on the evidence available will probably be the Sky scheme. However, there is no proper basis on which I could conclude that the defendants were responsible for the cost of that scheme in its entirety either directly or on the basis that it is likely to be cheaper, more effective and completed more quickly than the Mace scheme.

226. So far as Mace is concerned, it has made no attempt to identify what sum was recoverable by it or on its behalf down to the date of Practical Completion, nor any real world reason why it should have sued separately from Sky for what in substance is the (or a sub set of the) same monetary remedy that Sky will recover and for the declarations it has sought. That leaves only its claim for declaratory relief. Whether that justifies the commencement of its claim in addition to that of Sky is an issue I leave to one side at this stage.