



BL O/029/06

27 January 2006

PATENTS ACT 1977

BETWEEN

The British Precast Concrete Federation
Limited

Claimant

and

Coventry University

Defendant

PROCEEDINGS

Application under section 27 to amend
UK Patent No. GB 2294077

HEARING OFFICER

R J Walker

DECISION

Introduction

1 On 11 July 2002 Coventry University ("the University") filed a request for amendment of Patent No. GB 2294077 ("the patent") under section 27 of the Patents Act 1977 ("the Act"). Following advertisement of this request in the Patents and Designs Journal, the British Precast Concrete Federation Limited ("the Federation") gave notice on 10 September 2003 of its opposition to the request. A statement setting out the grounds for opposition was filed on 22 September 2003. The grounds given were:

- (i) The claims as proposed to be amended do not comply with section 14(5), nor does the amended specification meet the requirements of section 76;
- (ii) That favourable exercise of the discretion of the comptroller to allow the amendments ought to be refused;
- (iii) The subject matter of the claims as proposed to be amended is not sufficiently clearly distinguished from the matter disclosed in the

prior art of which the University is aware and thus does not cure the defect for which the amendment was sought.

In due course the University filed a counterstatement in which it denied or did not admit the above grounds.

- 2 The University filed evidence on 25 February 2004 and I will need to return to this later in this decision. Of more immediate interest is that the covering letter from the University's patent attorney, who at that time was Marks & Clerk, referred to an earlier UK patent and sought the comptroller's discretion to allow further amendment of claim 1 of the patent. In a later letter, dated 8 April 2004, Marks & Clerk confirmed that the further amendment was firm and not conditional upon an adverse finding on the originally requested amendment. Subsequently, the University filed a supplementary counterstatement with a copy of the patent marked up to show the consolidated amendments. The Federation responded by filing a supplementary statement in which the basic grounds for opposing the amendments remained as set out in its original statement. In due course, the Federation filed its evidence under cover of letters dated 15 December 2004. The evidence rounds were completed on 4 April 2005 when the University filed its final piece of evidence.
- 3 There was then a dispute between the parties over the need to cross-examine two of the Federation's witnesses. After hearing both parties on this matter at a preliminary hearing on 22 April 2005 I decided that the two witnesses should be available for cross-examination at the substantive hearing. At the preliminary hearing the patent attorney, acting for the Federation, indicated that the Federation would want to cross-examine one of the University's witnesses and counsel for the University stated that there would be no objection to this.
- 4 Shortly after the preliminary hearing both parties agreed a date for the substantive hearing. Finally, just before the substantive hearing the University's patent attorney wrote to request further amendment of the patent specification to exclude references to Figure 3.
- 5 This then was how things stood when the matter came before me at a two day hearing. Mr. Peter Colley, instructed by Marks & Clerk, appeared for the University, and Mr. Michael Tappin, instructed by Abel & Imray, appeared for the Federation.

Preliminary matter

- 6 At the hearing it was necessary for me to give a direction concerning the request made by the University to amend the patent further by excluding references to Figure 3. Mr. Tappin's position was that this amendment had been introduced too late but if I ruled that it should be considered alongside the other requested amendments, the proper course would be to re-advertise it. Mr. Tappin added that the Federation's case had proceeded on the basis of the requested amendments as they stood on 1 March 2004 and as a result the Federation had been deprived of the opportunity of addressing the package of amendments now sought. When I pressed Mr. Tappin on this point, he accepted that evidence already submitted probably dealt sufficiently with the

consequences of deleting Figure 3 but nevertheless the emphasis of this evidence might have been different. Mr. Colley on the other hand submitted that the reason for requesting deletion of Figure 3 was simply to avoid potential inconsistency with the amendments already requested. In essence it was merely a “tidying up” amendment. However, he had no objection to re-advertisement.

- 7 In the event I decided that the Federation’s position would not be prejudiced if I admitted the request to exclude references to Figure 3. The Federation had been aware of the request for approximately two weeks and Mr. Tappin had accepted that the evidence already before me probably dealt with the matter sufficiently. The hearing therefore proceeded on the basis of the full package of requested amendments, including the deletion of Figure 3. Depending on my decision I may need to consider whether further advertisement is necessary.
- 8 Mr. Tappin informed me at the outset that he had spoken to Mr. Colley to clarify the status of the request to exclude references to Figure 3. As the result of this conversation it was his understanding that the request was unconditional. In other words the University wanted to put forward the amendments as a consolidated package and it had no fall back position. Later in the hearing Mr. Colley confirmed that the offer to amend was unconditional. However, he went on to suggest that I must consider the validity of the amendments and if I consider them allowable in part, then it is for me to decide what to do about it. This is something I will need to consider if I find, for example, that the deletion of Figure 3 is not allowable but the amendments requested earlier are acceptable.

The requested amendments

- 9 The patent relates to a paving system for spillage and flood management. It is stated on page 2 of the patent specification that the term “paving system” as used therein refers to a system which is capable of supporting repeated vehicular loading.
- 10 Claim 1 of the patent, as sought to be amended, reads as follows with the amendments shown in bold:
- “1. A paving system for spillage or flood water management comprising:
a permeable layer providing an upper surface;
a supporting substrate layer thereunder which is permeable to liquid;
and a containment membrane of impermeable material containing said substrate layer for controlled retention of liquid therein;
wherein:
said permeable layer enables the drainage of spillage or floodwater therethrough into the substrate layer and the introduction of treatment material into said substrate layer;
the substrate layer is of particular material and is of a material which is non-friable and non-susceptible to frost;
the particles of the substrate layer are of irregular shape thereby to provide interstitial cavities therebetween in which draining spillage or

floodwater or introduced treatment material can dwell, and are of a size in the range 15mm to 300mm;

said permeable layer has openings of slot-like form for the drainage of spillage or floodwater therethrough into the substrate layer and for the introduction of treatment material into the substrate layer;

said permeable layer is formed by a plurality of discrete pavings having lateral abutting edge surfaces and each discrete paving is provided with at least one groove in at least one of said abutting edge surfaces, each said groove extending for the thickness of said paving thereby to form said slot-like holes;

and the system is arranged to enable biological decomposition of pollutants to occur in said substrate layer.”

The additional text incorporated in claim 1 is taken from the existing claims 18, 19, 20 and 21 and as a result the request to amend also includes a request to delete these claims. Some consequential re-ordering and re-numbering of the remaining claims is also requested.

- 11 The request also extends to amendment of the description and includes amendment of several paragraphs on page 2 line 17 to page 3 line 10. It is helpful to set out these changes here. New text is highlighted in bold and deleted text is shown using strikethrough:

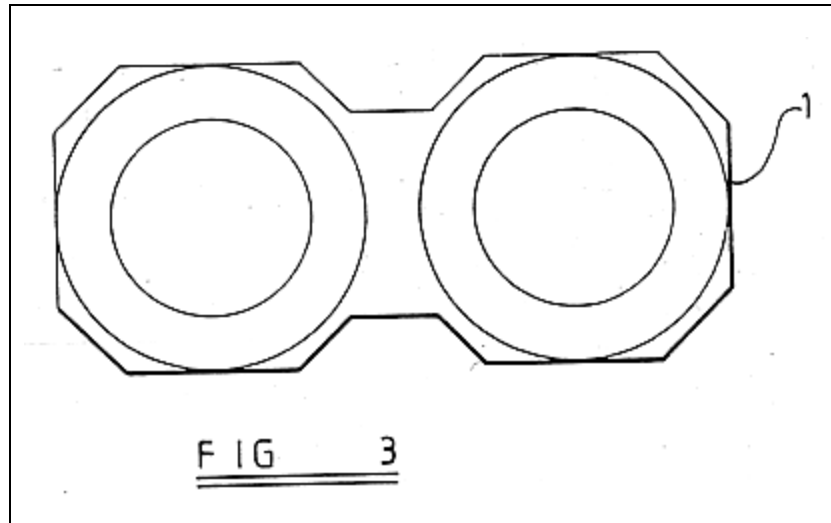
~~“The permeable layer is conveniently perforated to allow the liquid to run through into a tank or channel formed by the containment membrane layer.~~

~~The permeable layer, which forms the pavement may be a single sheet laid or cast over the whole of, or a large section of an area, in which the perforations may conveniently be simple holes. However, it is advantageous to have holes~~ **The openings of slot-like form are** of small span to stop ingress of foreign objects, but of long periphery to facilitate dispersion of the fluid underneath the pavement. Slot-like holes are therefore attractive, and these ~~can conveniently be~~ **are** provided by grooves on the outside of prefabricated pavings.

~~In a further preferred arrangement, the~~ **The** pavement may be formed by discrete pavings of such size and mass as to be convenient to handle continually without fatigue, and designed to be laid close-fitting without mortar or cement. They may be made in any material suitable for any particular application, such as brick, concrete, or cast iron, and must be of sufficient depth to ensure dispersion of the concentrated loads applied. Concurrently, they are of sufficient depth to prevent them tipping over under load, given the lateral freedom allowed by close-fitting laying. Pavings may have holes through them ~~but from many points of view it is preferable that the perforations be~~ **in addition to the** grooves in the interfaces separating adjacent pavings. Paviours find this type of pavement cheap and easy to lay, with the further advantage that pavings can easily be lifted when required.”

- 12 Finally, there is the request to delete Figure 3 and the references to it. The

patent as granted states that Figure 3 illustrates a typical discrete paving suitable for use in the paving system. The figure itself shows:



The law

- 13 The power to amend a patent specification after grant comes from section 27(1) of the Act:

“27.-(1) Subject to the following provisions of this section and to section 76 below, the comptroller may, on an application made by the proprietor of a patent, allow the specification of the patent to be amended subject to such conditions, if any, as he thinks fit.”

Section 27(5) gives a person the right to oppose an application to amend, as the Federation has done here.

- 14 Section 76(3) of the Act limits the amendment allowed:

“(3) No amendment of the specification of a patent shall be allowed under section 27(1), 73 or 75 if it –

- (a) results in the specification disclosing additional matter, or
- (b) extends the protection conferred by the patent.”

- 15 At the hearing Mr. Tappin and Mr. Colley referred me to a number of authorities which go to the discretionary nature of the power in section 27(1). Both Mr. Tappin and Mr. Colley accepted that the principles to be applied are those set out in *Smith Kline & French Laboratories Limited v. Evans Medical Limited* [1989] F.S.R. 561 at page 569:

“The discretion as to whether or not to allow the amendment is a wide one and the cases illustrate some principles which are applicable to the present case. First, the onus to establish that amendment should be allowed is

upon the patentee and full disclosure must be made of all relevant matters. If there is a failure to disclose all relevant matters, amendment will be refused. Secondly, amendment will be allowed provided the amendments are permitted under the Act and no circumstances arise which would lead the court to refuse the amendment. Thirdly, it is in the public interest that amendment is sought promptly. Thus, in cases where a patentee delays for an unreasonable period before seeking amendment, it will not be allowed unless the patentee shows reasonable grounds for his delay. Such includes cases where a patentee believed that amendment was not necessary and had reasonable grounds for that belief. Fourthly, a patentee who seeks to obtain an unfair advantage from a patent, which he knows or should have known should be amended, will not be allowed to amend. Such a case is where a patentee threatens an infringer with his unamended patent after he knows or should have known of the need to amend. Fifthly, the court is concerned with the conduct of the patentee and not with the merit of the invention”.

- 16 Although *Smith Kline & French* was decided under the Patents Act 1949, the existence of the discretion and the continuing applicability of these principles were confirmed by the Court of Appeal in *Kimberly-Clark Worldwide Inc. v. Proctor & Gamble Ltd* [2000] R.P.C. 422 at page 435. Moreover, whilst this later judgment related to an application to amend under section 75 of the Act, neither Mr. Tappin nor Mr. Colley suggested to me that the same considerations should not apply to amendment under section 27. Indeed, it is clear to me that they do.

Full disclosure of all relevant matters

- 17 The need for disclosure of all facts and matters relevant to the exercise of discretion was emphasised by the Court of Appeal in *Oxford Gene Technology Ltd v. Affymetrix Inc. (No. 2)* [2001] R.P.C. 18. Mr. Tappin directed my attention to paragraphs 19 and 20 of this authority. I do not need to reproduce these paragraphs here but as Mr. Tappin explained they emphasise that the obligation of good faith requires the patentee to put forward the correct reasons for the amendment and if there are facts relevant to the exercise of discretion for those reasons, then those facts need to be put before the court.
- 18 Mr. Tappin then took me to paragraphs 51 to 53 of the judgment of Brooke L.J. in *Oxford Gene Technology* for an example of where discretion had been refused. The example was actually a reference to *Hsiung's Patent* [1992] R.P.C. 497 in which Aldous J. concluded that he had been left completely in the dark as to whether there had been culpable delay over a number of years. In the circumstances Aldous J. took the view that he was unable to exercise his discretion to allow the requested amendments.
- 19 Another case, relied on by Mr. Tappin, was a decision of Mr. Bridges, Divisional Director acting for the comptroller, in *Kaiser's Application* (O/279/00). Mr. Tappin submitted that Mr. Bridges was correct when he stated at paragraph 26 of his decision:

“26., the requirement to make full disclosure of all relevant

matters is one which to some extent overarches the other principles set out in *Smith Kline & French* because the comptroller must first be in possession of all the relevant facts before coming to an informed decision on questions such as whether there has been an unjustified delay and whether the patentee has sought to gain unfair advantage from the patent. To this end, the patentee is under an obligation of utmost good faith to make the whole story known. This includes information which is already in the possession of the other party to the proceedings, because it is not good enough for an applicant to support an amendment by mere argument, even if the other side should agree to it. It is for the comptroller to decide what is relevant and it is clearly in the patentee's interest to err on the side of caution in deciding what to disclose."

In this case Mr. Bridges went on to find that the applicant had failed to disclose relevant matter in connection with the assertion of the patent against another party and therefore did not fulfil the conditions necessary in order for discretion to be exercised. Mr. Tappin stressed that the hearing officer refused the amendment on the basis of non-disclosure, even though the particular incident itself was not culpable because the applicant did not know at the time that the patent needed amending.

- 20 Commenting on Mr Bridges' decision in *Kaiser's Application*, Mr Colley noted that this decision predated *Oxford Gene Technology* and he described the hearing officer as being a little too gung ho. In his opinion the hearing officer had been wrong to impose an absolute test of full disclosure of all relevant matters because the only way in practice this could be achieved would be to provide everything so that the comptroller could then decide what is relevant. I accept that *Oxford Gene Technology* does not require a patentee to trawl through all his documents to look for something that might conceivably be relevant. However, in my view, the hearing officer had a valid point in *Kaiser's Application* when he observed that the patentee is under an obligation of utmost good faith to make the whole story known. In particular, I cannot find fault with Mr. Bridges' statement in paragraph 39 of his decision:

"39. I would say that in the light of *Smith Kline & French*, it is difficult to escape the conclusion that any instance involving assertion of a patent is relevant to the question of whether discretion may be exercised, because there is always the possibility of raising a question over what the patentee ought to have known."

The amendments are permitted under the Act

- 21 Section 76(3)(a) requires that the amendment should not be allowed if it results in the specification disclosing additional matter. Mr. Tappin referred me to *Bonzel (T.) and Anr. v. Intervention Limited and Anr. (No.3)* [1991] R.P.C. 553 at page 574, which sets out the test for deciding if matter has been added:

"The task of the court is threefold:

- (1) To ascertain through the eyes of the skilled addressee what is disclosed, both explicitly and implicitly in the application.

(2) To do the same in respect of the patent as granted.

(3) To compare the two disclosures and decide whether any subject matter relevant to the invention has been added whether by deletion or addition. The comparison is strict in the sense that subject matter will be added unless such matter is clearly and unambiguously disclosed in the application either explicitly or implicitly.”

Although *Bonzel* related to matter disclosed in a specification of a patent extending beyond that in the application as filed, Mr. Tappin took the view, with which I agree, that it applies equally when one is comparing a patent as proposed to be amended with the patent as granted. I also accept that this is the test I must apply when considering whether any of the amendments proposed by the University results in the specification disclosing additional matter.

22 Mr. Colley suggested that I would gain assistance when construing the patent as granted and as it is sought to be amended from certain propositions established by Staughton L.J. in *Glaverbel SA v. British Coal Corp. and Another* [1995] R.P.C. 255 at pages 268 and 269:

“The propositions which were common ground or are in my opinion well founded are these:

- (1) The interpretation of a patent, as of any other written document, is a question of law. That does not mean that the answer to it will necessarily be found in our law books. It means that it is for the judge rather than a jury to decide, and that evidence of what the patent means is not admissible. In particular, evidence of the patentee as to what he intended to mean should not be admitted, nor indirect evidence which is said to point to his intention. Compare the rule that the parties to a deed or contract cannot give evidence of what they intend it to mean. A patent is construed objectively, through the eyes of a skilled addressee.
- (2) The court may, and indeed should, have regard to the surrounding circumstances as they existed at the date of the publication of the specification (or perhaps the priority date). Those circumstances, sometimes described as “the matrix” in a commercial context, would include common general knowledge. I imagine that they would not include circumstances known only to the patentee or a limited class of persons, since every skilled addressee should be able to know what the patent means and therefore have equal access to material available for interpretation.
- (3) The court should admit evidence of the meaning of technical terms. It may be that expert evidence can go somewhat further than that in aid of interpretation; but I need not decide that in the present case.
- (4) The whole document must be read together, the body of the specification with the claims. But if a claim is expressed in clear language, the monopoly sought by the patentee cannot be extended or

cut down by reference to the rest of the specification.”

23 In so far as one of the Federation’s allegations is that the deletion of Figure 3 is contrary to section 76 of the Act, Mr. Tappin saw a parallel with a situation which arose in *Merck & Co Inc’s Patents* [2004] F.S.R. 16 before the Court of Appeal. In this case the patentee had applied to delete paragraphs in the description which specified tablets containing different amounts of active ingredient for administration in accordance with methods of the invention. The Vice-Chancellor (Sir Andrew Morritt) found, with the agreement of Buxton and Laws L.JJ., that an objection taken under section 76(3)(a) was well founded. In doing so he noted at paragraph 46:

“46 Counsel for the respondents submitted that the proposed amendment disclosed additional matter. The additional matter relied on would be the further teaching of the importance of the quantity of the single dose. Instead of any number of pills aggregating a dose of about 70mg it would teach that a single pill comprising 70mg of alendronate was essential. This was disputed by counsel for the patentee. He contended that the proposed amendment would not add matter at all. By contrast it would restrict the ambit of claim 1.”

The Vice-Chancellor continued:

“47 In my view it is necessary to approach this question on the assumption that the amendment, if made, will affect the interpretation of claim 1. But in that event it will be seen that the deletion of the three paragraphs in question adds to the teaching of the patent by pointing out the importance, as claimed, of a single pill or other administration comprising 70mg or thereabouts of alendronate. It is true that such an addition will have the effect of restricting the ambit of claim 1. The decision of *Aldous J. in Bonzel v Intervention Ltd (No. 3)* [1991] R.P.C. 553, 574 shows that what is material is the addition of any subject matter relevant to the claimed invention and that such addition may be accomplished by either addition to or deletion from the specification.

48 On that basis in my view the objection taken under s.76(3)(a) is well founded. If the question is, as counsel for the patentee submitted, whether the proposed amendment would widen or restrict the scope of the claim then it would not be precluded by the subsection. But that is not the question. The right question is whether the proposed amendment would result in the specification disclosing additional matter. The basis on which I am considering this issue, namely that the amendment will alter the scope of claim 1, indicates that the answer must be in the affirmative. It adds to the teaching of the patent the requirement for a single pill or other administration vehicle comprising 70mg of alendronate. The fact that it does so by deletion is neither here nor there.”

Unreasonable delay

24 Mr. Tappin then moved on to consider the third principle identified by Aldous J. in *Smith Kline & French*, namely that the amendment should be sought

promptly and that where there has been an unreasonable delay, the amendment will not be allowed unless the patentee shows reasonable grounds for the delay.

- 25 Addressing me on how long is needed to formulate an amendment and to begin proceedings once a decision has been taken to amend, Mr. Tappin referred me to *Instance v. CCL Label Inc.* [2002] F.S.R. 27 in which at paragraph 33 Pumfrey J. states:

“33 No coherent reason was advanced in the evidence or elsewhere for the delay in stating these proceedings to amend, or for the generous period of time which was taken up in formulating the amendment. My view is that after counsel’s advice was received a period of two months would have been more than adequate to formulate an amendment. This application could have been made in October 1999, not in December 2000.”

- 26 However, Mr. Colley urged me to bear in mind what Graham J. said in *Matbro Limited v. Michigan (Great Britain) Limited and Another* [1973] R.P.C. 823 at pages 833 and 834:

“The case of *Bristol Myers Co. v. Manon Freres Ltd.* was cited to me in support of the argument that mere delay is not, in itself, sufficient to justify refusal of the exercise of discretion, and I was referred to the decision of Mr. Justice Whitford on this point where he sets out the principles on which he was acting and referred to *Van der Lely v. Bamfords Ltd.* 1964 Reports of Patent Cases, page 55. I think these cases do support what I have said above in regard to delay and detriment and also draw a clear distinction between instances where a patentee knows of prior art which he genuinely, and quite properly in the circumstances, thinks is irrelevant, and other instances where, though he learns of or has been warned of objections which are available against his patent as the result of prior art, yet he takes no steps to put his specification right by way of amendment, or worse still, knowingly persists in retaining it in the unamended and suspect form. In the latter cases delay is culpable because potential defendants and the general public are entitled to plan their activities on the assumption that the patentee, though warned, has decided not to amend. If the patentee, by his conduct, lulls the public into a false sense of security he cannot thereafter be allowed to change his mind and ask for amendment, or at any rate without adequate protection being granted to the public.”

- 27 On the need to explain any unreasonable delay in seeking an amendment, Mr. Tappin took me once again to *Merck*. The application to amend the specification by deleting three paragraphs from the description was made fifteen days before the start of the hearing of the appeal. In his judgment the Vice-Chancellor stated at paragraph 49:

“49 In addition I consider that the application should be refused as a matter of discretion under s.75 Patents Act 1977. The amendment now sought goes well beyond that allowed by Jacob J. at the trial. It was

made two weeks before the hearing of this appeal. No explanation has been forthcoming as to why it was not sought at the time of the application for the first amendment nor why the application is made now, nearly nine months after the judgment of Jacob J.”

Obtaining an unfair advantage

- 28 The fourth principle established by *Smith Kline & French* is that a patentee who seeks to obtain an unfair advantage from a patent, which he knows or should have known should be amended, will not be allowed to amend. On this point neither Mr. Tappin nor Mr. Colley directed me to any other authorities.

Nature of the amendment

- 29 Mr. Tappin acknowledged that a higher standard applies before discretion should be exercised against a patentee when the amendment requested is a “deleting” amendment, as opposed to a “validating” amendment, in line with Aldous J.’s statement in *Chiron Corporation v Organon Teknika Ltd (No.7)* [1994] F.S.R. 458 at page 460:

“When exercising the discretion on amendment attention must be paid to the nature of the amendments sought, as there is a material difference between deletion of claims and validation by reformulation. The courts have been more ready to allow amendment in the former case than in the latter.”

- 30 Mr. Tappin referred to two further authorities which make it clear that a higher standard applies in the case of a deletion amendment. The first of these was *Mabuchi Motor K.K.’s Patents* [1996] R.P.C. 387 in which Jacob J. considered an amendment which was effectively no more than deletion of claims. At page 398 he concluded (Mr. Tappin’s emphasis):

“I must here, therefore, look to see whether there are **very compelling reasons** for refusal of the amendment. I must consider all the facts, including both the patentees’ conduct in obtaining the claims in the first place and their conduct thereafter. I must consider also the effect or potential effect on the public at large.”

The second authority was the *Instance* case in which Pumfrey J. observed at paragraph 2 that (Mr. Tappin’s emphasis):

“2 Unless there is a **very good reason** indeed, an amendment consisting only of the deletion of invalid claims will be allowed.”

- 31 Mr. Tappin continued by referring at some length to the judgment of Neuberger J. in *Kirin-Amgen Inc.’s Patent* [2002] R.P.C. 43. He acknowledged that it is sometimes said that this case shows that there is no discretion at all in the case of a deleting amendment. The issue for Neuberger J. here was whether there is discretion to refuse deletion of invalid claims in a partially valid patent. When addressing this matter Neuberger J. began by considering the issue as if it were free of authority. This led him to observe in paragraph 49 of the judgment:

“49 It does not therefore seem to me to be difficult to conclude that, where only some the claims of a patent have been held to be invalid under section 72(1), then, in the light of section 63(1) and Article 138(2) [EPC], the court should, at least in the absence of the most exceptional circumstances, grant a deleting amendment, and thus uphold the patent as amended.”

32 Neuberger J. continued by considering the effect of the authorities. One of these authorities was *Kimberley-Clark Worldwide* and Mr. Tappin drew my attention to Neuberger J.’s comments at paragraph 63:

“63 There is no doubt in my mind that, so far as validating amendments are concerned, the reasoning and decision in *Kimberley-Clark* [2000] R.P.C. 422 establishes that the 1977 Act gives the court a genuine discretion whether or not to grant such amendments, and its effect is that, if it refuses to do so, then the court should revoke the patent. It also appears to me that there is force in the point that the reasoning of Aldous L. J. in *Kimberley Clark* [2000] R.P.C. 422 is to the effect that the existence of the discretion whether or not to grant permission to amend, and the general approach to such discretion, applies equally to deleting amendments. However, any observations that the Court of Appeal in a case relating to validating amendments, even from a source as authoritative as Aldous L.J., have to be read in the context of the particular case. In addition, one must of course distinguish between those parts of his reasoning which are plainly *ratio decidendi* and those which are strictly *obiter*. If, as I believe to be the case, there are good grounds, in the light of principle, authority (going back to *Van der Lely* in 1964), statute (section 63), and Treaty obligations (the EPC), to distinguish between validating amendments and deleting amendments, then it seems to me that a decision and reasoning of the Court of Appeal in relation to a case involving validating amendments can properly be treated, where appropriate, as strictly *obiter* so far as deleting amendments are concerned. I express that view in a qualified way, because, in so far as the reasoning in the Court of Appeal in relation to validating amendments clearly applies equally to deleting amendments, it would not be right for me to depart from it. However, in my judgment, there is nothing in the reasoning in *Kimberley Clark* [2000] R.P.C. 422 which requires me to depart from the conclusion I have reached on the basis of the statutory and EPC material and the earlier cases. I reach that conclusion not only on the basis of consideration of the judgment in *Kimberley Clark* [2000] R.P.C. 422 itself, but also, indeed more, on the basis of subsequent authority.”

Mr. Tappin submitted that it is clear that Neuberger J. felt able to depart from *Kimberley-Clark* because of section 63 of the Act and his view of Article 138 of the European Patent Convention (“EPC”). Thus, in Mr. Tappin’s opinion, Neuberger J.’s departure from *Kimberley-Clark* must be limited strictly to the case before him of a partially valid patent where one is then applying to delete the parts which have been found to be invalid, leaving the parts found valid. In other words, in so far as Neuberger J.’s reasoning departs from *Kimberley-Clark*, it can only depart in the narrow circumstances where section 63 and

Article 138 have the force they do.

- 33 Neuberger J. continued by considering the Court of Appeal judgment in *Oxford Gene Technology* and Mr. Tappin urged me to consider paragraphs 64 to 66 of Neuberger J.'s judgment where, in Mr. Tappin's view, there is further support for distinguishing amendments, which are designed to validate an invalid patent, from amendments which serve to limit the patent to a part which is valid. Crucial in Neuberger J.'s view was the statement of Aldous L.J. in *Oxford Gene Technology* :

"We did not hear argument on the amendments sought by OGT, but on their face they appear to be of the kind designed to validate an invalid patent rather than to limit the patent to a part which is valid. Thus it would seem that the court would have to exercise its discretion under section 75 when considering the amendments. If the amendments had been of the kind which reflected the fact that one claim was valid, then section 63 could apply provided that the claim was infringed. In those circumstances the word 'may' in section 63 might be construed in a permissive sense to give effect to the word 'shall' in Article 138(2)."

- 34 Ultimately, at paragraph 67 of his judgment Neuberger J. concluded that where an amendment is solely a deleting amendment, it should, save (possibly) in an exceptional case, be granted. In summary he based this conclusion on his view that it was (a) consistent with the United Kingdom's Treaty obligations under Article 138(2) EPC, (b) consistent with the natural meaning and effect of section 63(1) of the Act, (c) not inconsistent with the provisions of section 72 and 75 of the Act, (d) consistent with the well accepted distinction between deleting and validating amendments which goes back to *Van der Lely* [1964] R.P.C. 54, (e) logically and commercially sensible in the light of the law as laid down in *Gerber* [1994] F.S.R. 471 and [1995] F.S.R 492, and (f) open to him in the light of *Oxford Gene Technology* [2001] R.P.C. 310.
- 35 Mr. Colley did not address me at any length on *Kirin Amgen*. In his view the difficulty with this judgment was that it looks to be an isolated decision, both on the facts and on what those facts led to in the law. Thus, there was a limit to the extent that either party could discern anything from it.
- 36 I am inclined to agree with Mr. Colley and Mr. Tappin that Neuberger J.'s judgment was based on the specific circumstances of the case before him and that his conclusion does not appear to apply to all cases where the amendment sought is a deletion amendment. Nevertheless, in the light of *Instance* and *Mabuchi Motor*, it is clear to me that before deciding to refuse a deletion amendment I would need a very good or compelling reason to do so.

The evidence and witnesses

- 37 The evidence, filed on behalf of the University, comprises witness statements by Professor Christopher John Pratt, Mr. Brian More, Dr. John Gledhill, Ms. Katherine Robinson and Mr. Arnold Vincent Hallam. I should perhaps add that Mr. Hallam provided two witness statements. The evidence, filed on behalf of

the Federation, comprises witness statements by Messrs. Christopher Douglas Hodson, Stephen Robert Wharton, Ian D Cook, John Howe and Julian Eason Bardo. Professor Pratt and Messrs. Hodson and Wharton were also cross-examined at the hearing before me.

- 38 Professor Pratt is Dean of School, Science and the Environment, Coventry University. He is also the named inventor of the patent and the author of certain documents referred to in association with the request to amend. Under cross-examination Professor Pratt seemed nervous but he answered the questions put to him in a straightforward manner and as helpfully as he could. I am therefore content to take his evidence at face value. It became apparent during cross-examination that Professor Pratt's hearing was slightly impaired but I am satisfied that this had no impact on the evidence he gave.
- 39 Mr. More is Intellectual Property Rights Manager at Coventry University Enterprises Ltd. His very short witness statement merely sets out his view of the intention behind a letter, dated 14 July 2003, he sent on behalf of Coventry University Enterprises. This letter and Mr. More's evidence, which are also addressed in the witness statement provided by Mr. Howe, were not specifically referred to by either side at the hearing before me. Nevertheless, I have considered them and conclude that they do not add significantly to the other matters I rely on in this decision.
- 40 Dr Gledhill was appointed University Secretary at Coventry University on 1 October 2001 and his witness statement deals with events that led to the request to amend the patent. His evidence is based in part on his own knowledge and in part on the records of the University.
- 41 Ms Robinson is a Director of Formpave Limited ("Formpave"), a sub-licensee under the patent of Coventry University Enterprises Limited which in turn is the licensee of the University. Ms Robinson's evidence concerns the inventiveness of the paving system of the patent, particularly the shape and size of openings in the permeable layer of the paving system. In so far as Ms Robinson relies on, for example, documents, which are either undated or dated February 2003, I do not find her evidence of any particular help. Moreover, at the hearing before me neither party sought to rely on this evidence. Thus, as with Mr. More's evidence, I do not believe it is necessary to consider Ms Robinson's evidence further in this decision.
- 42 Mr. Hallam, who is a Patent Attorney and a partner of the firm Marks & Clerk, is the patent attorney acting for the University in the present proceedings. In his witness statement he confirms Dr Gledhill's evidence as it relates to correspondence with and the actions and advice of Marks & Clerk. Mr. Hallam's evidence also addresses the prosecution in other countries of patent applications which correspond to the patent. Again nothing was made of Mr. Hallam's evidence at the hearing before me and after considering it I find that it does not help significantly with the decision I must make.
- 43 Mr. Hodson is a Chartered Architect and has a degree in Architecture from Cambridge University. In his witness statement he explains that his father was involved in the commercial use of concrete paving blocks in the 1970s and that

he assisted his father's company, BDC Concrete Products Limited, while he was at Cambridge University and thereafter. In 1983 Mr. Hodson set up a consultancy firm, Hodsons Limited, and since then a significant proportion of his work has been concerned with concrete block paving. During the course of his career he has designed two paving blocks. He has also acted as a consultant to the RMC Group, which acquired BDC Concrete Products Limited, and to Interpave which is a Product Association of the Federation. At the hearing Mr. Hodson told me that he first became involved with concrete block permeable paving around 1995 and that he presented his first paper on permeable block paving at a conference in 1998/1999.

- 44 Before Mr. Hodson was cross-examined by Mr. Colley and in response to questions from Mr. Tappin, he confirmed that he had been provided with the Practice Direction supplementing Part 35 of the Civil Procedure Rules 1998 and relating to the duty of expert witnesses. Mr. Hodson went on to confirm that when preparing his evidence his approach had been to provide objective and unbiased opinion on matters within his expertise. When cross-examined by Mr. Colley, Mr. Hodson admitted that he had prepared his witness statement before seeing Part 35 of the CPR but that he was aware nonetheless of the duties of an expert because they had been explained to him by lawyers acting for him on another case. Despite these explanations Mr. Colley took great exception to what he described as "the sudden and completely unexpected promotion of Mr. Hodson to a fully fledged Part 35 expert". He therefore urged that I should "not accept this miraculous promotion and not to treat him as an expert". Mr. Colley also requested a direction from me that the instructions given to Mr. Hodson should be provided.
- 45 There can be no dispute in my view that Mr. Hodson's witness statement did not comply with the formal requirements of the relevant Practice Direction on the form and content of experts' reports. Nevertheless, I was surprised to hear Mr. Colley object to Mr. Hodson's sudden and unexpected promotion to an expert witness in view of an exchange I had with him at the preliminary hearing on 22 April 2005. At that time I questioned the nature of Mr. Hodson's evidence and Mr. Colley accepted my view that his witness statement appeared to be of the nature of expert evidence, although not formally presented as such. Mr. Colley also accepted at the hearing in April that this was not a great problem and it could be resolved later, possibly at the substantive hearing, if necessary. When I reminded Mr. Colley of this exchange, it was apparent that he had misunderstood the point I had made at the earlier hearing but nevertheless he withdrew his Part 35 point. Moreover, having heard Mr. Colley's submissions and those of Mr. Tappin I decided against directing that any instructions given to Mr. Hodson should be provided.
- 46 Although Mr. Colley withdrew his Part 35 point, he maintained that Mr. Hodson was not a careful witness. The impression I formed of Mr. Hodson during his cross-examination did not support this view. It seemed to me that Mr. Hodson was careful and tried to be helpful when answering the questions put to him. In the light of this attack on the usefulness of Mr. Hodson's evidence I have reviewed the transcript and this has confirmed my initial view. Mr. Colley also suggested that Mr. Hodson was pedalling a line and could not be regarded as an expert in the relevant field. I am satisfied that Mr. Hodson's evidence

reflects his own opinions but I believe that I should be cautious about the weight I give to them. My caution stems in part from the date Mr. Hodson first became involved in permeable block paving and in part from his uncertain responses to questions about what the recommended practice was in 1994 for laying rectangular paving blocks in areas subject to vehicular traffic. Moreover, when re-examined by Mr. Tappin, Mr. Hodson admitted that his expertise did not extend to designing complete pavements, such as the paving system of the patent, which require a particular sub-base structure. In this latter respect Mr. Hodson does not conform to my view of a skilled addressee in this case, that is someone with knowledge of the design of permeable paving systems.

- 47 Mr. Wharton is a civil engineer. After obtaining a HNC in Civil Engineering, he worked for 10 years for local authorities in Nottinghamshire and Derbyshire. In the early 1980s he did a lot of pedestrianisation schemes using concrete block paving. In 1985 he joined a company, called at that time Charcon ECC (Quarries) Limited, as a Technical Services Engineer working for someone he considered to be one of the top two or three people in the country working on concrete block paving. After his first year with this company he went out on the road selling products to architects and engineers. He left the company in 1987. After various roles in the building industry he joined the RMC Group on 1 February 2001. Since the summer 2002 he has been Technical Manager of RMC Concrete Products (UK) Limited ("RMC Concrete Products"). During cross-examination it became very clear that Mr. Wharton has extensive knowledge of the practical aspects of paving using blocks. Moreover, in my view he answered the questions put to him as helpfully and completely as was possible. I should also record here that Mr. Wharton was not present during the cross-examination of Mr. Hodson and therefore his evidence under cross-examination was given without knowledge of the answers Mr. Hodson gave during his own cross-examination.
- 48 Mr. Cook is the Group Technical Manager of Blockleys Brick Limited and his short witness statement concerns an exchange of correspondence between a patent attorney acting for his company and Formpave. I refer to this later in this decision.
- 49 Mr. Howe is the Development Director of Interpave and as such his main role is to develop and co-ordinate initiatives to expand the market for members of Interpave. His witness statement addresses why he thought that a letter, which is also the subject of Mr. More's evidence, was about infringement of the patent. However, as I have already concluded in relation to Mr. More's witness statement, I do not believe Mr. Howe's evidence adds significantly to the other evidence before me. Therefore I do not propose to consider it further.
- 50 Finally, Mr. Bardo is a partner of Abel & Imray and his involvement stems from a request to represent RMC Concrete Products in respect of what they considered to be an allegation of infringement of the patent. His witness statement deals with this matter and various publications central to the present proceedings.

The issues

51 I have already referred to the grounds on which the opposition to the requested amendment was launched. At the hearing before me Mr. Tappin presented the Federation's case under four main headings which were:

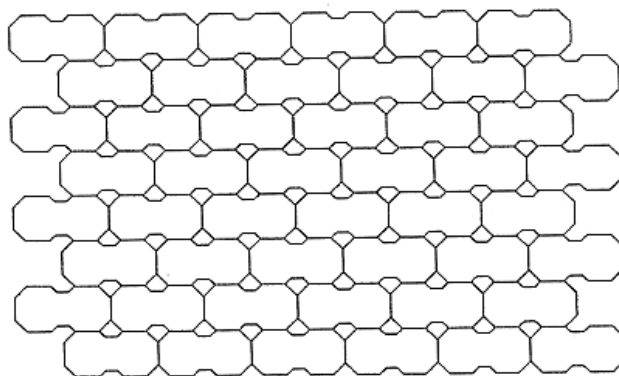
- (a) the deletion of Figure 3 is either ineffective or contrary to section 76(3)(a) of the Act;
- (b) the proposed amendments do not cure the defect;
- (c) the proposed amendments create a lack of clarity;
- (d) discretion to amend should not be allowed due to the conduct of the patentee.

Is the deletion of Figure 3 contrary to section 76(3)(a)?

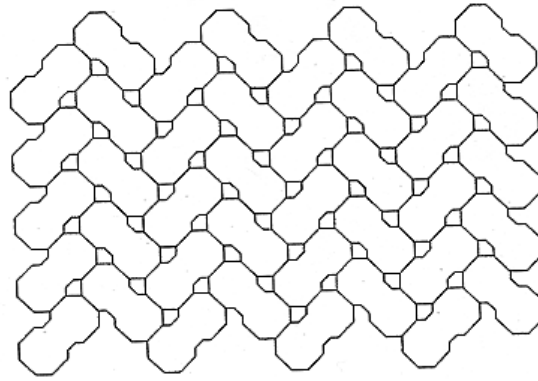
52 I will start by considering whether the deletion of Figure 3 results in the specification disclosing additional matter.

53 Describing the paving illustrated in Figure 3, Mr. Tappin related the grooves shown in its sides to the grooves on the outside of prefabricated pavings described in the specification of the patent as granted. He went on to submit that the skilled person could easily visualise that holes would be formed when such pavings were put together. My ability to visualise this was aided by drawings, provided by Mr. Tappin, of how the pavings would appear when laid in so-called parquet, herringbone and stretcher bond laying patterns. It is helpful to reproduce these drawings here.

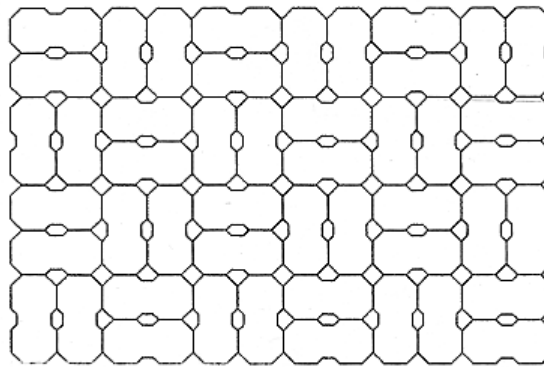
Stretcher Bond



Herringbone



Parquet



These drawings show that pentagonal holes are formed when the paving, illustrated in Figure 3, is laid in herringbone or stretcher bond and that a mixture of pentagonal, hexagonal and square holes is formed when it is laid in a parquet pattern. Thus, according to Mr. Tappin the pavings, as illustrated in Figure 3, can be laid to provide a permeable surface in which slot-like holes are formed by the grooves on the outside of the pavings, once again as described in the patent specification as granted.

54 Mr. Tappin then turned to comments made by the University in paragraph 4 of its counterstatement, which he took as confirming his view (my emphasis):

“There is no suggestion in the specification that the paving block shown in Fig 3, must necessarily be used solely in conjunction with further paving blocks of this shape to form the upper permeable layer. Nevertheless **it is contended that the grooves shown in the block illustrated in Figure 3 are capable of forming slot-like openings** and thus the claim as amended is both clear and supported by the description **In particular it is contended that all the examples [pentagonal and hexagonal] given by the Opponent of the shapes of slots formed by the groove in the side wall of the block of Figure 3 are “like” slots and thus slot-like.** With reference to the square openings formed by beveled corners of adjacent blocks, it is admitted that these are not “slot-like”. The interpretation by the Opponent that a number of identical pavings,, are to be laid either in a herringbone pattern or side by side, is not disclosed in the specification and claims and is irrelevant to the interpretation of the term “openings of

slot-like form". In any event, **it is possible for paving of this shape to be used side-by-side, so that "openings of slot-like form" would be provided.**"

- 55 He took further support for his view from a statement made by Professor Pratt in paragraph 3 of his witness statement (again my emphasis):

"I have no difficulty in understanding what "slot-like" means in relation to the holes. To my mind, it simply means that the holes are long and narrow, **The block of figure 3** of the patent is only one example of the type of block which can be used in the patented paving system and **it can be used in conjunction with other blocks of the same shape or blocks of differing shapes in order to provide the slot-like holes.** In any event, **it is obvious that laying paving blocks such as the block shown in figure 3 could result in a mixture of different shaped holes, including slot-like holes.**"

- 56 Mr. Tappin concluded on this point by observing that the University is caught in a cleft stick. Either the deletion of Figure 3 does not have an effect on how the expression "slot-like" should be construed, in which case, firstly, there is no point in making the amendment and, secondly, even if deleted all the Federation's other objections remain because one might as well treat the figure as if it were still there, or it does have a bearing on the meaning of "slot-like", in which case the teaching has changed. Mr. Tappin extended this reasoning to the omnibus claim which is claim 33 of the patent as granted and claim 28 as the University wishes to amend it. This omnibus claim is in the standard form and claims a paving system by reference to the description and drawings. Mr. Tappin took the view that the proposed deletion of Figure 3 would also have the effect of changing the scope and disclosure of the omnibus claim.

- 57 For his part Mr. Colley relied on a statement made by Mr. Hallam in his second witness statement to explain why the University is requesting deletion of Figure 3 on the grounds that it is merely a tidying up amendment. In paragraph 7 of this witness statement Mr. Hallam states (once again my emphasis):

"Figure 3 of the patent in suit is described in the patent specification as a "typical discrete paving suitable for use in this paving system" i.e. for use in the paving system as originally claimed. However, it is accepted that the amendment of claim 1 to define more clearly the openings formed in the surface would now exclude openings formed by adjacent blocks of Figure 3. **The openings formed by adjacent blocks as shown in Figure 3 of the patent in suit would be hexagonal and not as defined in the amended claim 1.**"

- 58 Mr. Colley continued by stressing that the deletion of Figure 3 does not create a situation where the whole emphasis of the disclosure is changed or something new is taught. This was because the patent as granted did not confine its teaching to a particular block or paving. Thus, in his view the request to delete Figure 3 differs from the situation that arose in *Merck*.

Assessment on added matter

- 59 Claim 1, as it is proposed to amend it, requires that the permeable layer of the paving system is formed by a plurality of discrete pavings having lateral abutting edge surfaces, wherein each discrete paving is provided with at least one groove in at least one of said abutting edge surfaces, each said groove extending for the thickness of the paving so as to form slot-like holes. If I conclude that the discrete paving shown in Figure 3 lacks these features, which are found in the patent specification as granted, then I must accept Mr. Colley's submission that deletion of Figure 3 is a "tidying up" amendment. On the other hand, if there is no inconsistency between Figure 3 and the claimed paving system, I will need to consider whether deletion of the figure adds subject matter or whether it makes no difference to the way I construe the amended claim.
- 60 The University's original position was that the hexagonal holes, which would be formed when discrete pavings shown in Figure 3 are laid with their long sides abutting, are slot-like. This was also the view of Professor Pratt, which was unchallenged. However, later the University's patent attorney, Mr. Hallam, stated that the hexagonal openings are not as required by the amended claim 1. There has therefore been a range of views on this matter over time.
- 61 As established in *Glaverbel* when interpreting a patent, in this case the expression "slot-like", evidence of what the patentee intended should not be admitted. Moreover, although Mr. Colley questioned Mr. Hodson about the meaning of this expression, I do not believe Mr. Colley was suggesting that it has any special technical meaning in the field of paving. Indeed I am satisfied that this is not something which requires expert evidence to construe and that it is for me to decide what "slot-like" means, objectively and through the eyes of a skilled addressee having knowledge of permeable paving design.
- 62 During the cross-examination of Mr. Hodson, Mr. Colley observed that it is sometimes said that it is quite hard to define an elephant but you know one when you see one. I think the expression "slot-like" tends to fall into the same category. In trying to construe what "slot-like" means the patent specification, both as granted and as it is sought to be amended, comes to my aid in that in the last paragraph on page 2 slot-like holes or openings are described as having a small span and a long periphery. Moreover, the patent specification indicates that the dimensions of the slot-like openings should be such as to stop ingress of foreign objects whilst facilitating dispersion of the fluid underneath the pavement. Thus, I believe the skilled addressee would visualise an opening which is longer than it is wide. I also believe that the skilled addressee would not regard slot-like as being limited to an elongate, rectangular shape, such as normally found in a letter or a money box. With this in mind I do not consider the square and pentagonal shapes, formed by laying discrete pavings of Figure 3 in herringbone, stretcher bond or parquet patterns, to be slot-like. However, in my view the skilled addressee would recognise that the hexagonal openings, formed when laying the pavings of Figure 3 in a parquet pattern, are longer than they are wide and so are slot-like. Furthermore, there is no evidence to indicate that the dimensions of these hexagonal openings would not satisfy the dual functional requirements of

facilitating fluid dispersion whilst preventing ingress of foreign objects, other than the particulate material which according to the specification at page 3 lines 16 – 21 is deliberately dropped into the openings.

- 63 The question then arises whether, on a purposive construction, the amended claim 1 embraces a paving system formed by laying discrete pavings of Figure 3 with their long sides abutting, such as in a parquet pattern. I have already mentioned that the patent specification defines the term “paving system” as a system capable of supporting repeated vehicular loadings but it does not specify any particular laying pattern or patterns necessary for this purpose. During the cross examination of Mr. Hodson, Mr. Colley produced two documents. The first was a 1999 publication by RMC Concrete Products with the title “The Paving Manual – A comprehensive guide to Concrete Block and Flag Paving with related Hard Landscaping and Civil Engineering elements”. The second document was a 1991 publication by Interpave, The Concrete Block Paving Association concerning “Concrete block paving – the essential considerations”. Both documents illustrate four different laying patterns which are described in the Interpave publication as stretcher bond, basket weave, 90^o herringbone and 45^o herringbone. From the illustrations it is clear that “basket weave” is an alternative description for the parquet pattern. The 1991 publication also states:

“Where rectangular blocks are used in areas subjected to vehicular traffic, herringbone is recommended.”

- 64 Mr. Hodson was cross-examined extensively on whether it was widely recognised as good practice by 1994 to lay rectangular paving blocks in a herringbone pattern in areas subject to vehicular traffic. His initial response was that he could not be sure but he eventually accepted that this laying pattern represented best practice at the priority date of the patent. However, he came to this view only after being shown the two publications produced by Mr. Colley. According to Mr. Hodson the turning of vehicle wheels over a twenty year period would result in horizontal movement of the pavings and hence a visual problem, when the pavings are laid in parquet or stretcher bond pattern. Mr. Hodson also explained a process called “spalling” where traffic can make paving blocks rotate very slightly and contact each other so that the top edges of the blocks become damaged. Mr. Wharton, although not an expert witness, was much more certain about the recommended laying patterns in areas designed for vehicular access and stated that as far back as 1980 it would always have been herringbone pattern in areas of vehicular traffic. Moreover, Mr. Wharton stated that it was standard highway practice to design a pavement for a lifetime of at least 20 years.
- 65 When cross-examining Mr. Hodson, Mr. Colley indicated that his submission later on would be that it has been long well accepted that herringbone is the only acceptable format for heavy vehicular access. Despite this indication, Mr. Colley did not in fact make any submission to me along these lines when closing. Nevertheless, Mr. Tappin dealt with the point. He proceeded on the basis that the evidence established that by the priority date of the patent it was known that herringbone was what you wanted to ensure a 20 year life. However, in his view this was immaterial in the context of the patent which

does not say that the paving system of the invention is one having a 20 year life or one which avoids spalling.

- 66 Like Mr. Tappin I also accept that the evidence establishes that at the priority date of the patent the skilled addressee would have recognised that in areas subject to vehicular access the recommended laying pattern was herringbone. However, this is only a recommendation and it seems to me that the skilled person could decide to adopt a different laying pattern dependent on the circumstances. I am reinforced in this view by a statement made by Mr. Hodson during his cross-examination that Euston bus station had been laid as stretcher bond. I therefore agree with Mr. Tappin that on a purposive construction claim 1, as it is proposed to amend it, is not restricted to a paving system designed to have a 20 year life or more particularly one laid in herringbone fashion. In my view the amended claim embraces discrete pavings laid in a variety of patterns, including parquet. Thus, to this extent there is no inconsistency between claim 1, as it is proposed to amend it, and the use of the Figure 3 pavings to provide the desired slot like openings.
- 67 I should now consider whether Figure 3 shows a paving having at least one groove extending for the thickness of the paving in at least one of its lateral edges. Mr. Colley suggested that was not the case because Figure 3 illustrates a paving having raised pads on its upper surface and the grooves do not extend for the full height of the paving, measured from its bottom surface to the top surfaces of these raised pads. Figure 3 is a plan view but even so there is no doubt in my mind that the skilled addressee looking at the figure would conclude that it shows a paving having a vertical groove in each of its lateral edges. Furthermore, I believe that the skilled addressee would conclude from Figure 3 that the grooves are open at their tops and bottoms and so extend for the thickness of the paving. This is necessary so that water can drain through the openings formed by the grooves. Therefore, in my opinion there is no inconsistency between Figure 3 and the requirement in the amended claim 1 that the groove should extend for the thickness of the paving.
- 68 All in all I can find no inconsistency whatsoever between the discrete paving defined in the amended claim 1 and the discrete paving shown in Figure 3. I must therefore reject the University's view that deletion of Figure 3 is necessary as a tidying up amendment. This means that I must now consider whether deletion of the figure would result in the specification disclosing additional matter. I can deal with this relatively quickly.
- 69 *Bonzel* requires that I compare what is disclosed in the patent as granted with what is disclosed in the patent as it is sought to be amended, and then I must decide whether any subject matter has been added whether by deletion or addition. Moreover, in *Merck* the Court of Appeal recognised that an amendment, which altered the scope of claim 1, indicated that the amendment added to the teaching of the patent or in other words it disclosed additional matter. In so far as I have already concluded that a skilled addressee would generally recognise a slot-like opening, such as the hexagonal openings formed when laying pavings as shown in Figure 3 side by side, when he or she saw one, I am not convinced that the deletion of Figure 3 would have any effect on his or her judgement on this matter. In my opinion the deletion of

Figure 3 would not change how the expression “slot-like”, and hence the amended claim 1, would be construed. Whether or not Figure 3 is deleted, the scope of claim 1, as it is proposed to amend it, remains the same in my view. It follows that I do not accept that deletion of this figure would lead to the patent teaching a more limited set of shapes suitable for use in the invention and in this respect the present situation differs from the one that arose in *Merck*.

70 Before I come to a final view on whether the deletion of Figure 3 would add subject matter, I need to consider the possible impact on the omnibus claim. As stated in the patent specification as granted, Figure 3 illustrates a typical discrete paving suitable for use in the paving system of the invention. Thus, although the deletion of Figure 3 would have the effect of removing the limitation placed on the omnibus claim by this figure (if indeed the omnibus claim is restricted to the combined teaching of the three drawings in the patent specification), no matter would be added because the patent specification as granted envisaged the use of discrete pavings other than the one illustrated. Furthermore, the deletion of Figure 3 would not restrict the omnibus claim so as to exclude the use of discrete pavings as illustrated in the figure. Therefore, whilst I accept Mr. Tappin’s submission that the proposed deletion of Figure 3 possibly would have the effect of broadening the scope of the omnibus claim, I do not agree that there is any disclosure of additional matter. I should perhaps add that although the deletion of Figure 3 may extend the protection conferred by the omnibus claim, it would not extend the protection conferred by the patent and so there is no problem with section 76(3)(b) of the Act.

71 I must therefore reject the Federation’s objection that the deletion of Figure 3 would add subject matter and so offend section 76(3)(a). However, I must also conclude that the deletion of Figure 3 would have no impact on the way claim 1, as it is proposed to be amended, should be construed.

Do the amendments cure the defect?

72 The University’s initial request to amend the patent explained that a licensee had identified a number of prior publications, which were considered relevant to the patent. The four most relevant publication were:

D1: “Permeable Pavements for Stormwater Quality Enhancement”, Pratt C J (1989). This was a paper presented at an ASCE Engineering Foundation Conference, Urban Stormwater Quality Enhancement – Source Control, Retrofitting and Combined Sewer Technology in Davos, Switzerland;

D2: “Urban stormwater reduction and quality improvement through the use of permeable pavements”, Pratt C J, Mantle J D G and Schofield P A (1989), Water Science Technology, Volume 21;

D3: “Scope for control of urban runoff”, Volume 3: Guidelines, Leonard O J and Sherriff J D F (1992), CIRIA Report No. 124;

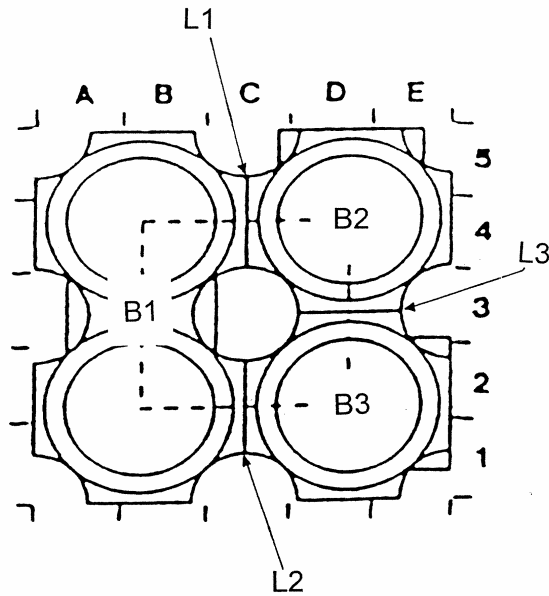
D4: “Permeable Pavements: Design and Maintenance”, Pratt C J and Hogland W (1990), published in “Developments in Storm Drainage: A symposium on infiltration and storage of stormwater in new developments”, edited by

Balmforth D, Sheffield City Polytechnic.

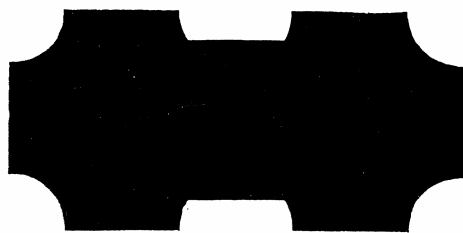
- 73 The Federation took the view in its supplementary statement that the amendments proposed did not adequately distinguished the subject matter of claim 1 from the prior disclosure in documents D1, D2 and D4. This remained the Federation's position at the time of the substantive hearing before me.
- 74 At the hearing I understood Mr. Colley to accept that each of D1, D2 and D4 discloses all the features of the paving system as claimed in claim 1 of the patent as granted. Mr. Colley also accepted that each of D1, D2 and D4 discloses the use of a discrete paving, which was described to me as a "Ceepy type" block. However, he cautioned that I should not assume that Ceepy blocks are unambiguously of just one shape or configuration. Having conceded this much, Mr. Colley denied that any of D1, D2 and D4 destroys the novelty of what is claimed in the claims as they are proposed to be amended. Mr. Colley also resisted any suggestion that it would have been obvious to lay paving blocks, disclosed in D1, D2 and D4, in such a way that slot-like holes would be formed between the blocks or that it would have been obvious to use blocks which are shaped to provide grooves, to create slot-like openings between them.

Assessment on novelty

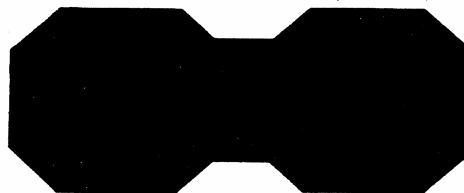
- 75 In the light of the concession made by Mr. Colley in relation to the relevance of D1, D2 and D4 to the subject matter of claim 1 as it was granted, I propose to restrict my consideration on the question of novelty to those features introduced by the proposed amendments to this claim. In essence, this means I will only consider whether there is also prior disclosure of the features claimed in claims 18 to 21 of the patent as granted.
- 76 Under a sub-heading "Engineered Permeable Surfaces" document D1 discloses that two general forms of engineered permeable surfacing have been employed in Europe and North America, namely, porous macadam and interlocking concrete blocks which are shaped to allow water to flow through spaces between and within the blocks. Under the same sub-heading there is a reference to research reported in 1988 by Professor Pratt and others concerning permeable concrete block paving construction in experimental car parking areas on private property. Mr. Tappin informed me that the date quoted for this report was incorrect and that the year should be 1989 and not 1988. Mr. Tappin pointed out that this report was none other than document D2. I accept Mr. Tappin's clarification on this point since it was not challenged by Mr. Colley and is consistent with the documents before me. I was also informed by Mr. Tappin that the car parking area was at Trent Polytechnic in Nottingham. Document D1 continues under a further sub-heading "Water Quality from Permeable, Concrete Block Paving" by describing paving blocks shaped to form a pattern of holes 25mm diameter when laid in the traditional herringbone arrangement. Figure 13 of document D1 shows the results of a laboratory model of a surface structure, including a pattern of concrete blocks. In so far as a picture is worth a thousand words, it is helpful to reproduce this pattern of blocks, as exhibited with Mr. Hodson's witness statement.



77 Mr. Hodson describes what is shown in this drawing. He explains that the three lines, labelled by him as L1, L2 and L3, represent junction lines between the blocks. The block to the left of lines L1, L2 is a whole block and is marked B1. To the right of block B1 the junction line L3 indicates that two blocks are shown. One of these blocks B2 is aligned with block B1 whilst the other block B3 is perpendicular to block B1. According to Mr. Hodson's evidence this pattern is what you get with a herringbone pattern of laying. Mr. Hodson goes on to describe a recess midway along each side of block B1, which is of curved shape at the top but reduced in depth by a straight back edge below the top of the block. A further exhibit to Mr. Hodson's witness statement compares the silhouette of block B1 with the silhouette of the paving block shown in Figure 3 of the patent. Again it is helpful to reproduce this exhibit here:



Block shown in Fig. 13 of D1



Block shown in Fig.3 of the Patent

78 The question I must answer is whether the opening formed at the centre of the pattern of blocks illustrated in Figure 13 of document D1 is slot-like. Mr. Tappin's view was that it is no less slot-like than the holes formed when pavings as shown in Figure 3 of the patent are arranged in a herringbone pattern. I have already indicated that I do not accept the University's initial view and Professor Pratt's view of the pentagonal holes being slot-like. I would therefore turn Mr. Tappin's submission to me on its head and describe the hole shown at the centre of the blocks in Figure 13 of document D1 as no more slot-like than the pentagonal holes formed when laying discrete pavings of Figure 3 of the patent in a herringbone pattern.

79 I turn now to document D2 which relates to the experimental permeable pavement constructed on the campus of Trent Polytechnic. When describing this experimental pavement the document refers to paving blocks shaped to provide a pattern of holes through which stormwater can percolate. Mr. Tappin directed me to photographs, which are identified as Figures 2 and 3, and which show the blocks being used as a temporary measure to hold down an impermeable membrane used in the paving system. These photographs are not very clear but they do appear to show blocks of the form illustrated in Figure 13 of document D1. Mr. Tappin also highlighted Figure 7 of document D2, which is another somewhat unclear photograph and shows the paving wearing course being laid parallel to the sides of the experimental area. When I questioned Mr. Tappin whether it was possible to tell from this figure which laying pattern was used, he acknowledged that document D2 does not provide the answer but in so far as D1 and D2 can be read together, it is possible to conclude that the blocks were laid in herringbone. However, the point I believe Mr. Tappin intended to make in relation to the photograph of Figure 7 was that where the paving blocks meet the edge of the area being laid, there is going to be a flat surface abutting the cutouts and this would form half-hexagonal holes.

80 The witness statement of Mr. Wharton provides some further clarification about the nature of the blocks shown in document D2. In his statement Mr. Wharton describes how during his first year of employment at Charcon in 1985 or 1986 he was involved in a project with Professor Pratt. He states that Charcon manufactured blocks, known as Ceepy blocks, for this project, and that he was asked to supervise the installation of the blocks at a test site at Gill Street, Nottingham. He remembers the general shape of the Ceepy blocks made at that time and exhibits a block which he obtained on 10 November 2004 from a site at the Clifton Campus at Nottingham Trent University (formerly Trent Polytechnic). Mr. Wharton explains in his statement that he recognised the Clifton Campus site as the site referred to in document D2. Moreover, he states that the exhibited block matches his recollection of the Ceepy blocks installed at the Gill Street site. In his evidence Mr. Wharton further identifies the paving blocks disclosed in documents D1 and D2 as Ceepy blocks. I have compared the Ceepy block exhibited by Mr. Wharton with the paving blocks shown in documents D1 and D2 and there are clear similarities between them. In particular, I accept that the blocks shown in the rather indistinct photographs in document D2 are the same as the Ceepy block exhibited by Mr. Wharton. For avoidance of doubt I should add that this does not mean that

the block exhibited by Mr. Wharton is definitive of what a Ceepy block looks like. It is possible that a Ceepy block could take other forms.

81 As with document D1 I can find no disclosure in document D2 of slot-like holes, even with the clarification provided by the exhibited Ceepy block. In particular, I do not accept Mr. Tappin's submission that Figure 7 of document D2 discloses the formation of half hexagonal holes at the edges of the laid paving. This would require, as stated by Mr. Tappin, a flat surface abutting the cutouts but the photograph does not show this so far as I can see. It is impossible to tell from this photograph whether the paving blocks forming the edge of the laid paving are the same as or different from the other blocks used.

82 Document D4 has no drawings or photographs of the paving blocks used in the disclosed permeable pavement. However, in relation to the paving blocks used, it states:

"The paving blocks were hydraulically pressed to the same overall dimensions and standards of strength and frost resistance as orthodox rectangular, concrete block paving, but were shaped to provide a pattern of holes between blocks to allow for the inflow of stormwater to the construction. Each block had two raised discs on the top surface to carry tyre loading to prevent any compaction of the material in the infiltration holes. The blocks were manufactured by ECC Quarries Ltd., Derby and are known as Ceepy R blocks."

Mr. Colley helpfully explained to me that the "R" in the reference to "Ceepy R" was intended to indicate the existence of a registered trade mark rather than a specification of the block. A little further into document D4 it is stated that the block paving is laid in herringbone pattern.

83 I have no grounds for concluding that the Ceepy block exhibited by Mr. Wharton is the "Ceepy R" block referred to in document D4, but, even if it is, there is once again no explicit or implicit disclosure in document D4 of the blocks being laid to form slot-like holes in the pavement wearing surface.

84 Before reaching an overall conclusion on novelty I should address the view, expressed by Mr. Wharton in his witness statement, that the discrete paving illustrated in Figure 3 of the patent looks like a Ceepy block to him even though it does not exactly match his recollection of this type of block. I understood Mr. Colley to accept this. Mr. Tappin was not sure that it made a great deal of difference because he did not think there was any dispute that each of these blocks has the necessary grooves in the sides to create holes of a particular shape. I accept both views but what is missing in the prior art before me is any explicit or implicit disclosure of the blocks being laid for form the required slot-like openings.

85 When summing up Mr. Colley argued that whatever the basis, be it documents D1, D2, D4 or the Ceepy block, nobody had planted the flag at claim 1 as it is proposed to amend it. I agree and I am satisfied that the proposed amendments serve to cure the defect in so far as what it is proposed is novel.

Assessment on inventive step

86 Mr. Tappin's case on inventive step was that parquet form was one of the standard ways of laying paving blocks and if you laid Ceepy blocks, as illustrated or described in documents D1, D2 and D4, in this way, the holes or openings you would get would be essentially hexagonal. In his opinion these essentially hexagonal openings would be indistinguishable from the hexagonal openings formed by arranging discrete pavings, as illustrated in Figure 3 of the patent, in a parquet arrangement. Alternatively, Mr. Tappin submitted that it would be obvious to create slot-like holes. His argument ran as follows. Document D1 tells you to provide permeable paving by using blocks shaped so as to create holes between the blocks. This document also describes a particular example of producing an opening of particular shape using blocks with grooves. It is well known to have slot-like holes between blocks since this is what you normally get when you lay paving. Thus, it would have been obvious to shape the blocks so that the grooves would create holes which are more slot-like than those shown in document D1.

87 By applying the four step approach established by the Court of Appeal in *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd.* [1985] R.P.C. 59 the final question I need to answer to determine the question of inventive step is whether it would have been obvious to the skilled addressee to provide openings of slot-like form as an alternative to the openings formed in the surface layer of the known permeable paving system, disclosed in documents D1, D2 and D4, by using discrete pavings having at least one groove in at least one abutting edge surface.

88 Mr. Colley only addressed me specifically in relation to Mr. Tappin's alternative argument and so I will deal with this first. The University did not have its own expert witness and so the only expert evidence before me comes from Mr. Hodson. However, as I have already noted, I need to approach Mr. Hodson's evidence with some caution. In particular, I need to consider not only Mr. Hodson's opinions but also his reasons for them.

89 Mr. Hodson states in his witness statement (my emphasis) :

"34. Quite apart from what shapes of opening may be disclosed in D1, it **seems natural to me** to choose a shape of block that results in grooves forming slot-like openings. I have already noted in paragraph 10 that D1 indicates that one general form of engineered permeable surfacing is interlocking concrete blocks shaped to allow water to flow through the spaces between the blocks. When shaping blocks to provide such spaces one would provide projections and/or recesses. It is standard practice and was in the mid-nineties to provide spaces between adjacent straight edges of pavings, those spaces then generating slots. Whether the pavings are laid in a herringbone, stretcher bond or parquet pattern, some of the joints between the spaced blocks have ends. D1 refers to this kind of approach at the top of page 4 where reference is made to widely spaced concrete block paving. Thus **it would be natural to shape the** blocks to create slots, either by forming projections on the blocks or by forming recesses in the blocks. If the slots were formed by recesses that could easily be achieved by forming vertical grooves in side edges of the blocks."

- 90 When asked by Mr. Colley what he meant by “it would be natural to shape the blocks to create slots” Mr. Hodson replied that it was common practice in 1994/1995 to provide traditional block pavements with spacer nibs to keep the blocks apart. He continued that if he was seeking to develop a block-type pavement to form a permeable pavement, he would have seen the potential for forming grooves in the side of a pavement by enlarging the spacer nibs on these traditional rectangular pavements. Mr. Hodson went on to clarify that this would have been obvious to him in the light of his experience in non-permeable paving systems.
- 91 I found Mr. Hodson’s response to this line of questioning unconvincing. In my view his opinion was influenced by his knowledge of the paving system disclosed in the patent and it did not reflect what would have been obvious to the skilled addressee in 1994. Thus, I find that this limb of Mr. Tappin’s inventive step argument does not succeed.
- 92 I turn now to Mr. Tappin’s other line of attack on the matter of inventive step. I have already referred to two documents which Mr. Colley produced in the course of cross-examining Mr. Hodson. Both documents illustrate four different laying patterns - stretcher bond, basket weave or parquet, 90° and 45° herringbone. Moreover, in the light of the 1991 publication by Interpave and other evidence I have already accepted that at the priority date of the patent the skilled addressee would have recognised that in areas subject to vehicular access the recommended laying pattern was herringbone. In order to answer the final *Windsurfing* question formulated above I must decide whether it would have been obvious to the skilled addressee to lay the Ceepy blocks disclosed in documents D1, D2 and D4 in a parquet pattern rather than the disclosed herringbone pattern.
- 93 In his witness statement at paragraph 26 Mr. Hodson refers to a statement on page 8 of document D1 that:
- “The paving blocks used by Pratt et al. were 200mm long by 100mm wide by 90mm high and were shaped to form a pattern of holes 25mm diameter, when the blocks were laid in the traditional herringbone arrangement.”
- Mr. Hodson interprets the reference to “when the blocks were laid in the traditional herringbone arrangement” as indicating that other standard laying patterns of stretcher bond and parquet could be contemplated but the author has chosen herringbone. I do not take from this statement the same meaning as Mr. Hodson does. It does not suggest to me that document D1 envisages laying the blocks in any pattern other than herringbone.
- 94 In my view the key to what I must decide lies in the skilled addressee’s response to the recommended laying patterns in 1994 and whether there are any reasons why he or she would have departed from these recommendations for the car parking area disclosed in documents D1, D2 and D4. In this I am not helped much by the evidence. Nevertheless, I am ready to conclude that the recommendations probably would have created sufficient prejudice that the skilled person would not have contemplated laying the Ceepy blocks in a

pattern other than the illustrated or described herringbone pattern. In particular I do not believe it would have been obvious to lay them in a parquet pattern which would be necessary to form slot-like holes in the paving.

- 95 I therefore find that the proposed amendments to claim 1 of the patent also provide an inventive step over the prior disclosure in documents D1, D2 and D4.

Clarity of scope of amended claim 1

- 96 In his submissions to me Mr. Tappin explained the Federation's principle contention that "slot-like" in the context of the patent must include the holes formed by laying the blocks of Figure 3. In other words the pentagonal and hexagonal holes so formed are slot-like. However, if this is wrong, then in Mr. Tappin's view the meaning of "slot-like" becomes wholly unclear.

Assessment

- 97 During the proceedings on this case various views have been expressed about what holes are slot-like and what holes are not. When assessing whether the deletion of Figure 3 would be contrary to section 76(3)(a) I put these views to one side and considered how the skilled addressee would construe the expression "slot-like" in the context of the patent. In doing this, I came to the conclusion that the skilled addressee would recognise a slot-like opening when he or she saw one. Moreover, I concluded that the hexagonal openings formed by laying discrete pavings, shaped as shown in Figure 3, in parquet pattern are slot-like but the pentagonal holes formed when the blocks are laid in a herringbone pattern are not. Therefore, I do not agree that the expression "slot-like" and hence the amended claim 1 lack clarity.

Conduct of the Patentee

- 98 Putting aside for the moment the request to delete Figure 3, the requested amendments fall into the category of deletion amendments. Claim 1 has been restricted simply by incorporating limitations which were the subject of claims 18 to 21 in the patent as granted. Thus, in line with the authorities reviewed above, there would have to be very exceptional circumstances or very compelling reasons for me not to exercise discretion to allow them. I therefore need to consider the circumstances surrounding the request to amend the patent.

Background to the requests to amend made on 11 July 2002 and 25 February 2004

- 99 The reasons the University gave in July 2002 for requesting amendment can be summarised as follows:
- In late October 2000 searches carried out by the University's licensee, who was considering action against a number of alleged infringers, located a number of relevant publications relating to paving systems;
 - In about January 2001 the University was notified of these publications;

- In June 2001 an incomplete copy of document D1 was discussed with Professor Pratt who did not consider it to be particularly relevant to the patent;
- Later a full copy of document D1 was obtained and it was decided to seek amendment of the patent;
- There were discussions between the University and the licensee as to the best way of proceeding, particularly in view of eight corresponding foreign patents and applications.

100 The evidence provides further background. Dr Gledhill exhibits an extract from a note of a meeting held in March 1995 reporting that a patent application, relating to a paving system for spillage and flood management, had been filed and that the construction methods of the system had already been published. The extract goes on to note that the sub-surface biotreatment described in the application was possibly a novel feature. It is accepted by both sides that the application in question was the application from which the patent claims priority.

101 Dr Gledhill's evidence also fleshes out and sometimes contradicts the events acknowledged by the University when requesting amendment. In his witness statement he describes how Professor Pratt was advised by the University's licensee, Formpave, in October 2000 that a firm of solicitors representing a company, with whom the licensee was in contact regarding a potential infringement of the patent, had identified documents D1, D2 and D4 as prior art which they considered relevant. According to Dr Gledhill, Professor Pratt then met with the University Secretary on 24 October 2000 to put her in the picture and recommend a meeting with Formpave. On 6 November 2000 the University received a copy of a report, which had been prepared by Formpave's patent attorney, K Bryer & Co. This report considered documents D1, D2 and D4 and identified them as relevant prior art documents. In relation to document D2, which it refers to as document 12 the report states:

“Finally, although there is no statement in document 12 that the system is arranged to enable biological decomposition of pollutants to occur in the substrate layer, we are aware from discussions with the inventor and yourself that no additional “arrangements” are in fact required to enable biological decomposition of pollutants to occur in the substrate layer if it has such structure.”

before concluding:

“Clearly, then Claim 1 of the patent is not novel and therefore invalid.”

102 Dr Gledhill's evidence goes on to state that Lewis & Taylor, who were the University's patent attorney at that time, reviewed the Bryer's report and in a letter, dated 16 February 2001, concurred with the view that documents D1, D2 and D4 rendered claim 1 invalid. The University then instructed Lewis & Taylor on 27 February 2001 to apply for post-grant amendment of the patent. Dr Gledhill continues by describing how the note of the meeting in March 1995

was unearthed and its relevance realised at a meeting attended by Professor Pratt on 23 April 2001. Lewis & Taylor were notified of the contents of the note and they discussed it with Professor Pratt at a meeting in June 2001. Following this meeting Lewis & Taylor re-assessed the validity of the patent and in a letter dated 5 July 2001 advised that claim 1 of the patent as granted might be novel because the prior art does not explicitly refer to biological decomposition of organic pollutants. In the same letter Lewis & Taylor gave advice as to the benefits of maintaining a broad patent of doubtful validity and the pitfalls of later seeking to amend the patent.

103 The validity of claim 1 of the patent was considered yet again in September 2001 at a meeting attended by Mr. Bryer of K Bryer & Co and the University's patent attorney. The conclusion drawn at this meeting was that claim 1 was invalid in the light of document D1 and it was agreed that K Bryer & Co should liaise with the University's patent attorney to agree appropriate wording for an amendment.

104 Dr Gledhill next picks up an event on 9 April 2002 when the Secretary to the University's Intellectual Property Rights Committee wrote to Lewis & Taylor about an approach made by Marshalls, which is a block paving company, seeking some form of collaboration. The letter notes that this approach has implications for the proposed amendment of the patent since Marshalls had indicated that it would be more beneficial to all parties not to amend. There was then a further letter, dated 15 May 2002, to Lewis & Taylor informing them that Formpave had agreed to liaise directly with Marshalls with a view to sub-licensing. Lewis & Taylor wrote to the University on 27 May 2002 asking for instructions whether they should advise K Bryer & Co that the amendment had been put on hold pending the outcome of Formpave's discussions with Marshalls. This letter also repeated the warning that delay in requesting the amendment could prejudice the possibility of the amendment being allowed. The letter was annotated by a representative of the University on 13 June 2002 with a request to put the matter on hold. Finally, in an email dated 8 July 2002, the University instructed Lewis & Taylor to proceed immediately with the amendment and as I noted at the beginning of this decision a request to amend was filed on 11 July 2002.

105 Before I leave this sequence of events I should refer to the further amendment requested by the University and the reason given for it. At the relevant time the University's patent attorney was Marks & Clerk and a letter, dated 25 February 2004, from them explains:

“Exhibit PH1 of the Witness Statement of Katherine Robinson shows a paviour with vertically extending spacers or nibs. We also understand from the Patent Attorney acting for the Defendant's licensee, Formpave, (.....) that these are described in GB 2,136,348. GB 2,136,348 was not cited by the Patent Office as prior art on the patent in suit. Nevertheless, the licensee and the Defendant would prefer to make the further amendment to Claim 1 set out in Clause 18 of the Counterstatement filed in these proceedings. We therefore formally request the exercise of the Comptroller's discretion in allowing further amendment of claim 1 as follows:

The addition of the following wording as a penultimate paragraph in claim 1:

said permeable layer is formed by a plurality of discrete pavings having lateral, abutting edge surfaces and each discrete paving is provided with at least one groove in at least one of said abutting edge surfaces, each said groove extending for the thickness of said paving thereby to form said slot-like holes;"

- 106 In his submission to me Mr. Tappin drew my attention to other matters which he argued have a bearing on the question of discretion. These relate to instances when it is alleged that the University or Formpave sought to obtain advantage from the patent.
- 107 The first of these instances is mentioned in Mr. Bardo's witness statement. Mr. Bardo recalls that in 1999 he was asked by RMC Group's legal department to represent RMC Concrete Products in respect of an allegation of infringement of the patent. He refers to a letter dated 7 April 1999 from K R Bryer & Co on behalf of Formpave. The letter notes that a RMC Concrete Products' brochure, advertising ecological block paving, illustrates a proposed installation which appears to fall within the terms of the patent.
- 108 A further instance emerges from Mr. Bardo's witness statement and concerns a letter, dated 16 March 2000, from Lewis & Taylor to Raynesway Construction Services Limited ("Raynesway"). This letter refers to the construction of a car park for the New Royal Infirmary in Edinburgh and states:

"We have been advised that you have laid a sub-base and are proposing to cover the sub-base with a surface layer which would result in a system identical to that developed by our clients and protected by British patent No. GB 2294077. Your construction would, therefore, constitute direct infringement of this patent."

It continues by asking for details of steps taken to avoid the infringement and concludes:

"Should you fail to provide us with this information by return fax, we shall have no option but to advise our clients to commence proceedings immediately."

- 109 Lewis & Taylor followed up this letter with a further letter, dated 1 June 2000. This further letter was produced by Mr. Tappin during the course of the hearing before me and deals with points made by RMC Concrete Products' patent attorney in response to the earlier letter. The main point Mr. Tappin wanted me to take from the later letter was that it demonstrates how the University and its exclusive licensee were joined up when dealing with the alleged infringement of the patent. In his view this is demonstrated in the letter by the statement:

"Our clients and their exclusive licensee consider infringement of our clients' patent as a serious matter and in this respect we would advise you that they have already agreed a settlement including undertakings and damages with an infringing third party in England."

110 Mr. Bardo also exhibits with his witness statement a letter, dated 10 August 2000, to RMC Concrete Products from Bird & Bird. This letter was written on behalf of Formpave and concerns the construction of the car park for the New Royal Infirmary in Edinburgh. In particular the letter refers to advice given by Bird & Bird to Formpave that they are entitled to start patent infringement proceedings against RMC Concrete Products for indirect infringement.

111 It is relevant once again to refer at this point to the letter, dated 16 February 2001, from Lewis & Taylor to the University, in which Lewis & Taylor agrees that documents D1, D2 and D4 render claim 1 invalid and states:

“..... the features of any of claims 13, 14, 21 and 30 to 32, if incorporated into claim 1 would provide the best chance of rendering the patent valid. Unfortunately, such an amendment would appear to remove the Edinburgh Royal Infirmary car park from within the scope of the patent. However, since the major claims of the patent are now considered to be invalid it would seem prudent not to proceed further with the infringement action.”

112 The evidence of Mr. Cook reveals that after the request to amend the patent had been filed Blockleys Brick Ltd (“Blockleys”) received a letter, which is dated 7 October 2003, from K R Bryer & Co on behalf of Formpave. The letter refers to a permeable pavement system advertised on the website of Blockleys Plc and to an enclosed copy of the patent specification marked to show recent amendments. Barker Brettell, patent attorneys acting for Blockleys, responded by letter on 25 November 2003. This letter describes paving blocks, used in Blockleys’ permeable pavement system, and refers to published patent application No. GB 2136348 which relates to Blockleys’ chamfered nibbed pavements. This patent application is of course the patent referred to by the University when seeking discretion to allow the further amendment requested on 25 February 2004.

Argument

113 Mr. Tappin argued that the circumstances surrounding the request to amend the patent provide the compelling reasons the courts had in mind for refusing amendment. He took the view that the University should have known that claim 1 was invalid at the outset given the note of the March 1995 meeting. Claim 1 did not contain any feature which distinguished it from the prior art which the University was already aware of. He reinforced this point by referring to the advice Lewis & Taylor gave in February 2001 concerning the relevance of documents D1, D2 and D4 and submitted that there is no reason to suppose that Lewis & Taylor would not have given the same advice in 1995. Nevertheless the University asserted the patent against RMC Concrete Products and Raynesway in 1999 and 2000.

114 Mr. Tappin continued by pointing out that even if the University were unaware that there was a problem with the validity of claim 1 of the patent until February 2001, it was not until July 2002 that the University applied to amend the patent. In the meantime, it sought a commercial advantage from the patent, not the least in its contact with Marshalls.

- 115 Overall Mr. Tappin put it to me that there has been a pattern of failure to disclose relevant information. Instances where the patent was asserted were not disclosed and there are matters which still have not been explained satisfactorily in relation to the delay at various stages. In Mr. Tappin's opinion this does not add up to the required full and frank disclosure to the Office of all the relevant facts.
- 116 Mr. Colley responded to Mr. Tappin's submissions by arguing that the disclosure of documents should be a proportionate exercise and that in the present proceedings there has been full disclosure of all relevant matters. He went on to suggest that I have to take a view on the facts, as I perceive them from the evidence, not only as to whether the disclosure was reasonable but also to what was known and what ought reasonably to have been known.
- 117 Addressing the two month period, which Pumfrey J. considered adequate in *Instance*, Mr. Colley observed that whilst this period was said to be adequate in the circumstances of that case, it did not mean that it could not be exceeded when the circumstances were different. In his view the time taken by the University to request amendment was reasonable in the circumstances. Thus, although the University moved at its own pace, this was typical of universities and whilst Mr. Colley accepted that there were gaps between things happening, he asked me to understand that the responsible people associated with the patent were not always as readily available for discussion as their commercial counterparts might be. For example, it would have been unrealistic for the University to request amendment without consulting its licensee or giving its licensee an opportunity to negotiate with a potential sublicensee. However, arranging meetings, which involved the University, the University's exploitation company, Professor Pratt, Formpave and the two sets of patent attorneys, would take some organisation. Mr. Colley stressed that there was nothing culpable about the delay and he labelled any suggestion that the conduct of the University involved cynical delay as unrealistic and readily distinguishable from that in *Smith Kline & French*. Moreover, in his view the extract of the 1995 meeting drops away in the light of what Graham J. said in *Matbro* regarding culpable delay where the patentee was aware of the need to amend but failed to do so.
- 118 Mr. Colley also dismissed the suggestion that the University had acted in bad faith by seeking an unfair advantage from the patent which it knew or should have known required amendment. He pointed out that although Professor Pratt knew about the documents D1, D2 and D4 he initially did not consider them to be relevant. They were drawn to the University's attention in 2000 but in Mr. Colley's opinion it was unreasonable to expect that the University ought to have made the connection between these documents and the patent prior to that time. If Professor Pratt had not made the connection, it could not be right that the University ought to have done so.
- 119 Mr. Colley went on to address the letters from Lewis & Taylor and other letters which were written on behalf of the Formpave. He argued that the University cannot be held to account for the actions of Formpave and so I should put aside the acts of the licensee. He relied on the fact that the University and Formpave were taking independent advice to demonstrate that they are not

one entity. Moreover, he characterised the letter dated 16 March 2000 from Lewis & Taylor to Raynesway as a request for information. In any event he argued that this letter and the further letter dated 1 June 2000 are not relevant because they predate the moment Lewis & Taylor first confirmed that claim 1 was invalid.

Assessment on discretion

- 120 It is clear from the authorities reviewed above that I must consider whether the University has acted in good faith by putting forward the correct reasons for the amendments as well as any facts relevant to the exercise of discretion. This was accepted by both parties. The dispute lay in whether the University withheld relevant facts, whether there was a culpable delay in seeking amendment and whether any of the attempts to assert the patent were unfair. I will begin by considering when the University first became aware, or should have been aware, that claim 1 of the patent was invalid. Once I have established this I will move on to consider whether the University has fully disclosed all relevant matters, whether the University attempted to assert the patent unfairly, and whether there was a culpable delay in requesting the amendments.
- 121 From a reading of the letter from the University's patent attorney, Lewis & Taylor, dated 16 February 2001, it seems to me, on the balance of probabilities, that Lewis and Taylor did not have sight of documents D1, D2 and D4 until January or February 2001. Moreover, it seems unlikely that the University would have sought advice from its patent attorney on receipt of the validity report from K Bryer & Co if it already knew or had advice that these documents rendered claim 1 invalid. Whilst the University must have recognised the need to consider whether claim 1 of the patent was bad by October 2000, I accept that it probably did not know this for certain until February 2001 when it received the letter, dated 16 February 2001, from Lewis & Taylor.
- 122 The question I must now consider is should the University have been aware earlier that claim 1 of the patent was invalid. Dr Gledhill's evidence revealed the note of the meeting in March 1995 but the University has not shown how the information in the note was used, if at all, in the preparation and prosecution of the patent. Mr. Colley relied on *Oxford Gene Technology* which established that there is no need to disclose privileged documents. I accept this and it would be wrong for me to draw any adverse inference from the maintenance of privilege.
- 123 It is clear from the note of the March 1995 meeting that the University realised that the paving system of the priority application had already been published but that it may be possible to rely on the description of sub-surface bio-treatment to provide a novel feature. In the event, claim 1 of the patent claimed a paving system arranged to enable biological decomposition of pollutants to occur in the substrate layer. Nevertheless, the question remains whether the University should have known prior to February 2001 that this feature did not distinguish the paving system claimed in claim 1 from those disclosed in documents D1, D2 and D4.

- 124 Professor Pratt was cross-examined extensively on a statement in his evidence that it was not until August 1994 that experiments were started to find out how rainwater systems could be designed to remove organic pollutants and that it did not occur to him that document D1 or any of the other documents would be relevant to the patent. Under cross-examination the Professor explained that at the outset there was a belief that it was essential to add materials to enable biological decomposition of pollutants. He went on to accept that by late 2000 he had come to the view that no structural arrangements were necessary to the various layers of the paving system to allow biological decomposition to occur. Mr. Tappin then took Professor Pratt to a passage in the patent, which refers to bacteria breeding on the substrate walls if spillages were not infrequent. Professor Pratt, who confirmed that he had been involved with the preparation of both the priority application and the patent, commented that at the time the patent was written this was strongly probable but not known because the results only came through after the patent was filed. Nevertheless, he accepted that the patent suggests that the paving system constructed as described would meet the requirements for biological decomposition. In so far as the patent was drafted to reflect what Professor Pratt thought was a strong possibility at that time, I am surprised that the University and the Professor hung on to the 1995 view that the paving system of claim 1 of the patent was distinguished by the sub-surface bio-treatment feature. Therefore, I conclude that the University should have been aware that the patent was invalid when it was granted. The case against them is even stronger by late 2000 when according to Professor Pratt the results of his experiments confirmed what he had thought at an earlier stage was strongly probable.
- 125 I will now consider whether the University made a full disclosure of all relevant matters. When requesting the initial amendment the University gave the impression that it first became aware of documents D1, D2 and D4 in about January 2001 and sometime after June 2001 decided to seek amendment of the patent. Moreover, although there was a reference to the University's licensee considering action against a number of alleged infringers of the patent, there was no mention of the patent having been drawn to the attention of others involved with paving systems.
- 126 According to Dr Gledhill's evidence the University became aware of documents D1, D2 and D4 in October 2000 which is some two to three months earlier than stated in the University's reasons for the request. However, I am not inclined to give too much weight to this discrepancy. Of greater significance is the University's failure to disclose at the outset that it knew about these documents in March 1995 despite the discovery of the note of the 1995 meeting in April 2001 when the validity of the patent was under active consideration.
- 127 There is also clear evidence that the University failed to disclose instances where the patent had been drawn to the attention of third parties when the University should have known that the claim 1 of the patent was invalid, that is from the time the patent was granted. When requesting the original amendment the University merely stated that its licensee had been considering action against alleged infringers and that its licensee had carried out searches, which had located documents D1, D2 and D4, and yet the subsequent

evidence of Dr Gledhill on behalf of the University is that these documents were identified not by the licensee but by a firm of solicitors representing a company, with whom the licensee had been in contact regarding potential infringement of the patent.

- 128 I would have expected the University to disclose the approach in April 1999 from K R Bryer to RMC Concrete Products and the subsequent approach in March 2000 from Lewis & Taylor to Raynesway even though they predate the time when the University was informed by Lewis & Taylor in February 2001 that claim 1 of the patent was invalid. Furthermore, I have been left completely in the dark about the settlement with an infringing third party in England, which is mentioned in Lewis & Taylor's letter of 1 June 2000. Then there is the letter, dated 10 August 2000, from Bird & Bird to RMC Concrete Products concerning possible proceedings for indirect infringement of the patent.
- 129 Before reaching a conclusion on whether the University has met its obligation to make the whole story known, I can deal very briefly with the University's supplementary request to amend made on 25 February 2004. I am satisfied that on this occasion the reasons provided by the University provide an adequate explanation for this further amendment.
- 130 Overall (excluding any considerations relevant to the request to delete Figure 3) I find that the University has failed to provide a full disclosure of all relevant matters which would allow the comptroller to come to an informed decision on questions such as whether there has been an unjustified delay and whether the University has sought to gain unfair advantage from the patent.
- 131 I turn now to consider whether the University sought to obtain an unfair advantage from the patent. I have already concluded that the University drew the patent to the attention of third parties when it should have known that the patent was invalid. Was this reasonable behavior on the part of the University? Essentially, Mr. Colley asked me to excuse the University because it had not made the connection between documents D1, D2 and D4 and the patent at the relevant times. However, the evidence shows not only that the University was aware of documents D1, D2 and D4 in connection with the priority document but also that the patent was drafted in the light of a strong probability that nothing extra was required in terms of construction to enable biological decomposition of pollutants to occur in the substrate layer of the paving system. In my view the University failed to make the connection between the patent and documents D1, D2 and D4 as the result of its own short comings and I believe it would be wrong to ignore the University's attempts to obtain an advantage in such circumstances.
- 132 Mr. Colley also argued that the University cannot be held to account for the actions of its licensee, Formpave, in asserting the patent against third parties. This argument does not stand up to examination. The letter, dated 16 March 2000, from the University's own patent attorney, Lewis & Taylor, to Raynesway clearly indicates that the University and Formpave were joined up in relation to pursuing Raynesway in relation to the construction of the car park for the New Royal Infirmary, Edinburgh. This view is confirmed by the subsequent letter, dated 1 June 2000, from Lewis & Taylor. Moreover, I cannot accept Mr.

Colley's attempt to characterise the Lewis & Taylor letter, dated 16 March 2000, as a request for information. The clear message in this letter, which is confirmed by the subsequent letter, is that the University and Formpave believed that the patent had been or would be infringed and that they were minded to commence proceedings unless it could be shown that steps had been taken to avoid infringement.

- 133 I therefore find that the University sought to gain unfair advantage from the patent when it should have known of the need to amend.
- 134 Finally I need to decide whether there was a culpable delay in seeking amendment. The bottom line is that it took just over 4½ years for the University to request amendment from when the patent was granted. Mr. Colley's explanation for part of this delay was that it is unreasonable to expect the University to have recognised the significance of documents D1, D2 and D4 before Lewis & Taylor advised in February 2001 that claim1 was invalid. I have already accepted that the University probably did not know that the patent was invalid until February 2001 and so I am satisfied that up until that point there was no culpable delay.
- 135 However, I must consider whether there was a culpable delay from February 2001 onwards. It took almost seventeen months for the University to apply to amend the patent after Lewis & Taylor advised that claim1 was invalid. That said it was not unreasonable in my view for the University to rely on Lewis & Taylor's change of mind in July 2001 up to the point in September 2001 when there was once again agreement that claim 1 was invalid. Nevertheless, even allowing for this hiccup between July 2001 and September 2001, there was still a delay of approximately ten months from September 2001 until the University applied to amend. In addition there was a delay of about three months from the time the University became aware of Patent No. GB 2136348 and the request on 25 February 2004 for further amendment of the patent.
- 136 In *Instance Pumfrey J.* took the view that a period of two months from the receipt of advice from counsel would have been more than adequate to formulate an amendment. Thus, even the shorter period of ten months greatly exceeds what Pumfrey J. considered would be adequate. Whilst I accept Mr. Colley's submission that this two month period does not constitute a hard and fast rule, in my view there would need to be good reasons to justify a significantly longer delay. Thus, I need to consider whether the University can show reasonable grounds for a delay which when put in the best light amounts to ten months.
- 137 I do not accept Mr. Colley's submission that I should make an allowance because the patentee is a university and so moved at its own pace. This generalisation is not supported by the evidence before me and in any event I need to consider if there are circumstances specific to the University and this particular request for amendment, which provide reasonable grounds for the delay. Moreover, the University was warned by Lewis & Taylor in its letter of 5 July 2001 about the dangers of delay in requesting amendment and if, despite this advice, the University moved at its own pace, it should be ready to face the consequences.

- 138 There is also no evidence to support Mr. Colley's contention that it was especially difficult to arrange meetings between the University, the University's exploitation company, Professor Pratt, Formpave and the two sets of patent attorneys. Even if this were the case, it does not in my view explain a delay which is five times longer than that which Pumfrey J. considered to be adequate. What does emerge from the evidence is that at the meeting in September 2001 there was a discussion about the form of the amendment and an agreement that Lewis & Taylor and Bryer & Co should liaise to agree the appropriate wording. There is nothing to suggest that anyone other than the two sets of patent attorneys were involved with the amendment until 9 April 2002 when the University wrote to Lewis & Taylor with news of the approach by Marshalls. Moreover, what this letter from the University did was to reopen the question of whether to amend or not to amend rather than pursue the question of what the amendment should be. The later letter, dated 15 May 2002, from the University to Lewis & Taylor also says nothing about amendment of the patent. It seems that at this stage the amendment may have been put on hold, something which is confirmed in the University's response in June 2002 to the letter, dated 27 May 2002, from Lewis & Taylor. To my mind this sequence of events, for which the University was responsible, demonstrates an almost total disregard for the public interest that an amendment is sought promptly. The situation is even worse when account is taken of the period between February 2001 and July 2001 when the University had good grounds for believing that claim 1 was invalid. I would have expected work done during this period to give the University a head start when it was confirmed in September 2001 that the claim was bad.
- 139 Set against a delay of at least ten months, the delay of three months in requesting the further amendment on 25 February 2004 pales into insignificance but nevertheless exceeds the two months Pumfrey J. considered adequate in *Instance*. Moreover, there has been no explanation for this delay and no account seems to have been given to the public interest.
- 140 Thus, on the matter of the University's conduct in relation to the amendments requested on 11 July 2002 and 25 February 2004 I have found that the University did not discharge its onus to make a full disclosure of all relevant matters. In particular, at the outset the University gave the impression that it first became aware of documents D1, D2 and D4 in January 2001 whereas it knew in April 2001 that these documents had been considered as long ago as 1995. Furthermore, the University failed to acknowledge instances where it sought to obtain an advantage from the patent. I have also found that the University not only sought to obtain an unfair advantage from the patent at a time when it should have known that claim 1 was invalid and required amendment but that it was also culpable for a delay of at least 10 months in seeking amendment. Individually these factors may not provide the very compelling reasons required to refuse a deletion amendment but in my view the University's overall conduct has been such that it provides sufficient reason for me to do so. I therefore refuse the amendments requested on 11 July 2002 and 25 February 2004.

The request to delete Figure 3

141 The reason for the request to delete Figure 3 and references to it is given in a letter, dated 1 June 2005, from Marks & Clerk:

“In the defendant’s further evidence filed 31 March 2005 the Witness Statement of Mr. A V Hallam confirmed that following amendment of claim 1 to define more clearly the openings formed in the surface, the openings formed by adjacent blocks of Figure 3 of the specification of the patent would be excluded (Clause 7, lines 5 to 9).”

I have already concluded that blocks of the form shown in Figure 3 can be laid to provide hexagonal, slot-like openings which are not excluded from the scope of claim 1 as it is sought to be amended. Thus, in my view the deletion of Figure 3 is not a tidying up amendment as characterized in the request to make this amendment. Moreover, there is no explanation for the delay in requesting this amendment bearing in mind the request to restrict the paving system of claim 1 to one having “openings of slot-like form” was filed on 11 July 2002. Therefore, I refuse the request to delete Figure 3 and references to it principally on the ground that no explanation is given for a culpable delay of almost three years in making this request.

Summary

142 I have found that the deletion of Figure 3 and references to it would be ineffective but not contrary to section 76(3)(a) of the Act. However, I have not allowed this amendment because the University has failed to explain the reason for the delay, for which it is culpable, in requesting it. I have decided that the other requested amendments are clear and serve to distinguish the claimed paving system from those disclosed in documents D1, D2 and D4. Nevertheless, I have come to the view that the conduct of the University once again provides compelling reasons for refusing these other amendments, even though they are deletion amendments. I therefore refuse the application to amend the patent.

Costs

143 I asked to be addressed by both parties on costs for the main hearing, having noted that the costs for the preliminary hearing had already been settled. Both parties agreed that scale costs should be awarded but that I should consider some partitioning of costs if I found that the amendments were allowable with the deletion of Figure 3 and that made the difference between allowability and non-allowability. In the event I have not allowed the amendments and so the Federation has been successful. Thus, based on the Patent Office published scale, I order the University to pay the Federation £3500 as a contribution to its costs. This sum should be paid within seven days after the expiry of the period for appeal against this decision. If an appeal is lodged, payment is automatically suspended pending the outcome of the appeal.

Appeal

144 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

R J WALKER
Divisional Director acting for the Comptroller