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Expert Evidence in Rights to Light Litigation: A Review of Judicial Attitudes to Current Practice in the UK

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ABSTRACT

Construction for development in city centre locations often results in the erection of higher and wider buildings than those being replaced, with a consequent reduction in the daylight enjoyed by neighbouring properties. This may lead to litigation if a legal right to light has been infringed.

English law generally provides building owners with an entitlement to "sufficient light according to the ordinary notions of mankind" and, since the 1920s, this has been defined by expert witnesses in terms of a sky factor of 0.2 per cent enjoyed over 50 per cent of floor area. The scientific basis of this methodology has recently been challenged but expert witnesses defend its continued use on the basis that it is supported by the courts. The current paper tests this assumption by examining judicial statements in reported legal cases. Although the courts continue to make use of expert evidence it concludes that they are sceptical of some of the methods used and have criticised particular aspects of these. The courts' approach therefore falls short of the endorsement which is sometimes claimed and does not provide a justification for its continued use by expert witnesses.

Keywords: Daylight; Evidence; Expert Witness; Litigation

1. INTRODUCTION

Pressure to maximise floor areas in city centre redevelopment projects often results in the construction of higher and wider buildings than those being replaced. In many situations in the UK this will have a detrimental effect on the daylight enjoyed by neighbouring buildings and this may lead to litigation if a legal right to light has been infringed.

Where a right to light exists the law provides building owners with an entitlement to “sufficient light according to the ordinary notions of mankind”.¹ The courts often receive expert evidence from surveyors as to the practical meaning of this term in particular contexts. Since the 1920s expert evidence in rights to light cases has typically relied on the so-called Waldram methodology which was developed by Percy J Waldram during the early years of the twentieth century (Chynoweth 2004).

This proposes a threshold of adequate illuminance for office work of 1 foot-candle. In view of the fluctuating nature of daylight this is expressed, not as an absolute measurement, but as a percentage of the illuminance available outside the building from the totality of the unobstructed sky. Based on an assumed illuminance of 500 foot-candles from an overcast sky, this threshold level of 1 foot-candle is therefore considered to be present providing 0.2% of the sky is visible at the working plane.

This percentage measurement (the so-called “grumble point” below which people will start to grumble) is referred to as the 0.2% sky factor. By convention expert witnesses regard a room as well lit as long as 50% of its area, measured at working plane height, continues to receive a sky factor of 0.2%. This aspect of the Waldram methodology is therefore sometimes described as the “fifty-fifty rule”.

2. CURRENT RESEARCH

Within the last decade a number of researchers have challenged the underlying scientific basis of the Waldram methodology and have argued that new methodologies must now be developed (Pitts 2000; Chynoweth 2005; Defoe & Frame 2005). Many expert witnesses concede the limitations of existing practices but defend their continued use on the basis that they are supported by the courts. The current paper therefore tests this assumption by reviewing the judgments of all reported cases in which the Waldram methodology was used, and in which the nature of the expert evidence was discussed.

Sixteen such cases were identified which were heard between 1922 and 2006 and these are displayed in Table 153.1. An initial examination was undertaken to ascertain the extent to which the courts’ decisions in each case were consistent with the experts’ findings in applying the Waldram methodology.

The results tend to suggest that the courts will readily accept the experts’ recommendations as to whether an actionable injury has occurred. In 14 of the 16 cases the court’s decision on liability was consistent with the experts’ findings. Of the 2 remaining cases it is perhaps significant that the experts’ findings were extremely marginal in one of them. In *Ough v King* [1967] 3 All ER 859 the court disregarded the fifty-fifty rule, but this was in circumstances where the room was said to be only 51.27% adequately lit,

¹ *Colls v Home & Colonial Stores Ltd* [1904] AC 179

thus exceeding the Waldram threshold by only 1.27%. Of the 16 cases studied only one, *Smyth v The Dublin Theatre Company Ltd* [1936] IR 692, therefore appears to provide evidence of the court's unequivocal departure from the findings of the expert witnesses.

Table 153.1 Table of cases

	Case Name & Citation
1	<i>Charles Semon & Co v Bradford Corporation</i> [1922] 2 Ch 737
2	<i>Horton's Estate Ltd v James Beattie Ltd</i> [1927] 1 Ch 75
3	<i>Price v Hilditch</i> [1930] 1 Ch 500
4	<i>Sheffield Masonic Hall Co v Sheffield Corporation</i> [1932] 2 Ch 17
5	<i>Smith v Evangelization Society (Incorporated) Trust</i> [1933] Ch 515
6	<i>Fishenden v Higgs and Hill Ltd</i> (1935) 153 LT 128
7	<i>Smyth v The Dublin Theatre Company Ltd</i> [1936] IR 692
8	<i>Gannon v Hughes</i> [1937] IR 284
9	<i>William Cory & Son Ltd v City of London Real Property Company Ltd</i> (1954) 163 EG 514
10	<i>McGrath v Munster and Leinster Bank</i> [1959] IR 284
11	<i>Ough v King</i> [1967] 3 All ER 859
12	<i>Gamble v Doyle</i> (1971) 219 EG 310
13	<i>Carr-Saunders v Dick McNeil Associates Ltd</i> [1986] 2 EGLR 181
14	<i>Deakins v Hookings</i> [1994] 1 EGLR 190
15	<i>Midtown Ltd v City of London Real Property Company Ltd</i> [2005] EWHC 33 (Ch)
16	<i>Regan v Paul Properties DPF No 1 Ltd</i> [2006] EWHC 1941 (Ch)

3. ROLE OF EXPERT EVIDENCE

An examination of the judicial comments in many of the cases indicates the usefulness, to the courts, of receiving evidence which is capable of quantifying the otherwise nebulous concept of sufficiency of light according to ordinary notions of mankind.

Evidence based on the Waldram methodology has been described, by the courts as "exceedingly useful"² and "very helpful"³ and the judges often express considerable gratitude to the individual witnesses. The fifty-fifty rule itself has also received limited judicial endorsement in a number of cases. Most recently, in *Regan v Paul Properties DPF No 1 Ltd* [2006] EWHC 1941 (Ch), it was described as "a very useful guide which will apply to the majority of cases concerning infringements of rights to light, especially where the dominant tenement is a dwelling house and the room in question is a living room" (para. 67).

Nevertheless, the courts' willingness to accept evidence based on the fifty-fifty rule has led some surveyors to treat it as having greater legal

² *Fishenden v Higgs and Hill Ltd* (1935) 153 LT 128

³ *William Cory & Son Ltd v City of London Real Property Company Ltd* (1954) 163 EG 514

significance than was ever intended.⁴ In particular, the clear legal distinction between a rule of law, and the process of ascertaining the facts to which the rule can be applied, has sometimes been insufficiently clear in some of the practitioners' textbooks (for example Ellis 1989, pp. 33-37; Anstey 1992, p. 13 & 57).

Although surveyors are inevitably involved in providing legal advice to clients during preliminary rights to light negotiations their role in court is more restricted. The value of their expert testimony lies in assisting the court to understand the factual situation to which it can then apply the established legal rules.

The courts regard the fifty-fifty rule as a surveying technique which can assist this process and they have variously described it as "a convenient rule of thumb"⁵, "a very rough guide"⁶ and "a useful guide to be adopted or discarded according to the circumstances".⁷ Although the issue would no doubt have appeared self-evident to most judges a number of the judgments expressly emphasise that the fifty-fifty rule is not a rule of law.⁸

4. SIGNIFICANCE OF COLLS V HOME AND COLONIAL STORES

In fact the judgments also emphasise that the evidence from the expert witnesses simply forms one component of the detailed factual matrix to be assembled by the court before applying the relevant legal rule when deciding on liability.

As mentioned in the introduction to this paper the rule, which is stated in *Colls v Home & Colonial Stores Ltd* [1904] AC 179, refers to the entitlement to "sufficient light according to the ordinary notions of mankind" (p. 208). This form of words, of course, leaves considerable room for discretion by the courts when interpreting the rule in a particular situation. The courts' approach to liability, and to the role of expert evidence within the process, was described by Maughan J in the following terms in *Sheffield Masonic Hall Co v Sheffield Corporation* [1932] 2 Ch 17:

"But I do think I ought to say that in my opinion, it is possible to exaggerate [the expert] evidence in a particular case. The question to be solved by the court is not really a question which can always be fairly decided by the amount of direct sky which will reach a hypothetical table 2 feet, 9 inches high in a particular room. I think it is safer to rely upon the view expressed in *Colls v Home and Colonial Stores Ltd*, and to consider whether, as a matter of common sense, there is such a deprivation of light as to render the occupation of the house uncomfortable in accordance with the ordinary notions of mankind" (p. 548).

⁴ *Carr-Saunders v Dick McNeil Associates Ltd* [1986] 2 EGLR 181

⁵ *Ough v King* [1967] 3 All ER 859

⁶ *William Cory & Son Ltd v City of London Real Property Company Ltd* (1954) 163 EG 514

⁷ *Carr-Saunders v Dick McNeil Associates Ltd* [1986] 2 EGLR 181

⁸ *Carr-Saunders v Dick McNeil Associates Ltd* [1986] 2 EGLR 181; *Regan v Paul Properties DPF No 1 Ltd* [2006] EWHC 1941 (Ch); *Ough v King* [1967] 3 All ER 859

The courts therefore see themselves as involved in the exercise of common sense rather than with the application of scientific principles and this leads to a much more instinctive process than is sometimes assumed. An examination of the decision making processes actually undertaken in the sixteen cases discussed in this paper therefore indicates that the expert evidence was less significant to the decision than might initially have been supposed. In particular, the courts often gave as much, or more, credence to the evidence of lay witnesses as they did to the expert testimony. As graphically described by Meredith J in *Smyth v The Dublin Theatre Company Ltd*, “the wearer of the shoe is the one best qualified to say if and where it pinches” (p. 705).

5. JUDICIAL SCEPTICISM

Of the 14 cases noted above as having been decided in conformity with the Waldram approach very few of them can therefore be regarded as the straightforward product of the expert evidence. Many of them represent the courts' overall impressions gained from having heard the evidence of lay witnesses alongside that of the experts. The most recent case of *Regan v Paul Properties* is a clear example of this, as are the earlier cases of *Deakins v Hookings* [1994] 1 EGLR 190 and *Gamble v Doyle* (1971) 219 EG 310.

Others represent a grudging acceptance of the expert testimony in circumstances where the court has expressed a clear preference for the evidence of building occupants but, for whatever reason, this is not available. This is apparent from the judgments in both *Price v Hilditch* [1930] 1 Ch 500 and *William Cory & Son Ltd v City of London Real Property Company Ltd* (1954) 163 EG 514.

Finally, some actually represent decisions which are consistent with the expert evidence but which have clearly been decided in spite of it. The cases of *Gannon v Hughes* [1937] IR 284 and *McGrath v Munster and Leinster Bank* [1959] IR 284 both fall into this category. Although the decisions in these cases appear, superficially, to be consistent with the Waldram methodology the judges in each case were critical of it and were not prepared to base their decisions upon it. In *Gannon v Hughes* Johnston J noted that he “could not say much for the ‘grumble point’ as a test which would be of much use in cases like the present” (p. 290) and Dixon J observed in *McGrath* that:

“I.....regard the expert evidence as not being of great help in the present case except by way of giving a general picture of the situation....I regard the methods adopted as being inherently inadequate to give a sufficiently comprehensive result.....” (p. 117).

Judicial scepticism about the methodology has not been confined to these 2 cases, or to the cases where the courts have made decisions on liability which are inconsistent with the expert evidence. They are a common feature of many of the cases studied, even in situations where the

court has ultimately chosen to place some limited reliance on the experts' findings.

By way of example, Meredith J seems to have been particularly unimpressed by Waldram's evidence in *Smith v The Dublin Theatre Company Ltd*. After hearing a detailed description of the methodology, in person, from Percy Waldram he notes in his judgement that "Mr Waldram's charts, carefully prepared and interesting as they were, leave me cold". (p. 705). The underlying basis of many of the judicial criticisms is that the methodology is too rigid, and presents too simplistic a picture, to be of genuine assistance to the courts in reaching decisions which have to take account of so many variables.

This is clear from Dixon J's judgment in *McGrath* where he remarks that: "the principle selected is too selective and too ideal, and there are too many factors, of a practical or tangible character, that it does not and cannot take account of" (p. 116). These sentiments were echoed by Upjohn J in *William Cory & Son* in his dismissal of one expert witnesses' evidence which focused entirely on the movement of the 0.2% threshold: "What he said was quite useful as a test, but it does not consider anything like the whole ground that I have to consider" (p. 8).

6. SPECIFIC CRITICISMS

6.1. Inability to represent external environment

Within this general scepticism about the methodology's overall lack of sophistication, a number of specific criticisms are also apparent from the judgments. The first of these deals with its inability to accurately represent the complexity of the external lighting environment which the court has to consider.

One aspect of this relates to the role of externally reflected light, and another, to the effect of sunlight on the daylight enjoyed by building occupants. Although it is almost an article of faith amongst practitioners that reflected light and sunlight have no significance in the right to light the situation may actually be more complicated.

The question of externally reflected light was addressed in *Sheffield Masonic*. Maughan J criticised the Waldram methodology for its inability to distinguish a small obstruction situated immediately outside a window from a large one located some distance away from it but still obscuring the same percentage view of the sky.

He considered it obvious "to anybody who has ever considered the matter for five minutes" that the effect on the building occupier is greater in the former situation and that this is due to the continued availability of externally reflected light in the latter (p. 549).

The effect of the sun's position in the sky was discussed in *McGrath*. Dixon J considered that the Waldram approach was unrealistic as it assumed that the sky had a uniform luminance distribution whereas, in reality, this was not the case:

“Even when the sky is overcast and there is only skylight.....it may be doubted if there is ever uniformity. Observation suggests that even on a day on which there is only skylight, the intensity of light in any portion of the sky is more likely to be an inverse function of the angular distance of that portion from the source of light, the sun.....It is for these reasons that I consider the direction of the new obstruction relative to the windows of the plaintiff’s office, of great importance and, as pointed out, this is a factor of which the ‘grumble line’ or ‘sky factor contour’ takes no account” (pp. 116-7).

The lighting designer’s distinction between “skylight” and “sunlight” has, of course, always been an artificial one and on occasions the courts have been willing to blur the distinction in rights to light cases.⁹ The distinction, in any event, rested on technological limitations in the early days of daylight measurement which no longer apply. As Nabil & Mardaljevic (2005) have recently demonstrated, Dixon J’s instinctive assumptions were entirely correct. In the northern hemisphere, even under predominantly overcast skies, windows on southern elevations do, of course, receive greater levels of daylight than those facing in a northerly direction.

6.2. Dependence on internal room design

The second specific criticism relates to the methodology’s dependence on the internal design of the affected rooms in deciding whether they are the subject of an actionable injury. It was pointed out by Maughan J in *Price v Hilditch* (p.508), and again by Millett J in *Carr-Saunders v Dick McNeil Associates Ltd* [1986] 2 EGLR 181, that the right to light under section 3 of the Prescription Act 1832 is a right in favour of a building, rather than to a particular room within it. The extent of the right should therefore not necessarily be measured by reference to the internal arrangements of particular rooms.

Despite this, the Waldram approach is constrained by the design of the actual rooms under consideration in two respects. Firstly, the sky factor at a particular point on the working plane is heavily influenced by the actual height of the window head in the room. Secondly, having established the position of the 0.2% sky factor contour in the room, the actual depth of the room will largely determine the outcome once the fifty-fifty rule is applied. Maughan LJ considered both these aspects in *Fishenden* and concluded that the experts’ plans:

“...may, I think, often be exceedingly misleading if the so-called fifty-fifty rule.....is applied to a room which has any unusual depth in it, or applied to a room where the windows are in any sense unusual, because the light falling at table height....depends directly upon the depth of the room and the height of the window....” (p. 144).

⁹ *Allen v Greenwood* [1980] Ch 119; *Deakins v Hookings* [1994] 1 EGLR 190

6.3. Distinction between task illumination and general room lighting

The final specific criticism draws attention to an inconsistency within the methodology which ignores the distinction between task illumination and general room lighting, both of which are important in good lighting design (CIBSE 1994, pp. 26-7).

Task illumination is concerned with the quality of light required to perform specific tasks at particular points at the working plane and is generally expressed as an absolute level of service illuminance (historically measured in foot-candles but now measured in lux). General room lighting on the other hand relates to the user's perceptions as to whether a room appears bright or gloomy. This is largely affected by the relationship between the internal and external illuminance (as measured, for example, by the sky factor) and the distribution of daylight within the room (as measured, for example, by the fifty-fifty rule).

In general, as long as a room appears sufficiently well lit according to principles of general room lighting, there is no requirement for task illumination to be provided in all parts of the room. It will usually be sufficient (and indeed, more pleasant) for additional levels of service illuminance to be confined to the areas of the room in which this is actually required.

It will be apparent from this description that the Waldram methodology, which utilises the sky factor and the fifty-fifty rule, is concerned entirely with the measurement of general room lighting. The irony is that the entitlement to a right to light appears to be restricted to task illumination.¹⁰ Perhaps unsurprisingly therefore, the courts have often expressed frustration with its inability to provide any meaningful assistance in determining the adequacy of light in rights to light situations.

This can be seen, in particular, in the cases of *Smyth v Dublin Theatre Company* and in *Carr-Saunders*. In each case the affected rooms had particular task illumination requirements close the windows. Although the experts' plans showed that the general room lighting was sufficient according to the fifty-fifty rule, the tasks previously performed in the rooms could no longer be carried out due to the loss of light in the immediate vicinity of the windows. For example, in *Carr-Saunders*:

"..... it is clear that the effect of raising the height of the defendants' building by two storeys, while it did not reduce the light over the whole of that space below a reasonable standard, severely diminished the amount of light in two of the places where it was reasonably to be expected, that is to say near the two windows.....The room as a whole may be adequately lit, but significant portions of it near the windows, not merely the corners or parts unlikely to be well lit, are poorly lit by direct light."

For the same reason in *Smyth*, Meredith J considered that the Waldram approach was more appropriate for town planning situations where the general lighting of the room as a whole was most relevant. He

¹⁰ *Midtown Ltd v City of London Real Property Company Ltd* [2005] EWHC 33 (Ch), at paras 60 & 61.

did not consider it helpful in rights to light situations in view of the frequent requirement to consider the need for task illumination close to windows in an affected room:

“The practical minimum tolerable is different from the theoretical minimum tolerable of the experts, and differs for different parts of the room in which different ordinary purposes are customarily satisfied. There is nothing special, peculiar or extraordinary in requiring a reasonable amount of direct light near the window of a room laterally lighted” (pp. 704-5).

7. THRESHOLD OF ADEQUATE LIGHT

Despite the courts' scepticism about so many aspects of the methodology there has, to date, been no direct judicial challenge to the threshold level of illuminance on which it is based. Indeed, even where the courts ultimately decide to moderate the expert evidence with that from other sources, they appear to be entirely comfortable with the notion that adequacy of light can be represented by 1 foot-candle, or a sky factor of 0.2%.

Discussions within the judgments often treat the concept of “adequate light” as synonymous with these values and a number of the judgments contain detailed summaries of the assumptions underlying the expert evidence. The following bald restatement of the Waldram principles is taken from Smith J's judgment in *Midtown Ltd v City of London Real Property Company Ltd* [2005] EWHC 33 (Ch) but is typical of the unquestioning acceptance by the courts of this aspect of the methodology:

“1 lumen per square foot is the amount of light that is required for someone to be able to read without artificial light on an ordinary overcast day. The whole dome of the sky produces 500 lumens, so that 1 lumen may also be described as 0.2% of the available sky” (para. 51).

As current recommendations for office illuminance are actually 50 times greater than this stated threshold (British Standards Institution 1992, p. 33) it is surprising that expert evidence continues to be presented on this basis, and that the courts have not previously been made aware of the discrepancy. In fact, the Waldram threshold is not only significantly lower than current guidance. It is also significantly lower than the guidance that was available in the 1930s when it was first proposed (Mills & Borg 1999) as well as being based on some questionable assertions by its original proponent (Chynoweth 2005).

8. CONCLUSIONS

The courts are faced with the difficult task deciding whether sufficient light continues to be enjoyed by the affected building “according to the ordinary notions of mankind”. In many of the cases studied the expert evidence has clearly played a significant role in this decision.

But this does not amount to the judicial approval of the experts' methodology, nor can it provide a justification for its continued use,

particularly if other factors suggest that it is no longer defensible. The Waldram methodology is not a rule of law. The relevant rule of law is that described in *Colls* and this requires the courts to consider all relevant factual circumstances when reaching their decisions on liability. This includes the evidence of expert witnesses who the court relies on to use appropriate techniques within their areas of expertise. The fifty-fifty rule is such a technique. Its relevance and continued use are therefore matters for the experts which present the evidence, rather than for the courts which rely on the expertise of those who present it.

In fact, whilst having little choice but to accept the validity of expert evidence which they are unqualified to challenge, the courts have consistently expressed disquiet over aspects of the Waldram methodology. There is judicial scepticism about the ability of so simplistic a model to accurately reflect the complexity of the environment which it purports to simulate. Particular concerns have been expressed over its inability to cater for the effects of sunlight and externally reflected light, on its dependence on internal room design, and on its failure to distinguish task illumination from general room lighting.

Perhaps the most surprising finding was the absence of any judicial challenge to the use of 1 foot-candle / 0.2 % sky factor as a threshold of adequate illuminance, and the extent to which this features in the judgments as a valid measure of adequacy. There was no indication that the courts had been provided with evidence as to the actual standards of adequate day lighting used in the construction industry, or about the concerns now being expressed about the inadequacy of the Waldram standards. This absence of any alternative viewpoint, as a counterbalance to the traditional expert techniques, raises concerns about the quality of decision making by the courts in this context.

In conclusion, although the courts rely on the evidence of expert witnesses in rights to light cases the nature of the expert techniques used must remain a matter for the experts rather than the courts. Neither the fifty-fifty rule, nor any other aspect of the Waldram methodology has the status of a rule of law, or is otherwise approved of by the courts. On the contrary the methodology has been the subject of criticism by the courts. If the courts were aware of the discrepancies between the methodology and official guidance on day lighting, or of the published criticisms of the methodology, additional judicial criticism could be expected. According to the findings of this paper the courts' approach to the Waldram methodology does not therefore provide a justification for its continued use by expert witnesses.

9. REFERENCES

- Anstey, J. 1992, *Rights of light and how to deal with them* (London:RICS Books).
- British Standards Institution 1992. *BS 8206-2:1992: Lighting for Buildings – Part 2: Code of Practice for Daylighting* (London: BSI).

Chynoweth, P., 2004, Progressing the rights to light debate - Part 1: A

review of current practice. *Structural Survey*, **22:3**, 131-137.

Chynoweth, P., 2005, Progressing the rights to light debate, part 2: the grumble point revisited. *Structural Survey*, **23:4**, 251-264.

CIBSE 1994, *Code for Interior Lighting* (London: Chartered Institution of Building Services Engineers).

Defoe, P.S. & Frame, I., 2005, The Validity of Daylight Calculations in Rights to Light. In *Proceedings of the Fifth International Postgraduate Research Conference in the Built & Human Environment*, 14-15 April 2005, University of Salford, Salford, UK.

Ellis, P. 1989, *Rights to Light*. (London: Estates Gazette).

Mills, E. & Borg, N., 1999, Trends in recommended illuminance levels: an international comparison. *Journal of the Illuminating Engineering Society*, **28**, 155-163.

Nabil, A. & Mardaljevic, J., 2005, Useful daylight illuminance: a new paradigm for assessing daylight in buildings. *Lighting Research and Technology*, **37:1**, 41-59.

Pitts, M., 2000, The Grumble Point: Is it Still Worth the Candle? *Structural Survey*, **18:5**, 255 - 258.