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Case No: HP-2018-000003

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
INTELLECTUAL PROPERTY LIST (ChD)
PATENTS COURT

Rolls Building
Fetter Lane
London, EC4A 1NL

27 September 2022

Before :

MISS CHARLOTTE MAY KC
(Sitting as a Deputy High Court Judge)

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Between :

GEOFABRICS LIMITED	**Claimant**
- and -	
FIBERWEB GEOSYNTHETICS LIMITED	**Defendant**

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Mr Michael Hicks (instructed by **Womble Bond Dickinson (UK) LLP**) for the **Claimant**
Dr Geoffrey Pritchard, Mr Charles Brabin and Ms Alice Hart (instructed by **Withers & Rogers LLP**) for the **Defendant**

Hearing dates: 10-13 May 2022, 18-19 May 2022

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JUDGMENT

I direct that no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

This judgment was handed down by the judge remotely by circulation to the parties' representatives by e-mail and release to The National Archives. The date and time for hand-down is deemed to be 10.30am on 27 September 2022.

Miss Charlotte May KC (sitting as a Deputy High Court Judge):

Introduction

1. This is the damages inquiry following the decision of David Stone (sitting as a Deputy High Court Judge) dated 5th March 2020 (*Geofabrics Ltd v Fiberweb Geosynthetics Ltd* [2020] EWHC 444 (Pat)) in which he found the Defendant liable for infringement of European Patent (UK) EP 2 430 238. The Defendant appealed that finding, but Mr Stone's decision was upheld by the Court of Appeal on 11 June 2021 (*Geofabrics Ltd v Fiberweb Geosynthetics Ltd* [2021] EWCA Civ 854).

2. At the inquiry, the Claimant was represented by Mr Michael Hicks and the Defendant was represented by Dr Geoffrey Pritchard, Mr Charles Brabin and Ms Alice Hart. Dr Pritchard undertook the bulk of the oral advocacy for the Defendant, but each of Mr Brabin and Ms Hart addressed me on a discrete point of argument in closing. Parties are encouraged to look for opportunities to enable junior counsel to undertake oral advocacy in this way. I am grateful to counsel on both sides for their helpful submissions.

3. The technical background to the patent is conveniently summarised in Mr Stone's judgment at [5]-[11], to which the reader is referred. In summary, the patent concerns a geosynthetic trackbed liner (also sometimes called an anti-pumping geocomposite) that sits as a geotextile layer between the soil (or subgrade) and the ballast underneath railway tracks. It is used to ameliorate a problem known as "pumping erosion" that is seen with clay subgrades. This is a well-known problem caused by water, clay and silt leaching out of the subgrade by the weight of the train as it travels over the track. Over time, removal of clay and silt causes erosion to the trackbed and settling of the track, which requires remediation.

4. The problem of pumping erosion had previously been addressed by using a layer of sand (a "sand blanket") between the subgrade and the ballast, but this was expensive and inconvenient to lay. In 2010 the Claimant launched its geocomposite product, Tracktex, as an alternative to a sand blanket (although sand remains approved for use as geocomposites are not suitable for all rail lines). A geocomposite has several advantages over a sand blanket which are said to make it commercially and environmentally attractive, including lower materials costs and lower costs of installation, and less track downtime required to install it.

5. The Defendant launched its rival product, Hydrotex 2, in July 2012. Hydrotex 2 was found to infringe the patent. It was on the market until June 2021, when the Court of Appeal dismissed the Defendant's appeal and the stay of the injunction ordered by Mr Stone pending appeal came to an end. In May 2021, the Defendant introduced a replacement for Hydrotex 2 called Hydrotex 4. All sales of Hydrotex 4 are deemed licensed and so are not relevant to this judgment. At all material times Tracktex and Hydrotex 2 were the only commercially available alternatives to a sand blanket.

6. Broadly, the Claimant's claim for damages can be broken down into four parts, as follows:

i) lost profits on lost sales of Tracktex;

ii) lost profits on historic sales of Tracktex as a result of price competition;

iii) lost profits on future sales of Tracktex as a result of ongoing price depression caused by historic price competition;

iv) interest.

7. There was also a claim for lost profits on lost sales of convoyed goods, but this was dropped at the start of trial, so I do not need to address it further. There was no claim based on a reasonable royalty in respect of any infringing sales that the Claimant would not have made itself.

8. By the end of trial, the parties had agreed a list of issues for me to decide. However, for that list to make sense, it is necessary first to provide a summary of the witnesses and the relevant factual background.

The Witnesses

9. Each party called one witness of fact and one forensic accounting expert.

10. For the Claimant, factual evidence was provided by Mr Gordon Donald. At all material times he was (and remains) the Claimant's Managing Director. He has been involved with Tracktex since he joined the Claimant in October 2009 and was responsible for Tracktex sales from when it was first approved. He provided six written statements and gave oral testimony. I found Mr Donald to be a careful witness. He gave clear and direct answers to questions and was able to speak first-hand about events that happened during the relevant period to the best of his recollection.

11. The Defendant did not criticise the way in which Mr Donald gave evidence but submitted that his views of what would have happened in the counterfactual should be scrutinised carefully for the reasons explained by Norris J in *Servier v Apotex Inc* [2008] EWHC 2347 at [11]. As Norris J said in *Servier*, even the most honest witness can innocently give self-serving evidence about what they would have intended or done in the counterfactual, with the result that this evidence must be assessed carefully by reference to whatever objective tools and evidence are to hand. However, in the same passage the judge warned that this assessment is not an opportunity for the court to construct its own hypothetical world out of the available materials in place of that argued by the parties. I have the whole of that passage well in mind in my assessment of all the evidence (not just that of Mr Donald).

12. For the Defendant, factual evidence was provided by Mr Stephen Hancock. He provided three written statements and also gave oral evidence. Mr Hancock has worked for the Defendant (or its predecessors) since 1988 but did not get involved with rail sales until around 2007. He was promoted to Sales Director in November 2012, responsible for managing the Network Rail account. His title changed to Key Account Manager in 2014, but he remained responsible for the Network Rail account until 2015 when his role changed. He then had little involvement with

UK rail sales until 2018. His evidence was that he did not have hands on involvement during this period, although he continued to have some awareness of matters relating to sales of Hydrotex and the operation of the 2014 tender (of which more below).

13. The Claimant did not criticise Mr Hancock, who I find was also a good witness. However, the Claimant fairly observed that he did not know certain key facts and submitted that, as a result, some of his evidence should be treated with caution. This submission is best addressed in the context of the issues in which it arises (see below).

14. The Claimant's accounting expert was Mr Martin Chapman, a Fellow of the Institute of Chartered Accountants and a partner in the forensic accountancy team at Azets Holdings Ltd. He began his career in forensic accounting in 2005.

15. The Defendant's accounting expert was Mr Gervase MacGregor, also a Fellow of the Institute of Chartered Accountants and a partner in the forensic accountancy team at BDO LLP since 1992. He has been in charge of the forensic accounting department since 1994.

16. Each expert provided two written reports in a sequential fashion, with Mr Chapman going first. Both experts also gave careful oral testimony and were clearly doing their best to assist the court in respect of matters within their expertise.

17. The Defendant criticised Mr Chapman because there were some errors in the calculations in his first report and he did not provide a coherent reason for the changes in approach he made to the calculations in his second report. Whilst there is some basis for this criticism, I bear in mind that Mr Chapman corrected the errors in his second report. I also bear in mind that there is more than one way to approach the assessment of damages in this case. That is something that both experts accepted. The Defendant also submitted that Mr Chapman's approach to various issues was at best internally inconsistent and at worst selective in favour of his client.

18. As a result of these points, the Defendant argued that I should prefer the evidence of Mr MacGregor. I do not consider this to be a case where it is helpful or appropriate generally to "prefer" the evidence of one expert over another in the way that can sometimes be seen in respect of technical expert evidence in patent cases. Instead, I must approach each issue in turn, doing my best to determine what would have happened in the counterfactual by reference to the available evidence with respect to that issue. That includes the evidence of what actually happened, the evidence of Mr Donald about what the Claimant's intentions would have been (subject to the warnings given by Norris J in *Servier v Apotex* that I have referred to above), and the evidence of the experts (including, importantly, the reasons they give for their opinions).

19. It is convenient at this stage to note that both experts built detailed financial models which they used to calculate the overall damages figure based on their opinions of the suggested input parameters. However, the parties agreed that it was not necessary for me to learn how to operate the models or to reach a

determination of the final damages sum as part of this judgment. Instead, the parties will work with their experts to input the necessary parameters that arise from my decision into the models and agree the resulting figure. It may be necessary for me to give directions about this, and I will hear from counsel as to the appropriate way forward in due course. However, since the experts agreed on the methodology for doing the calculations, this should be a reasonably straightforward exercise and I am confident that the parties will co-operate effectively. The only downside with this approach, at least from my perspective, is that I have not been able to sense check the consequences of my judgment in terms of the overall damages figure. This has felt rather uncomfortable but is the necessary consequence of the way in which the evidence was prepared and presented.

Factual Background

20. Anti-pumping geocomposites are used for track renewal (maintenance or repair of existing track) or specific projects (installation of new track). The primary customer is Network Rail, although there are a few other end users such as London Underground. Whilst Network Rail organises the work, it is carried out by contractors and sub-contractors (such as Balfour Beatty, Babcock, Amey Colas and Carillion) using Network Rail approved products and in accordance with Network Rail standards.

21. Tracktex was approved for use by Network Rail on 9 March 2010 as an alternative to a sand blanket. The Claimant originally chose to sell it exclusively via a distributor called Aqua Fabrications Ltd ("Aqua"). The evidence of Mr Donald was that the Claimant used Aqua because it had good sales and marketing infrastructure and a good track record of selling geocomposites into the rail industry.

22. Tracktex was introduced on to the market at a price to Aqua of £15/m^2. Mr Donald gave evidence that the idea behind this price was that Aqua would then be able to sell to Network Rail at £20/m^2, a price which compared favourably with the higher cost of a sand blanket (at £25/m^2) but which would still maintain a satisfactory margin for Aqua. However, there was no evidence from Aqua and Mr Donald did not actually know the prices that Aqua sold at.

23. Aqua made its first sale of Tracktex to Network Rail in July 2010. However, in late 2010 Network Rail informed the Claimant that it wanted to purchase Tracktex directly from it (as this would be more cost effective). By March 2011, the Claimant had agreed to supply Tracktex to Network Rail directly by reference to the following pricing matrix and terms (highlighting in the original):

Tracktex Pricing 2011/12

Network Rail Pricing 2011/12	3.9 x 25m Sqm	97.5 Roll	3.7 x 25m Sqm	92.5 Roll	3.5 x 25m Sqm	87.5 Roll
Less than 250 rolls	15.00	1462.50	15.19	1405.08	15.38	1345.75
Up to 500 rolls	13.50	1316.25	13.67	1264.48	13.83	1210.13
Up to 750 rolls	12.74	1242.15	12.90	1193.25	13.06	1142.75
Up to 1000 rolls	11.46	1117.35	11.61	1073.93	11.76	1029.00
Over 1000 rolls	10.89	1061.78	11.03	1020.28	11.16	976.50

Distribution Agreement

Geofabrics agrees to direct supply of Tracktex Network Rail/NDS on following terms:
*Network Rail will exclusively use Tracktex as its Sand Blanket Replacement for two years starting on April 1st 2011
*The volume target for 2011/2012 is 750 and 1000 rolls. The target for 2012/2013 will be in March 2012
*Pricing will be held for the two years unless ISIS index of FD UK-Raffia moves +/- 10% from 11th March level of 1310/1320
*Rebate/Supplement calculations and invoices will be finalised within one month of the contractual end of year
*Geofabrics will deliver a limited number of Network Rail Nodal points
*Network Rail will give an order schedule 1 in adv"

24. The pricing matrix provided that the price of Tracktex was dependent on how many rolls were purchased. It seems clear that this was to be assessed on an annual basis since the rebate or supplement calculations were to be calculated and invoices finalised within one month of the contractual end of year. The parties agreed that the price would be held for two years unless the fibre materials index changed by more than a certain amount.

25. The first invoice showing a direct sale of Tracktex to Network Rail is dated 24 March 2011. The price was £11.46 per sqm reflecting the volume target in the agreement of up to 1000 rolls per annum.

26. Mr Donald met with Aqua on 14 March 2011 to inform it of the distribution agreement that the Claimant had agreed with Network Rail. At that meeting, he agreed a separate pricing matrix with Aqua as follows:

Tracktex Pricing 2011/12

Aqua Pricing 2011/12	3.9 x 25m Sqm	97.5 Roll	3.7 x 25m Sqm	92.5 Roll	3.5 x 25m Sqm	87.5 Roll
Less than 100 rolls	15.00	1462.50	15.19	1405.08	15.38	1345.75
101 to 200 rolls	13.50	1316.25	13.67	1264.48	13.83	1210.13
201 to 300 rolls	12.74	1242.15	12.90	1193.25	13.06	1142.75
301 to 500 rolls	11.46	1117.35	11.61	1073.93	11.76	1029.00
Over 500 rolls	10.89	1061.78	11.03	1020.28	11.16	976.50

*The rebate scheme will run from 1st April 2011 to 31st March 2012
*Rebate calculations will be finalised within one month of the rebate scheme end
*Pricing will be held until 31st March 2012 unless ISIS index of FD UK-Raffia moves +/- 10% from 11th March level of 1310/1320

27. The Aqua pricing matrix follows the same basic structure as the matrix agreed with Network Rail, although Aqua was not required to purchase as many rolls of Tracktex before prices went down. Pricing was only fixed for one year (in contrast to Network Rail which, as I have said, was for two years).

28. In late 2011 Unipart Rail was appointed by Network Rail to manage the distribution of Tracktex and it instigated a tender process for the supply of Tracktex. The Claimant was the only tenderer and won the two-year contract in September 2012. Mr Donald's unchallenged evidence was that this was based on a price of £12.74/m^2, although the Claimant's skeleton also refers me to the tender agreement and that includes a range of prices based on the width of the roll and whether it was delivered or provided ex works. In fact, the £12.74/m^2 price was the lowest price in the range (for a 3.9m roll, ex works) and £15.64/m^2 was the highest (for a 3m roll, delivered). It was not clear if the Claimant ever made any sales under the Unipart tender framework agreement, but nothing turns on this.

29. Meanwhile, on 12 July 2012 Network Rail approved Hydrotex 2 for use as an alternative to a thin sand layer and geotextile separator. The Claimant's case is that this caused an immediate downward pressure on the price of Tracktex. I shall return to this in the context of Issue 2 (see further below). The Defendant made its first sale to Keyline, its distributor, in February 2013 and to Network Rail in May 2013. Keyline was part of the Travis Perkins group.

30. On 4 December 2012, Network Rail issued an invitation to tender entitled "Geo-Textile Separators Framework Agreement 2013". For reasons that will become apparent, this was referred to by the parties as the "First Tender". The invitation related to three products: (i) filter separators; (ii) robust separators; and (iii) anti-pumping composites. The tender related to sales to Network Rail alone but did not guarantee exclusivity to the winning party.

31. The Claimant, the Defendant and Aqua all submitted tender bids, but the Defendant prevailed because its bid was the most competitive in terms of price. It was notified by Network Rail that it had won the First Tender on 26 April 2013 and began selling Hydrotex to it at the agreed prices.

32. However, in May 2013 the Claimant successfully challenged the First Tender process and so it was never signed. As a result, a new invitation to tender was issued in January 2014. The parties referred to this as the "Second Tender".

33. Even before the Second Tender was issued, Mr Donald took the view that the Defendant was likely to win it. In that situation, he was concerned to ensure that the Claimant would still have a route to market. He also wanted to avoid the risk of Aqua purchasing Hydrotex 2 instead of Tracktex and to maintain good relations with Aqua. As a result, on 6 December 2013 the Claimant entered into an exclusive distribution agreement with Aqua and did not bid for the Second Tender.

34. Pursuant to the distribution agreement with Aqua, the Claimant agreed to supply Tracktex at the following prices for deliveries in 2014:

   - Tracktex 3.9m - £9.50 per sqm/£926.25 per roll

- Tracktex 3.7m - £9.63 per sqm/ £890.78 per roll
- Tracktex 3.5m - £9.74 per sqm/£852.25 per roll

35. It was also agreed that prices would be adjusted pro rata if fibre prices increased by more than a specified amount. The initial term of the agreement was three years.

36. As part of the same agreement, the Claimant also agreed to supply Tracktex (width 3.9m) for the Crossrail project at a price of £6.50 per sqm/£633.75 per roll based on a contract of 800 rolls. I shall return to this in the context of Issue 6 (see further below).

37. The Defendant won the Second Tender over Aqua (who was the only other bidder), again based on price. The Second Tender took effect from 21 July 2014 and was for three years. As noted above, by that date the Defendant had already started selling to Network Rail. The evidence shows that Hydrotex 2 was priced at between £10.59/m^2 and £8.45/m^2 depending on width and volume.

38. Meanwhile, by September 2013, the Claimant had made eight employees redundant. I shall return to this in the context of Issue 4 (see further below).

39. Despite the Second Tender agreement between the Defendant and Network Rail, Aqua was still able to generate substantial sales of Tracktex. The Second Tender came to an end on 20 July 2017 and was not renewed. Thereafter, Tracktex and Hydrotex 2 competed directly in the market. Throughout, I understand that Tracktex retained a market share of approximately 45% to 60%.

40. As noted above, the work of installing geocomposites was carried out by contractors. The contractor could source the product by ordering directly from the manufacturer (the Claimant or the Defendant) or from their distributors (Aqua or Keyline respectively) or via Network Rail. The evidence was that for track renewal work, the contractor typically sourced the product from Network Rail (via its portal) whereas for specific projects they would typically source the product from the manufacturer or distributor.

The Issues

41. As I have said, by the end of trial the parties had helpfully agreed a list of seven issues which I have to decide, as follows. Some of the issues contain a number of sub-issues that will need to be addressed in turn.

Issue 1 - What structure should be assumed for the Claimant's trading arrangements in the counterfactual?

42. The issue here is whether the Claimant and Aqua would have entered into an exclusive distribution agreement in respect of Tracktex in the counterfactual? The Defendant argued that there would have been such an agreement, either because the Claimant would have offered such an agreement, which Aqua would have accepted, or because Aqua would have demanded such an agreement and the Claimant would have agreed to that demand. The Claimant disagreed and maintained that it would have sold direct to Network Rail.

43. The parties agreed that in this context, the actions of the Claimant are to be determined on the balance of probabilities, but where quantification of damages is dependent the actions of Aqua or Network Rail, such are assessed proportionately according to the chances. I will come back to this in the context of the relevant legal principles below.

Issue 2 - What prices would Geofabrics have been able to achieve for Tracktex in the counterfactual world?

44. The parties agreed that prices in the counterfactual should be assessed on the basis of notional pricing matrices running from 1 April in one calendar year to 31 March in the following calendar year with 2011/2012 being taken as a "baseline" pricing matrix for 2 years.

45. As regards the counterfactual pricing matrix for sales to Network Rail, the parties agreed that the 2011/2012 Network Rail pricing matrix should be used as the baseline. However, they did not agree on how sales prices to Aqua should be determined. The Claimant argued that the 2011/2012 Aqua pricing matrix should be used as the baseline whereas the Defendant argued that it should be based on the Network Rail matrix but subject to a 23% discount.

46. The parties agreed that there should be some allowance for price growth by reference to an annual average price increase but did not agree as to (i) what the growth rate would be; (ii) if it should be the same or different for Network Rail sales and Aqua sales; (iii) how frequently it should be applied after the first 2-year period (annually, as contended for by the Claimant, or biennially as contended for by the Defendant).

47. In addition, the Defendant argued that sales to Aqua in the counterfactual should be subject to the same rebate scheme that the Claimant had agreed in the actual. The Claimant disagreed and said there should be no rebate.

Issue 3 - Number of sales of Tracktex in the counterfactual

48. The primary issue here is whether all sales of Hydrotex 2 correspond to lost sales of Tracktex, or if not, what deduction should be made to reflect the proportion of Hydrotex sales which the Claimant would not have made in the counterfactual.

49. There was also a question of whether the Claimant would have had capacity in the counterfactual to meet all the additional demand for Tracktex, and if not, what, if any, allowance should be made.

Issue 4 - Costs of production/sale of Tracktex

50. The costs of production were agreed. Whilst there had been a dispute about whether transport costs in respect of sales to Network Rail should also be included, by the end of the trial, the parties agreed that an additional 5.6% should be added to the costs of sales to Network Rail to allow for this. However, there remained a dispute about what allowance, if any, should be made for cost savings as a result of redundancies.

Issue 5 - Lost profits on future sales

51. The issue here is whether the Claimant lost any further profits as a result of the infringing sales of Hydrotex 2 even after Hydrotex 4 had come on to the market. The Claimant claims that it would have been selling Tracktex at a higher price in May 2021 when Hydrotex 4 came onto the market, and that it would have taken a period of time for the price to be depressed to an estimated future value. The parties agree that this requires determination of:

    i) the selling prices for Tracktex immediately prior to the introduction of Hydrotex 4 at the end of May 2021 (this relates to Issue 2 above);

    ii) the period over which the price of Tracktex should be assumed to fall to a market price; and

    iii) what is the appropriate value of that market price?

Issue 6 - Was any loss attributable to the Crossrail deal too remote?

52. The Claimant had agreed a price of £6.50 per sqm to supply Tracktex for the Crossrail project. The issue here is whether the Defendant was responsible for the additional losses caused by that lower price (as compared with the price that the Claimant would otherwise have sold Tracktex in the counterfactual), or whether such additional loss was too remote because it was not reasonably foreseeable.

Issue 7 - How much interest should be awarded?

53. The Claimant argued that it should be 2% above base, whereas the Defendant said it should be 1% above base.

Points which fell away

54. Whilst that completes the list of issues that remained live by the end of trial, because of the way in which the evidence and opening arguments were presented, it is also important to record some of the points which fell away. The Claimant had helpfully provided a list of issues with its opening skeleton which was significantly longer (with 14 main issues, several of which had multiple sub issues).

55. Of the original list, the most significant point to fall away was the need to consider different counterfactuals. The Claimant's case had been pleaded by reference to two alternative counterfactuals (Counterfactual A and Counterfactual B). The difference between them was that Counterfactual A was based on a situation where there was a Network Rail tender process in 2013 whereas Counterfactual B was based on a situation where there was no Network Rail tender process. The experts had considered these different counterfactual scenarios in their reports (although for reasons which are not clear Mr MacGregor termed them 'But For Scenario A' and 'But For Scenario B'). Mr MacGregor also considered an additional counterfactual which he called 'But For Scenario C'; this was also based on an assumed Network Rail tender process but differed in other details

from But For Scenario A. The parties opening written arguments also addressed these different counterfactuals.

56. However, in oral opening the parties agreed that in the counterfactual, Network Rail would not have entered into a tender process and that the inquiry could proceed on the basis of Counterfactual B/But For Scenario B alone. As a result, I do not have to address Counterfactual A or But For Scenarios A and C any further.

57. Since it was only as part of Counterfactual A that the Claimant was pursuing a claim in respect of convoyed goods, this point also fell away (as already noted above) and I have not addressed any of the evidence that related to the parties' other products.

58. Within his But For Scenario B, Mr MacGregor considered three different scenarios which he referred to as "the primary calculation", "the alternative calculation" and "the instructed calculation". The alternative calculation was based on a situation where there was 0% price growth, but a modified price adjustment mechanism based on quantities purchased. This scenario was also not pursued. The difference between the primary calculation and the instructed calculation relates to whether Network Rail sales in the counterfactual were made directly by the Claimant or via Aqua. This is addressed under Issue 1.

Legal Principles

59. There was no dispute between the parties as to the relevant legal principles applicable in this case.

General approach to damages

60. Both sides referred me to the well-known summary from Kitchin J (as he then was) in *Ultraframe (UK) Ltd v Eurocell Plastics Ltd* [2006] EWHC 1344 (Pat) at [47]:

> 47. The general principles to be applied in assessing damages for infringement of patent are now well established. Many were considered in *Gerber Garment Technology v Lectra Systems* by Jacob J at first instance at [1995] RPC 383, and by the Court of Appeal at [1997] RPC 443. So far as relevant to the present case, they can be summarised as follows:
>
> i) Damages are compensatory. The general rule is that the measure of damages is to be, as far as possible, that sum of money that will put the claimant in the same position as he would have been in if he had not sustained the wrong.
>
> ii) The claimant can recover loss which was (i) foreseeable, (ii) caused by the wrong, and (iii) not excluded from recovery by public or social policy. It is not enough that the loss would not have occurred but for the tort. The tort must be, as a matter of common sense, a cause of the loss.
>
> iii) The burden of proof rests on the claimant. Damages are to be assessed liberally. But the object is to compensate the claimant and not to punish the defendant.
>
> iv) It is irrelevant that the defendant could have competed lawfully.

v) Where a claimant has exploited his patent by manufacture and sale he can claim (a) lost profit on sales by the defendant that he would have made otherwise; (b) lost profit on his own sales to the extent that he was forced by the infringement to reduce his own price; and (c) a reasonable royalty on sales by the defendant which he would not have made.

vi) As to lost sales, the court should form a general view as to what proportion of the defendant's sales the claimant would have made.

vii) The assessment of damages for lost profits should take into account the fact that the lost sales are of "extra production" and that only certain specific extra costs (marginal costs) have been incurred in making the additional sales. Nevertheless, in practice costs go up and so it may be appropriate to temper the approach somewhat in making the assessment.

viii) The reasonable royalty is to be assessed as the royalty that a willing licensor and a willing licensee would have agreed. Where there are truly comparable licences in the relevant field these are the most useful guidance for the court as to the reasonable royalty. Another approach is the profits available approach. This involves an assessment of the profits that would be available to the licensee, absent a licence, and apportioning them between the licensor and the licensee.

ix) Where damages are difficult to assess with precision, the court should make the best estimate it can, having regard to all the circumstances of the case and dealing with the matter broadly, with common sense and fairness.

61. As to the approach of the court in assessing what would have happened if there had been no infringement and the claimant had not sustained the wrong, the authorities make clear that the exercise is not capable of precise estimation and that the court must do the best it can based on the material available to it. See *Gerber Garment Technology Inc v Lectra Systems Ltd & Anr* [1995] RPC 383 at 395 and *Original Beauty Technology v G$K Fashion* [2021] EWHC 3439 (Ch) at [75], citing Lord Wilberforce in *General Tire and Rubber Company v Firestone Company* [1975] W.L.R. 819 at 826.

62. The point is best encapsulated by this extract from the decision of Jacob J (as he then was) at first instance in *Gerber Garment Technology Inc v Lectra Systems Ltd & Anr* [1995] RPC 383 at 395:

> *6. Damages are not capable of precise estimation where the patentee exploits by his own manufacture and sale.*
>
> > In *Penn v. Jack*, Page Wood V.C. said it all:
> >
> > Now if the plaintiffs case had been one of a patentee who had never granted a licence, and had always remained his own manufacturer, the question, as I observed in Betts v. De Vitre 34 L.J. (Ch.) 289 would have been one of great difficulty; and I do not hesitate to say I should not have attempted to grapple with it, but I should have sent it to a jury to settle the amount of damages.
>
> Sadly, I cannot send it to a jury. I must, on the facts, form an estimate, recognising that precision, or even near precision, is impossible of attainment. I am in the world of "what would have been", not "what was". I find guidance in what was said by Lord Diplock in *Mallet v. McMonagle* [1970] A.C. 166 at 176.
>
> > The role of the court in making an assessment of damages which depends upon its view as to what will be and what would have been is to be contrasted

> with its ordinary function in civil action of determining what was. In determining what did happen in the past a court decides on the balance of probabilities. Anything that is more probable than not, it treats as certain. But in assessing damages which depend upon its view as to what will happen in the future or would have happened in the future if something had not happened in the past, the court must make an estimate as to what are the chances that a particular thing will or would have happened and reflect those chances, whether they are more or less than even, in the amount of damages which it awards.
>
> There is a dispute of law as to whether this "estimation" principle applies to the lost sales claim. Miss Heilbron Q.C., for Lectra, says it does not. I return to it later.
>
> Turning back to the general proposition, the exercise was described by Sir Herbert Cozens Hardy M.R. in *Meters Ltd. v. Metropolitan Gas Meters Ltd.*, (1911) 28 R.P.C. 157 at 161.
>
>> A matter to be dealt with in the rough, doing the best one can, not attempting or professing to be minutely accurate—having regard to all the circumstances of the case, and saying what upon the whole is the fair thing to be done…. We are really in the position of a jury, and we must arrive at a conclusion as best we can, not tying ourselves down by any hard and fast rule, not requiring the plaintiffs to establish before us that any definite number of retailers would have come to the plaintiffs if the defendants had not supplied infringing instruments, but dealing with the matter broadly as men of common sense.
>
> In short one cannot expect much in the way of accuracy when the court is asked to re-write history. "What if Lectra had not been there for a period of 5 years?" is my task. When I first looked at the accountants' various reports, supplementary reports, and further supplementary reports, I thought they were counting the uncountable; assuming the unreliable as sands on which to build towers of detailed calculation. I still think this is largely so.
>
> I would only add one general comment: quantification of damage in a case such as the present (of a patentee manufacturer) is a much harder, and less certain, task than I had hitherto thought. Although I have had to reach an answer I do not pretend it is an accurate measure of the damage, of what would have been. It is just the best assessment I can make. Moreover a number of aspects of the claim show that damage can potentially be large even if an infringer's sales are comparatively low. I have in mind particularly the effect of price depression on the patentee's sales, lost profits when lost sales affect marginal profits, and the loss of sales of articles or services associated with the patented goods. and of course all these heads have their own uncertainties of quantification.

63. I echo the sentiment that the exercise is harder than it looks.

Burden of proof

64. The authorities also make clear that whilst the burden of proof is on the claimant, where the defendant's wrongdoing has created uncertainties, those should (where necessary) be resolved by making assumptions generous to the claimant. Both parties referred me to the passage in *Gary Fearns v Anglo-Dutch Paint & Chemical Co Ltd* [2010] EWHC 1708 (Ch) at [70] where Mr Leggatt QC (as he then was) said:

> [70] To assess what profits were lost as a result of the loss of the franchisees, it is necessary to consider what would have happened if the Defendants had acted

lawfully and had not induced the franchisees to transfer their business to Anglo Dutch in June 2005. This necessarily involves a large element of conjecture. The need for such conjecture, however, is itself a consequence of the Defendants' conduct. It seems to me that, as in cases where the Court has to form a view of what would have happened in hypothetical circumstances in order to evaluate a lost chance, the principle in *Armory v Delamirie* (1722) 1 Stra 505 applies. In essence, this requires the Court to resolve uncertainties by making assumptions generous to the claimant where it is the defendant's wrongdoing which has created those uncertainties: see e.g. *Browning v Brachers* [2005] EWCA Civ 753, [2005] PNLR 44 at paras 204-212; *Phillips & Co v Whatley* [2008] Lloyd's IR 111, 121 at para 45. This also accords with the second of the two principles stated by Lord Wilberforce in the *General Tyre & Rubber Co* case which I referred to earlier.

65. The Defendant also referred me to the judgment of Green L.J. in *NTN Corporation & Ors v Stellantis N.V. & Ors* [2022] EWCA Civ 16 at [26] where he pointed out that: "*where a claimant has a justiciable right, the procedural and evidential rules governing the enforcement of that right must not be allowed to become so onerous that they undermine or weaken the very right itself by making it too hard to vindicate.*"

66. However, the court should also have regard to the extent to which it is within the power of one party to provide evidence in support of a particular point. See Lord Bingham in *Fairchild v Glenhaven Funeral Services Ltd & Ors* [2002] UKHL 22 at [13] where he approved the principle stated by Lord Mansfield in *Blatch v Archer* (1775) 1 Cowp 63 at 65 to the effect that evidence must be weighed against the proof which it was in the power of one side to produce and the other side to contradict. See also *McGregor on Damages* (21st Edition) at §52-021 which addresses the specific situation where a party has lost or destroyed information which could have assisted the court in determining the level of damages. In that situation, the court may draw adverse inferences against that party, but should not do so in a way that is punitive. Any adverse inference should take account of the evidence that does exist and should be realistic.

67. The Claimant also referred me to the decision of Norris J in *Fabio Perini SPA v LPC Group plc* [2012] EWHC 911 at [61]-[63] in support of the submission that where a patentee is established in the market and does not grant licences, the court should assume that sales made by an infringer (particularly one that is a newcomer to the market) would have been sales made by the patentee unless the infringer proves to the contrary. The case concerned a patent for a process rather than a product. One of the heads of damage related to the loss of contracts for the sale of machinery that operated the process that were awarded to the defendant. Norris J said:

> 61. LPC and PCMC submit that the burden lies on Perini to show exactly why the use of its patented method was causative of the loss of the contracts entered into by LPC and Georgia-Pacific.
>
> 62. In the *General Tire* Case [1976] RPC 197 Lord Wilberforce explained at p.212
>
>> "Many patents of inventions belong to manufacturers, who exploit the invention to make articles or products which they sell at a profit. The benefit of the invention in such cases is realised through the sale

> of the article or product. In these cases, if the invention is infringed, the effect of the infringement will be to divert sales from the owner of the patent to the infringer. The measure of damages will then normally be the profit which would have been realised by the owner of the patent if the sales had been made by him….."

> 63. In *Catnic Components v Hill & Smith Ltd* [1983] FSR 512 the claimant held a patent for cavity wall lintels which the defendant infringed by its product. The claimant sought in the inquiry as to damages loss of profits in respect of all lintel sales lost to the defendant. The defendant argued that had it not sold infringing lintels (a) it would instead have provided each of the customers with its own non-infringing lintels, or (b) such customers would have bought lintels from other competitors of Catnic, so that the defendant's infringement caused no loss. Falconer J (relying on the passage from General Tire which I have just cited) dealt with this argument at p.524 of the report in this way:-

> > "For the [claimants] [counsel] submitted that it would be consistent with the attitude of the law to any infringer for the law to assume that the claimants would have made, with their patented lintels, those sales made by the defendants with the infringing lintels unless and insofar as the defendants prove the contrary. In a case such as this, where the [claimants] had been established for a number of years as the market leaders with their patented construction, having available ample production capacity and stocks … but never having granted any licence under the patent, and where defendants not previously in business in this field at all, entered the market with the object of doing so at the expense of the [claimants] and using an infringing version of the [claimants'] patented construction, in my judgment that is the proper approach for the court to adopt".

> The endorsement of the approach (that the law should assume that the patentee would have made those sales actually made by the infringer unless and insofar as the infringer proves the contrary) was thus qualified.

68. The Defendant accepted that *General Tire* was right on the facts, but cautioned me in applying it as a rule of law in different factual circumstances. I heed this caution, which I think is reflected in [68] of the decision where Norris J said:

> 68. As Aldous L.J. observed in *Coflexip* (at p.735) many reported cases in this field are useful illustrations of judicial reasoning, but are apt to mislead if decisions on particular sets of facts (or observations in judgments leading up to such decisions) are later relied on as establishing rules of the law. I would hold only:-

> i) that the legal burden of establishing that the loss claimed was caused by the infringement proved lies on [the claimant];

> ii) that in general, since the object of a patent is to confer a monopoly of profit and advantage, any infringement of that monopoly is likely to cause some loss or damage by the loss of actual sales or the chance of sales or through the appropriation of something of value;

> iii) that in general, where the patent belongs to a manufacturer who exploits the invention by selling products at a profit (whether the

> products embody a patented invention, or in their operation employ a patented process, or are themselves produced by a patented process) the legal burden will be discharged (and the nexus between infringement and loss established) by the inference which the court is prepared to draw that the effect of the infringement is to divert sales from the owner of the patent to the infringer;
>
> iv) that the infringer may adduce evidence which demonstrates that the usual inference does not hold good in a particular case, so that whether the claimed loss is caused by the proven infringement must simply be decided on the proved facts and the inferences properly drawn from those facts;
>
> v) that is to be done using commercial common-sense, avoiding overrefined analysis, but taking account of all factors which may reasonably bear on the issue and (in particular) giving full weight to the consideration that the patent owner has a right to a monopoly in respect of the invention and that the infringer's putting into the marketplace the infringing product or process has destroyed that monopoly;
>
> vi) that the focus of any such inquiry is not why the infringer or infringers actually entered the real contract, but whether (on the assumption that the infringing product or service was not available) the owner of the patent would or might have secured the infringer's contract for himself.

Causation and Remoteness

69. It is now well established that it is not enough for a claimant to show that "but for" the infringement, the damage would not have occurred. Instead, the claimant must demonstrate that the defendant's infringing acts were a cause of the loss (although it is unnecessary to evaluate competing causes and ascertain which one of them is dominant): see *McGregor on Damages* at §8-0006.

70. However, a claimant cannot recover damages for losses that are too remote. This principle was explained by Lord Nicholls in *Kuwait Airways Corpn v Iraqi Airways (Nos 4 and 5)* [2002] UKHL 19 at [69]–[71] as follows:

> 69. How, then, does one identify a plaintiff's 'true loss' in cases of tort? This question has generated a vast amount of legal literature. I take as my starting point the commonly accepted approach that the extent of a defendant's liability for the plaintiff's loss calls for a twofold inquiry: whether the wrongful conduct causally contributed to the loss and, if it did, what is the extent of the loss for which the defendant ought to be held liable. …
>
> 70. The second inquiry, although this is not always openly acknowledged by the courts, involves a value judgment ("*ought* to be held liable"). Written large, the second inquiry concerns the extent of the loss for which the defendant ought fairly or reasonably or justly to be held liable (the epithets are interchangeable). … The law has to set a limit to the causally connected losses for which a defendant is to be held responsible. In the ordinary language of lawyers, losses outside the limit may bear one of several labels.

> They may be described as too remote because the wrongful conduct was not a substantial or proximate cause, or because the loss was the product of an intervening cause. …
>
> 71. In most cases, how far the responsibility of the defendant ought fairly to extend evokes an immediate intuitive response. This is informed common sense by another name. Usually, there is no difficulty in selecting, from the sequence of events leading to the plaintiff's loss, the happening which should be regarded as the cause of the loss for the purpose of allocating responsibility. In other cases, when the outcome of the … inquiry is not obvious, it is of crucial importance to identify the purpose of the relevant cause of action and the nature and scope of the defendant's obligation in the particular circumstances. What was the ambit of the defendant's duty? In respect of what risks or damage does the law seek to afford protection by means of the particular tort?"

71. The Defendant submitted that the burden of proving that damages are not too remote rests on the claimant, relying on the following passage from *McGregor on Damages* (footnotes omitted):

> 52-004. On the issue of remoteness there are conflicting dicta in the House of Lords as to where the burden of proof lies. Thus Lord Sumner said in *SS Singleton Abbey v SS Paludina* that the claimant must show that a particular item of damage is not too remote before they can recover for it, while Lord Haldane and Lord Dunedin in *The Metagama* said that the defendant must show that a particular item of damage is too remote if they are not to be held liable for it. Lord Merriman P in *The Guildford*, after considering the earlier dicta, expressed preference, obiter, for the view that the burden of proof lay on the claimant, but there remains a tendency at first instance in ship collision cases, where the issue has generally arisen, to take into account only the dicta which favour placing the onus on the defendant. This conflict of views essentially arises from the fact that, although it is clear law that the party alleging must prove, it is not always clear what particular allegations form an essential part of a party's case. It is submitted that, consistently with the dictum of Lord Sumption in *Hughes-Holland*, on the issue of remoteness the claimant must allege the items for which they may properly recover: hence the burden of proving them is on them.

72. I accept that the legal burden to prove the damages claim rests on the Claimant.

Loss of a chance

73. I was also referred to several authorities that address the different approach to quantification depending on whether the loss is based on an uncertainty of past fact or future hypothetical event, and whether it is uncertainty as to the actions of the claimant or those of a third party.

74. The Claimant relied on the explanation from Nugee J (as he then was) in *Wellesley Partners LLP v Withers LLP* [2014] EWHC 556 (Ch) at [188]. Whilst the passage is long, it merits setting out in full.

> [188] As these citations show, despite *Allied Maples* having been the leading authority for nearly 20 years, this area is one that continues to cause real difficulties of classification and application. What I understand from these authorities can be summarised, with I hope suitable diffidence, as follows:

(1) There is a difference between the question whether a loss has been caused by the wrong complained of, and if it has, the quantification of that loss. The fact that there is a distinction is in principle clear; what is not always clear is where the line is to be drawn.

(2) Sometimes what the claimant has lost was only ever an opportunity to obtain something else, for example the chance to take part in a competition or the opportunity to bring litigation. Such an opportunity is a valuable right in itself, and what the claimant proves (on the balance of probabilities) is that he has lost that right; the assessment of the value of the right then depends on the chances of success. As Patten LJ says in *Vasiliou* at [21] this is because what has been lost is by definition the loss of a chance. It would obviously be wrong to value the right to take part in a competition at the value of the prize that might be won as the claimant never had a right to the prize, only the right to enter the competition. It would also be wrong to value the right to bring litigation as if it were bound to succeed, if, as is almost inevitably the case, the outcome of the litigation is uncertain. A claim with a prospect of success has a value, but until judgment has been obtained (and indeed it is clear that it can be successfully enforced) that value is not the same as the amount which would be awarded were it to succeed.

(3) What Patten LJ makes clear, which had not I think been so clear before, is that this is not quite the same type of case as *Allied Maples*. In an *Allied Maples* case the claimant has not lost a valuable right, but he has lost the opportunity of gaining a benefit, albeit one which depends on a third party acting in a particular way. In such a case the claimant is not required to prove that the third party would have acted in that way, only that there was a real and substantial chance that he would. This is still a question of causation, not of quantification (see *Vasiliou* at [22], and also *First Interstate Bank of California v Cohen Arnold & Co* [1996] CLC 174 at 182 per Ward LJ, cited in *Vasiliou* at [43]); but if the claimant does establish that there was such a real and substantial chance, then when it come*[s]* to quantification, his damages will be assessed not at 100% of the value of the benefit he would have obtained, but at the appropriate percentage having regard to the chances of his obtaining it. I only add the obvious point that in some cases, where the chance is found to be say 30%, the requirement that the claimant only need show that he has lost a real and substantial chance is beneficial to him (as if he had to prove how the third party would have acted on the balance of probabilities, he would recover nothing); but in other cases, where the chance is assessed at say 70%, it has the effect of only enabling him to recover 70% of the damages he otherwise would. But as I read the authorities, the claimant does not have a choice whether to adopt the Allied Maples approach; if the case is an Allied Maples type of case, this is the appropriate way to approach the issues of causation and quantification.

(4) However, as *Parabola* and *Vasiliou* illustrate, there are other cases where the claimant does not seek to establish as a matter of causation that he has lost the opportunity of acquiring a specific benefit which is dependent on the actions of a third party; rather, he claims he has lost the opportunity to trade generally, and claims the loss of profits that he would have made.

(5) It seems that in such a case the Court must first decide whether the claimant would have traded successfully. It is not entirely clear if this is part of the question of causation and a separate exercise from quantification; or whether it is to be regarded as part of the quantification exercise. Toulson LJ in *Parabola* at [23] fairly clearly treats the finding of Flaux J that "on a balance of probability Tangent would have traded profitably…" as part of the question of causation as he deals with it in the context of the claimant having first to establish an actionable head of loss, and coming before the "next task" which is "to quantify the loss". On the other hand Patten LJ in *Vasiliou* at [23] seems to have regarded the question as part of the

exercise of quantification: see his reference to there being "no doubt at all that the breach had caused the loss subject only to the quantification of that loss", and to Mr Vasiliou's competence and the restaurant's prospects of success not being matters that went to causation at all but being relevant at most to the assessment of how profitable the restaurant would have been.

(6) On either view this is clearly a different type of exercise from that undertaken in an *Allied Maples* case. It does not require the Court to find that there was a real and substantial chance of a third party acting in a particular way; but to reach a conclusion whether trading would have been profitable or not. However the exercise is characterised, I think it must follow that this is a simple yes/no question (would the trading have been profitable?), and hence falls to be decided on the balance of probabilities. I accept that this is so, even though as a matter of strict logic it is not entirely obvious why there should be such a sharp difference of approach from the *Allied Maples* type of case. The profitability of the restaurant in Vasiliou presumably depended on whether it would have attracted sufficient custom, or in other words whether a number of third parties would have chosen to come to Mr Vasiliou's restaurant; and this does not seem very different in kind, only in degree, from the question in *Allied Maples* which was whether the third party in question would have chosen to accede to Allied Maples' request for a particular contractual term. It may be that the difference is between one particular third party and a pool of potential customers; in the case of an individual third party, the Court must assess the chance of his acting in a particular way, but in the case of a pool of potential customers, the Court is not concerned with how any individual would have behaved but with whether there would have been sufficient custom generally to make the business a success.

(7) Be that as it may, it is clear from *Parabola* and *Vasiliou* that if the Court finds that trading would have been profitable, it then makes the best attempt it can to quantify the loss of profits taking into account all the various contingencies which affect this: see *Parabola* at [23]. This neither requires any particular matter to be proved on the balance of probabilities (see Parabola at [24]) nor has anything to do with the loss of a chance as such (see *Vasiliou* at [25]). The assessment of the loss will itself include an evaluation of all the chances, great or small, involved in the trading (see Parabola at [23]). Once the judge has assessed the profits in this way, any further discount is therefore inappropriate (see *Vasiliou* at [28]).

75. The Claimant also referred me to *SDL Hair Limited v Next Row Limited* [2014] EWHC 2084 (IPEC), where HHJ Hacon provided the following further summary of the applicable principles—

> (6) An inquiry will generally require the court to make an assessment of what would have happened had the tort not been committed and to compare that with what actually happened. It may also require the court to make a comparison between, on the one hand, future events that would have been expected to occur had the tort not been committed and, on the other hand, events that are expected to occur, the tort having been committed. Not much in the way of accuracy is to be expected bearing in mind all the uncertainties of quantification. See *Gerber* at first instance [1995] RPC 383, per Jacob J, at 395-396.
>
> (7) Where the claimant has to prove a causal link between an act done by the defendant and the loss sustained by the claimant, the court must determine such causation on the balance of probabilities. If on balance the act caused the loss, the claimant is entitled to be compensated in full for the loss. It is irrelevant whether the court thinks that the balance only just tips in favour of the claimant

or that the causation claimed is overwhelmingly likely, see *Allied Maples Group v Simmons & Simmons* [1995] WLR 1602, at 1609-1610.

(8) Where quantification of the claimant's loss depends on future uncertain events, such questions are decided not on the balance of probability but on the court's assessment, often expressed in percentage terms, of the loss eventuating. This may depend in part on the hypothetical acts of a third party, see *Allied Maples* at 1610.

(9) Where the claim for past loss depends on the hypothetical act of a third party, i.e. the claimant's case is that if the tort had not been committed the third party would have acted to the benefit of the claimant (or would have prevented a loss) in some way, the claimant need only show that he had a substantial chance, rather than a speculative one, of enjoying the benefit conferred by the third party. Once past this hurdle, the likelihood that the benefit or opportunity would have occurred is relevant only to the quantification of damages. See *Allied Maples* at 1611-1614.

76. The Defendant identified the more recent summary by Andrew Burrows QC in *Palliser Ltd v Fate Ltd & Ors* [2019] EWHC 43 (QB) at [27] (emphasis in the original):

> 27. … Although when assessing damages resting on hypothetical events, damages can be awarded that are proportionate to the chances – one might call these 'damages for loss of a chance' or, synonymously, 'damages for the chances of loss' – such proportionate damages are inappropriate where the uncertainty is as to what the *claimant* (in contrast to a third party) would have hypothetically done. The correct picture of the law on proof in relation to damages is therefore that where the uncertainty is as to past fact, the 'all or nothing balance of probabilities' test applies. Where the uncertainty is as to the future, proportionate damages are appropriate. Where the uncertainty is as to hypothetical events, the correct test to be applied depends on the nature of the uncertainty: if it is uncertainty as to what the claimant would have done, the all or nothing balance of probabilities test applies; if it is as to what a third party would have done, damages are assessed proportionately according to the chances. For that general distinction between past fact and future or hypothetical events, see Mallett v McMonagle [1970] AC 166 at 176 (per Lord Dilock). That there is a contrast between the test applicable to what hypothetically the claimant would have done and what hypothetically a third party would have done emerges from cases such as Allied Maples Group Ltd v Simmons & Simmons [1995] 1 WLR 1602, CA, and 4 Eng Ltd v Harper [2008] EWHC 915 (Ch), [2009] Ch 91, at [41] - [92]. In the Court of Appeal in Gregg v Scott [2002] EWCA Civ 1471, [2003] Lloyd's Rep Med 105 (affirmed without discussing this point at [2005] UKHL 2, [2005] 2 AC 176), Mance LJ, as he then was, said at [71]:
>
> > *'[T]he rationale of the distinction ... must, I would think, be the pragmatic consideration that a claimant may be expected to adduce persuasive evidence about his Approved Judgment Palliser Ltd v Fate Ltd own conduct (even though hypothetical), whereas proof of a third party's hypothetical conduct may often be more difficult to adduce.'*
>
> There is also a very helpful passage in J Edelman, McGregor on Damages (20th edn, 2017) at para 10-062 (the same wording was in the previous edition written by the late Harvey McGregor, McGregor on Damages (19th edn, 2014) at para 10-060):

> '*While at first glance it may seem somewhat strange to have different tests applicable to hypothetical acts of the claimant and hypothetical acts of third parties, it can be seen to make sense, with nothing at all arbitrary about it and with no need to bring in public policy to justify it. For a claimant can hardly claim for the loss of the chance that he himself might have acted in a particular way; he must show that he would have; it cannot surely be enough for a claimant to say that there was a chance that he would have so acted. The onus is on a claimant to prove his case and he therefore must be able to show how he would in fact have behaved. There is no such onus on third parties.*'

> In this case, the essential uncertainty on quantum that I am faced with is as to what the claimant, Palliser, would hypothetically have done had there been no fire at 228 York Rd. The 'all or nothing balance of probabilities' test therefore applies.

77. These authorities make clear that the "loss of chance" analysis applies if the uncertainty on quantum rests on hypothetical future events or the actions of a third party. By contrast, where the uncertainty on quantum rests on what the claimant hypothetically would have done, then this is determined on the balance of probabilities.

Interest

78. Pursuant to s.35A Senior Courts Act 1981, the court has a discretion to award simple interest for such period and at such rate as it thinks fit. Both parties referred me to the approach to determining the amount to award as was summarised by Hamblen J in *Carrasco v Johnson* [2018] EWCA Civ 87 at [87]:

> [17] The guidance to be derived from these cases includes the following:
>
> (1) Interest is awarded to compensate claimants for being kept out of money which ought to have been paid to them rather than as compensation for damage done or to deprive defendants of profit they may have made from the use of the money.
>
> (2) This is a question to be approached broadly. The court will consider the position of persons with the claimants' general attributes, but will not have regard to claimants' particular attributes or any special position in which they may have been.
>
> (3) In relation to commercial claimants the general presumption will be that they would have borrowed less and so the court will have regard to the rate at which persons with the general attributes of the claimant could have borrowed. This is likely to be a percentage over base rate and may be higher for small businesses than for first class borrowers.
>
> (4) In relation to personal injury claimants the general presumption will be that the appropriate rate of interest is the investment rate.
>
> (5) Many claimants will not fall clearly into a category of those who would have borrowed or those who would have put money on deposit and a fair rate for them may often fall somewhere between those two rates.

> [18] Challinor and Reinhard are examples of cases which were held to fall within that mid-category, justifying a blending between rates, and in both cases interest was awarded at 3% over base rate.

Determination of the issues

79. Against that background, and with the relevant legal principles in mind, I now turn to the issues I must decide. In some cases, I have renamed the issue to reflect more accurately what remained in dispute by the end of trial.

Issue 1 - Would the Claimant have entered into an exclusive distribution agreement with Aqua?

80. The Defendant argues that the Claimant would have entered into an exclusive distribution agreement with Aqua in the counterfactual, either (i) because the Claimant would have offered it or (ii) because Aqua would have demanded it. The parties agree that I should assess (i) as a balance of probabilities because it is dependent upon what the Claimant would have done and (ii) as a % chance because it is dependent upon the hypothetical actions of a third party. That is consistent with the case law that I have set out above.

81. In order to evaluate and determine this issue, it is necessary to recount the evidence about the nature of the Claimant and its business and the market for anti-pumping solutions, and to delve in more detail into why matters evolved as they did between the Claimant and Aqua.

The Claimant and its business

82. The Claimant sells three types of products: needle punched textiles for a variety of applications; cuspate plastics for drainage and gas venting; and geocomposites for various engineering solutions.

83. Geocomposites are multi-layered combinations of geosynthetics. They account for approximately half of the Claimant's overall business. Within this side of the business, the Claimant sells three products to the rail industry. Two of these are reinforcement products used for placement under the railway (but do not replace a sand blanket or address the problem of pumping erosion). The third is Tracktex. Tracktex accounts for about 15% of the Claimant's total sales.

The anti-pumping geocomposite market

84. Tracktex was the first-in-class anti-pumping geocomposite product. The Defendant's predecessor, Terram, had previously developed a product called Terram PW Geosand (Geosand) that was intended as an alternative to a sand blanket. Geosand comprised a thin layer of sand encased between two layers of bonded geotextile. It was approved by Network Rail sometime in about mid 2000 but was deemed to be too expensive and heavy to install and so was not a commercial success. It had a cost of about £28/m^2, as compared with a sand blanket that had a cost of about £25/m^2. Geosand was withdrawn from the market around the time that Tracktex was launched.

85. As noted above, Tracktex has a number of perceived advantages over sand. These include (a) lower materials costs; (b) lower transportation costs; (c) lower installation costs; (d) lower removal costs; and (e) less track downtime to perform installation. In addition, a geotextile brings environmental advantages of decreased excavation depth (thereby reducing spoil for landfill and the volume of traffic involved in removing materials). Mr Donald gave evidence that he marketed these advantages to Network Rail as benefits of Tracktex. As he pointed out, since Network Rail adopted the product, it is only reasonable to assume that they accepted these benefits as genuine. This view is also supported by a document from Network Rail dated 18 October 2010 which shows the cost benefit of using Tracktex over a sand blanket (a Tracktex roll priced at £11.45/m^2 produced a cost saving of approximately £765,908 over a stretch of track of about 24km). Mr Donald also said that Network Rail told him that Tracktex reduced track possession time by about 33%. This can represent an even greater saving than the materials costs saving, as possession of a mainline typically costs approximately £200,000 per day.

Aqua

86. Aqua is a supplier to the rail industry, selling both drainage solutions and geocomposites. It deals with its own products and those of other manufacturers.

87. The evidence was that Aqua had good relationships with rail contractors and a strong network of contacts. It was well established as a general distributor to the rail industry and had an extensive transport and distribution arm which enabled fast and efficient distribution. By contrast, the Claimant is a small specialist geotextile company that had limited experience in selling into the rail industry.

88. The Claimant already had a distribution arrangement with Aqua before the introduction of Tracktex in 2010. In his written evidence, Mr Donald said that this was not formally an exclusive arrangement, but in practice most of the Claimant's sales of geotextile products to the rail industry were made via Aqua. In cross-examination he said that the relationship had been in existence for about 10 years.

89. Network Rail provided a Certificate of Acceptance for Tracktex on 9th March 2010, effective as of that date. Aqua was named as the distributor on the Certificate, but Network Rail had the option to buy direct from the Claimant.

90. Shortly thereafter, in or about April 2010, the Claimant and Aqua entered into a marketing agreement for Tracktex. There is a disclosure document headed "Tracktex - Marketing Agreement" which records the terms by which the Claimant agreed to supply Tracktex to Aqua. It is undated but seems to have been sent under cover of a letter from Mr Donald to Ian Smith of Aqua on 7th April 2010. The terms included that the Claimant would supply Tracktex to Aqua exclusively for the mainland UK (but excluding N. Ireland) save in respect of Network Rail's right to direct supply. The agreement could be terminated on 6 months' notice by either party. The price for 2010 was £15/m^2 ex works. As noted above (see paragraph 22), the idea was that Aqua would then sell on to Network Rail at a price of £20/m^2, although Mr Donald did not know what price Aqua in

fact charged because the relationship between the Claimant and Aqua was arm's length. The first invoice to Aqua under this agreement was on 16th July 2010.

91. Towards the end of 2010, Network Rail raised the prospect of buying Tracktex directly from the Claimant. The MD Report from the Board Meeting of 25th October 2010 indicated that this was motivated by price, and that Network Rail were keen to reduce the price of Tracktex to as low as £10/m^2. These discussions continued into early 2011. In the MD Report of the Board Meeting of 21st February 2011, Mr Donald recorded that he was considering this, but was "*mindful*" of the damage it could do to the relationship with Aqua, as well as Aqua's ability "*to win projects and also to convert the Renewal contractors to Tracktex anyway*".

92. In about March 2011 Network Rail exercised its right to direct supply of Tracktex from the Claimant with effect from 1st April 2011 for an initial period of two years (although in fact the first invoice to Network Rail is dated 25th March 2011). The terms agreed between the Claimant and Network Rail are as set out in paragraph 23 above.

93. As noted above, Mr Donald met with Aqua on 14th March 2011 to explain what had happened with Network Rail. In a letter to Mr Ian Smith of Aqua dated the following day, Mr Donald was at pains to point out that it was Network Rail that had initiated this distribution agreement. The effect of the direct supply arrangement was to cut Aqua out of a significant proportion of the market, and Mr Donald was understandably concerned about the impact it would have on the Claimant's relationship with Aqua.

94. In the same letter, he explained that the agreement with Network Rail was not exclusive, although he referred to a communication from Chatta Daljinder (presumably someone from Network Rail) which made clear that Network Rail only anticipated supply of Tracktex from Aqua for the short term. Mr Donald also confirmed that the Claimant had offered Aqua exclusivity for the UK for all sales other than those to Network Rail, as well as exclusivity in Ireland, Spain and Portugal. Enclosed with the letter was the proposed pricing structure and rebate scheme as set out in paragraph 26 above. Mr Donald made clear that this was on "*preferential*" terms relative to Network Rail and expressed the hope that project work, international business, London Underground and private lines would enable the Claimant and Aqua to continue to develop a profitable Tracktex business together.

95. Mr Donald explained that he did not want to leave Aqua without an opportunity in relation to Tracktex and that he was very concerned to maintain a good relationship with it despite the direct supply arrangement with Network Rail. He also said that he knew that there would be situations where sub-contractors would need or want to buy Tracktex directly rather than obtaining it from Network Rail. He acknowledged that Aqua had good relationships with sub-contractors and was much better set up to ship products and service customers than the Claimant. Therefore, the best way for the Claimant to handle this sector of the market was via Aqua.

96. This resulted in a side-by-side trading arrangement, with the Claimant supplying Tracktex to Network Rail and Aqua. There were substantial sales to both, and the arrangement appeared to be working reasonably well:

    i) Both experts calculated the sales to Network Rail but assessed them over different periods. Mr MacGregor calculated that sales in the 13 months April 2011 to April 2012 were 94,078m^2 for a total price of about £1.035million at an average price of £11.00/m^2. Mr Chapman calculated that sales in the 12 months from April 2011 to March 2012 were 78,235m^2 for a total price of £852,525 at an average price of £10.90/m^2.

    ii) Mr Chapman calculated that sales to Aqua in the period April 2011 to March 2012 were 60,220m^2 for a total price of £779,194 at an average price of £12.94/m^2.

97. Mr Donald accepted in cross-examination that the arrangement of direct sales to Network Rail was for an initial period of two years and was not necessarily intended to be permanent. It would have depended on the attitude of Network Rail and Aqua, as well as the commercial situation. However, he pointed out that since Network Rail had the right to direct supply under the Certificate of Approval, if it had wanted to continue the arrangement then the Claimant would not have been able to say ‘no’.

98. Of course, as things panned out, it was within this initial period that Hydrotex 2 was launched onto the market and the First Tender was issued. By May 2013, Network Rail was purchasing the majority of its geocomposite from the Defendant. According to Mr Chapman’s evidence (which was not disputed):

    i) Sales of Tracktex to Network Rail in the year April 2012 to March 2013 were 96,338m^2.

    ii) By contrast, total sales of both Tracktex and Hydrotex to Network Rail in the following year April 2013 to March 2014 were 96,948m^2 of which 87,473m^2 were Hydrotex and 9,475m^2 were Tracktex.

    iii) In the period April to December 2013, only 3,452m^2 of Tracktex were sold by Geofabrics to Network Rail.

The Exclusive Distribution Agreement with Aqua

99. By mid-2013, the Claimant was concerned that it would start trading at a loss. This was partly due to the impact of Hydrotex 2 and the resulting lost Tracktex sales to Network Rail. However, it was also partly due to market conditions which Mr Donald fairly accepted in cross-examination had nothing to do with Hydrotex 2 or this case. Overall, it meant that the Claimant was under significant commercial pressure. I return to this in the context of Issue 4 and redundancies below.

100. By late 2013, and even though the Claimant successfully challenged the First Tender, Mr Donald had formed the view that the Defendant would be likely to win the Second Tender. He realised that would effectively exclude the Claimant

from making direct sales of Tracktex to Network Rail and mean that the only sales route available to it was via sub-contractors. He was concerned to ensure that the Claimant was not left without a route to market and recognised that Aqua was better placed than it was to maintain this line of Tracktex sales. In this context, in the MD Report of the Board Meeting of 23 September 2013, Mr Donald recorded as follows:

> "We have little knowledge or exposure to the front line of railway business in the UK. Contractors, rail consultants and Network Rail itself are more or less strangers to us. It will take years to build up a network of contacts. Aqua already has that network."

101. Mr Donald also wanted to avoid the risk of Aqua taking the decision to purchase Hydrotex 2 instead of Tracktex.

102. In addition, since Aqua was also the distributor of the Claimant's other geotextile products which amounted to about 50% of the total business between them, he was concerned to protect that too, particularly considering the market conditions. In cross-examination he explained that if the Claimant lost the whole of the Aqua business, it would have had an "*existential*" impact on the Claimant. As a result, the Claimant could not take the risk of falling out with Aqua. It is important to remember, however, that one of the reasons why the non-Tracktex sales were so important at the time was because of the potential impact that Hydrotex 2 and the Second Tender were likely to have on the Tracktex side of the business. Mr Donald pointed out in cross-examination that in the counterfactual world where the Claimant had the additional Tracktex business, it would have been significantly further away from a loss-making position.

103. Finally, Mr Donald was still concerned about the damage that may have been caused by Network Rail's decision in 2011 to source Tracktex directly from the Claimant.

104. It was for all these reasons that the Claimant decided to cement relations with Aqua and entered into the exclusive distribution arrangement of 6 December 2013 referred to at paragraphs 33-34 above. This arrangement covered all sales of Tracktex, including sales which were in fact made to Network Rail (despite the Second Tender).

Would the Claimant have offered Aqua an exclusive arrangement in the counterfactual?

105. In his written evidence, Mr Donald said that in the counterfactual where Network Rail did not issue a tender, the Claimant would have retained its direct supply agreement with Network Rail. He said he could not see a reason why the Claimant would not have continued to supply Network Rail direct, although it would have continued to use Aqua as its distributor for non-Network Rail sales (including to sub-contractors who then service Network Rail). He rejected the suggestion that the Claimant would have offered an exclusive distribution agreement to Aqua. I accept Mr Donald's evidence on this issue, which seems to me to be founded on commercial common sense and was not undermined by the cross-examination.

106. The Defendant pointed to the fact that the direct supply agreement with Network Rail was at the instigation of Network Rail and there is no evidence that the Claimant would ever have suggested it. However, that rather misses the point. The question is not whether the direct supply agreement would ever have been put in place, since it was in the actual and is deemed to be so in the counterfactual. Instead, the question is whether the Claimant would have undone that arrangement in the counterfactual and replaced it with an exclusive distribution agreement with Aqua instead. I cannot see why it would have been in the commercial interest of the Claimant to do that, particularly bearing in mind that direct sales of Tracktex to Network Rail commanded a higher price pursuant to the Network Rail price matrix (at least depending on the quantities sold).

107. The Defendant also pointed to the fact that the direct supply arrangement with Network Rail had damaged the Claimant's relationship with Aqua. There is no doubt that it did. But the evidence showed that the Claimant had repeatedly made clear to Aqua that it had been Network Rail's doing. I refer to the letter of 15th March 2011, considered at paragraph 93 above. I also refer to the MD Report of the Board Meeting dated 21st March 2011, where Mr Donald records that Aqua were not pleased that the Claimant had entered into a direct supply arrangement with Network Rail but that he had stressed to Aqua that this was a Network Rail initiative. In cross-examination, Mr Donald said that Aqua felt that the Claimant "*had done the dirty on them*" which is why he had reassured them that it had come from Network Rail.

108. However, whilst the situation remained what Mr Donald described as "*sensitive*", he recorded in the MD Report of the Board Meeting dated 18th April 2011 that "*the Aqua relationship appears strong despite the Network Rail situation*". That is supported by the sales figures set out at paragraph 96 above. These figures suggest that the overall arrangement was working reasonably well, and there is no reason why the Claimant would have wanted to change it in the counterfactual.

109. The Defendant also relied on the fact that the Claimant entered into the exclusive distribution agreement with Aqua on 6th December 2013. It submitted that this was because Aqua was not prepared to wait until the outcome of the Second Tender and had put the Claimant under pressure for a more favourable solution. It referred to the MD Report of the Board Meeting of 23rd September 2013 where Mr Donald records that since the last Board Meeting, he had met with Aqua "*and definitely detected that the tactic of 'wait and see' was running out of time and that we were in danger of losing position through Aqua in the rail distribution market*". However, when Mr Donald was cross-examined about this, he explained that the "wait and see" tactic had come from the Claimant and not Aqua and had been devised to buy some time to assess the consequences of losing the First Tender whilst the tender challenge process was under way. He also made clear that the key pressure was competition from the Defendant in conjunction with market conditions at the time and losing the First Tender. This situation would not have occurred in the counterfactual where there would never have been competition from Hydrotex 2 or a tender process (even though the other market conditions would have been the same). Absent competition from the Defendant, the Claimant would not have needed to take remedial steps to ensure that it continued to have access to the market and retained Aqua's loyalty to Tracktex.

110. Finally, in this context the Defendant referred to the fact that the Claimant has continued its exclusive relationship with Aqua to this day, even though the tender arrangement between Network Rail and the Defendant came to an end in July 2017 and the exclusive distribution agreement with Aqua had an initial term of only three years. The Defendant submitted that there has been nothing to stop the Claimant from selling direct to Network Rail and said it is telling that it appears not to have even tried. I do not think that there is anything in this point since it does not shed any light on what the Claimant would have done in the counterfactual.

111. It follows that I reject the Defendant's arguments that the Claimant would have offered an exclusive distribution agreement to Aqua in respect of all Tracktex sales. On the balance of probabilities, the Claimant would have continued the supply arrangements that were in place immediately before Hydrotex 2 came onto the market, which comprised direct supply to Network Rail and exclusive distribution via Aqua to contractors, specific projects, and non-Network rail customers.

Would Aqua have demanded an exclusive distribution agreement in the counterfactual?

112. The Defendant argues in the alternative that even if the Claimant had not offered an exclusive distribution agreement, Aqua would have demanded one and the Claimant would have had to agree to it. It puts the chance of this happening at about 25-33%, although it accepts that the quantification of this chance must be assessed in the round.

113. The foundation of the argument as expressed in the Defendant's written closing was that Aqua held tremendous bargaining power and there was no reason to suggest that it would not have used it in the counterfactual to obtain an exclusive contract. It contends that Aqua would have forced the Claimant to offer a deal, failing which it would have walked away "because the Tracktex game was no longer worth the commercial candle". I have to say that I found this part of the Defendant's case to be largely speculative and unsupported by evidence. In this context, I note that there was no evidence at all from Aqua itself, either in terms of disclosure or from witnesses.

114. To the extent there was relevant evidence on this issue, it seemed to undermine the Defendant's case rather than support it. In particular, whilst there was clear evidence in the Claimant's disclosure that Aqua were unhappy with the direct supply arrangement that Network Rail had imposed on the Claimant, there was no suggestion that Aqua were threatening to walk away from the situation or to stop distribution of Tracktex to non-Network Rail customers unless they had the benefit of complete exclusivity. To the contrary, as soon as the direct supply arrangement with Network Rail was imposed in 2011, the Claimant and Aqua were able to agree a new distribution arrangement with the pricing matrix set out above and which was to operate alongside the direct supply agreement between the Claimant and Network Rail. That arrangement was in place when Hydrotex 2 was launched in July 2012 and, as I understand it, remained in place until the December 2013 exclusive distribution agreement. Moreover, it was an arrangement that worked well.

115. I appreciate that there was evidence from Mr Donald to the effect that both the Claimant and Aqua wanted to enter into the December 2013 exclusive distribution agreement. I have already explained above the reasons why that agreement was so important to the Claimant at the time, but apart from residual damage to their relationship arising out of the direct supply to Network Rail, none of those reasons would have materialised in the counterfactual. There was no evidence to explain any additional reasons why the agreement was important to Aqua or to suggest that Aqua had demanded it in the actual. To the contrary, when it was put to Mr Donald in cross-examination that it was Aqua that had pushed for the exclusive deal, he explained that it was the Claimant who had offered it, but that of course the exclusivity was mutual in the sense that Aqua only bought from the Claimant and the Claimant only supplied to Aqua. That evidence was supported by the MD Report of the Board Meeting of 23rd September 2013, which recorded that Mr Donald had initiated discussions with Aqua about a longer-term partnership and had recommended to the Board that the Claimant tried to secure a deal with it.

116. The Defendant also relied on the evidence that by mid-2013 there were other market pressures which were having a detrimental impact on the sale of non-Tracktex products in any event. The Defendant pointed out that these pressures would have pertained in the counterfactual, which I accept. However, as I have already noted above, in the counterfactual the Claimant would have had greater sales from Tracktex with the result that these pressures would not have been as significant. This is consistent with the evidence of Mr Donald who accepted in cross-examination that the Claimant would have done anything to protect the sales of non-Tracktex product in the actual but rejected the suggestion that the position would be the same in the counterfactual.

117. Finally, it was put to Mr Donald right at the end of his cross-examination that in the counterfactual, there was a material chance that Aqua would not have "put up with" a situation where the Claimant was supplying Tracktex directly to Network Rail and Aqua only had sales to contractors. Mr Donald said that the chance of Aqua demanding something different was even lower than the chance of Network Rail issuing a tender, and the parties had agreed that would not have happened in the counterfactual.

118. For all these reasons, there was no material before me upon which I could conclude that there was any real chance that Aqua would have demanded an exclusive distribution agreement, and I reject this part of the Defendant's case also.

119. I should note for completeness that Mr Hicks also argued that even if there was a chance that Aqua would have demanded an exclusive distribution agreement in the counterfactual, then the Claimant would have refused that demand on the balance of probabilities. It was not put to Mr Donald in cross-examination that the Claimant would have agreed to an exclusive distribution agreement if Aqua had demanded one, and there was no other evidence to support this part of the Defendant's case. Based on what I have held above, I do not have to decide this point. However, in case it matters, I would have held that it is more likely than not that the Claimant would have refused the demand if it had been made. This is essentially for the same reasons that I have given above in support of my view

that the Claimant would not have been likely to offer an exclusive distribution agreement. The Claimant would not have needed to accede to such a demand, and it would not have been in its commercial interest to do so.

Issue 3 – Number of sales of Tracktex in the counterfactual

120. For reasons which will become apparent, I consider that it is more appropriate to address Issue 3 before Issue 2.

121. Issue 3 relates to the period between February 2013 and May 2021 when Hydrotex 2 was on the market. In the counterfactual, it would not have been on the market and the Claimant would have been in a monopoly position. In that situation, the Claimant argued that every sale of Hydrotex 2 in the actual would have been a sale of Tracktex in the counterfactual. To support this argument, it relied upon the following factors:

    i) Hydrotex or Trackex would only be specified in the actual when an anti-pumping solution was needed.

    ii) There were only three alternative options on the market that provided anti-pumping solutions: Tracktex, Hydrotex or a sand blanket.

    iii) Since a sand blanket is more expensive and takes longer to install, it was inherently unlikely that Network Rail would choose it over a geocomposite.

    iv) Once Network Rail or a contractor had made the decision to use a geocomposite rather than a sand blanket, in the counterfactual the only choice was to use Tracktex.

122. The Defendant argued that a proportion of the Hydrotex 2 sales that it made were sales that the Claimant could never have achieved. There were a number of aspects to this argument.

Marketing efforts by the Defendant in a reluctant market

123. Firstly, the Defendant relied on the fact that Tracktex was the first-in-class geocomposite product, and that it needed to be accepted into a market that had been using sand for years. In his written evidence, Mr Hancock said that in 2012 the advantages of geocomposite products over sand were not as widely known as they are now, and that there was a reluctance by some contractors to use them. He explained that one of the reasons for this reluctance was safety; anti-pumping geocomposites were still new technology and if they did not perform there could be serious consequences. Another reason was a general resistance to change. He also explained that it was often the contractors or sub-contractors who decided which anti-pumping solution to use.

124. According to Mr Hancock, it was only the Defendant's marketing efforts that changed this perception. Those efforts comprised attendance at trade fairs, the company website, and an (unnamed) engineer working full time on promoting the Defendant's products (with about half that time spent on anti-pumping geocomposites). He gave evidence that the Defendant was required to exert

significant effort to secure sales, and he estimated that about 30% of the Defendant's sales were attributable solely to this hard work. He said that he and his team only encountered competition from Aqua about 50% of the time, and on this basis, he thought that approximately 15% of the Defendant's sales would never have been made by the Claimant.

125. Mr Hancock was questioned at some length about this evidence in cross-examination. He accepted that he was not involved in the sale of Hydrotex 2 in the UK from 2015 to 2018, so he could not speak from first hand-knowledge about that period. He said his evidence was based on his own experience from selling and promoting to Network Rail engineers prior to 2015 and from feedback from colleagues in the field. Unfortunately, he did not identify who these colleagues were, and I did not hear evidence from them. I also did not see any contemporaneous documents which supported Mr Hancock's evidence that the Defendant was winning sales of Hydrotex 2 through its promotional efforts.

126. Mr Hancock accepted that his 30% figure was nothing more than an estimate of the effect of the Defendant's promotion of Hydrotex 2, but that he did not have any basis for it. He also accepted that promotional efforts were not required in respect of orders from Network Rail, since they came in automatically. As a result, he agreed that any such efforts only related to non-Network Rail sales. In my judgment, since approximately 85% of Hydrotex 2 sales were through Network Rail, the opportunity to win additional sales through marketing and promotion must have been much more limited than Mr Hancock's evidence suggested.

127. Mr Hicks submitted that I should not give this evidence any real weight because it was vague and unspecific, and there was no material upon which to assess the reason why the Defendant had won Hydrotex 2 sales over competition from Tracktex or sand or both. I accept this submission. In so doing, I am mindful of the warning from Norris J in *Servier* about honest but self-serving evidence (see paragraph 11 above). Considering the authorities summarised at paragraph 66 above, I also have regard to the fact that it was the Defendant who could have provided material to support its case on this issue, but it failed to do so.

128. In any event, it is clear from what Mr Hancock accepted in cross-examination that to the extent there is a point here at all, it only relates to the sales to contractors. Mr Donald gave evidence that in the actual, if a contractor decided to use Hydrotex, that was a clear indicator that they preferred a geocomposite over sand for that particular project or piece of work. He went on to say that if Hydrotex had not been available (as in the counterfactual), there was no reason why the contractor would not have selected Tracktex instead. The only other option would be to use sand, but that was the more costly choice and there would be no logical reason to make it when a geocomposite had been determined as a technically satisfactory option. (In this context, it will be recalled that antipumping geocomposites are not suitable for all tracks.)

129. Based on this evidence, the Claimant submitted that in the counterfactual, where Tracktex was the only player in the market, the Claimant and Aqua would have been equally effective in "converting" contractors to use it as the Defendant had been in the actual. I think that there is force in this submission, particularly

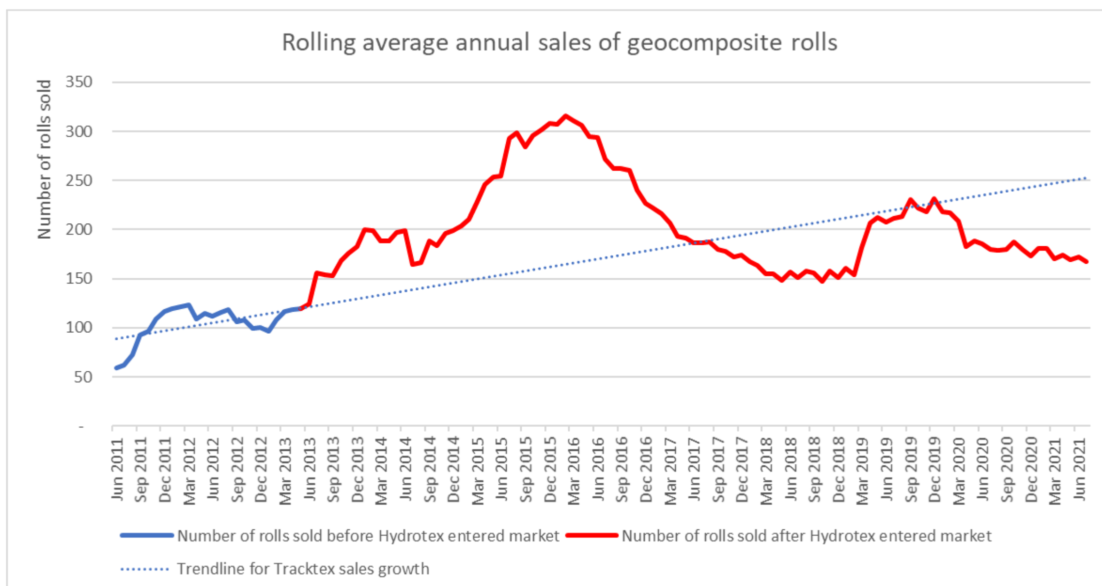
bearing in mind the significant savings of cost and installation time over sand. It is also consistent with the contemporaneous evidence to the effect that Aqua were good at converting contractors, for example as noted by Mr Donald in his MD Report of the Board Meeting of 21st February 2011 (see paragraph 91 above), and as confirmed by him in cross-examination.

Additional market expansion in a duopoly

130. Secondly, the Defendant argued that the launch of Hydrotex 2 in the actual caused the overall size of the market to grow to a greater extent than would have been achieved in the counterfactual. This was based on what the Defendant described as an "economic principle" to the effect that generally when two suppliers enter the market for a new (and as yet unaccepted) class of products, the market will grow faster than if there is only one supplier. The experts agreed that, with an emerging product, a duopoly can increase the growth of the market over and above the monopoly position.

131. There is clear evidence that the rolling average annual sales of geocomposite rolls grew after Hydrotex entered the market, with a peak in sales in around late 2015 to early 2016. In its defence, the Defendant relied on the fact that Tracktex sales were approximately 97 rolls per month prior to the launch of Hydrotex 2. It also claimed that Network Rail had predicted annual sales of 1300 for 2013-2014, which amounts to approximately 109 rolls per month. By contrast, the average number of rolls sold between May 2013 and July 2021 was 204 rolls per month.

132. The overall annual average sales were summarised in the graph in Mr MacGregor's first report, as follows:



133. However, the graph also shows that a general trend in growth had already been established before Hydrotex was launched. Consistent with that trend, Mr Donald gave evidence that by the time Hydrotex entered the market, Tracktex had already gained market acceptance with Network Rail (even if some contractors remained reluctant).

134. Moreover, Mr Donald provided the following reasons to explain the variability and why there was a "bulge" in the volume of geocomposite sales between about June 2013 and June 2017.

   i) First, a geocomposite product will only be used for remediation work when clay is detected. The presence or absence of clay will vary across different geographic locations and within different sections of a particular track. That explains why there is inherent variability in how much product is used.

   ii) Secondly, the opportunity that geocomposites presented to remediate tracks at a much lower cost and with reduced track possession time enabled Network Rail to address pumping erosion issues that it might have otherwise not addressed. That may explain a spike in sales over this period.

   iii) Thirdly, as regards the 1300 roll estimate, he explained that this figure came from the Network Rail tender documents and would have been sufficient to cover approximately 20 miles of track. However, since Network Rail is responsible for about 14,500 miles of track in total, it can readily be seen that even a small increase in remediation work would reflect a large increase in sales.

   iv) Lastly, the London Crossrail project presented a one-off opportunity for a sale of 800 rolls of geocomposite and would also have contributed to higher sales over this period.

135. It is difficult for me to assess to what extent, if at all, the growth in the market in the actual was caused specifically by the presence of two geocomposite products on the market, instead of one. On the one hand, I accept in principle that the advent of a second product on to a new market can help to swell the overall size of that market, particularly if it is still in the early stages of establishment and acceptance. On the other hand, the evidence was that Tracktex had already gained acceptance, at least by Network Rail, and its market was growing even before Hydrotex 2 was launched. Mr Donald also gave cogent reasons to explain the spike in sales over 2015-2016. This suggests that the pattern of growth in the actual would have been reflected in the counterfactual.

136. The Defendant did not attempt to quantify how much, on its case, the market had grown by reason of the duopoly situation in the actual. I found that telling. It was not clear to me how I was expected to be able to put a figure on it when the Defendant could not.

Tension between market size and price

137. Thirdly, the Defendant argued that the size of the market in the actual was, at least in part, attributable to the price competition that resulted from two competing products. It said that the market only grew to the extent that it did because prices were kept low.

138. In this context, Dr Pritchard impressed upon me the interrelationship between the price that the Claimant could have charged in the counterfactual with the overall market that it could have achieved. I accept, of course, that there is such a

relationship. The point is explained in *Terrell on the Law of Patents* (19th Edition) at §21-114, a passage which Dr Pritchard helpfully referred me to. However, that does not necessarily mean that the Claimant would not have secured more sales in the counterfactual when it had a monopoly position, even with higher prices.

139. Mr Donald said that he did not believe that the lower prices in the actual had an effect of increasing the size of the market overall. Moreover, in his view, the higher price of Tracktex in the counterfactual would have been offset against the advantages that it presented over sand.

140. In my view, this particular point is better addressed in the context of price growth under Issue 2 (see below) and is why I have addressed Issue 3 first.

Marketing power of Aqua

141. Fourthly, the Defendant argued that the total sales the Claimant would have achieved in the counterfactual should be reduced "to reflect the absence of Aqua's marketing power". However, I do not think that this is a separate point to the point about marketing efforts I have addressed above. It also seemed to be presented on the false premise that Aqua would not have been part of the counterfactual, which is contrary to what the parties agreed. There was no dispute that the Claimant would have continued to use Aqua in the counterfactual to sell Tracktex to contractors and other non-Network Rail customers.

Assessment

142. Based on these points overall, the Defendant submitted that not all the sales of Hydrotex 2 in the actual would have been Tracktex sales in the counterfactual. It suggested a reduction of around 15-20% but acknowledged that it was a matter of "feel" for the court in light of the evidence and was not capable of precise mathematical calculation.

143. I reject this submission. In my judgment, all the sales of Hydrotex 2 in the actual would have been sales of Tracktex in the counterfactual. For the reasons set out above, I was not persuaded that the Defendant had won any meaningful sales through its marketing efforts with contractors which would not have otherwise come to the Claimant via Aqua. The 15% figure proffered by Mr Hancock in this regard was speculation and was not supported by any objective evidence. The Claimant would have achieved the direct orders from Network Rail in any event. I was also not persuaded that the duopoly situation in the actual grew the overall size of the market more than it would have done in a monopoly situation in the counterfactual. I gave this point particular consideration as I am aware that this argument has found favour in other cases (see in particular Jacob J (as he then was) in *Gerber v Lectra* at p.415). But I must decide this case on the materials before me and in my view the overall balance of the evidence did not support it.

Capacity?

144. Assuming I am right, and that the sales of Hydrotex 2 in the actual would have been sales of Tracktex in the counterfactual, there is the additional question of

whether the Claimant would have had the necessary production capacity to meet those increased sales.

145. Mr Donald gave evidence that Tracktex was manufactured through two discrete lines: needle punching (called the BF1 line) and laminating (called the L1 line). The BF1 line is also used to make two other geofabric products: Terratex and TED 10. Over an operating schedule of 5 days a week, 24hrs a day (which is how the Claimant's factory operates and operated), the average utilisation of each line on an annual basis is as follows[1]:

Year	L1 Utilisation	BF1 Utilisation
2013	27% (actual 25%)	61% (actual 56%)
2014	23% (actual 19%)	61% (actual 52%)
2015	21% (actual 16%)	70% (actual 57%)
2016	20% (actual 18%)	76% (actual 69%)
2017	20% (actual 19%)	65% (actual 60%)
2018	23% (actual 21%)	51% (actual 46%)
2019	21% (actual17%)	56% (actual 47%)
2020	15% (actual 13%)	42% (actual 37%)

146. The utilisation figures in brackets represent the level of utilisation of each production line in the actual, whereas the other figures represent the predicted level of utilisation of each production line in the counterfactual. So far as I understand it, the actual figures are based on the annual volumes that ran through each production line to manufacture the actual volumes of Tracktex, Terratex and TED10 that the Claimant produced. This was not clear from Mr Chapman's report but was what Mr Donald said in his written evidence. The counterfactual figures also include the total annual sales of Hydrotex 2.

147. Based on these figures, the Claimant submitted that it had ample production capacity to manufacture the additional sales of Tracktex that it would have made in the counterfactual.

148. However, the Defendant challenged this submission because it is based on annual figures, rather than monthly ones. As a result, it said that the Claimant had failed to demonstrate that it had capacity in any one month, bearing in mind month to month variability. In this context, it relied on the spikes in sales that can be seen

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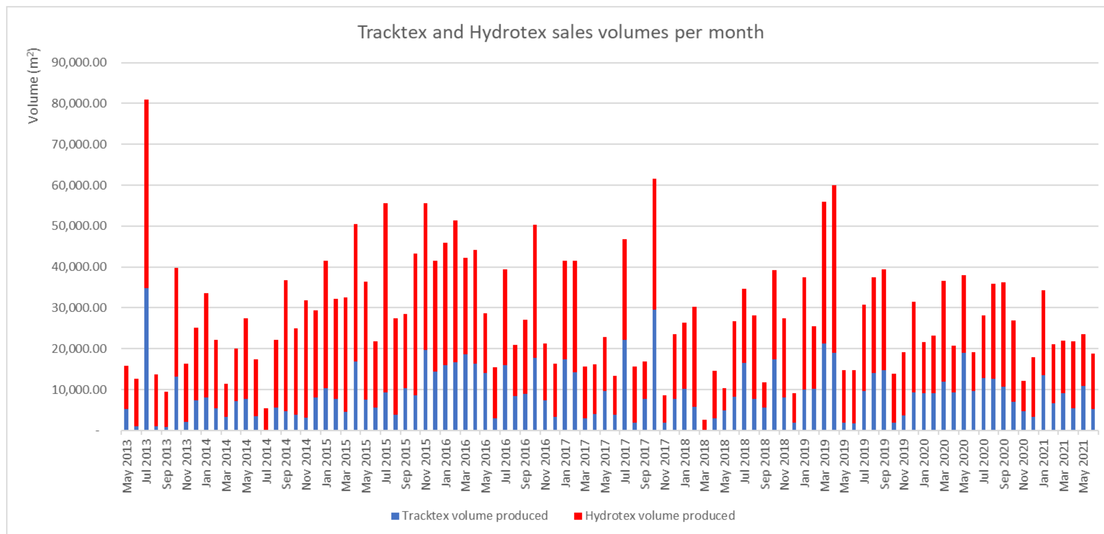
1 I note that both Mr Donald and Mr Chapman provide these figures in their evidence, but that there are very small differences between some of them (1-3%). It is not clear what the reason is for these differences. I have used Mr Donald's figures as they are consistently higher.

from the summary of total invoices that Mr MacGregor prepared as part of his evidence:



149. The Defendant's argument went thus:

i) There is month to month variability in the sales of Tracktex and Hydrotex 2.

ii) Mr Donald accepted that there was the same kind of variability with the other products that were manufactured on the same lines, as well as seasonal variation (60:40 summer : winter).

iii) Since Tracktex only amounts to a small proportion of total production (the evidence was that, at least in 2013, it was 4%), the majority of line utilisation relates to other products (96% for 2013) and the variation in production of those other products will have a much greater effect on overall usage and capacity.

iv) Mr Donald accepted that if there was significant demand for the other products in a particular month, there was the potential to run out of capacity.

150. I think that this argument is flawed for a number of reasons. Firstly, Mr MacGregor's graph relates to invoices and hence reflects monthly variability in sales, not production. Secondly, the proportion of line usage for other products is the wrong comparator. What matters is the total remaining capacity in the actual, and whether that was sufficient to accommodate the additional manufacturing requirements in the counterfactual. Thirdly, whilst Mr Donald did accept that there was a potential to run out of capacity, he made clear that was only in theory. His evidence was that it was unlikely to happen in practice. He pointed to the fact that in the last 10-12 years, the factory had not even had to work at the weekend to meet production demands. He also explained that there were levels of protection (he called them "safety valves") to ensure consistent supply: (i) Aqua retained their own stock of Tracktex which they used to meet their customer demand. They replenished their stock via stock orders every few months; (ii) Aqua's stock orders usually had a lead time of 6-8 weeks and were not for

immediate supply; (iii) the Claimant also kept stock of Tracktex (typically 100 rolls) in case of last-minute orders.

151. The Defendant also criticised the Claimant for not having provided the monthly production data upon which the annual data set out at paragraph 145 above was based. As a result, it submitted that the Claimant had failed to prove that it had the capacity to make the additional sales it would have achieved in the counterfactual. Dr Pritchard pointed out that this was information that the Claimant had but had failed to provide and reminded me of the authorities set out at paragraph 64 above.

152. There was some force in this criticism, but after careful consideration, I think that the totally of evidence was sufficient for the Claimant to discharge the burden of proof on this issue. The annual figures demonstrated that there was ample head room to manufacture the total quantity of Tracktex in the counterfactual. Moreover, the concerns about monthly variations seemed more theoretical than real, particularly bearing in mind the normal lead time on orders which would enable production to be spread over a period of weeks (if so required) and the stock of Tracktex that the Claimant held to meet any urgent demands.

153. It follows that I hold that the Claimant would have had capacity to manufacture the additional Tracktex product it would have sold in the counterfactual.

Issue 2 – What prices would the Claimant have achieved for Tracktex in the counterfactual?

154. At a general level, the Claimant's case was that it would have achieved higher prices for Tracktex in the counterfactual than it did in the actual. This is because it would not have been subject to any price competition. The Defendant accepts that the counterfactual prices would have been different, but there is significant dispute about the detail of how these prices should be estimated.

155. The outcome of Issue 2 is relevant to three heads of loss: (i) lost profits on lost sales of Tracktex (i.e. the additional sales of Tracktex that would be made in the counterfactual – Issue 3); (ii) lost profits on sales of Tracktex in the actual (assuming these were at lower prices than would have been achieved in the counterfactual); and (iii) lost profits on future sales which requires an estimation of what the sales price of Tracktex would have been in the counterfactual in May 2021 when Hydrotex 4 was launched (Issue 5).

156. Both parties accepted that it is not possible to determine what the prices would have been with any kind of precision. I must do the best I can based on the evidence before me, which was largely provided by the experts on this issue.

<u>The pricing matrices</u>

157. As noted above, the parties agreed that the prices in the counterfactual should be assessed on the basis of notional pricing matrices running from 1st April in one calendar year to 31st March in the following calendar year, with 2011/2012 being taken as the "baseline" pricing matrix for the first 2 years.

Network Rail

158. The parties also agreed that the 2011/2012 pricing matrix agreed with Network Rail should be used as the baseline for calculating the average annual sales price to Network Rail in the counterfactual. This is the matrix set out at paragraph 23 above. I set it out again here for convenience.

Network Rail Pricing 2011/12	3.9 x 25m Sqm	97.5 Roll	3.7 x 25m Sqm	92.5 Roll	3.5 x 25m Sqm	87.5 Roll
Less than 250 rolls	15.00	1462.50	15.19	1405.08	15.38	1345.75
Up to 500 rolls	13.50	1316.25	13.67	1264.48	13.83	1210.13
Up to 750 rolls	12.74	1242.15	12.90	1193.25	13.06	1142.75
Up to 1000 rolls	11.46	1117.35	11.61	1073.93	11.76	1029.00
Over 1000 rolls	10.89	1061.78	11.03	1020.28	11.16	976.50

159. However, there was a small point of detail here which remained in dispute. Based on the matrix, the Claimant submitted that the Network Rail starting price for Tracktex in the counterfactual should be £10.90/m^2 whereas the Defendant said it should be £11/m^2. The discrepancy arises because Mr MacGregor calculated the average sales price for 2011/2012 over a 13-month period to reflect the fact that the Claimant had extended the 2011/2012 contractual period by one month in the actual. This had been done at the time to allow Network Rail to achieve total sales of over 1000 rolls and take advantage of the lowest price band of the matrix. Network Rail had received a rebate of £54,705 as a result. Mr MacGregor took this rebate into account in his calculation of the average sales price. Mr Chapman's calculation was based on sales over the 12-month period of 1 April 2011 to 31 March 2012, although it did take the rebate into account.

160. I prefer Mr MacGregor's approach on this issue, for no other reason than it is anchored in the actual. I think it is likely that the Claimant would have approached the first year of pricing with Network Rail in the counterfactual in the same way that it did in the actual. The task of estimating what would have happened in the counterfactual is uncertain enough as it is, and it would be foolish to exacerbate that by ignoring what happened in the real world.

Aqua

161. The parties could not agree on how to determine prices to Aqua. In this context it is perhaps worth emphasising that it was common ground that non-Network Rail sales of Tracktex in the counterfactual would have been made through Aqua, as they were in the actual. This means that even though I have held that there would not have been an exclusive distribution arrangement between the Claimant and Aqua in the counterfactual, with the result that the Claimant would have made direct sales to Network Rail, it is still necessary to determine the price of sales to Aqua for the purposes of calculating the damages in respect of non-Network Rail sales.

162. The Claimant argued that in the counterfactual, it would have used the 2011/2012 Aqua pricing matrix as the baseline for Tracktex prices to Aqua, as it had done in the actual. This is the price matrix set out at paragraph 26 above.

163. The Defendant argued that in the counterfactual, the Claimant would have used the 2011/2012 Network Rail pricing matrix, but with a 23% discount. This was because Mr MacGregor assumed that Aqua would have to purchase Tracktex from the Claimant at a price that was lower than the price agreed with Network Rail in order to remain competitive when selling to contractors. He arrived at the figure of 23% by calculating the average mark-up that Aqua had applied to sales of Tracktex in the actual, which he assessed at about 30% (a mark-up of 30% is mathematically equivalent to a discount of 23%). The 30% figure itself was based on a range of sources, as follows:

i) The original supply agreement between the Claimant and Aqua at a sale price to Aqua of £15/m^2 and which presupposed a sale price from Aqua to Network Rail of £20/m^2. This amounts to a 33% markup.

ii) The MD Report of the Board Meeting of 3rd February 2014, which provided a sale price to Aqua of £6.50/m^2 and a sale price from Aqua of £7.50/m^2 for the Crossrail project. This amounts to a 15.4% markup.

iii) Evidence of the value of the First Tender of £7.5m for Geofabrics and £10.2m for Aqua. This amounts to a 36% markup.

iv) A comparison between the annual average sales prices charged by the Claimant to Aqua and the annual average sales prices charged by the Defendant to Network Rail. Mr MacGregor suggested that the latter price was the closest proxy for the average sales price of Tracktex from Aqua to Network Rail in the counterfactual. This gave a figure of 29.1%.

164. I have a number of difficulties with the Defendant's suggested approach. First, in the actual the Claimant did not use the Network Rail pricing matrix to determine the prices that it charged to Aqua. Instead, it used a different pricing matrix specific to Aqua. Secondly, there was no evidence to support the view that the Claimant would have changed its approach in the counterfactual. Thirdly, there was no evidence of the prices that Aqua in fact charged in the actual. As noted above, Mr Donald did not know, because the relationship between the Claimant and Aqua was arm's length. This means that the 30% figure is based on supposition. Fourthly, during the period between about April 2011 and December 2013 when the Claimant was supplying to Aqua and Network Rail in parallel, the average Tracktex prices to Aqua were higher than the average prices to Network Rail (presumably reflecting the different volumes that they bought). The Defendant's sales prices of Hydrotex 2 to Keyline were also higher on average than its prices to Network Rail. This evidence undermines the assumption that prices to Aqua in the counterfactual should necessarily be lower than prices to Network Rail. Mr Hicks also explained that contractors are prepared to pay higher prices from distributors because of the additional services they offer (such as distribution, additional products, ready stocks, etc).

165. In addition, the Defendant argued that it was unreasonable to assume that the Claimant would have used the Aqua pricing matrix in the counterfactual in circumstances where it was more likely that there would have been an exclusive distribution arrangement between them. I have already rejected this argument, above.

166. For all these reasons, I reject the Defendant's suggested approach. In my judgment, it is more likely than not that in the counterfactual the Claimant would have used the pricing matrix that it agreed with Aqua in the actual, and that should be used as the baseline for calculating the average sales price to Aqua.

What would the annual price increase have been?

167. The parties agreed that price growth should be estimated by reference to an annual average price increase. However, the experts disagreed on the detail of how to calculate the estimated price increase. Whilst they both used sales of Hydrotex in the actual as the relevant proxy, they determined the average increase by reference to different sales figures and over different periods of time. They also disagreed on whether the price increase would be the same or different for each of Network Rail and Aqua. Mr Chapman considered that there would have been different rates of increase in the counterfactual for Network Rail and Aqua, whereas Mr MacGregor thought that there would have been a single rate of increase for all sales.

168. Mr Chapman calculated the average annual Hydrotex 2 sales growth as follows:

Table 2.1: Hydrotex 2.0 sales growth to Network Rail

Year	Start Date	End Date	Years of growth	Sales value (£)	Quantity sold (m^2)	Average price (£/m^2)	Price movement %
2013/2014	03-May-13	31-Mar-14		814,125	87,473	9.31	
2014/2015	01-Apr-14	31-Mar-15	0.91	1,627,437	167,295	9.73	4.5%
2015/2016	01-Apr-15	31-Mar-16	1.91	1,726,433	178,790	9.66	-0.7%
2016/2017	01-Apr-16	31-Mar-17	2.91	885,648	91,398	9.69	0.4%
2017/2018	01-Apr-17	31-Mar-18	3.91	602,407	61,529	9.79	1.0%
2018/2019	01-Apr-18	31-Mar-19	4.91	988,337	85,903	11.51	17.5%
2019/2020	01-Apr-19	31-Mar-20	5.91	1,367,545	109,731	12.46	8.3%
2020/2021	01-Apr-20	31-Mar-21	6.91	609,470	48,403	12.59	1.0%
2021/2022	01-Apr-21	22-Jul-21	7.22	52,267	4,024	12.99	3.2%
		Hydrotex's compound annual growth rate for Network Rail sales					4.73%

Table 2.2: Hydrotex 2.0 sales growth to Non-Network Rail

Year	Start Date	End Date	Years of growth	Sales value (£)	Quantity sold (m^2)	Average price (£/m^2)	Price movement %
2012/2013	12-Feb-13	31-Mar-13		18,915	1,755	10.78	
2013/2014	01-Apr-13	31-Mar-14	0.14	317,745	28,178	11.28	4.6%
2014/2015	01-Apr-14	31-Mar-15	1.14	243,001	21,675	11.21	-0.6%
2015/2016	01-Apr-15	31-Mar-16	2.14	275,301	25,545	10.78	-3.9%
2016/2017	01-Apr-16	31-Mar-17	3.14	125,073	10,405	12.02	11.5%
2017/2018	01-Apr-17	31-Mar-18	4.14	152,164	13,114	11.60	-3.5%
2018/2019	01-Apr-18	31-Mar-19	5.14	60,494	5,494	11.01	-5.1%
2019/2020	01-Apr-19	31-Mar-20	6.14	253,507	21,713	11.68	6.0%
2020/2021	01-Apr-20	31-Mar-21	7.14	281,253	27,349	10.28	-11.9%
2021/2022	01-Apr-21	21-Jul-21	7.44	199,827	17,648	11.32	10.1%
		Hydrotex's compound annual growth rate for Non-Network Rail sales					0.67%

169. Mr MacGregor calculated the average annual Hydrotex 2 sales growth as follows:

Table 4: Growth rate of Hydrotex 2.0 sales price[63]

Period of calculation	Number of years	Average price in start period £/m²	Average price in final period £/m²	Growth rate %
Jan 2014 to Dec 2020	6	9.88	12.03	3.3%
Jan 2014 to Jun 2021	6.5	9.88	11.48	2.3%
Jul 2013 to Jun 2021	7	10.18	11.48	1.7%

170. Whilst the experts presented their calculations differently in their reports, I understand that their methodology is the same. They both use the following growth rate formula, where FP = Average final sales price, SP = Average starting sales price and P = Period of sales price growth:

$$\boldsymbol{Growth\,rate}\ (\%) = \left((\frac{\boldsymbol{FP}}{\boldsymbol{SP}})^{\frac{1}{\boldsymbol{P}}} - \mathbf{1} \right) \boldsymbol{x}\ \mathbf{100}$$

171. However, the experts used different input parameters, which is how they generate different figures (the table only compares Mr MacGregor's 1.7% figure with Mr Chapman's 4.73% figure):

	MacGregor's 1.7%	**Chapman's 4.73%**
FP	11.48	12.99
SP	10.18	9.31
P	7 years	7.22 years
Formula	(11.48/10.18)^(1/7)-1 x 100% = **1.7%**	(12.99/9.31)^(1/7.22)-1 x100% = **4.73%**

172. The differences in approach were helpfully summarised by the Defendant in tabular form as follows:

	Chapman 1	MacGregor 1	Chapman 2
Actual world proxy	Hydrotex	Hydrotex	Hydrotex
Average	Simple average	Weighted average	Weighted average
Period of growth rate calculation	7-year period – Jan 2014 to Dec 2020	8-year period – Jul 2013 to Jun 2021	8.22-year period (NR) – May 2013 to Jul 2021 8.44-year period (non-NR) – Feb 2013 to Jul 2021
Start period average sales price	12 months – Jan 2014 to Dec 2014 (excl. discounted May 2013 sales)	9 months – Jul 2013 to Mar 2014 (excl. discounted May 2013 sales)	11 months – May 2013 to Mar 2014 (inc. discounted May 2013 sales)
End period average sales price	6 months – Jan 2021 to Jun 2021	6 months – Jan 2021 to Jun 2021	3 months – Apr 2021 to Jul 2021
Final %	**3.4%** [1]	**1.7%** [2]	**4.73% (NR)** **2.86% (non-NR)** [3]

173. So far as I understand it, the approach set out in Mr Chapman's first report has been superseded by the approach he set out in his second report. I therefore focus my analysis on the competing approaches as summarised in the second and third columns in the table above (MacGregor 1 vs Chapman 2).

Same or different figures for Network Rail and Aqua?

174. The question of whether the price increase would have been the same or different for Network Rail and Aqua is interrelated with what that estimated price increase would be. Mr MacGregor's 1.7% figure was calculated by reference to all Hydrotex sales, whereas Mr Chapman based his 4.73% figure on Hydrotex sales to Network Rail and his 2.86% figure on Hydrotex sales to Keyline. For this reason, it is more logical to determine the sub-issue of whether the same or different annual price increases would have applied to Network Rail and non-Network Rail sales in the counterfactual first, before going on to assess what the price increase or increases would likely have been.

175. In my judgment, the annual price increase in the counterfactual should be assessed independently for Network Rail and Aqua. I think that this is an inevitable consequence of the decision I have reached above to the effect that the Claimant would have used the Network Rail price matrix for sales to Network

Rail and the Aqua price matrix for sales to Aqua. Once one accepts that the Network Rail and non-Network Rail prices were negotiated differently, in my view one must also accept that it is more likely they will be subject to different average annual price increases.

176. I should note that my reason for reaching this view is not the same as the main reason that Mr Chapman gave in his report for determining the price increase for the Network Rail and non-Network Rail sales separately. His justification for splitting the sales was that the Hydrotex sales to Network Rail were more reflective of the monopoly situation that would pertain in the counterfactual. However, the Defendant was critical of this view. Dr Pritchard pointed out that the sales of Hydrotex to Network Rail took place in two distinct periods. The first period was pursuant to the tender framework when prices were fixed and there was effectively no price growth. The second period was once the Second Tender had come to an end, after which there was an immediate price spike (presumably representing market freedom outside the tender framework), followed eventually by more stable price growth akin to that of the non-Network Rail sales. During this second period, Hydrotex was also being sold to Network Rail in competition with Tracktex.

177. In cross-examination, Mr Chapman accepted that the Hydrotex sales to Network Rail as a whole were not reflective of a quasi-monopoly position. He agreed that to the extent there was a monopoly situation in the actual, it was only during the period of the tender framework.

178. It is clear that there are differences between the actual and the counterfactual which make any comparison less than perfect. But in my view, assessing the price increase of Tracktex sales to Network Rail and Aqua separately is the most logical approach in all the circumstances of the case.

Annual price increase - Network Rail

179. As noted above, the experts agreed that the price increase of Hydrotex 2 in the actual was the appropriate proxy against which to estimate the price increase of Tracktex to Network Rail in the counterfactual. The rationale for this approach was that the Claimant would have achieved at least the same rate of price increase in the counterfactual (when Tracktex would have been in a monopoly position) as the Defendant had achieved in the actual (when Hydrotex had encountered some competition from Tracktex, at least once the Second Tender period had come to an end).

180. The Defendant was highly critical of the way in which Mr Chapman's 4.73% figure had been calculated and submitted that Mr MacGregor's 1.7% figure should be preferred. There were a number of reasons for this, as follows.

(i) Mr Donald's evidence

181. Firstly, the Defendant submitted that the best estimate of the annual price increase in the counterfactual was the evidence from Mr Donald rather than the models proposed by the experts. In his Third Witness Statement, Mr Donald had said that based on his experience of sales of products in the sector, an average annual rise

in price of 2% p.a. seemed a reasonable assumption. He calculated that this would have meant an average price of £12/m^2 in 2013, increasing to £13.79/m^2 in 2020. Whilst he did not say so expressly, the inference is that he considered those prices to be reasonable. He also sense-checked the 2% figure against the CPI, CPIH and RPI values for the years 2013-2020, and considered it to be comparable on average to those values. By his Sixth Witness Statement, Mr Donald's evidence was that his aim would have been to secure a price increase of 2-5% each year to match the yearly increase in the cost of a sand blanket. However, he accepted in cross-examination that 2% was a "safer" figure, and he said it was the best figure to take based on his own commercial experience.

182. I do not think that I should determine the likely annual price increase by reference to this evidence alone, as the Defendant submitted, but I obviously take it into account in my overall assessment of what the average annual price increase would likely have been. However, I also bear in mind that, as Mr Hicks pointed out, the 2% figure was based on an average price in 2013 of £12/m^2, which is higher than the deemed price in the counterfactual from the Network Rail price matrix.

(ii) The average starting sales price (SP)

183. Secondly, Mr Chapman's calculation of the start price was based on the sales from May 2013 to March 2014, whereas Mr MacGregor based his on sales from July to December 2013.[2] Mr MacGregor excluded the first two months of initial sales (May - June 2013) because they were at a price of £7.95. Within a couple of months, the Hydrotex price had risen to £9.50 and whilst there was some fluctuation thereafter, it never went as low as £7.95 again. As a result, Mr MacGregor considered that these initial prices were given at a discounted rate so that the Defendant could enter the market. In his view, there would not have been an equivalent dip in the Tracktex price in the counterfactual, since by then it would have already been on the market for some time and would have an established price in accordance with the Network Rail price matrix.

184. Mr Chapman agreed in principle that the calculation should exclude data that was peculiar to Hydrotex in the real world and would not have been relevant to the counterfactual. However, he did not accept that the initial Hydrotex price was an anomaly. In his view, it was simply the price that the Defendant started selling at, and so was the proper basis against which to assess the average increase in price. He thought that the rationale behind the pricing was irrelevant.

185. I note that there was no evidence from Mr Hancock on this issue. He did not suggest that the £7.95 price was a discounted one or that there was something unusual about it. Nor was there any disclosure from the Defendant which shed any light on this issue.

186. Mr Hicks submitted that Mr MacGregor's approach was akin to "cherry picking". The thrust of the submission was that Mr MacGregor was ignoring the early sales because they skewed the figure in the Claimant's favour. Mr Hicks also pointed out that Mr MacGregor's approach was contrary to the desire which both experts

[2] This evidence is from fn63 of Mr MacGregor's first report but contradicts the summary in the table at paragraph 172 above. I do not know what is correct, although nothing turns on it.

shared to include as much data as possible over as large a time frame as possible. Finally, he said it would be inconsistent for the court to disregard the May-June sales of Hydrotex on the basis that they were the Defendant's starting prices in circumstances where the Network Rail pricing matrix comprised the Claimant's first prices to Network Rail.

187. I found this difficult to decide, as there is force in both side's approaches. However, on balance, in my judgment it would be wrong to exclude the May and June sales from the determination of the average starting sales price, particularly when there was no evidence from Mr Hancock to support the idea that they were discounted prices or an outlier. I prefer Mr Chapman's approach to the calculation of the average starting sales price for the purposes of the growth rate formula.

(iii) The average final sales price (FP)

188. Thirdly, Mr Chapman's average final sales price was based on the sales period of 1 April 2021 – 22 July 2021. I presume this was because the pricing matrices ran from 1 April in each calendar year. There were only three sales of Hydrotex to Network Rail in this period, amounting to just over 4000 sqm.

189. Mr MacGregor considered that this three-month period was too short and did not provide a large enough sample from which to calculate a meaningful average price. As a result, he had calculated the average final sales price from the sales figures for the six-month period from January to June 2021. So far as I understand it from Mr MacGregor's evidence, he excluded the July 2021 sales figures because they comprised sales at £nil value and this would have distorted the average. I note that Mr Chapman had adopted a similar approach in his first report (albeit that his first calculation is no longer relied upon).

190. In cross-examination, Mr Chapman agreed that the 4000 sqm quantity sold during this period was a small number and looked like an outlier. He also agreed that Mr MacGregor's approach to calculating the average final sales price was reasonable.

191. I prefer Mr MacGregor's approach to calculating the average final sales price for the purposes of the growth rate formula for the reasons he gives and because Mr Chapman agreed it was reasonable. I was particularly concerned about the impact of the July prices on Mr Chapman's calculation in conjunction with the small number of sales overall. I also did not understand why there were July 2021 sales at all when the Court of Appeal's judgment upholding the finding of infringement was handed down in June 2021.

(iv) The period of sales price growth (P)

192. Fourthly, Mr Chapman based his calculation on a total period of 8.22 years of sales (May 2013 to July 2021), which results in a period of sales price growth (P) of 7.22 years. By contrast, Mr MacGregor based his calculation on a total period of 8 years of sales (July 2013 to June 2021), which results in a period of sales price growth (P) of 7 years. The experts agreed that the period should be based on the longest possible period of reliable data. If the May-June 2013 prices are included in the SP calculation and the July 2021 prices are excluded from the FP calculation, which is my preferred approach, then the period of sales price growth

is 7.16 years. I have calculated this figure by adding 0.25 (being the three-month period April 2021 to June 2021) to 6.91 (being the figure for the period to the end of the 2020/2021 period in Mr Chapman's Table 6.2.

(v) General price pressure from Network Rail

193. The Defendant also argued that the annual average price increase would not be much more than around 1.7% - 2% because of price pressures from Network Rail. It relied on the fact that in the actual, the Claimant had succumbed to significant pressure from Network Rail to reduce the Tracktex price in 2011. It also relied on the evidence from Mr MacGregor where he said that in a one seller one buyer market, he would expect the larger entity (in this case Network Rail) to have significantly more bargaining power. Mr MacGregor did not support this opinion with any further reasoning or evidence, and so it is difficult to place much weight on it. Whilst there is no doubt that Network Rail was by far the larger commercial entity, and it would have been the Claimant's primary customer for Tracktex, there is no objective evidence to suggest that these factors would have given it the upper hand in its negotiations with the Claimant in the counterfactual. In this context, I bear in mind that the Claimant would have been the only supplier of an anti-pumping geocomposite in the counterfactual and that the product offered several advantages over the only alternative of a sand blanket, including significant cost savings. Network Rail was behind the product and would have wanted to buy it. I also bear in mind that the Defendant was able to resist pressure from Network Rail to reduce its prices as between the First and Second Tenders and won the Second Tender even though its prices for Hydrotex 2 were the same as the First Tender. As a result, I consider that the Claimant and Network Rail would have had equal bargaining positions in the counterfactual.

Analysis

194. I have used the growth rate formula to generate an estimate of the annual percentage price growth based on how I consider the input values are best calculated. I have done this exercise using a range of estimated figures for the average final sales price (FP). This is because Mr MacGregor's FP figure is based on all Hydrotex sales rather than Network Rail sales. I do not know what the FP figure would be using Mr MacGregor's approach but based on the Network Rail sales alone, although Mr Chapman's analysis in his Tables 2.1 and 2.2 (above) seems to suggest that it would be higher.

	MacGregor's FP value	**Estimated lower FP value**	**Estimated higher FP value**
FP	11.48	11.00	12.00
SP	9.31	9.31	9.31
P	7.16 years	7.16 years	7.16 years
Formula	(11.48/9.31)^(1/7.16)-1 x 100% = **2.97%**	(11.00/9.31)^(1/7.216-1 x100% = **2.36%**	(12.00/9.31)^(1/7.216-1 x100% = **3.61%**

195. I considered whether I should go back to the parties to ask them to provide me with the FP figure using Mr MacGregor's approach but based on the Network

Rail sales alone. However, I formed the view that it was not necessary to do that for the following reasons. Firstly, the growth rate formula is simply an accounting tool that can be used to estimate annual percentage price growth. It does not provide *the* answer; it is no more than an aid to the court in reaching a view as to what the annual average price increase in the counterfactual would likely have been. Secondly, I was concerned not to add any further cost and delay to what I think has already been a complicated and time-consuming exercise in assessing damages. Thirdly, both parties impressed upon me that the task of assessing the likely annual price increase is not one that can be done with any precision (see above).

196. Doing the best I can on the basis of the information before me, none of which is perfect, I find that the likely annual price increase of Tracktex sales to Network Rail in the counterfactual would have been 3.25%. I have reached this figure taking the following factors into account:

    i) the 2% figure from Mr Donald, but bearing in mind that it was based on a different assumed starting price and no matrix, so it is likely to be too low;

    ii) the competing estimates from the experts (1.7% vs 4.73%), but bearing in mind that both figures were based on assumptions and input values that were subject to criticism;

    iii) the estimated figures using the growth rate formula based on assumptions which I consider to be preferable, which suggest that 2.97% is too low but that 3.61% may be too high;

    iv) the interrelationship between the size of the market and price, and that some allowance must be made for the fact that if the Claimant was able to achieve the full extent of sales in the counterfactual (as I have held likely), that would have tempered likely price growth;

    v) damages must be assessed liberally but as compensation for the Claimant and not punishment to the Defendant (see paragraph 60 above).

Annual price increase - Aqua

197. In relation to Aqua, the Claimant argued that the Tracktex price would have increased at an annual rate of 2.86% in the counterfactual. The rationale for this figure was rather complicated, as I shall explain.

198. The starting point is Mr Chapman's second report, where he identified a number of different bases which could be used to estimate the likely increase in prices. These were as follows:

    i) the annual price increase in material costs for a sand blanket, which was 2.86%;

    ii) the annual price increase achieved by the Defendant in respect of sales of Hydrotex to Network Rail, which was 4.73%;

iii) the annual price increase achieved by the Defendant in respect of sales of Hydrotex to other customers, which was 0.67%;

iv) the midpoint between the growth in Network Rail and non-Network Rail prices, which he calculated to be 2.7%;

v) the Claimant's intended target of at least 2-5%, as stated by Mr Donald in his evidence.

199. His opinion was that the 0.67% figure (which I understand was based on the growth rate formula set out above) was not reflective of the growth rate that Tracktex would likely have achieved in the counterfactual. This was because it was based on non-Network Rail sales of Hydrotex in the actual, where this part of the market was in a duopoly.

200. He suggested that the 2.86% figure was a reasonable alternative on the basis that it was the likely minimum growth that the Claimant would have achieved based on the raw material price growth of the only other pumping erosion solution that would have been available in the counterfactual (namely sand).

201. The Defendant criticised Mr Chapman's approach and submitted that I should reject the proposition that the growth in the pricing index of sand could be considered as a suitable guideline to estimate the likely growth in prices of non-Network Rail sales. In support of this submission, the Defendant relied on the following points:

i) there was no clear relationship on the evidence between the price of sand and the price of Tracktex;

ii) Mr Donald's evidence was that the Claimant have never negotiated the Tracktex price to Network Rail with reference to the price of sand;

iii) when the Claimant started to supply Network Rail directly, Network Rail had persuaded it to reduce the price of Tracktex even though sand was significantly more expensive;

iv) if the average increase of the price of sand was a relevant comparator for non-Network Rail prices, then it was also a relevant comparator for Network Rail prices.

202. I think that there is force in these points, which I accept. In my judgment, selecting the annual growth in the price of sand in the actual as the likely figure for the annual growth in the price of non-Network Rail sales of Tracktex in the counterfactual seems entirely arbitrary, and is unlikely to reflect how things would have been done.

203. Having said that, I am inclined to accept Mr Chapman's view that the 0.67% figure is no more reliable. This is because it is based on sales of Hydrotex to Keyline in the actual. However, there was no evidence about the nature of the Defendant's relationship with Keyline, so I have no means of assessing what factors influenced the prices that the Defendant was able to charge in the actual

or how those factors compare with the situation between the Claimant and Aqua in the counterfactual. In this instance, I do not think I should simply assume that the actual is a reasonable proxy for the counterfactual.

204. Unfortunately, the parties took extreme positions on this issue: the Claimant contended that I should accept the 2.86% figure and the Defendant contended that I should reject it, but neither of them gave me any direction about how I should come up with an alternative figure if I considered both of their approaches to be wrong.

205. In the circumstances, the only evidence that provides any assistance on this issue is the 2% figure from Mr Donald. This was one of the other figures that Mr Chapman had considered in his report (see above). It was also the figure that the Defendant had submitted was generally the most reliable (again, see above). Accordingly, doing the best I can on the material before me, I hold that the likely annual price increase of non-Network Rail sales of Tracktex in the counterfactual would have been 2%.

How frequently would the pricing matrices be revised?

206. Even though the parties agreed that there would be an annual price increase in the counterfactual (the value of which I have now determined), they did not agree whether that increase would then have been applied on an annual or biennial basis. Not surprisingly, the Claimant argued that the price increase should be applied annually (since that will generate a higher overall figure) and the Defendant argued that the price increase should be applied every two years (since that will generate a lower overall figure).

207. The Aqua pricing matrix was only valid for one year and so must have been revisited annually (which I understand was the case). Mr Hicks submitted that it was reasonable to assume that the same approach would have been adopted in the counterfactual. He also pointed to the evidence of Mr Donald that since Hydrotex 2 has come off the market (in mid-2021), Aqua has already agreed two price increases. I accept this submission.

208. The Network Rail pricing matrix was fixed for the first two years. By the time that period had come to an end in March 2013, Hydrotex 2 was on the market and the invitation for the First Tender had been issued. The Claimant and Network Rail did not revise the matrix, and instead Network Rail switched to supplying from the Defendant. This means that there is no evidence of the periodicity with which the Claimant renewed the matrix thereafter in the actual. However, Dr Pritchard submitted that it was reasonable to assume that the Claimant would have revised the Network Rail pricing matrix every two years in the counterfactual. I accept this submission.

209. Mr Donald gave evidence that the original price matrices were created at an early stage of Trackex supply, during the period when the product was being introduced to the market. He said that his intention at the time was to establish product credibility and volumes on the market. Then, as the product proved itself in use and the industry started to appreciate the costs savings that it provided, his plan was to increase prices through new price matrices. Whilst I accept this evidence

as far as it goes, it does not shed any further light on how frequently the price matrices would have been reviewed and whether prices would have gone up annually or every two years.

210. It follows that I hold that in the counterfactual, the Trackex price to Network Rail would have increased every two years whereas the Tracktex price to Aqua would have increased every year. This is because it reflects what happened in the actual, albeit that the matrices were only used over a limited period.

Should Aqua sales be subject to a rebate scheme?

211. In his first report, Mr MacGregor had referred to and relied upon a document from the Claimant's disclosure dated 11th March 2011 entitled "Distribution Agreement" which suggested that the Claimant had agreed a rebate scheme with Network Rail. However, Mr Donald explained that this document was an unfinished draft which got superseded by the 15th March 2011 price matrix I set out at paragraph 23 above and that the Claimant never agreed a rebate scheme with Network Rail. This evidence was not challenged by the Defendant, and I accept that the Claimant would not have agreed a rebate scheme with Network Rail in the counterfactual.

212. However, the Defendant maintained that sales of Tracktex to Aqua would have been subject to a rebate scheme. This argument was based on a disclosure document in which the Claimant confirmed to Aqua the details of the 2014 Annual Rebate Scheme. This was a scheme that gave Aqua a % rebate depending on the value of Tracktex sales that the Claimant made to it. Mr Donald explained in cross-examination that this scheme was in place after the pricing matrix had been dropped and the Claimant was simply selling to Aqua on a price per square metre. The idea behind the rebate scheme was to incentivise Aqua to buy more.

213. In my judgment, there would have been no need for the Claimant to provide the same rebate scheme in the counterfactual since Aqua would have been purchasing Tracktex pursuant to the Aqua pricing matrix and that already provided an incentive to buy more by means of the pricing bands. Accordingly, I reject the Defendant's argument on this issue. The Aqua sales should not be subject to a rebate as part of the damages calculation.

Metres squared vs number of rolls

214. There was a small point of difference between the experts in the way that they proposed to calculate the pricing matrices in the counterfactual, based on the various issues that I have now determined (starting point, growth rate, etc). Mr MacGregor's loss model approached the calculation on the basis of the number of rolls sold each year in the counterfactual, whereas Mr Chapman's model approached the calculation on the basis of the total quantity in metres squared. Mr Chapman explained that his approach was adopted to simplify the calculation. However, he assumed that all rolls are 97.5m^2, whereas this is only correct for the 3.9m width roll. The 3.7m roll is 92.5m^2 and the 3.5m roll is 87.5m^2. As a result, his approach included unnecessary inaccuracy. In addition, Mr MacGregor pointed out that in the actual, price matrices were done based on the numbers of

rolls sold, which is why he thought that was the better way to approach the calculation for the counterfactual.

215. I agree that Mr MacGregor's approach is preferable, and that the damages calculation should be undertaken on the basis of number of rolls.

Application of a consistent annual growth rate after March 2019?

216. Finally, there was a debate about whether the experts should calculate the damages figure based on a consistent annual growth rate after March 2019. Assuming that the Network Rail price matrix was reviewed biennially, this date would have been the first "new" pricing matrix in the counterfactual after the Second Tender had come to an end in July 2017 in the actual. When that happened, there was a price spike which Mr MacGregor considered was likely to have been caused by the Defendant's freedom to charge higher prices once it was no longer subject to the tender framework. Since that would not have occurred in the counterfactual, he thought it was more appropriate to assume that the last two years of sales (2019-2021) were based on the maximum sales price the Claimant could have charged rather than by reference to annual growth.

217. I found this point difficult to follow and it was not very well explained in the evidence. In particular, it was not clear why one assumption was any better than the other in circumstances where the maximum sales price that the Claimant could have charged was itself calculated by reference to the estimated % annual growth. Moreover, I am not convinced that the point requires determination in light of the other findings I have already made. In the circumstances, I prefer not to express a view but will wait to hear further from the parties in the context of providing directions for the damages determination as needs be.

Issue 4 – What allowance, if any, should be made for redundancies?

218. As noted in the background section above, the Claimant made eight redundancies in 2013. The Claimant implemented a so-called "reorganisation plan" between about June and September 2013. This reduced the head count of the business by eight people or 28% of the workforce. Of the employees that were made redundant, one was a development manager, two were sales support staff and five were production staff.

219. The costs savings of the development manager and sales support staff amounted to £120,000 per annum. The costs savings of the production staff were £80,000 per annum. The overall one-off cost of these redundancies was £74,000, of which £32,976 was attributable to the production staff.

220. There is a dispute on the evidence as to which of these redundancies were attributable to the downturn in the Claimant's business caused by the infringement and resulting lost sales of Tracktex. The costs savings from redundancies in the actual that would not have occurred in the counterfactual should be deducted from the final damages figure.

221. The Claimant's case is that the three support staff (the development manager and two sales support) would have been made redundant anyway. It accepts that not

all the production staff would have been made redundant and puts the figure at one third of those five staff. This would result in a deduction of £189,008. This is calculated as follows: [(7.5 x £80,000) - £32,976]/3, where 7.5 years is the total period of costs savings.

222. The Defendant's primary case is that none of the redundancies would have happened in the counterfactual, with the result that the annual savings they generated for the Claimant should be deducted from the final damages figure. This would result in a deduction of £1,426,000. This is calculated as follows: [(7.5 x £200,000) - £74,000]. The Defendant's alternative case is that even if some redundancies would have been made, it would have been no more than a third of the total eight staff. This would result in a deduction of £475,333. This is calculated as follows: [(7.5 x £200,000) - £74,000]/3.

223. I must therefore decide on the balance of probabilities which redundancies would and would not have been made in the counterfactual. Depending on that finding, I must then assess the quantum of the costs savings from those redundancies that should be deducted from the overall damages figure that the Claimant can recover. The parties are agreed that it is only costs savings that the Claimant made in the actual from redundancies that would not have occurred in the counterfactual that should be deducted.

Evidence about the redundancies

224. In his written evidence, Mr Donald gave evidence that the redundancy programme was a very painful process because he was acutely aware of the detrimental impact it would have on the employees concerned. However, it was necessary to protect the Claimant's ongoing business, which was under significant financial pressure at the time. The May 2013 accounts showed that the Claimant had traded at a loss of £4,547 that month against a forecasted profit of £122,757; and the year-to-date trading profit was £8,755 against a forecasted profit of £171,395.

225. Mr Donald provided four reasons why the Claimant was under such severe pressure:

i) The poor conditions of the construction market generally, which impacted on sales and margins.

ii) A reduction in levels of landfill construction owing to delays by WRG, a leading waste management company, in commencing projects.

iii) The impact that Hydrotex 2 was having on volumes and margins for Tracktex. This included the fact that the Defendant had won the First Tender.

iv) Increased competition from the Defendant in other core areas of the Claimant's business (specifically needle punched products).

226. However, Mr Donald also said that the development manager and sales support staff were not engaged in the Tracktex business. He explained that this was because the only customers of Tracktex were Network Rail and Aqua.

227. Mr Donald was challenged on some of this evidence in cross-examination. It was put to him that in the counterfactual, trading conditions would have been much more favourable to the Claimant: it would have enjoyed the increased revenue from significant additional Tracktex sales; it would have been cementing a long-term relationship with Network Rail; and it would have had the promise of continued and reliable income from them, if not a growing market. Mr Donald agreed with these propositions, all of which I accept.

228. As a result, it was suggested to Mr Donald that the Claimant would have needed to retain staff in the counterfactual to meet these increased demands, and that since it was an unpleasant process, he would have wanted to avoid it. Whilst Mr Donald agreed, he went on to explain that the sales support staff would have been made redundant in any event, consistently with what he had said in his written evidence. I accept this evidence. He was not specifically asked about the development manager, but since that employee fell into the same category as the sales support staff for the reasons Mr Donald gave in his written evidence, I accept that he/she would also have been made redundant in the counterfactual. Mr Donald also explained that it was possible to slim down the fixed costs of production because there was additional production capacity as required through overtime.

229. It was also put to Mr Donald that the Tender and competition from Hydrotex 2 (i.e. reason (iii) above) was one of the "key" reasons why the redundancies were made in the actual. Mr Donald agreed with this suggestion, which is obviously correct, but it does not mean that it was the only reason or that the other reasons he gave were not also "key". He was not challenged on the other reasons he had given in his written evidence, which were consistent with the MD Report of the Board Meeting of 24th June 2013 to which I was referred. This recorded as follows:

> "o Following on from the decisions taken at the last Board Meeting I have auctioned (*sic*) the costs saving programme as outlined.
> o I briefed all staff as follows :
> ▪ The Business is under severe pressure as result of volume and margin problems in the UK , the 'loss' of Tracktex business from Network Rail and the lack of substantive progress in our development opportunities
> ▪ The Forecast is that the business is already loss making on a full year basis
> …
> o This will lead to a reduction in the fixed cost base and headcount of the company in production, sales support and technical development."

Analysis

230. In light of this evidence, I find that the development manager and the sales support staff would have been made redundant in the counterfactual. These individuals concerned were not involved in the Tracktex side of the business and the

redundancies had nothing to do with the infringement. As a result, despite the painful nature of the redundancy process, I consider that it is more likely than not that these redundancies would have happened regardless. It follows that I reject the Defendant's primary case and decline to make any reduction in the overall damages figure based on the £120,000 annual savings the Claimant made from these three redundancies.

231. However, it is more difficult to assess whether any of the production staff would also have been made redundant in the counterfactual, and if so, how many. The Claimant's justification for the argument that one third of the production staff would not have been made redundant is that the presence of Hydrotex 2 on the market was one of three reasons recorded in the Board Minutes that had prompted the redundancies. Mr Hicks submitted that this figure was generous to the Defendant bearing in mind that only 4% of the Claimant's production was attributable to Tracktex.

232. Dr Pritchard argued that the introduction of Hydrotex 2 was the tipping point that had effectively triggered the redundancy programme. He reminded me that in the counterfactual, the Claimant would have had the benefit of additional Tracktex sales in 2013 (estimated to be approximately £800,000 - £1million) as well as the promise of future income and security from the monopoly position it would have commanded. He also relied on Mr Donald's evidence that the redundancy process was extremely painful, and that he would have kept the staff if the circumstances had justified keeping them.

233. I have found this a difficult issue as the arguments were finely balanced. However, doing the best I can on the materials before me, I think it is more likely than not that the Claimant would still have made some production staff redundant in the counterfactual. In this context I bear in mind that there were other reasons beyond the impact of Hydrotex 2 that were contributing to the financial pressures of the Claimant which would still have occurred in any event. I also bear in mind that only 4% of the Claimant's production was attributable to Tracktex, which means that it is unlikely that the Claimant would have needed to retain all five of the production staff, even allowing for the additional Tracktex production that would have been required in the counterfactual. As noted above, Mr Donald also explained that there was extra production capacity through overtime as required.

234. The Defendant seemed to accept as part of its alternative case that, if there were some redundancies in the counterfactual, the costs savings would be calculated on the basis that they were a third of the costs savings in the actual. As can be seen above, the reason that the parties propose different figures is that the Claimant's sum is limited to the costs savings of the production staff in the actual, whereas the Defendant's sum is based on the total costs savings of all eight staff.

235. I prefer the Claimant's approach on this issue because it is consistent with my finding that the development manager and sales support staff would have been made redundant in any event. This finding means that only the costs savings attributable to the production staff are relevant to calculating the figure that should be deducted from the final damages sum.

236. Accordingly, I hold that the Claimant's damages should be reduced by a figure of £189,008 to reflect the savings that it made from redundancies that would not have occurred in the counterfactual.

Issue 5 - Lost profits on future sales

237. The Claimant argues that if Hydrotex 2 had never been on the market, then in May/June 2021 when Hydrotex 4 was launched, Tracktex would have been selling at a higher price in the counterfactual than in the actual. Moreover, it contends that it would have taken about two years for the price of Tracktex to fall to a real-world price. As a result, the Claimant claims that the historic presence of Hydrotex 2 on the market will have an impact on future sales, even after Hydrotex 2 was removed, until about June 2023.

238. The Defendant's primary case is that there is no future loss at all. In the alternative, it says that I should prefer Mr MacGregor's approach to the calculation. In this regard, the experts agree on the methodology but dispute the input values.

239. This head of claim is dependent upon the following:

    i) The estimated price of Tracktex in the counterfactual as at May 2021 (this was variously referred to as the "starting price" or the "But For estimated future sales price" (BFSP)). This price is determined by reference to the price matrices and the annual average price growth that I have considered under Issue 2 above.

    ii) The time over which price depression occurs. This is in dispute.

    iii) The estimated price that Tracktex will reach in the real world when prices have stabilised (variously referred to as the "end price" or the "Actual estimated future sales price (ASP)). This value is dependent upon the time period under (ii) above. It is also in dispute.

    iv) The estimated volume of Tracktex sales between May 2021 and the end of the time period under (ii) above. This is agreed.

    v) The discount rate, to allow for the fact that the Claimant is recovering for future losses. This is also agreed.

Time over which price depression occurs?

240. In support of its case that the Tracktex price in the counterfactual would have fallen over a period of time, the Claimant submitted that it would have taken Hydrotex 4 some time to build up a reputation in the market, since it would have been an entirely new product with no track record. This was in marked contrast to what happened when Hydrotex 4 was launched in the actual. When Hydrotex 4 was actually launched in May 2021, that was off the back of established trading of Hydrotex 2, and the Defendant was able to exploit the sales and distribution channels and trading reputation it had already acquired with respect to that product. Mr Donald referred to the fact that the Defendant's website makes little

differentiation between Hydrotex 2 and Hydrotex 4, treating the new product simply as a replacement of the original. He says that it also relies on the original certificate of acceptance of Hydrotex 2.

241. The Claimant also relied on the fact that, in the counterfactual, by the time Hydrotex 4 was launched, Tracktex would have been on the market in a monopoly position for about 10 years with a well-established reputation and proven track record.

242. Mr Donald's estimation that it would have taken approximately two years for the Tracktex price to reduce from an assumed higher price in the counterfactual to the real-world price was based on the fact that there were about two years between when Hydrotex 2 was first tested for approval in early 2012 and when the Tracktex price reached its low in December 2013. Mr Chapman adopts this two-year time period in his calculations without further analysis or comment.

243. The Defendant argued that it was unrealistic to think it would have taken as long as two years for the Tracktex price to reduce to real-world prices when faced with competition from Hydrotex 4. Its primary position was based on Mr MacGregor's opinion that the Claimant would have immediately lowered the Tracktex price to match that of Hydrotex 4 so as to stop Network Rail simply shifting its custom to the Defendant instead.

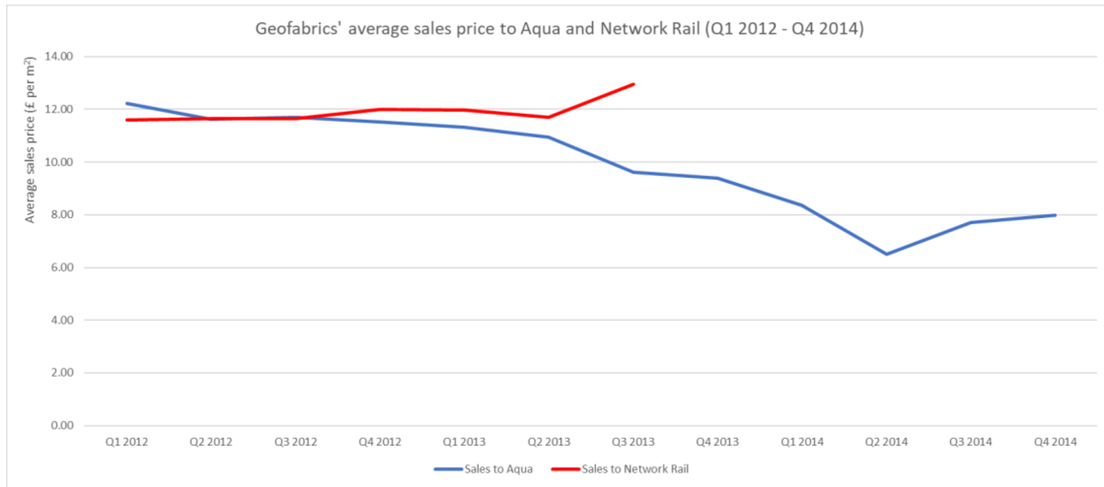
244. It also relied on Mr Donald's evidence that Network Rail started to apply price pressure in the actual from the moment that Hydrotex 2 was introduced. It submitted that Network Rail took what it describes as a "very aggressive attitude to price reduction" in the actual and said that there is every reason to believe that it would have forced the price down at the earliest opportunity in the counterfactual.

245. There is no doubt that Network Rail was proactive about obtaining the best possible price in the actual, although there is no evidence to suggest that its attitude was aggressive as such. Nevertheless, I accept that it is likely that it would have used the presence of Hydrotex 4 on the market as an opportunity to obtain more competitive prices with the Claimant. I do not accept, however, that this would have achieved an immediate price reduction. In my view, this suggestion (which comes from Mr MacGregor's report) is unreal. It ignores the fact that in the counterfactual, Tracktex would have had an established track record of over 10 years whereas Hydrotex 4 was a complete unknown. Mr Hancock accepted in cross-examination that people are creatures of habit and are unlikely to change from Tracktex without being persuaded that Hydrotex 4 was a suitable alternative (in terms of product efficiency, ease of installation, supply, etc). It also ignores the lead time on projects and orders. Even with price pressure from Network Rail, I think that it is much more likely that the Claimant would have reduced the Tracktex price on a gradual basis, and only then once Hydrotex 4 had started to gain some traction in the market.

246. In his reports, Mr Chapman assumed that price depression would have commenced in January 2022, approximately seven months after Hydrotex 4 was licensed. However, he accepted in cross-examination that a five-month period would be more suitable to be consistent with his assumption that the Tracktex

price was depressed in the actual from about five months after Hydrotex 2 had been approved.

247. Mr MacGregor charted the average sales price of Tracktex charged by the Claimant to Network Rail and Aqua, as follows:



248. The chart showed that as soon as the Defendant commenced sales of Hydrotex 2, there was some price depression on the average sales price to Aqua but not to Network Rail. This reinforces the view that the Claimant would not have immediately reduced the Tracktex price to Network Rail in the counterfactual once Hydrotex 4 was launched.

249. The chart also showed that once the Aqua price started to reduce, it took approximately 12 months (Q2 2013 to Q2 2014) to reach its lowest point and possibly a further six months to stabilise (although this is hard to tell as the chart stops at Q4 2014). This may shed some light on how long it would have taken for the Tracktex price to go from the future counterfactual price (i.e. the price at May 2021, before Hydrotex 4 was on the market) to the future actual world price (i.e. the estimated price that Tracktex will be sold in the actual when prices have stabilised) once the price started to go down. If it took approximately five months before the Tracktex price was reduced at all (as Mr Chapman suggested) and then about a further 12-18 months before the reductions came to an end and the price stabilised, the time over which depression had occurred would be approximately two years. This is consistent with the Claimant's case on this sub-issue.

250. Stepping back and assessing the material in the round, I consider the Tracktex price depression would likely have happened over a two-year period from May 2021. This is because it is consistent with the evidence as I have set out above. The Defendant's suggestion that the price would immediately fall to a new low was unrealistic. I also note that the Defendant did not suggest an alternative period by way of a fall-back position.

Actual estimated future sales price

251. The dispute here arises because the experts have calculated the ASP by reference to different sales figures. Mr Chapman based his calculation on the Tracktex sales in the actual whereas Mr MacGregor based his on Hydrotex 2 sales.

252. Mr Hicks submitted that Mr Chapman's approach was to be preferred precisely because he had used the Tracktex price in the actual and that was the best way to assess what the Tracktex price would be at the end date.

253. Dr Pritchard submitted that Mr MacGregor's approach was to be preferred because the Tracktex price in the actual was not a reliable proxy considering the price depression that had occurred when the Claimant entered into the exclusive distribution agreement with Aqua in December 2013. This submission was based on Mr MacGregor's view that the price depression had been caused by price pressure applied by Aqua as well as the infringement. As a result, he had thought that it would be more appropriate to calculate the end price by based on Hydrotex 2 sales.

254. I found this issue difficult to decide, not least because it was not properly explained by either of the experts in their reports. Counsel for both parties agreed that the evidence was far from clear. It also seems to me that the approach of both experts is equally problematic. In particular, even if the Tracktex sales are a poor proxy for the reasons Mr MacGregor gives, I do not understand why the Hydrotex 2 sales are any better. They are subject to their own vagaries, such as the price spike after the end of the Second Tender, which mean that they are also a poor proxy.

255. In the circumstances and doing the best I can on the paucity of helpful material on this issue, I have formed the view that Mr Chapman's approach to calculating the ASP is the better one. The primary reason for this view is that he has approached the assessment separately for Network Rail and Aqua, which is consistent with my findings above. As a result, I think it is more convenient to use his calculations (subject to the necessary amendments in light of my other decisions) thereby making the process of calculating the overall damages figure more efficient and proportionate. I think that it is legitimate to take these considerations into account when there is so little else to go on.

Issue 6 – Was the damage caused by the lower price for Crossrail too remote?

256. On or about 15 January 2014, the Claimant agreed to provide Tracktex to Aqua for the Crossrail project at a price of £6.50/m^2. The price remained the same for the duration of the Crossrail project. This was at a markedly lower price than the standard price of £9.50/m^2 that the Claimant was then charging Aqua, or the prices that I have held that the Claimant would have achieved based on the pricing matrices in the counterfactual. The Claimant claims the difference in price between the £6.50/m^2 it achieved in the actual with what it says it would have achieved in the counterfactual.

257. The Defendant's pleaded case is that this loss was not caused by the infringement or alternatively was too remote because it was not a reasonably foreseeable consequence. It said that the reductions made to the sales price were because of information from a third party that the Defendant was offering Hydrotex for sale at £6.50, but that information was erroneous and did not reflect the true price. The point was argued at trial on the basis of remoteness and I shall address it on that basis.

258. The MD Report of the Claimant's Board Meeting of 3rd February 2014 records as follows:

> o Aqua have invited me to join them for discussions on Crossrail and we have worked together to win the Anti pumping element against a low Hydrotex price of £6.50 per sqm based on 800 rolls. We will sell to Aqua at £6.50 and they will invoice Balfour Beattie at £7.50, a small premium against Hydrotex. Not a good price overall but I decided that defending the market vulnerable moment was the right thing to do

259. This presented a firm view that, so far as the Claimant was concerned, the Defendant was offering a price for Hydrotex at £6.50/m^2, although it is not clear from the MD Report whether the Claimant thought this was the Defendant's standard price or a specific price for Crossrail.

260. In his written evidence, Mr Donald said that he believed that the £6.50 price was the price that Network Rail told Aqua that the Defendant had proposed for Hydrotex. He did not recall being shown the Defendant's prices by Network Rail himself. He also did not recall whether he had taken the £6.50 price to be a negotiating position by Aqua or a hard fact, but that it was likely to be a mixture of the two. However, in cross-examination he fairly accepted that the MD Report was more likely to reflect his recollection of what had happened than what he had subsequently written in his witness statement. The upshot of this evidence is that at the time, it is more likely than not that Mr Donald thought that the Defendant was offering Hydrotex at a price of £6.50/m^2.

261. Mr Donald also confirmed in cross-examination that he did not ask Aqua to show him where they had got the information about the Defendant's prices from; and nor did he check it for himself.

262. He explained that the £7.50 price was the price that Aqua had said it would supply Tracktex to Balfour Beatty, but he did not know what price it had actually charged.

263. Mr Hancock's evidence was that the Defendant had never offered Hydrotex 2 for a price as low as £6.50, and I have no doubt that was correct.

264. In cross examination, he also said that the Defendant had not bid for Crossrail, because Aqua had got the deal done first. I have to say that I found that evidence rather more surprising, particularly bearing in mind (i) the scale of the project, which would have made it an attractive contract for any supplier; and (ii) the fact that the Defendant had a dedicated salesperson for the South East (a Mr Dave Dutton) which would have included this project. As Mr Hicks pointed out, his written evidence had not given this impression; to the contrary, it had even referred to one order that the Defendant had received for Crossrail. However, I understand that there is a difference between bidding for the Crossrail supply contract as a whole and meeting a one-off order, and his evidence was not addressing the former. When questioned, Mr Hancock said that he had checked his files and had no record of Hydrotex being put forward for Crossrail. He also said that he would have known if Dave Dutton had made a bid, since he was Mr Dutton's manager at the time.

265. Ultimately, the question as to whether the Defendant bid for the Crossrail project does not matter, although if I had needed to decide the point, I would have accepted Mr Hancock's evidence. What matters is the reason why the Claimant agreed the price it did with Aqua in order to secure the Crossrail contract. The Claimant submitted that it was because of general price competition which had been caused by Hydrotex 2. Mr Hicks argued that such price competition was foreseeable, including in the form of a contractor seeking to use the presence of competition on the market as a negotiating tactic to achieve lower prices.

266. However, in my judgment, it was the specific information that the Defendant was offering Hydrotex 2 at a price of £6.50/m^2 that led the Claimant to agree to supply Tracktex to Aqua for the Crossrail project at the same price. The MD Report makes that clear. That information came from Aqua, who no doubt had its own commercial motivations for providing it and obtaining the lowest possible price it could. In this context, it is to be remembered that the Claimant's relationship with Aqua was arm's length, and the Claimant did not know what price Aqua supplied Tracktex to Balfour Beatty.

267. Whilst I accept that general price competition was foreseeable, I do not think that the information from Aqua falls into that category. This is highlighted by the fact that the standard price the Claimant was selling Tracktex to Aqua – that price itself being the result of general price competition from Hydrotex 2 – was £9.50/m^2. Nor was it foreseeable that the Claimant would offer such a significant price reduction (nearly 30%) on the basis of such information without checking its accuracy first. Moreover, the information from Aqua is itself an intervening cause over which the Defendant had no control. It is not something for which the Defendant ought fairly to be held liable.

268. It follows that the loss caused by the £6.50 Crossrail price was too remote and cannot be recovered, and I so hold. In reaching this view, I have carefully considered the guidance set out in *Kuwait Airways* (which was the only authority to which I was referred on this point) and have paid particular attention to the sequence of events that led up to the Claimant's loss so as to identify the happening which should be regarded as causing the loss for the purposes of allocating responsibility.

269. I understand that Mr MacGregor's loss model allows for the Crossrail price to be adjusted to an average sales price that the Claimant charged Aqua in the year of the transaction, that average sales price itself based on sales figures that exclude Crossrail. This has been done so that the Crossrail price anomaly does not skew the average value. Based on this approach, when the loss on the Crossrail sales is calculated, the Defendant will only pay for any price depression caused by the infringement. This approach was not challenged by the Claimant, and so I take it that it is not in dispute.

Issue 7 – What interest rate should be applied?

270. The Claimant claims interest on damages pursuant to Section 35A of the Senior Courts Act at a rate of 2% above the Bank of England base rate. This means that it is a claim for simple interest only, which is all that can be ordered under the Act. The parties agreed that interest should be applied at a percentage point above

base, but the Defendant disputed the claimed rate, arguing that it should be at 1% above base instead.

271. I have set out the legal principles and approach above. The task is to compensate the Claimant for being kept out of the monies due to them by way of damages, rather than to punish the Defendant. I must take a broad-brush approach to determine a rate that is fair and just in all the circumstances of the case.

272. Based on the approach set out in *Carrasco v Johnson*, Mr Hicks submitted that the Claimant did not fall into the category of a borrower or an investor, and that a fair rate would fall somewhere between the borrowing and investment rates an SME like the Claimant could have achieved. He suggested that 2% above base was an appropriate figure in this context.

273. In support of that figure, he drew my attention to the decision of Warren J in *Reinhard v ONDRA* [2015] EWHC 2943 (Ch) at [23] where the judge considered that a rate of 3% above base was appropriate, and to *Carrasco v Johnson wher*e the Court of Appeal upheld the first instance award of 3% interest as being within the boundaries of the legitimate exercise of the court's discretion. He also referred me to *Britned Development Ltd v ABB AB & Anr* [2018] EWHC 2913 (Ch) where Marcus Smith J held that the appropriate rate was EURIBOR plus 1% and to *Blizzard Entertainment SAS & Ors Bossland BmbH & Ors* [2019] EWHC 1655 (Ch) where interest was awarded at 1.4%.

274. Mr Hicks pointed out that 2% was the midpoint between the percentage rates of 1%-3% that had been applied in these earlier authorities. He also submitted that it was in keeping with inflation.

275. I am wary at drawing much from individual cases (beyond legal principle) since each decision will be given in the context of the particular facts of that case. It is helpful to see the range of rates that have been applied by other judges, but I must decide this one based on the evidence and arguments before me.

276. Mr Brabin argued this point for the Defendant. He cautioned me against relying on *Reinhard*, since that decision was given at a time when the Commercial Court Guide indicated that there was no such presumption that 1% above base is an appropriate measure of a commercial rate of interest (see [13]). He submitted that later authorities confirm that 1% above base is the conventional starting point, at least for simple interest, referring to paragraph [17(2)] of *Britned Development*.

277. I accept that submission. As Marcus Smith J made clear in *Britned Development* at [17(3)], the idea is that this conventional rate will normally be less than a claimant would have paid as a borrower but more than they would have earned as a lender. However, the appropriate benchmark is to consider the claimant as a borrower not a lender and in this context the court must consider a fair rate for the class of persons with the claimant's general attributes. This may justify departing with the conventional rate, depending on the facts of the case.

278. In this case the evidence was limited.

279. There was no evidence as to the average borrowing rate or investment rate over the relevant period (being the rates considered by the Court of Appeal in *Carrasco v Johnson*). However, I was provided with the figures for inflation, as follows:

Year	CPIH	CPI	RPI
2013	2.3	2.6	3.0
2014	1.5	1.5	2.4
2015	0.4	0	1.0
2016	1.0	0.7	1.8
2017	2.6	2.7	3.6
2018	2.3	2.5	3.3
2019	1.7	1.8	2.6
2020	1.0	0.9	1.5

280. From these figures, it is possible to calculate the average CPIH as 1.6%, the average CPI as 1.59% and the average RPI as 2.4%.

281. There was evidence that the Claimant was a small business based in Leeds, and I am mindful (as the authorities make clear) that SMEs tend to pay more for borrowing than large commercial entities.

282. Mr Donald gave evidence that the Claimant generally had cash reserves in the actual in the region of £0.5million to £1.5million. In the counterfactual, since it would have made larger profits, these reserves are likely to have been higher. He said that he would have looked for better opportunities to earn interest or dividends from cash reserves than was available from a deposit rate of interest, and that at the very least he would have looked at ways of investing the money to make sure it kept pace with inflation. I accept that evidence.

283. Taken together, in my judgment this evidence justifies a departure from the conventional starting point of 1% above base. I consider a fair rate in all the circumstances to be 2% above base.

Conclusion

284. For the reasons set out above, I have concluded as follows:

i) In the counterfactual, there would not have been an exclusive distribution agreement between the Claimant and Aqua for the sales of Tracktex to Network Rail.

ii) All sales of Hydrotex 2 in the actual would have been sales of Tracktex in the counterfactual, and the Claimant would have had capacity to make them.

iii) The price of Network Rail sales should be based on the 2011-2012 Network Rail price matrix, with an annual price increase of 3.25% applied every two years. The price of non-Network Rail sales should be based on the 2011-2012 Aqua price matrix, with an annual price increase of 2% applied every year. The pricing matrices should be calculated on the basis of number of

rolls. There should not be an additional rebate in respect of the non-Network Rail sales beyond that included with the pricing matrix.

iv) The Claimant's damages should be reduced by a figure of £189,008 to reflect the savings that it made from redundancies that would not have occurred in the counterfactual.

v) Future losses should be calculated by reference to a period of price depression over two years and based on Mr Chapman's approach to estimating the ASP.

vi) The Claimant cannot recover damages based on the £6.50 Crossrail price, which is too remote.

vii) The appropriate interest rate is 2% above base.

285. The parties will need to carry out calculations in accordance with my findings. I will hear further argument on this if necessary, and in due course as to the appropriate form of order.