

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

Rolls Building
New Fetter Lane
London

Neutral Citation Number: [2025] EWHC 563 (IPEC)
Date: 14 March 2025

Before:

HER HONOUR JUDGE MELISSA CLARKE
sitting as a Judge of the High Court

B E T W E E N :

Claim No: IP-2023-000054

D.W. WINDSOR LIMITED

Claimant

- and -

URBIS SCHREDER LTD

Defendant

Mr Adrian de Froment (instructed by **JMW Solicitors LLP**) for the **Claimant**
Dr Heather Lawrence (instructed by **Penningtons Manches Cooper**) for the **Defendant**

Hearing dates: 17 and 18 December 2024

JUDGMENT

This judgment was handed down remotely at 10.30am on 14 March 2025 by circulation to the parties or their representatives by e-mail and by release to the National Archives.

Her Honour Judge Melissa Clarke:

A. INTRODUCTION

1. This is judgment on liability only in a patent infringement claim relating to two patents, both entitled “A pathway lighting unit” and each describing itself as an invention which “*relates to a pathway lighting unit for a walled pathway*”: UK Patent GB 2 495 509 (“**509**”) and UK Patent GB 2 495 566 (“**566**”) and together (“**the Patents**”). The Patents each have the same priority date which is their filing date of 11 October 2011. The examples in both Patents describe the invention as being suitable for use in places where climbing is to be discouraged, such as on railway bridges.
2. Both the Claimant and the Defendant design, manufacture and supply exterior lighting fixtures. The Claimant is the proprietor of the Patents and claims that the Defendant’s Alinea Anti-Climb illuminated handrail (“**Alinea Product**”), which there is no dispute was developed after the priority date of the Patents, infringes the Patents. Before the case management conference in this matter, the Defendant had admitted infringement of the claims of the Patents relied on by the Claimant, subject to the issue of validity. The Defendant counterclaims for a declaration of invalidity and revocation in respect of both Patents, alleging that the claims in issue lack novelty over three items of prior art and are obvious over the same three items of prior art read in the light of the common general knowledge at the priority date.
3. The items of prior art relied on by the Defendant are:
 - i) Prior use at Woolston Railway Station footbridge in Hampshire (“**Woolston**”);
 - ii) Prior publication of JP 2008091133 (“**Ueda**”);
 - iii) Prior publication of the Rehau Profila Bench Trunking brochure (published in October 2010) and the Rehau Cable Management Solutions brochure (published in March 2011) (“**Profila**”).

4. The claims relied on for infringement, and which are in issue in relation to validity, are:
 - i) Claims 1, 5 (as dependent on Claim 1), 6 and 8 (as dependent on Claim 7 and Claim 1) of ‘509;
 - ii) Claims 1, 11 (as dependent on Claim 1), 12 and 14 (as dependent on Claim 13 and Claim 1) of ‘566.
5. However, at the CMC:
 - i) the parties undertook to accept that the question of whether Claims 11, 12 and 14 of ‘566 are valid shall be determined solely by reference to whether Claims 5, 6 and 8 of ‘509 are valid; and
 - ii) the Claimant confirmed that it does not pursue its claim for infringement of Claim 8 of ‘509/Claim 14 of ‘566, although the Defendant pursues its invalidity argument in relation to them.
6. Accordingly I am only required to determine the validity of Claims 1, 5 (as dependent on Claim 1), 6 and 8 (as dependent on Claim 7 and Claim 1) of ‘509 and Claim 1 of ‘566. To do so, I need to determine, *inter alia*, disputes about the identity of the person skilled in the art (“PSA”), the common general knowledge at the Priority Date, and the inventive concepts disclosed in the Patents. I am also required to construe the claims. Mr de Froment for the Claimant submits that the dispute about the identity of the PSA fundamentally mirrors that about the common general knowledge, and vice versa, and I accept that this is so, as I will come on to explain.
7. The trial was heard over two days. Mr Adrian de Froment appeared for the Claimant and Ms Heather Lawrence for the Defendant. I am very grateful to them for their clear and comprehensive skeleton arguments and helpful oral submissions.

B. EVIDENCE OF FACT

8. As is usual in IPEC, the pleadings were signed by directors of the parties and stand as evidence. Neither were called to give evidence and so their evidence is unchallenged.

C. THE EXPERTS

9. The Claimant's expert is Simon Lee Fisher. He is a product designer specialising in lighting technology and particularly lighting product design. He holds an OND and HND in Industrial Design from the Colchester Institute, and has 34 years' experience in the field of lighting design, development and innovation. He is a fellow of the Society of Light and Lighting and was Vice President of that body from 2015 to 2017, and sits on technical committees relating to, inter alia, remanufacturing of lighting at the Lighting Industry Association and the British Standards Institute. Mr Fisher wrote an initial report dated 8 November 2024 and a reply to Mr Keay's report of 29 November 2024. He attended Court and was cross-examined and re-examined.
10. The Defendant relies on David William Keay, who is a Chartered Electrical Engineer, a Fellow of the Institution of Engineering and Technology and a Chartered Mechanical Engineer and a registered European Engineer. He has a BSc in Electrical and Electronic Engineering from the University of Birmingham and a PGDip in Health & Safety. Mr Keay has over 50 years of experience in the railway and tramway industry. The first 11 years were spent as a Principal Engineer working on the design, development testing and commissioning of railway equipment in the UK and worldwide, first for GEC and then British Railways. He was then Chief Engineer for the Passenger Transport Executive and in 1997 became the Deputy Chief Inspector for HM Railway Inspectorate, responsible for overseeing safety regulation for UK mainline railways, tramways, light railways, metros and heritage railways. He therefore has significant experience in health and safety in respect of railways and railway stations. His work as DCI for HMRI included approval of new works, plant and equipment, including bridges and anti-climb measures. Mr Keay wrote an initial report dated 7 November 2024 and a reply to Mr Fisher's

report dated 29 November 2024. He attended Court and was cross-examined and re-examined.

11. The experts came from different backgrounds and had very different ideas of who the appropriate PSA should be, and what common general knowledge they should have, and their opinions were necessarily provided through the prism of their suggested PSA. The parties each criticised the other's expert for their approach, but this was a legitimate difference of opinion and a dispute for the Court to resolve, and I deal with those criticisms when dealing with the question of the PSA and common general knowledge.
12. The Defendant criticised Mr Fisher for implying into his interpretation of the claims wording which was not there. For example, he opined that to "saddle" the roof for the purposes of Claim 6 of '509 meant that it would allow the installer to use both hands, such that the luminaire could be maintained and installed without holding the roof, but those words are not in the claim and he resiled from that in cross-examination. He opined in relation to Claim 8 that the skirt depending from the roof would be a "*vertical surface*". These words are not in the claim, as he also accepted in cross-examination. In construing Claim 1 of '509 he made reference to "*a lighting module receiving bay*" which are words that do not appear in Claim 1 and have been borrowed from Claims 7 and 8.
13. Ms Lawrence put it to Mr Fisher squarely that his interpretation of the claims of the Patents read words into them which are not there, and that he did so in an attempt to limit the scope of the Claims to avoid the prior art. He disagreed, but later admitted, when shown that he had construed Claim 1 by reference to the words "detachably fixed" from Claim 5, that he had in fact attempted to limit Claim 1 by reference to later claims. He said that he didn't think he had made a mistake, and was just reading the context of all of the Patent as opposed to just Claim 1. When asked if he understood what he had done was impermissible, he said that he was not sure that he still fully understood that. In my assessment, Mr Fisher did not lack independence and was not deliberately trying to limit the claims, but did not fully understand how he

should go about it. This is no doubt why in his claim chart he disputed the presence of a number of features of various claims which the Claimant had already admitted. I deal with this at paragraphs 75-78 below, but I accept his evidence in cross-examination that he had not been told that the Claimant had already agreed that certain features of the claims of the Patents were present in the Prior Art. He said, "*I was presented with a novelty chart and I opined on it*". In re-examination he confirmed that he had not been provided with the Claimant's claim charts before he drafted either of his reports, and he had still not seen the Claimant's claim charts. I accept his evidence.

14. When it came to obviousness, Mr Fisher also showed a lack of understanding, which I address at paragraph 115 below. I feel that he could have been given a bit more assistance in how to go about these tasks by the Claimant's solicitors. Despite these challenges, I found Mr Fisher to have the expertise to offer his opinions to the Court, to be honest, and although I have had to scrutinise it carefully, he has provided much evidence which assisted me.
15. The Claimant submits that Mr Keay suffered from the opposite problem to Mr Fisher, namely a too heavy hand on the tiller by the Defendant's solicitors. I deal with this at paragraphs 82 and 83 below, but I agree. He was criticised for relying in his report on what he said was lighting on a footbridge at Penkridge station, which in fact it was not, and that took some time to sort out, but I accept that as an honest mistake and in fact that evidence has proved to be irrelevant. The parties will be pleased to know that this is the last mention of Penkridge station in this judgment. Mr de Froment also submitted that Mr Keay had a tendency to seek to argue unrealistic points, but it seems to me that he was fairly open and happy to make concessions where appropriate. I am also satisfied that he had the expertise to offer his opinions to the Court, was honest, and has also provided me with evidence which has assisted me in my task.

D. THE PATENTS

The specification

16. The '509 Patent is expressed to be for a pathway lighting unit for a walled pathway, i.e. one with one or more side walls. It explains from line 5 of internal page 1:

“A side wall may be to keep pedestrians and/or vehicles within the confines of the pathway. The pathway may be elevated, like, for example, a bridge or path of a high slope or in a building, in which case the side walls provide security to pathway users. The pathway may be adjacent private property in which case the side walls are to inhibit unauthorised entry by pathway users. If, for example, the walled pathway is a bridge over a railway or a motorway, the sidewalls provide security to both the pathway user and the railway or road users. In this case, the side walls are particularly high and can exceed two metres.”

17. The problem which the invention seeks to solve is identified from line 15 on page 1:

“Attachment of pathway lighting units to the side walls illuminates the deck and helps facilitate use by pedestrians or by vehicles. Ideally, the pathway lighting units are attached low enough for bright uniform lighting across the deck. However, attachments to the lower reaches of the side wall may serve as a foothold for scaling the side wall. The walled pathway's security may be compromised unless the side wall is raised. This increases the cost of pathway improvement and has the counter-productive effect of making the pathway shady”.

18. The specification explains that the invention concerns a wall lighting support with a roof which is inclined at an angle of 45 degrees or less in order to prevent climbing, from line 26 of page 1 to line 5 of page 2:

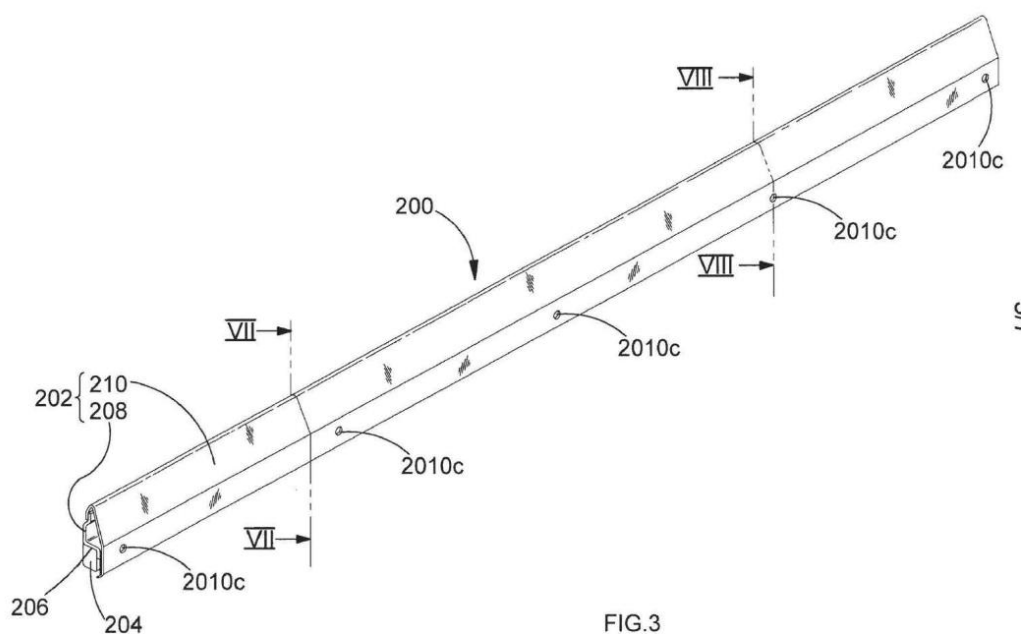
“Accordingly, in a first aspect of the present invention, there is provided a pathway lighting support for attachment to a side wall of a walled pathway, wherein the support comprises: a bracket for fixing the support to the side wall of the walled pathway; a means for supporting a lighting module; and a roof located on top of the support in normal use, wherein the roof is configured to inhibit the support from acting as a foothold wherein, the roof comprises a substantially flat top surface inclined with regard to the side wall of the walled

pathway by an angle of inclination of 45 degrees or less. This inhibits use of the pathway lighting support to scale the side wall of a walled pathway. Advantageously, the pathway lighting support may be attached at any height of the side wall so that it may be located for optimum brightness and uniformity of lighting across the deck. An angle of inclination of 45 degrees, or less, inhibits gripping of a shoe sole and makes it uncomfortable to even attempt to gain a foothold upon the support.”

19. The specification sets out a number of potential roof configuration features, alone or in combination. These include at line 8 of page 2, that the roof may be shaped to inhibit gripping of materials used in soles of shoes, at line 9 of page 2 that the roof surface may have a co-efficient of friction low enough to cause a rubber sole to slip if someone attempts to stand, achieved by anti-climb coating or vertical crenulations in the roof top surface (line 11-12 of page 2), or by a smooth surface (line 13 of page 2). The roof may be curved or flat, and preferably with an angle of inclination of 35 degrees or less, and more preferably with an angle of 25 degrees or less (lines 15 to 18 of page 2).
20. The specification notes that preferably, *inter alia*:
 - i) The roof is detachably fixed to the bracket, to enable assembly and disassembly of the support to facilitate easier maintenance (line 22-23 of page 2);
 - ii) The roof is saddled over the bracket before being correctly aligned and fastened to it, to facilitate easier assembly of the support (lines 25-28 of page 2);
 - iii) The means for supporting a lighting module comprises a lighting module receiving bay in the support, which may protect the lighting module from external elements and from interference (lines 30-32 of page 2);
 - iv) A portion of the lighting module receiving bay is formed by a skirt wall depending from the roof, and removal of the roof, leaving the bracket in situ, provides direct access to components located within the lighting

module receiving bay to facilitate easier maintenance (lines 1-4 of page 3).

21. '509 contains a single embodiment given "*by way of example*" and with reference to a number of drawings contained in figures 1 to 9 in the Patent. Figures 1 and 2 show a bridge over a railway in perspective and vertical cross-section respectively. Figures 3 – 9 show different views and cross-sections of the single embodiment. I have considered all of them but include for information figure 3 (a perspective view of a pathway lighting unit) and figure 7 (a cross-section through that pathway lighting unit fixed to a side wall):



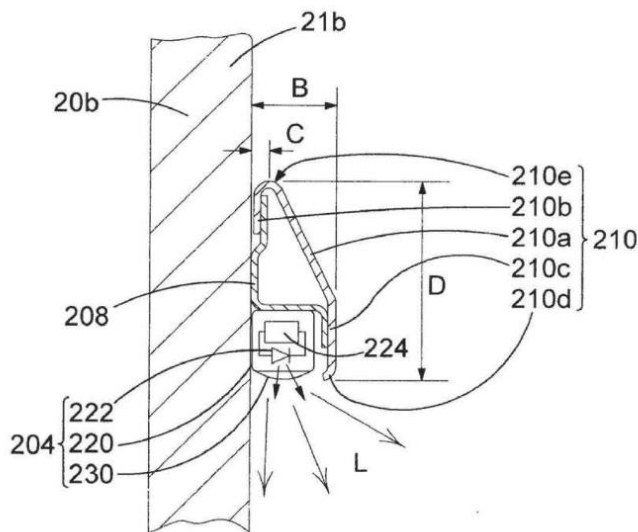


FIG.7

22. The specification describes the embodiment with reference to the figures, and the following paragraphs are a summary:
- i) The lighting unit is elongate, although shorter versions are feasible without departing from the scope of the invention. The lighting unit comprises lighting support 202 and a lighting module 204 supported in a lighting module receiving bay recessed within the support. The support comprises a bracket 208 for fixing the support to the side wall of the pathway and a roof 210 located on top of the support. Both the bracket and the roof are formed of flat metal sheet pre-coated with anti-corrosion material.
 - ii) The roof 210 has an inverted generally V-shaped cross-sectional profile saddled over the bracket 208. The roof comprises a flat top surface 210a inclined with regard to the inner surface 21b of the side wall 20b by an angle of inclination α . The top surface is smooth. The angle of inclination α is 25 degrees. The roof comprises a flap 210b depending

from an apex 210e of the top surface 210a. The roof comprises a skirt wall 210c depending from a lower end of the top surface opposite to the apex. The roof is detachably fixed to the bracket 208 by seating the flap in the pocket 214.

- iii) The lowermost portion of the skirt wall 210c overhangs the side section 208d of the bracket 208 and terminates with a rounded edge 210d arranged at a corner of the lighting module receiving bay 206. The lighting module receiving bay 206 is defined by the space between the base section and side section of the bracket 208, the side wall's inner surface 21b and the overhanging portion of the skirt wall 210c and rounded edge 210d.
- iv) The lighting module 204 is located in the lighting module receiving bay 206 and fixed to the support by fasteners (not shown). One or more lighting modules may be located in the lighting module receiving bay. The lighting module comprises an array of white LEDs 222, a LED driver circuit 224 for supplying electric power to the LEDs and a lens 230. The array of LEDs is arranged in a straight line to project light L downward through the lens and toward the deck. The LED driver circuit 224 of the, or each, lighting module is connected to an external power supply.

E. THE CLAIMS IN ISSUE

23. **Claim 1** has been split into the following integers for convenience:

- (a) A pathway lighting support for attachment to a side wall of a walled pathway, wherein the support comprises:
- (b) a bracket for fixing the support to the side wall of the walled pathway;
- (c) a means for supporting a lighting module;
- (d) a roof located on top of the support in normal use;

- (e) wherein the roof is configured to inhibit the support from acting as a foothold;
 - (f) and comprises a substantially flat top surface;
 - (g) inclined with regard to the side wall of the walled pathway by an angle of inclination of 45 degrees or less.
24. **Claim 5:** A pathway lighting support as claimed in any one of the previous claims, wherein the roof is detachably fixed to the bracket.
 25. **Claim 6:** A pathway lighting support as claimed in Claim 5, wherein the roof is saddled over the bracket.
 26. **Claim 7** is not in issue but I include it here as it is encompassed within Claim 8, which is in issue: A pathway lighting support as claimed in any one of the previous claims, wherein the means for supporting a lighting module comprises a lighting module receiving bay in the support.
 27. **Claim 8:** A pathway lighting support as claimed in Claim 7, wherein a portion of the lighting module receiving bay is formed by a skirt wall depending from the roof.

‘566

28. The ‘566 Patent is also expressed to be for a pathway lighting unit for a walled pathway. The specification notes that such a pathway may provide the most direct or readily available route for laying power cables, signalling cables, telecommunications cables, water pipes and gas pipes (lines 5 – 8 of page 1), and that pathways may have side walls to which means for supporting cables or pipes may be mounted (lines 14-15 of page 1) to avoid the trouble of digging up the ground to lay such cables or pipes, and allow easy access for maintenance in the future (lines 15-17 of page 1). The problem sought to be solved by the invention is set out from line 18 of page 1, namely: *“However, over time, an increasing numbers [sic] of cable supports can obstruct each other and, in extreme cases, dominate use of the side wall leaving little available space for other uses. This problem is difficult to solve if the cables,*

pipes etc... continue to serve a useful purpose and cannot be relocated to make space available without major upheaval to the networks they serve.”

29. The invention in Claim 1 of ‘566 is really that of ‘509, save that the lighting support is elongate and includes a means for supporting at least one cable or pipe along an axis of elongation of the support.
30. **Claim 1**, split into integers for convenience and highlighted to show the differences from the integers of Claim 1 of ‘509, is:
- (a) A pathway lighting support for attachment to a side wall of a walled pathway,
 - (b) wherein **the support is elongate and** the support comprises:
 - (c) a bracket for fixing the support to the side wall of the walled pathway;
 - (d) **a means for supporting at least one cable or pipe along an axis of elongation of the support, and**
 - (e) a means for supporting a lighting module;
 - (f) **wherein the support comprises** a roof located on top of the support in normal use;
 - (g) **and** wherein the roof is configured to inhibit the support from acting as a foothold;
 - (h) and comprises a substantially flat top surface;
 - (i) inclined with regard to the side wall of the walled pathway by an angle of inclination of 45 degrees or less.

F. THE PSA

The Law

31. Henry Carr J summarised the law in relation to the identification of the hypothetical construct of the PSA in *Hospira UK Limited v Cubist Pharmaceuticals LLC* [2016] EWHC 1285 (Pat) relied on by the Defendant and again in *Garmin (Europe) Ltd v Koninklijke Philips NV* [2019] EWHC 107 (Ch) relied on by the Claimant. There is no dispute as to the principles.

Patents are directed to those likely to have a real and practical interest in the subject matter of the invention, which includes devising the invention itself as well as putting it into practice. The PSA has practical knowledge and experience of the field in which the invention is intended to be applied, and reads the specification with the common general knowledge of persons skilled in the relevant art, knowing that its purpose is to disclose and claim an invention. The PSA may be a team of people with different skills, or may be a single hypothetical person, to whom the patent is addressed, but each such addressee is un inventive and unimaginative.

32. As Birss J (as he then was) stated at [58] of *Illumina Cambridge Ltd v Latvia MGI Tech SIA* [2021] EWHC 57 (Pat), [2021] RPC 12, the concept of the PSA applies in two distinct circumstances, the first being the person to whom the patent is addressed and whose attributes, skills and common general knowledge will be necessary to implement the patent, who is always the appropriate PSA from the point of view of addressing sufficiency, since the patentee is entitled to put together his invention by combining any skill-sets he likes. The second, described by Birss J at [59] of *Illumina* as “*the one relevant to obviousness*”, is said by him to be “*In nearly all cases... the same as the first kind*”, but may not be, and was not in the case of *Schlumberger Holdings Ltd v Electromagnetic Geoservices AS* [2010] EWCA Civ 819, [2010] RPC 33. Birss J explained in *Illumina* at [59] – [64]:

[59]... The question then is what are the legal principles which define the identity of the second kind of skilled person.

[60] One principle in *Schlumberger* was identified in [65]:

“In the case of obviousness in view of the state of the art, a key question is generally “what problem was the patentee trying to solve?” That leads one in turn to consider the art in which the problem in fact lay. It is the notional team in that art which is the relevant team making up the person skilled in the art.”

[61] This will be the governing approach in many cases but it can lead to trouble. There are cases of so called “problem-inventions” in which simply asking if the solution is obvious given the problem is unfair because inventiveness lay in identifying the problem. The fact the solution was obvious once you identify the problem does not prove a lack of inventive

step in such a case. In fact experience shows that real cases are often more nuanced in that there can be aspects of a problem which are not common general knowledge and so one cannot always draw a sharp line between problem invention cases and other cases.

[62] Furthermore, blindly applying an approach based on the definition of the problem to be solved could lead to a very narrowly defined skilled person and that can create its own difficulties, which were well described by Peter Prescott Q.C. in *Folding Attic Stairs Ltd v Loft Stairs Co Ltd* [2009] EWHC 1221 (Pat); [2009] F.S.R. 24. He showed why it could be wrong to frame the art in a narrow way. At [33]-[34] he said:

“33. Common general knowledge is quite different. It is what people skilled in the art actually do know, or ought to know, provided that knowledge is regarded as sound. Common general knowledge is not a phrase used in the Patents Act or the European Patent Convention. It would be difficult to define the person skilled in the art in this case, or the common general knowledge, because so far as I know there is no recognised profession or calling of designing folding attic stairways. ...It is unfair to define an art too narrowly, or else you could imagine absurd cases e.g. “the art of designing two-hole blue Venezuelan razor blades”, to paraphrase the late Mr T.A. Blanco White. Then you could attribute the “common general knowledge” to that small band of persons who made those products and say that their knowledge was “common general knowledge” in “the art”. That would have the impermissible result that any prior user no matter how obscure could be deemed to be common general knowledge, which is certainly not the law.

34. However it does not make much difference in this case, because the amount of special knowledge that is required to understand the patent in suit is not great. I would identify the person skilled in the art as one who has practical experience as a manufacturing carpenter, assisted by a metal fabricator. At the date of the patent (1996) this person or team would be vaguely aware of folding stairways in general terms, at most. The actual construction of old Stira, while known to many customers, was not common general knowledge in the art, in my judgment.”

[63] So while *Folding Attic Stairs* neatly explains one of the difficulties, given its facts the judge did not have to identify a principle to be applied to solve it. Furthermore, while too narrow a definition could be unfair to the inventors, it could be just as wrong and unfair to the public to define a team so widely that their common general knowledge is so dilute as to make something seem less obvious than it really was (see Pumfrey J. in *Mayne Pharma Ltd v Debiopharm SA* [2006] EWHC 1123 (Pat) at [3]-[4]).

[64] The other principled approach from *Schlumberger* to identifying the second kind of skilled person is to look at what is really going on in the art up to and at the priority date (Jacob LJ at [42]):

“I think one can draw from [*Dyson v Hoover*] that the Court, in considering the skills of the notional “person skilled in the art” for the purposes of obviousness will have regard to the reality of the position at the time. What the combined skills (and mind-sets) of real research teams in the art is what matters when one is constructing the notional research team to whom the invention must be obvious if the Patent is to be found invalid on this ground.”

33. Birss J acceded to a test proposed by Illumina, namely to require “*something which could properly be called an established field at the priority date. Depending on the facts the field could be a research field... or a field of manufacture as in Folding Attic Stairs*” (at [66]), which he described at [67] as “*a principled way of solving the problem identified in Folding Attic Stairs*”, saying:

“If the design and manufacture of folding attic stairs in particular was an established field then there is nothing unfair in defining the skilled person in that way. But if not then the wider definition (general carpenter plus metal fabricator) is appropriate. In other words, the width of the field in which the skilled person operates for the purposes of obviousness (a.k.a. the “art in which the problem lay” (per *Schlumberger*) is ultimately governed by what was actually going on up to the priority date. It is not primarily a function of the invention itself, the problem to be solved, nor the patent’s text.”

34. He concluded at [68] that in a case where it was necessary to define the PSA for the purposes of obviousness, the approach of the Court should be:

- i) To start by asking “What problem does the invention aim to solve?” (clarifying at [69] that this was an objective exercise);
- ii) Next to consider what the established field which existed was, in which the problem in fact can be located (clarifying at [70] that how wide the definition of that field should be will depend on the facts and what was going on in reality, and should be established as an exercise in hindsight: “*It does not matter at this stage if those in that field at the priority date*

did not perceive the particular problem or did not perceive it in the manner it is now characterised”); and

- iii) Determining that it is the notional person or team in that established field which is the PSA.

35. I have also been taken by the Claimant to the Court of Appeal judgment in *Illumina* which upheld Birss J on this issue ([2021] EWCA Civ 1924, [2022] RPC 14), and *Illumina* at first instance was approved and applied in *Modernatx Inc v Pfizer Ltd* [2024] EWHC 1695 (Pat), relied on by the Claimant, and *Alcon v Actavis* [2021] EWHC 1026 (Pat) (referred to at [115] of *Modernatx*) which emphasised that there was an element of value judgment in the assessment as the Court was required (i) not to be unfair to the patentee by allowing an artificially narrow definition, per *Illumina* at [62] and (ii) not to be unfair to the public (and the defendant) by going so broad as to “dilute” the common general knowledge (*Mayne Pharma Ltd v Debiofarm* at [4]).

The issue

36. There is a dispute as to the identity of the PSA in this case, although it appears to be common ground between the parties that the PSA is the same for both Patents. I will therefore focus on ‘509 for this purpose. It is important to note that neither party pleaded that the Patents were addressed to a PSA made up of a team of people.
37. The Claimant pleads that the PSA is “*A lighting design engineer with 2 to 5 years’ experience with a focus of working in the field of exterior lighting. They would likely be an individual but could work within a team. They would have had a general awareness of public infrastructure lighting, but would not have any detailed knowledge of or experience working in public infrastructure such as bridges and railways.*”
38. The Claimant’s pleaded case is generally supported by the Claimant’s expert, Mr Fisher, although is perhaps slightly narrower than his opinion in his first report. He opines that as the subject matter of the claims in issue is pathway

lighting units, the person with an interest in devising the invention and putting it into practice would likely be a university degree-level educated product design engineer (but may be a mechanical engineer) employed within the product design team of a luminaire manufacturer with experience of exterior public infrastructure lighting and a general knowledge of designing lighting for various application spaces. In his opinion, which is slightly wider than the Claimant's pleaded case, the PSA **may** have experience of designing products to light pathways or bridges but would not be a specialist in designing such products. Mr Fisher considers that they would have an understanding of anti-vandalism measures for consideration when designing an exterior luminaire, such as use of impact-resistant plastic rather than glass, and consideration of impact ratings for products in high-risk public areas, but he disagrees with the Defendant's position that the PSA would have expertise in pedestrian safety, including anti-climb measures. He opines that the PSA would be "*unlikely*" to have considered the risk of lighting being used as a foothold and would not have considered anti-climb measures in the design and development of a luminaire for a walled pathway. In his second report, he said that specific railway regulations and guidance relied on by Mr Keay, said to set operational standards and technical procedures for the railways, were "*simply not relevant in the field of a person designing and implementing lighting units, even those for use in public infrastructure settings*", and further notes that none of those make any reference to the use of anti-step features in lighting units. Mr Fisher was asked in cross-examination if they were not relevant because he considered the PSA would not be interested in such measures, or doesn't care about them, or thinks they don't matter, or simply ignores them. He said that "*at the point of designing it would not be clear that was the intended or sole application and so he would not have designed for that environment*" and for that reason, in his view, anti-climb features would not form part of the remit.

39. In his oral evidence he shifted his opinion slightly, and fairly in my judgment, by saying that the PSA would have considered such matters, and designed with such standards in mind, if they were presented to him in a specification or brief for the design of a custom lighting support. In his opinion, the PSA would

either have to go and look up the regulations or he would have to bring someone with specific railway safety expertise into the design team, like Mr Keay's PSA.

40. The Defendant does not plead to the PSA, but wrote to the Claimant on 4 June 2024 stating that it was “*an individual with expertise in pedestrian safety and anti-vandalism measures in public spaces. This person would have knowledge and experience of public infrastructure projects concerning the development of bridges and walkways.*” The Claimant treated this letter as a statement of the Defendant's case as to the PSA at trial. The Defendant's expert, Mr Keay, opines that the PSA is “*someone with an interest in items (such as handrails and lights) that were suitable for safe use on publicly accessible infrastructure such as at railway stations.*” He says that he is “*entirely comfortable*” that he can place himself in the shoes of such a person. Mr Keay further defines the PSA with someone with good knowledge of the relevant regulations and guidelines concerned with public safety referred to in his report, including those addressing the use of certain anti-climb measures, and would be highly motivated to work within the relevant statutory framework. His PSA may have an engineering background but would not necessarily have to have such a formal qualification.
41. In his oral evidence Mr Keay said that at the Priority Date, the PSA would be somebody working for the infrastructure team at Railtrack, the then owner of the UK network infrastructure, or one of Railtrack's then maintenance contractors, such as Carillion, or a safety inspector. In cross-examination, he said that at that time, in order to install a lighting support or fixture, a person in the infrastructure team (often the PSA) would carry out a risk assessment to satisfy himself that the risks at that location are as low as reasonably practicable, which would include assessing the previous history of the site, any existing mitigations, etc to determine if there is a climbing risk. If there is, they would come up with measures suitable to control the risks of the operation. His evidence in cross-examination was that in the risk assessment, all the applicable standards and regulations that pertained to the proposed installation

would be defined, and cross-checked. He said that the significant findings of that risk assessment and proposed light fittings would be, *inter alia*, included on a form which was required to be provided to Network Rail “*in all applications where lighting to [non-station footbridges and non-mainline station] footbridges is required*”, pursuant to a technical user manual NR/CIV/TUM/400 revision A of April 2008. If they were required to be notified in other instances, I was not told about them.

42. Mr Keay’s opinion in his second report is that Mr Fisher’s approach is not credible. He notes:

“...passenger safety was a primary and fundamental concern on the railways at the priority date, and remains so. Preventing climbing in high-risk areas such as passenger footbridges was a key priority. It would have been a futile exercise for a lighting designer to create products for this market which did not contain safety features, because potential clients would not have purchased them.

The types of anti-climb measures that I have set out in my Report were in place on many public installations and were therefore widely known as a matter of public (i.e. not necessarily specialist) knowledge. As the Court will appreciate, many of these measures are largely a matter of common sense. I would therefore expect a lighting product engineer with any experience of working on public infrastructure to know that pedestrian safety and anti-climb measures were of paramount importance to products intended for this market and would therefore have been familiar with the measures that had been employed...”.

The Claimant’s submissions

43. The Claimant submits that following Birss J’s approach in *Illumina* at [69], in order to define the PSA for the purposes of obviousness, the Court must answer to the first question “*what problem does the invention aim to solve?*”. Mr de Froment put it to Mr Keay in cross-examination that “*What the PSA would have thought that Claim 1 [of ‘509] is really about, the heart of it, is that it integrates an anti-climb measure into a lighting support does it not?*” to which Mr Keay answered “yes”. Mr Keay also agreed that Claim 5 of ‘509

was really about having a detachably fixed roof, as that facilitates easier assembly and maintenance, and that the heart of Claim 6 of '509 was that the roof being saddled over the bracket enables easier assembly of the roof and that the roof can be more easily detached. So those inventive concepts appear to be agreed, and I accept them. But the Claimant submits it is the identification of the possibility of integrating anti-climb measures into a lighting support, per Claim 1, which in large part is the inventive step in '509. I accept this, as both Claims 5 and 8 in issue in '509 are dependent on Claim 1.

44. The Claimant further submits that, in answer to the second *Illumina* question, the established field which existed at the Priority Date, in which this problem in fact can be located, is the established field of lighting product design, and the PSA is a lighting product design engineer, as this is the only established field that existed at that date where somebody is going to come up with a lighting product. The Claimant submits that the Defendant's more broadly and vaguely defined PSA, being "*an individual with expertise in pedestrian safety and anti-vandalism measures in public spaces*", or Mr Keay's narrower opinion, being "*someone with an interest in items (such as handrails and lights) that were suitable for safe use on publicly accessible infrastructure such as at railway stations*", misidentifies the relevant field, as the problem identified is not one which can be located in the field of pedestrian safety/anti-vandalism measures in public spaces, or railway safety experts or railway infrastructure operators or contractors, as they do not devise or put into practice lighting support designs. Mr Keay's evidence was that such persons would choose or specify products from those available on the market, or more likely, he thought, specify a brief for a custom product to be designed by a company or engineer working in the area of lighting product design.

The Defendant's submissions

45. Ms Lawrence for the Defendant criticises Mr Fisher for ignoring the "*pathway*" part of the title of the Patents, and specifically the walled pathway as described in the specification of the Patents, and the fact that the lighting

support of the invention is intended to be used in real-life situations within the public infrastructure realm, where public safety is paramount and regulations are necessarily strict. I do not think that this is a fair criticism, when she has acknowledged at para 43 of her skeleton that Mr Fisher accepted in his first report that if tasked with designing a pathway lighting unit, the PSA would consider the specific requirements of the project, noting that the Patents refer to a number of different types of walled pathways, including elevated pathways such as a bridge or a path on a high slope or in a building, walled pathways adjacent to private property, and walled pathways that are bridges over a railway or motorway.

46. The Defendant submits that the Claimant's approach to the PSA is far too narrow, which wrongly limits the CGK and leads to an erroneous construction of the Patents. The Defendant describes Mr Fisher's opinion on this issue as a "*blinkered approach*" and submits that the Claimant's PSA is one which is not grounded in reality as required by *Dyson v Hoover* as interpreted by Jacob LJ at [42] of *Schlumberger*, cited above, and as required by [115] of *Modernatx*: "*The Court must consider the real situation*". The Defendant submits that, by contrast, its PSA, whether as set out in its 4 June 2024 letter or as more narrowly described by Mr Keay, is mindful of safety and takes a real-life approach, looking at what the lighting is actually going to be used for. Ms Lawrence in closing submitted that "*You could not design a lighting support for a railway bridge without knowing what the rules and regulations were for railway bridges*".
47. In her closing submissions, Ms Lawrence drew my attention to [104] of *Modernatx*, in which Meade J relied on the judgment of Laddie J (as he then was) in *Inhale v Quadrant* at [53] to explain:

"What Laddie J. was saying was that where an invention involves the use of more than one skill, if is obvious to a person skilled in the art of any one of those skills, then the invention is obvious. And rightly so, for it would otherwise impede a class of person who found it obvious".

48. When I pointed out that it was not the Defendant's case that the PSA was a team of people with different skills, she submitted that "*the skilled person would be interested in making a product for use in this particular area, and immediately that brings in the regulations that are required for a lighting product to be put to use in that way, and that you cannot get away from that. So the blinkered approach that Mr Fisher is taking essentially addresses one-half of this skilled person, what the skilled person would know. He is ignoring the 'wall' side of the invention, where it is going to be put, and simply focusing on the lighting situation, and ignoring everything to do with the environment and the purpose for which the product is being made and used.*".

Determination

49. I am with the Claimant. In my judgment, following *Illumina*, the objective answer in respect of '509 to "What problem does the invention aim to solve?" is the integration of anti-step measures into a lighting support suitable for fixing on the side wall of a walled pathway, as Mr Keay accepted in cross-examination. The established field existing at the priority date in which that problem in fact can be located is, in my judgment, the field of lighting support design, for the following reasons:
- i) The Defendant has not specifically identified in pleadings (including the 4 June 2024 letter referred to in paragraph 40 above which stands as the Defendant's case on the PSA), or submissions an alternative established field in which the problem can be located. It is not clear to me what established field has within it a PSA "*with an interest in items such as handrails and lights suitable for safe use on publicly accessible infrastructure such as at railway stations*".
 - ii) Mr Keay suggested that his PSA would be working in the infrastructure team at Railtrack or one of Railtrack's contractors, and would also be carrying out risk assessments. If I am to assume that the Defendant's established field is that of railway infrastructure, or railway infrastructure health and safety, then I find that is too narrow as: (a)

neither the problem nor the invention is limited to railway infrastructure; and (b) the Defendant's PSA is also similarly not limited.

- iii) If the alternative established field is intended to be publicly accessible infrastructure, or publicly accessible infrastructure health and safety (taken from the wording of the Mr Keay's PSA, and into which the Defendant's "*individual with expertise in pedestrian safety and anti-vandalism measures in public spaces*" could be said to fit), then this has not been pleaded, argued or put to the Claimant's expert by the Defendant such that the Claimant has had an opportunity to address it.

- 50. Even if I am wrong on that latter point, that alternative established field seems far too wide when considered in hindsight against what was going on in reality at the relevant time. What came out of both experts' evidence, but particularly that of Mr Keay's oral evidence in my judgment, was that a lighting support product which would be safe and suitable for one application or installation would not or might not be safe and suitable for another. He gave, as an example, a standard bulkhead light of the type illustrated in his first report in figures 7 and 8, which has the potential to be used as a foothold. As he said, such a light might be suitable for use on the side wall of a railway bridge if it was positioned high up, so that it realistically could not be used as a foothold; or it might be suitable for use lower down if the side walls were so high that the step up provided by the bulkhead was ineffectual to aid climbing, or if other mitigations had been put in place such as a cage over the bridge. In reality, as he stated, before any lighting support was installed in those sorts of high-risk areas, the relevant location would be risk assessed, with relevant regulations and guidelines identified and taken into account, and an appropriate product specified or commissioned taking into account the site, the history, the regulatory framework, and the other mitigations which were or would be put in place.
- 51. Accordingly, in my judgment, the problem which the invention sought to solve was not located in the field of those with experience in pedestrian safety and anti-vandalism measures in public spaces, or with an interest in handrails and

lights in publicly accessible infrastructure, who Mr Keay described really as those specifying such lighting in an infrastructure team. I accept his evidence that those who were specifying lighting at the priority date could choose and specify whatever lighting support products were on the market, or they could commission a custom-designed solution to meet their particular brief, and install them together with anti-climb mitigations, whether those were physical (spikes, infills, cages, sloped surfaces and copings as identified by Mr Keay in his first report); psychological (notices, other visual signals not to climb as described by Mr Keay in his cross-examination); placement of fittings and fittings to deter climbing as already discussed; or CCTV or live surveillance. However they were not developing new lighting products. Even when commissioning custom-designed lighting supports, those were being designed by lighting support designers like the Claimant's proposed PSA to meet the brief required. Mr Keay's evidence was that a person working at Railtrack or one of its contractors or in railway safety inspection would not look at patents, although he accepted that a lighting product design engineer would need to keep up with the latest technology and would pay attention to patents. Mr de Froment submits that it is clear from Mr Keay's evidence that the Defendant's PSA would not have a real and practical interest in the Patents, but of course, as Ms Lawrence says, the question is rather who would have a real and practical interest in the subject matter of the invention.

52. I have considered, but reject, the Defendant's submission that the Claimant's PSA is far too narrow, and reflects a "*blinkered approach*" not rooted in the real world. I am satisfied that it reflects what was going on in reality at the priority date. I am satisfied that such a lighting support design engineer was either designing lighting supports for the general public infrastructure market, without knowing exactly where or for what purpose that would be specified, and so the only regulations and standards that it would comply with were those for luminaires in publicly available spaces, as Mr Fisher stated, or he/she was designing lighting supports to meet a specific, custom brief, such as from a member of the railway infrastructure team. Such a brief would have been produced, on Mr Keay's evidence, following the risk assessment process he

described, and would include within it such regulatory standards or guidance as the commissioner required the designer to design the lighting support to meet. I accept Ms Lawrence's submission that "*you could not design a lighting support for a railway bridge without knowing what the rules and regulations were for railway bridges*", but such a designer could design a general lighting support for publicly accessible infrastructure products without knowing such rules and regulations, and it would be up to the railway infrastructure team either to specify it, if it could be installed safely in a specific site either with or without additional mitigations, or to choose not to specify it. This is the point Mr Fisher made when he said that "*at the point of designing [such a lighting support] it would not be clear that [railway infrastructure] was the intended or sole application and so he would not have designed for that environment*". Alternatively such a designer could design a lighting support to meet a commissioned design specification or brief for a railway bridge if that specification/brief informed him of the rules and regulations he had to meet.

53. Accordingly, I am satisfied that it is the notional lighting support design engineer identified by the Claimant, in that established field of lighting support design, which is the PSA. I am satisfied that such a notional person will have a real and practical interest in the subject matter of the invention, which includes devising the invention itself as well as putting it into practice.

G. THE COMMON GENERAL KNOWLEDGE

54. The parties have each pleaded statements of the common general knowledge. There is little if any material dispute that the common general knowledge would have included knowledge on a range of lighting matters as set out in both parties' pleaded statements and the experts' reports, save as set out below.
55. The main dispute between them is whether the common general knowledge would include safety matters relating to anti-climb measures generally, rail safety regulatory requirements and guidelines, including about anti-climb measures, and various specific safety features relating to railway footbridges,

as set out in Mr Keay's report. The Claimant's case, supported by Mr Fisher's opinion, is that the PSA would have no knowledge of these matters, and the Defendant's case, supported by Mr Keay's opinion, is that that the PSA would. It follows my finding that the PSA is a lighting support design engineer that I accept Mr Fisher's evidence that the PSA's common general knowledge would not include knowledge of rail safety regulatory requirements, standards and guidelines relating to anti-climb measures or safety features relating to anti-climb or railways generally, including those which the Defendant has pleaded as being within the common general knowledge. Further, I accept Mr de Froment's submissions that:

- i) to the extent that such a PSA was provided with a specific design specification or brief containing details of such matters, that would not be within his common general knowledge but would be specifically provided information for the purposes of that design project; and
- ii) The PSA would not have had within his common general knowledge any appreciation that incorporating anti-climb measures within a lighting support was a technical problem that required solving, nor would they have had any motive to solve it.

56. There is little dispute about the lighting matters which are within the common general knowledge. I am satisfied that the following matters were common general knowledge as at 11 October 2011:

- i) A complete lighting unit is known as a luminaire. The PSA would be aware that standards exist for luminaires, such as BS60598 and GI/GN7520, but would not have detailed knowledge of the standards although he could look them up. BS60598 does not have a part specifically for railways or pedestrian footbridges.
- ii) BS60598 defines a luminaire as "*apparatus which distributes, filters or transforms the light transmitted from one or more lamps and which includes all the parts necessary for supporting, fixing and protecting the lamps, but not the lamps themselves, and where necessary, circuit*

auxiliaries together with the means for connecting them to the supply”.

There is a different definition in GI/GN7520 which is paraphrased from that quoted above, but makes no mention of including or excluding lamps.

- iii) The light emitting component of the luminaire is known as the light source. Traditional electrical light sources have used a lamp (what a lay person might refer to as a lightbulb) as the light source. More modern lights may use Light Emitting Diodes (LEDs) as the light source, which are contained in components which may be described as LED modules or lighting modules.
- iv) The use of luminaires which could be fixed to walls or other vertical surfaces was well known and long-established.
- v) Exterior lighting products have a roof, cover or canopy and that the function of this would be to keep dirt and moisture out and/or protect the lighting module. Exterior lighting products may also have a bracket to affix the lighting product to a wall or other surface.
- vi) Pedestrian handrails could be designed to include lighting systems and that they could be ground- or wall-mounted.

H. CONSTRUCTION OF THE CLAIMS

57. It is for the Court to construe the patent objectively, adopting the mantle of the notional PSA to whom it is directed, and in the light of the common general knowledge with which the PSA is assumed to be imbued (*Dyson v Hoover* [2001] R.P.C 26 at [48f]). It is common ground that the Court must give the language of a claim a purposive construction, in light of the inventor's purpose as set out in the description, to arrive at the meaning which would have been understood by those to whom it is actually addressed (see Lord Neuberger in *Eli Lilly v Actavis* [2017] UKSC 48, [2017] RPC 21 at [54], Lord Hoffman in *Kirin-Amgen* [2005] RPC 9 at [32]). However, it is not legitimate to narrow or extend the clear meaning of the language of a claim by references to the

specification as where language is clear and unambiguous, it does not require construing (see [21] of the judgment of Lord Clarke of Stone-cum-Ebony JSC, with whom the other members of the Court agreed, in *Rainy Sky SA v Kookmin Bank* [2001] UKSC 50, [2011] 1 WLR 2900: “Where the parties have used unambiguous language, the court must apply it”, albeit not cited by either party). To narrow or widen a claim in such circumstances is not construing it, but amending it.

58. Similarly, per Floyd J in *Nokia v Ipcom* [2009] EWHC 3482 (Pat) at [41] (approved by the Court of Appeal in *Optis v Apple* [2021] EWCA Civ 1619 at [50]), relied on by the Defendant:

“Where a patentee has used general language in a claim, but has described the invention by reference to a specific embodiment, it is not normally legitimate to write limitations into the claim corresponding to details of the specific embodiment, if the patentee has chosen not to do so. The specific embodiments are merely examples of what is claimed as the invention, and are often expressly, although superfluously, stated not to be ‘limiting’. There is no general principle which requires the court to assume that the patentee intended to claim the most sophisticated embodiment of the invention. The skilled person understands that, in the claim, the patentee is stating the limits of the monopoly which it claims, not seeking to describe every detail of the manifold ways in which the invention may be put into effect.”

59. The Claimant seeks the Court’s construction of a number of the claims or claims integers. However, one of those is the meaning of “*bracket*” in integer 1(b) of 509, despite the Claimant having admitted the presence of claim feature 1(b) in each of Woolston, Ueda and Profila. Mr de Froment originally sought to argue that although it was not necessary to construe this integer for the purposes of novelty, it remained in dispute for the purposes of obviousness. I accept Ms Lawrence’s submission for the Defendant that there can be only one construction which applies across the case for all purposes, whether the Court is considering novelty, obviousness or, indeed, normal infringement. There are exceptions, of course, in the case of infringement by equivalence and product-by-process claims, but neither are a feature of this case. I believe Mr de

Froment also accepted this principle in closing. See Kitchen J as he then was at [88] in *European Central Bank v Document Security Systems* [2007] EWHC 600, relied on by the Defendant and approved on appeal by the Court of Appeal [2008] EWCA Civ.

60. Of the remaining elements of the claims that I am asked to construe, then, three I can dispose of quickly as I do not consider they need construing:

- i) The first is the meaning of “*depending*” in Claim 8 of ‘509 (in the context “...a skirt wall *depending from the roof*”). The Claimant says that in the context of Claim 8, that means “*hanging down from*”, per the Oxford English Dictionary (December 2024) definition of that word when used as an adjective and preposition: “*Hanging or inclining downwards, pendent*”. Mr Fisher’s opinion is that the PSA lighting support design engineer would understand it to mean that the skirt wall is physically attached to and coming from the roof line. The Defendant says that is an ordinary English word and does not require construction. Mr Keay had nothing to say on the point one way or another in cross-examination. I agree it is an ordinary English word, which cannot really be understood in any way other than as per the dictionary definition, and I am satisfied the PSA would understand “*depending from the roof*” in Claim 8 of ‘509 as hanging or inclining down from the roof.
- ii) The second is the meaning of “*elongate*” in Claim 1 of ‘566. Again, the Defendant submits that this is an ordinary English word that does not need construing. Mr Keay in his reports said it had no particular technical meaning beyond the ordinary English word, which meant that something had proportions such that it was wider than it was tall, or taller than it was wide, and said in cross-examination that that was how it was used in engineering. The Claimant takes issue with this as being too broad a definition. It submits that the PSA would understand an elongate object to be one that is long in proportion to its breadth or height. Mr Fisher’s opinion was slightly different to that. He said that the PSA would understand it to mean that something had a ‘significant’ length

compared to the height of the product, and confirmed in cross-examination that was his wording. However, in cross-examination Mr Keay said that the Oxford English Dictionary definition read out to him by Mr de Froment and relied on by the Claimant “*seems reasonable*”: “*Lengthened, prolonged, extended; esp. in botany and zoology that is long in proportion to its breadth; that has a lengthened, slender or tapering form*” and so it appears that Mr Keay and the Claimant really agree. To the extent that Mr Fisher has sought to quantify the length as ‘significant’ compared to the height or breadth, the Claimant does not ask me to construe it in those terms and I do not do so. I am satisfied that this is an ordinary English word and whether something has been sufficiently lengthened or extended to properly be assessed as long in proportion to its breadth and so to be understood by the PSA as ‘elongate’ for the purposes of Claim 1 of ‘566 is a matter of fact and degree for the Court to assess through the eyes of the PSA.

- iii) The third is the meaning of “*saddled over*” in claim 6 of ‘509: “*wherein the roof is saddled over the bracket*”. There was little dispute following cross-examination of the experts. The Claimant submits that the term calls to mind the way a saddle is placed over a horse, with a part hanging down each side of the horse’s back, and requiring that the roof can be “hooked over” the high part of the bracket, with part extending down behind the wall side of the bracket. It relies for support on the reference in the specification to the embodiment as showing “*the roof 210 has an inverted generally V-shaped cross-sectional profile saddled over the bracket 208*” which can be seen clearly in figure 7, reproduced above. Of course the single embodiment does not limit the claim. Mr Fisher in his report stated that “saddling” allows the installer to use both hands, but resiled from this in cross-examination. The Defendant relies on Mr Keay’s opinion that saddling does not have a technical meaning for the PSA who would give the word its ordinary meaning, being a feature sitting at least partially around (i.e. straddling) another feature. He says it simply means the arrangement of one component placed or affixed

over another in that way. In cross-examination by Mr de Froment he accepted that to be saddled, the roof would need to have to go over the bracket with a bit hanging down on each side. I accept this and find that is what the PSA would understand that claim to mean.

61. There is a greater dispute over the construction of “*lighting module*” for the purposes of integer 1(c) of ‘509 and “*on top of*” for the purposes of integer 1(d) of ‘509.

Lighting module

62. The context is integer 1(b) – “*a means for supporting a lighting module*”. The specification provides the following assistance on page 3 of ‘509:

“The lighting module may comprise one or more filament lamps or neon lights. Light-emitting diodes are a viable alternative light source in many applications... Preferably the lighting module comprises a LED lighting module having at least one LED and a LED driver circuit for supplying electric power to at least one LED”.

63. Broadly speaking, the Claimant’s case is that a lighting module is a self-contained unit which can be swapped in and out of the luminaire, whereas the Defendant says this could be nothing more than a lamp holder and a lamp.
64. At paragraph 43 of his first report, in which he construed integer 1(b) of ‘509, the Claimant’s expert Mr Fisher opined that:

“The PSA would understand “lighting module” to mean not only the light source itself, but all the other components, including the electronics and optical features, that seal it into a complete and functioning self-contained unit that has its own integrity in terms of ingress protection and impact resistance. They would understand that this module is an independent unit from the claimed lighting support that could be fitted to and used with that support”

65. At paragraph 141 of his report Mr Keay opined that a “*filament lamp*” is another way of describing a traditional incandescent light bulb, which I accept. He said, “*A lighting module therefore consists of a lamp (in order [I assume that should be other] words, a light bulb or LED lamp) and the component that*

supplies electrical power to it (in the case of a traditional light bulb, this would be the lamp holder)." In oral evidence he confirmed his opinion that a lighting module *"could be the fixing for the lighting unit plus the lamp itself, so it is the whole unit... the holder and the lamp. That is a lighting unit"*. He accepted that it had to be something more than just a lamp, and something that could be swapped in and out of the luminaire. Mr Fisher disagrees that this is how *"lighting module"* would be understood by the PSA. In his oral evidence he stated explicitly *"There are quite clear definitions as to what a lamp is and what a lighting module is and what a luminaire is. A lighting module, I construe that to be different than a socketed lamp"*.

66. To the extent that Mr Keay in his second report states that Mr Fisher has interpreted lighting module as only an LED lighting module, ignoring the broader possibility in the specification that *"the lighting module may comprise one or more filament lamps or neon lights"*, I do not consider this to be correct. It seems clear from Mr Fisher's opinion at paragraph 43 of his first report, cited above, that he is agnostic on how the light is emitted, referring neutrally to *"a light source"*. Mr de Froment made the point in opening that the Defendant appeared, in Ms Lawrence's skeleton argument, to be submitting that it was the Claimant's case that a lighting module is only an LED lighting module, but this was not the case. He also put it to Mr Keay in cross-examination that Mr Fisher was not referring only to LEDs in his opinion, and he accepted that, although he said, *"he does focus primarily on LED"*. I do not think that is a fair criticism.
67. I have considered this carefully and on balance I accept Mr Fisher's construction as how the PSA would understand *"lighting module"*. That is because Mr Fisher, like the PSA is a lighting support design engineer which Mr Keay is not, and I found Mr Fisher's statement that there are clear definitions of each understood by those working in the field, to be convincing.

"on top of"

68. The context is integer 1(d) of ‘509 – “*a roof located on top of the support in normal use*”.
69. The dispute is that the Claimant submits the PSA would understand this to mean that the roof is attached to and contiguous with the support, just as the roof of a house is part of, and contiguous with the house, whereas the Defendant submits that there is no such requirement in the claim for the roof to be an integral part of the support, and submits that a “roof” within Claim 1 can be not touching and separate to the lighting support, as we will come to see when considering the Woolston prior art.
70. Mr Fisher in his first report opines that the PSA would understand the “roof” to be a solid structure covering the assembly and “*on top of*” as requiring the roof to be an integral part of the whole lighting support. In cross-examination by Ms Lawrence he said that he considered that “*a roof located on top of the support in normal use*” implies that it is fixed to the support, but he said that he arrived at that interpretation by looking at one of the diagrammatic figures in the Patent (which Ms Lawrence described as one of the embodiments but in fact there is only a single embodiment illustrated in multiple figures), and by the fact that Claim 5 refers to a support “*wherein the roof is detachably fixed to the bracket*”, from which he drew the inference that the roof in Claim 1 was fixed. When he was correctly informed by Ms Lawrence that it was impermissible to construe Claim 1 by reference to a later claim, or to limit Claim 1 by reference to an embodiment, Mr Fisher then agreed with her proposition that the PSA would understand that the roof would “*cover*” the assembly and not be attached to it.
71. Mr Keay in his first report equates “*on top of*” with “*over*”. In cross-examination he expressed the view that there are houses in other parts of the world where the roof is raised on stilts such that it is not integral with the house but sits over it. Mr Keay is not, of course, an architectural expert and I am concerned with Claim 1 of this Patent and not domestic architecture.

72. The Claimant has provided me with the Oxford English Dictionary definitions of “on” and “over”. The Oxford English Dictionary states at I.i.1.a that “on” when used of local position outside of, but in contact with or close to a surface, means: “*Above and in contact with, at rest on the upper surface of; above and supported by*”. This is in my view not particularly helpful, given the way in which it is limited. Of course if you consider something only when meaning in contact with a surface, it will be defined as being in contact with a surface. The Oxford English Dictionary states at A.I.1.a that “over”, when used as a preposition in the sense of “above” as the Defendant wishes the Court to construe it, means: “*Above, higher up than. Used of position or motion within the space above.*” and has a note saying, “*Used irrespective of whether the lower object is immediately adjacent or distinctly separate, although generally implying closer proximity than above*”. However, it also provides a definition of “over” in the sense of ‘on’ or ‘upon’, which must be what Mr Keay was intending. That states at A.II.5.a that it means “*On the upper or outer surface of; on top of, upon, esp. so as to be supported by, rest on, or cover (part of) the surface....*” and finishes with a note “*Not always easily distinguished from sense A.I.1.a*”.
73. In my judgment this integer cannot be construed in isolation. I am construing Claim 1 as it would be understood by the PSA, not a single integer of it, and I am doing so in the wider context of the purpose of the invention. Reading integer 1(d) as a part of the whole of Claim 1 makes clear that the lighting support includes (“comprises”, in patent terms) a roof located on top of the support: “*A pathway lighting support...wherein the support comprises:...a roof located on top of the support in normal use*”. In my judgment, the PSA would understand that the roof is part of the lighting support as it is explicitly stated to be included in it. I also consider that the PSA would understand “on top of”, which is an ordinary English phrase, to mean that the roof was supported by or resting on or covering (but touching, like a tablecloth covers a table) the top of the lighting support, and was not separated above it. I remind myself that, per *Nokia v Ipcom*, the PSA will understand that in the claim, the patentee is stating the limits of its claimed monopoly, and that if it had wanted

the claim to be wide enough to encompass an embodiment with a roof which was not part of the lighting support, and was above and separated from it, it could have chosen language to do so. I am satisfied that were I to construe the language of this Claim 1 in the way the Defendant seeks, I would be impermissibly amending it and widening the monopoly of the Patent.

74. For completeness, I do not construe this integer as requiring the roof to be fixed to the lighting support. I accept the Defendant's submission that there is no language in the claim by which the PSA would understand that to be the meaning of the claim and it is not required to give effect to the purpose of the invention. The claim would encompass an embodiment where the roof is on top of the lighting support and part of it, but fixed to the supporting wall, for example.

I. NOVELTY

75. The Claimant has admitted the following features of the following claims of the Patents were present in the prior art in its claim charts on validity:
- i) Woolston: '509: claim features 1(a), 1(b), 1(c), 1(f); and '566: additional feature (b);
 - ii) Ueda: '509: claim features 1(a), 1(b), 1(d), 1(f), and Claim 8; and
 - iii) Profila – '509: claim features 1(b), 1(c), 1(d), 1(f); and '566: additional features 1(b) and 1(d).
76. However, the Claimant's expert Mr Fisher reached different conclusions in his report. Of those features admitted by the Claimant he opines that only claim features 1(f) of '509 and 1(b) of '566 are disclosed by Woolston, none are disclosed by Ueda, and only claim features 1(b) and 1(d) of '566 are disclosed by Profila.
77. It follows that although the Claimant sought to argue in Mr de Froment's skeleton argument, based on Mr Fisher's opinion, that the PSA would understand the bracket for fixing the support to the side wall of the walled

pathway (being claim feature 1(b) in '509 and 1(c) in '566) as extending along the full length of the pathway lighting unit, it has accepted that feature is present in each of Woolston, Ueda and Profila.

78. The Claimant did not apply to resile from its admissions, nor to amend its pleaded case. Nor, the Defendant argued at the start of trial, would it be willing to admit infringement on the basis of the new and different construction of Claim 1 of '509 and Claim 1 of '566 being advanced for in Mr Fisher's report. As I made clear to the parties at trial, in those circumstances I will hold the Claimant to its admissions. In my judgment, the appropriate course is simply to ignore Mr Fisher's opinion to the extent that it conflicts with the Claimant's admissions. I do, however, accept Mr de Froment's submission that the fact that Mr Fisher has come to a different opinion when considering the prior art is evidence that he has carried out his task independently of those who instruct him, and I do not criticise him for that reason.

Woolston

79. This is an installation at Woolston station footbridge. It comprises an illuminated handrail (white in the photograph below) and a sloped wedge above it (green in the photograph below) which the experts agree is angled at approximately 45 degrees. It is agreed that the illuminated handrail is a lighting support for the purposes of integer 1(a). The Defendant's case is that Claim 1 of '509 and Claim 1 of '566 are not novel over Woolston, although it accepts that Claims 5, 6 and 8 are novel over Woolston.



80. The only integers of Claim 1 of ‘509 identified by the Claimant as missing from Woolston are 1(d) and 1(e). In relation to 1(d) it submits that the green wedge is not “*a roof located on top of the support in normal use*”. Given my construction of this integer, I am with the Claimant, as in my judgment the green wedge is not part of the lighting support (indeed, Mr Keay accepted in cross-examination that the green wedge and the handrail were different items supplied by different contractors) and it is not on top of it. Since it does not fulfil integer 1(d), it cannot fulfil integer 1(e) “*wherein the roof is configured to inhibit the support from acting as a foothold*” as this relies on 1(d). In addition, the Claimant submits that the green wedge is not configured to inhibit the illuminated handrail (being the lighting support) from acting as a foothold, as it does not extend the full length of the handrail. I also accept this point. It can be seen that the end of the handrail is accessible and could be used as a foothold, as Mr Keay accepted in cross-examination. The fact that it has been installed at a height which he thought was too high for a foothold to be obtained is, as the Claimant submits, nothing to do with whether the roof is configured to inhibit the support from acting as a foothold. In my judgment, it is not.
81. These findings also hold for the identical but differently-numbered integers 1(f) and 1 (g) of ‘566. Accordingly I am satisfied that Claim 1 of each of ‘509 and ‘566 are novel over Woolston.

82. The Claimant further identifies integer 1(d) of ‘566 as missing from Woolston - “*a means for supporting at least one cable or pipe along an axis of elongation of the support*”. Although it is not strictly necessary for me to deal with this, I will do so. The Claimant relies on Mr Fisher’s opinion that the illuminated handrail is not a means for supporting at least one cable or pipe. The Defendant submits that it is, relying on Mr Keay’s report. Mr Keay’s opinion on this point has been reached in a way which I am satisfied does show the hand of the Defendant’s solicitors Penningtons as being too firmly on the tiller, as Mr de Froment for the Claimant submits. Mr Keay’s reasoning is as follows:
- i) Penningtons explained to Mr Keay the Claimant’s interpretation of this element of Claim 1 of ‘566, namely that the lighting module in the handrail will necessarily require an electrical connection, that will be delivered by cables, those cables will pass through a portion of the bracket, and the lower curved portion of the bracket will act as a means of support of those cables;
 - ii) Penningtons then gave Mr Keay photographs of the Defendant’s Alinea Anti-Climb rail (which the Claimant has alleged, and the Defendant accepts subject to validity, infringes the ‘566 Patent) from which Mr Keay infers, because he says there is no other feature or element which can be said to be supporting a cable, that the floor of the product is the means for supporting at least one cable or pipe along an axis of elongation of the support;
 - iii) Penningtons then asked Mr Keay “*to adopt the Claimant’s interpretation of this feature*” of Claim 1 of ‘566, i.e. that it is present when a lighting support simply has a floor, when considering the prior art;
 - iv) That has led him to opine that because the illuminated handrail has a floor, this is a means for supporting at least one cable or pipe along an axis of elongation of the support.
83. When Mr de Froment put it to Mr Keay in cross-examination that the Woolston handrail was not a means for supporting a cable or a pipe he simply

answered, “*I don’t know*”. In my judgment, that goes to show that the opinion in his report was not one which he had arrived at independently, but one to which he had been led by Penningtons. I accept Mr Fisher’s evidence on this point and am satisfied that integer is not made out in Woolston.

Ueda

84. This is a Japanese patent which I have read in translation. It is for a “*lighting fixture*” and the problem it intends to solve is to provide a lighting fixture capable of reducing a gap between a support surface such as a wall or ceiling and an element which Ueda refers to as a “*luminaire*” but which has a different meaning to that previously used in this judgment. Mr Fisher refers to it as a diffuser, and I will also refer to it in this way to avoid confusion. It comprises a bracket which is to be fixed to a support surface, and a diffuser. Each of the bracket and diffuser have a locking part which can be engaged with each other. These are configured in a form of bayonet-style lock, so that when they are engaged, and locked by rotating the diffuser, the distance between the diffuser and the bracket bottom are between 3mm and 20mm. The experts agree that this helps prevent water ingress and the build-up of condensation if it is placed, for instance, in a bathroom [0013]. Once engaged, the angle of the diffuser can be adjusted by manipulating the rotation of the diffuser, even after it has been attached to the bracket.
85. The only integers of Claim 1 of ‘509 identified by the Claimant as missing from Ueda are 1(c) (“*a means for supporting a lighting module*”), 1(e) (“*wherein the roof is configured to inhibit the support from acting as a foothold*”) and 1(g) (“*inclined with regard to the side wall of the wall pathway by an angle of inclination of 45 degrees or less*”). Claims 5 and 6 of ‘509 are also disputed. As well as the corresponding identical integers missing in ‘566, the Claimant further identifies that 1(b) (“*wherein the support is elongate...*”) and 1(d) (“*a means for supporting at least one cable or pipe along an axis of elongation of the support*”) are missing in ‘566.

86. In relation to integer 1(c), the Claimant submits that this is not present as Ueda contains no “*lighting module*” and no “*means for supporting a lighting module*”. Rather, it submits, [0001] refers to a light source provided on a bracket and the embodiment described at [0028] and shown at figure 4 of Ueda contains “*a socket 51 for a light bulb and a cord insertion hole 15 for inserting an electrical cord 55 to be connected to the socket*”. The Defendant does not dispute that this is the case (which was confirmed by Mr Keay in cross-examination) and pleads same embodiment. It relies on the ‘socket 51’ (being a lamp holder) and a light bulb (being a lamp) as together comprising a lighting module. In construing Claim 1, I have found that it is not. Accordingly, I am with the Claimant on this point.
87. In relation to integer 1(e) and 1(g), Ueda describes an embodiment with “*an abbreviated triangular prismatic shape with [diffuser] bottom 32, first coated surface 37 and second coated surface 38 as three sides*”. It identifies at [0031] that these two surfaces meet the diffuser bottom 32 at angles of 70 degrees and 50 degrees respectively. However, at [0055] it notes that the embodiment is illustrative, but the invention is not limited to such a shape and that it “*allows for a wide choice of [diffuser] designs*”. Mr Keay in cross-examination pointed that out, when he agreed with Mr de Froment that the shape of the diffuser was “*neither here nor there*” to the invention.
88. The Defendant relies on these integers being present by installing the lighting fixture upside-down to that shown in the illustrated embodiment, so that what is described as ‘[diffuser] bottom 32’ forms an integrated top surface, or roof, with an angle which the Defendant says is between 38 and 45 degrees. It relies on Mr Keay’s evidence that the PSA would contemplate rotating the diffuser 180 degrees so that this lower surface becomes the upper surface and forms a roof. The Claimant disagrees that the PSA would contemplate doing so, as the description of the embodiment explains that the diffuser can only be installed in what it refers to as the “correct position” at [0048]. Mr Keay in cross-examination accepted that, but agreed that this problem could be avoided by coming up with a different diffuser shape.

89. I am satisfied that neither integer 1(e) nor integer 1(g) are present in Ueda. It does not, in my judgment, disclose a “*roof [which] is configured to inhibit the support from acting as a foothold*”. The roof in the embodiment, which I accept is merely illustrative, is a simple translucent coated surface which does not appear to have any configuration or design choices intended to inhibit the support from acting as a foothold. Mr Fisher’s evidence is that although he does not know what the diffuser material is constructed of, being translucent and having considered the drawings, he infers it would probably not be capable of supporting much weight and therefore not capable of inhibiting the support from acting as a foothold. The Defendant submits this is mere supposition but I do not agree. He is an expert lighting designer experienced at considering such drawings, and I accept his evidence.
90. Nor, as is explicit in Ueda, does the roof of the embodiment have an angle which is likely to be sufficient to inhibit the roof as acting as a foothold, as it is not 45 degrees or less as required by integer 1(g). I do not accept the Defendant’s submission that the embodiment could simply rotated 180 degrees, because of the wording which alluded to a “correct position”, as Mr Keay also accepted.
91. Although the diffuser could be entirely redesigned as to orientation, shape, and material so as to produce a roof which is configured to inhibit the lighting support from being used as a foothold, and which is at an angle of 45 degrees or less this is not, in my judgment, anticipated by Ueda. In my judgment Ueda is a patent concerning an invention of an attachment mechanism between the diffuser bracket, not the diffuser shape. I accept the Claimant’s submission that the fact that a patent is agnostic about the shape of a diffuser is not to say that it would cause the PSA to contemplate each of the entire range of possible forms that diffuser could take. Also relevantly, I have found that the PSA in this case, being a lighting support design engineer without anti-climb and safety matters in his common general knowledge, when reading this patent would not consider anti-climb issues and does not, for example, know that an

angle of 45% or less is an appropriate climbing deterrent, contrary to the Defendant's submission.

92. Accordingly, I am satisfied that Claim 1 of '509 is novel over Ueda.
93. In relation to Claim 5 of '509, the Defendant submits that this feature is present as the roof of Ueda is an integral part of the diffuser, which is detachably fixed to the bracket and easily removed from it. The Claimant submits that it is not detachably fixed to the bracket because it is part of the diffuser as a whole. I am with the Defendant on this point. There is nothing in the claim which requires removal of the roof to be independent of any other part of the housing of the lighting support. The question is whether it is detachably fixed to the bracket and that is, in fact, the point of the invention in Ueda. Accordingly, I am satisfied that the additional feature of Claim 5 (as distinct from Claim 1, on which it depends), is not novel over Ueda.
94. In relation to Claim 6 of '509, the Defendant's submissions that the roof is saddled over the bracket are founded on the embodiment in figure 4 being installed upside-down, or rotated 180 degrees. I have accepted the Claimant's submission that this is not permissible for that embodiment, and I am satisfied that if the embodiment was installed as shown in figure 4, that element which the Defendant seeks to describe as the roof (which in that orientation would be the diffuser base and not the roof) would not be saddled over the bracket, but nestled under it. Accordingly I am satisfied that Claim 6 is novel over Ueda.
95. Given my findings so far, it is not necessary to turn to the additional integers of Claim 1 of '566, but I will deal with them quickly. In relation to 1(b) of '566, the Defendant submits that the support in Ueda is elongate and the Claimant submits that it is not. This is a matter of assessment of fact and degree. It is true that in figure 4 the support does not appear to be entirely square, but I accept the Claimant's submission that it is only marginally broader than it is long and I do not think that the PSA, looking at that, would consider that it was elongate. In addition, the bracket is circular, and the

diffuser, we are told and Mr Keay accepts, could be any number of shapes, save that it must be able to rotate and lock about the bracket which does not suggest to me that it easily lends itself to an elongate shape. On balance, I am satisfied that integer 1(b) is not present in Ueda. In respect of integer 1(d), the Defendant submits that it is present based on Mr Keay's opinion reached in the same way and for the same reasons, and subject to the same flaws, as for Woolston. I reject that and find that integer 1(d) is not present in Ueda, for the same reasons as Woolston.

96. For those reasons I am satisfied that Claim 1 of '566 is novel over Ueda.

Profila

97. As stated, Profila is made up of two pieces of prior art, the Rehau Profila Bench Trunking brochure (published in October 2010) ("**Bench Trunking**") and the Rehau Cable Management Solutions brochure (published in March 2011) ("**Cable Management**").
98. The Bench Trunking brochure is subtitled "*A cable management system with multiple alternatives*". It states that "*Modern buildings and refurbishment projects demand flexible solutions for the safe and unsightly distribution of power and communication in teaching and working spaces*" and goes on to talk about laboratories and workshops being common situations where a cable trunking system "*running on top or below working surfaces is the best solution for power and data installations*". It describes the product range as a "*diverse range of market specific products and proven experience in health and education projects*", and although it talks about use in "*dangerous environments*" it is clear that it is referring to use in areas where "*spillages of dangerous materials can frequently occur such as laboratories and workshops*". Photographs on and within the brochure show that it can be installed with lighting modules and the brochure states that the product can be used for, inter alia, "*housing light fittings*".
99. The Cable Management brochure states that it is a product for data trunking and data cabling. It states that it offers "*...immediate permanent cable support*

on installation for data and power cables from below...” designed “...to meet the requirements for the latest power and data cables to be introduced to the marketplace...” and that the product has “been particularly successful in schools, colleges, hospitals and medical centre installations where hundreds of thousands of metres have been installed”. There is in my judgment nothing in the brochure which states or illustrates or suggests that this product can be used with a lighting module.

100. The Defendant’s case is that all the features of Claim 1 of both Patents and Claims 5, 6 and 8 of ‘509 are present in Profila. The Claimant’s case is that integers 1(a), 1(e), 1(g) of ‘509 (and the corresponding identical integers of ‘566), Claims 5, 6 and 8 of ‘509, and additional integer 1(b) of ‘566 are missing. Although the Claimant in Mr de Froment’s skeleton and oral submissions objects to the Defendant seeking to elide two different products from two different documents into a single piece of prior art, it does not appear that this was raised at the case management conference, and both parties have addressed the documents as if they were one piece of prior art in their claims charts and in experts reports. The Claimant, in fact, agrees with the Defendant that integer 1(c) of ‘509, (“*a means for supporting a lighting module*”), is present in Profila. Nonetheless the defence of invalidity for reasons of anticipation is for the Defendant to prove, and it is not permissible to combine two documents dealing with two entirely separate products with different features and specifications for the purposes of creating one composite piece of prior art to launch an invalidity attack. As Mr de Froment submits, this is not a case where the same product is relied on, but evidenced in two or more different documents. For that reason, I will only go on to consider the Bench Trunking brochure as the Profila prior art.
101. Turning then to the issues in dispute. Integer 1(a) (“*A pathway lighting support for attachment to a side wall of a walled pathway*”). The Claimant submits that Profila is not a lighting support for a pathway. It submits that the Bench Trunking is an undershelf lighting product marketed for use in laboratories and workshops. It notes that the sole reference to lighting in the Bench Trunking

brochure is that it can “*also be installed underneath shelves or cabinets to provide high level power points or for housing light fittings*”. Mr Fisher’s opinion is that it is not suitable for outdoor use. The Defendant notes that both Patents refer to walled pathways “*in a building*” (see for example lines 7-8 of ‘509) and so to the extent that the Mr Fisher suggests that the lighting support described in the Patents is only for outdoor use, he is wrong. I accept that submission. The Defendant further submits that the device is designed to be attached to a wall, and I accept that it is shown, housing a light fitting, on a wall installation on the cover of the brochure. In my judgment it can be used as a lighting support, and can be attached to a side wall of a pathway. I am satisfied that integer 1(a) is present in Profila.

102. 1(e) – (“*wherein the roof is configured to inhibit the support from acting as a foothold*”). The Claimant has accepted integer 1(d), that Profila has “*a roof located on top of the support in normal use*”, which Mr Fisher identifies in the photographs as the shelf under which the Bench Trunking with a lighting module is installed. It could also be the top wall of the product, where it meets that shelf as installed with a lighting module – I do not know what the Claimant considers it has admitted, and its admissions depart from Mr Fisher’s opinions in many cases. In any event, the Claimant submits that there is no configuration of the roof when wall mounted as a lighting support which would inhibit it from acting as a foothold.
103. The Defendant relies on an image from page 4 of the Bench Trunking brochure showing a cross-section through the modular product into which a lighting module can be inserted. The cross-section is that of a right-angled triangle, with the lighting or other module inserted into the hypotenuse. The Defendant submits that could be installed to a wall so that it was oriented so that the sloped surface or hypotenuse was uppermost, at 45 degrees. However: (i) the PSA as I have found him to be does not have anti-climb measures in mind as part of his common general knowledge, as I have stated before; (ii) as Mr Fisher has noted, that sloped surface, which the Claimant relies on as the roof, is the surface into which the lighting module is slotted into the product, such

that the light emitted would be directed upwards rather than downwards. However, the Patent as described is for the attachment of pathway lighting units to illuminate the pathway's deck (see lines 17 to 18 of page 1 of '509). In my judgment, that would be unsuitable for illuminating a pathway's deck.

104. When this latter point was put to Mr Keay in cross-examination, he said that the PSA would readily understand that he could put the lighting in the bottom face of the Profila product. Although Mr Keay denied when it was put to him that to do so, the product would need to be completely redesigned, he accepted that the lighting module shown on the cover of the brochure could not be put in the bottom face of the product illustrated on page 4 of the brochure. This is the product relied on by the Defendant in the claims chart. He said that it did not have to be the same lighting module, and another module could readily be fixed into the bottom face. He said that would not result in a different product, just the same product with a different hole in it.
105. I was not convinced by Mr Keay's evidence on this point. The Bench Trunking product is one in which there is a wide array of housings into which can be slotted plug sockets and lighting modules, and which can be put together and mounted in different ways. That appears to be the benefit of it, as I am satisfied would be understood by the PSA. However there is no evidence in the brochure that any such housings allow for insertion of modules into the bottom face as relied on by the Defendant, and I am not satisfied that the PSA would understand, from looking at the Bench Trunking brochure, that the product could be mounted so that it had a roof configured to inhibit the support from acting as a foothold, whilst still accepting a lighting module. In my judgment that would require a complete redesign of the product. I am satisfied that integer 1(e) of '509, and for the same reasons integer 1(g) of '509, are not present in Profila.
106. In relation to additional integer 1(d) of '566, the Defendant submits that it is present based on Mr Keay's opinion reached in the same way and for the same reasons, and subject to the same flaws, as for Woolston and Ueda. I reject that

and find that integer 1(d) of '566 is not present in Profila, for the same reasons as Woolston and Ueda.

107. It follows that I am satisfied that Claim 1 of '509 and Claim 1 of '566 are novel over Profila.
108. Claim 5 of '509 – The Defendant submits that the sloped surface of the product is detachable via snap fix, as Mr Fisher accepts, and so this feature is present. The Claimant submits that this is not a roof as this relies on turning the product upside-down and saying that the lit face is a roof, which it is not. That is also my view, for the reasons I have already given. The roof which the Claimant has admitted is either the shelf under which the unit incorporating the lighting module is installed, or the side wall of the unit which abuts the shelf, and in neither case does the Defendant claim these are detachable. I find that Claim 5 of '509 is novel over Profila.
109. Similarly, in relation to Claim 6 of '509, the Defendant cannot satisfy me that the roof that the Claimant has admitted is saddled over the bracket. I find that Claim 6 of '509 is novel over Profila.
110. In relation to Claim 8, whether this integer is present in Profila really depends on what roof the Claimant has admitted. If the roof is the shelf under which the product is installed, as is Mr Fisher's opinion, then no part of the lighting module receiving bay is formed by a skirt wall depending from the roof. If it is the side wall of the product which abuts the shelf, then it may be. However, invalidity is for the Defendant to prove and the Defendant relies on a definition of roof which I have found is not made out. Accordingly, I find that Claim 8 is novel over Profila.

Conclusion on novelty

111. Claim 5 of '509 is not independently valid, for lack of novelty over Ueda.

J. OBVIOUSNESS

112. There is no dispute that the Court is required to follow the well-known structured approach to obviousness set out in *Pozzoli v BDMO SA* [2007] FSR 37 at [23], which I will not set out here in the interests of brevity. As both counsel remind me, however, there is only one question, ultimately, which is whether the invention was obvious to the PSA having regard to any matter which forms part of the state of the art at the priority date (per *Actavis v ICOS* [2019] UKSC 15 at [60]). The Defendant reminds me, citing *Brugger v Medic-Aid Ltd* [1996] RPC 635 at 656, that it is the claim that is paramount and it is important to consider the inventive concept of the claim over its full width. It also relies on *Hallen Co v Brabantia (UK) Ltd* [1989] RPC 307 at 327, upheld at [1991] RPC 195, for the principle that “*the public are entitled to manufacture that which has been published, in the sense of made available to the public, with obvious modifications*”, those being modifications which technically or practically would be obvious to the unimaginative and un inventive PSA in the art.
113. Going through *Pozzoli*, then, I have identified the notional PSA and the relevant common general knowledge of that person. I have identified the inventive concept of Claims 1, 5 and 6 of ‘509 at paragraph 43 above. I have considered the parties’ pleaded cases and submissions in relation to the inventive concept of Claim 1 of ‘566 and consider that is the integration of an anti-climb measure into a lighting support which also allows for one or more cables or pipes to run horizontally within it, and can be retrofitted without relocating existing cables or pipes and disrupting the networks they serve. I have addressed the primary differences between the prior art and the claims in relation to novelty.
114. In relation to Woolston, the Defendant submits that if I found, as I have, that the green wedge is not a roof, that in Mr Keay’s opinion the PSA would consider it obvious to integrate it with the handrail to create a single overall configuration, for example by fixing a panel over any gap between the base of the roof and the body of the luminaire. This is founded on the assertion that it was common to do so on railway infrastructure in order to cover and protect

components from the elements and from access by the public, and it follows, in my judgment, from his view of the PSA as someone who “*would have had measures to prevent climbing at the front and centre of their mind*”. That is not the PSA as I have found him to be. I have found that the PSA is a lighting support design engineer who is not familiar with railway infrastructure within his common general knowledge, and did not have within their common general knowledge either an appreciation that incorporating anti-climb measures into a lighting support was a technical problem that required solving, or any motive to solve it.

115. Mr Fisher’s opinion in his report is that the PSA would have considered an illuminated handrail of the kind in Woolston, and a lighting support of the kind disclosed in the Patents, to be entirely different, with the functionality of the handrail being an important feature in the mind of the PSA. When addressing obviousness in cross-examination, however, Mr Fisher showed, and admitted, a significant lack of understanding, in my judgment. In particular, when asked by Ms Lawrence why he did not consider that the PSA would think that the Patents were obvious over Woolston, he said “*I’m not convinced the PSA would have any drawing or any reference of what it would look like, and wouldn’t know that there was a roof*”. It required Ms Lawrence to point out to him that the PSA would have the photographs which were in issue as Prior Art in these proceedings. It may be that he was tired at the end of a long cross-examination. It has caused me to consider what he has said in his report about obviousness very carefully, but it does seem logical and credible to me and I accept it.
116. Accordingly I consider that it would require invention by the non-inventive PSA who had seen Woolston to produce a pathway lighting support containing the features of Claim 1 of ‘509, and the first part of the inventive concept of Claim 1 of ‘566 (the integration of an anti-climb measure into a lighting support) and so I am satisfied they are not obvious.
117. In relation to Claims 5, 6 and 8, although it accepts those features are absent from Woolston, the Defendant relies on Mr Keay’s opinion that a detachable

roof, saddled over a lighting support bracket and a panel which would form a lighting module receiving bay are routine modifications of a lighting support which would not require any degree of invention for a PSA who had seen Woolston to produce a pathway lighting support containing the features of those claims. I do not accept this submission either, for really the same reasons. It seems to me that these cannot be characterised as routine modifications which an unimaginative and uninventive PSA as I have defined him to be would undertake, having seen Woolston.

118. In relation to Ueda, Mr Keay's opinion, should the Court find, as I have done, that Ueda does not disclose a lighting support with a roof sloped at 45 degrees from the side wall to which it is attached, is that it would be obvious to the PSA that the invention described in Ueda envisages a roof which had an angle of inclination of 45 degrees or less. In his opinion the PSA would not consider that this particular choice of this angle of inclination was unusual for an anti-climb measure, as it was part of the common general knowledge. However, I have found that it was not part of the common general knowledge of the PSA as I have found him to be, and once again, this does not fit with my finding that the PSA did not have within their common general knowledge either an appreciation that incorporating anti-climb measures into a lighting support was a technical problem that required solving, or any motive to solve it. Accordingly I consider that for the PSA who had read Ueda to produce a lighting support with the features of Claim 1 of '509 would require an inventive step. It is not obvious.
119. I have found that Claim 5 of '509 lacks independent validity for lack of novelty over Ueda because the roof is detachable, so I will not go on to consider the Defendant's argument on inventiveness.
120. The Defendant submits that the PSA would consider it obvious to modify Ueda to saddle the roof over the bracket for the purposes of Claim 6 of '509, and to modify Ueda to add features 1(b) (elongate the support) and 1(d) of '566 (support at least one pipe or cable), but I do not agree. The Defendant has not made any submissions about why the PSA, having read Ueda, would be

motivated to do any of these things and I consider that it would require invention on his part to do so.

121. In relation to Profila, the Defendant relies on Mr Keay's opinion to submit that, if I find that Profila is not configured to inhibit a foothold because the Bench Trunking brochure does not disclose that it can be mounted on a wall in any orientation other than as illustrated, and that it is unsuitable for lighting a pathway, as I have found, the PSA would nonetheless consider it obvious that Profila could be used to illuminate a pathway. It submits that is because although not ideal, upward lighting may be necessary for reasons other than illuminating the ground, such as for aesthetic reasons. Mr Fisher's evidence is that the PSA would not make a link between the undershelf lighting of Profila and the design of a lighting support with an integrated anti-climb measure. I am with Mr Fisher. It seems to me that the 45 degree angle at which the light would come out of the roof of Profila, if installed inverted as the Defendant suggests, would be quite blinding to pathway users unless installed at a height above the pathway users' eye-line, in which case it is unlikely to need to be anti-climb. I do not consider that would be a technically or practically obvious modification for the PSA. I do not consider that an unimaginative and uninventive PSA having seen the Bench Trunking brochure showing a product used as downward undershelf lighting would consider that it could be installed in this way for this purpose, and for him to do so would require an inventive step.
122. Finally, the Defendant makes a fairly bare submission that it would not require any degree of invention for the PSA who had seen Profila to produce a pathway lighting support containing the features of Claims 5, 6 and 8. If Profila was installed as the Defendant suggests so that the roof is where the lighting module emits the light, then I am satisfied that the Profila module has a detachable roof which is saddled over the bracket, so no further inventive step is required. In respect of Claim 8, I do not understand how a portion of the lighting module receiving bay could be formed by a skirt wall depending from the roof, when the roof lighting module was inserted into the roof as

envisaged by the Defendant. Nor can I understand what would motivate the unimaginative and uninventive PSA to seek to achieve that. In my judgment this would not be a routine modification but one that would require an inventive step.

123. For those reasons, I find that none of Claims 1, 5, 6 and 8 of '509 or Claim 1 of '566, are invalid for obviousness over the prior art.

K. SUMMARY

124. Claims 1, 6 and 8 (as dependent on Claim 7 and Claim 1) of '509 are valid and Claims 1 and 6 are infringed by the Defendant as admitted.
125. Claims 1, 12 and 14 (as dependent on Claim 13 and Claim 1) of '566 are valid and Claims 12 and 14 are infringed by the Defendant as admitted.
126. Claim 5 of '509 is not valid independently of claim 1, for lack of novelty over Ueda.