THE DEVELOPMENT OF AN EASEMENT OF SOLAR ACCESS

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The world's supply of fossil fuels is rapidly diminishing and alternative sources of energy are being sought. One viable energy alternative, especially in the home, is the power generated by the suns' rays. To gain the benefits of such power the source must be constant. Problems of access do and will arise with the growth of vegetation and neighbouring buildings. In this article Dr Bradbrook studies the legal implications of such problems. Many possible areas of law are examined such as zoning laws and existing American legislation. The author concludes that for Australian purposes the law of easements will be the most useful in assisting the solar user to maintain access to the direct rays of the sun.

I. INTRODUCTION

During the past decade public awareness in Australia of the capabilities and benefits of the use of solar energy¹ for space and water heating² and for the direct generation of electricity³ has increased rapidly. Along with this increased awareness has developed the Australian solar energy industry.⁴ Whereas in 1972 the annual sales of solar equipment were worth under \$1 million, by 1982 this had increased to over \$30 million. To date, over 100,000 solar hot water services are in use in this country, and many others have been exported.⁵ This rapid expansion has been encouraged and assisted by the Commonwealth and State governments since 1978 under the National Energy Research Development and Demonstration Program. During the years 1978-1981, grants exceeding \$13 million were approved under this program with respect to research, development and demonstration concerning renewable energy sources, the majority of this being for solar energy research.⁵

The rapid development in the practical mechanics of solar energy technology has not been matched by commensurate development in the law to overcome the problem of guaranteeing access to the direct rays of the sun for solar collector panels. Access to direct rays is essential. Although some solar collectors can capture diffused radiation from the sun, only a limited amount of energy can be obtained in this manner, well below the quantity needed for the efficient operation of a solar appliance. There is little incentive for a private landowner or an industry to install a solar appliance if the efficiency of the appliance can be ruined at any time by shadows on the solar collector panels caused by the erection of a building or the planting of vegetation on neighbouring land. Some form of legal protection for the solar user must be found.

In recent years the nature and magnitude of the problem of solar access has been recognized worldwide. For example, a resolution to encourage the use of solar energy and remove legal barriers to its use was adopted at the Ninth Conference on the Law of the World, held in Madrid in September in 1979. In Australia the Senate Standing Committee on Natural Rescources has also recognized the problem. In its Report on Solar Energy the Committee stated:

The Committee considers there is a need for the Commonwealth and State Authorities to investigate the need for legislation to define the solar rights, right to solar energy or sunshine rights of individual property owners and the implications for current town planning and building regulations. The need for such legislation arises because with every solar installation the nature and position of structures such as walls, fences, roofs of adjacent buildings and trees can affect the performance of the solar installations. This area is a matter for State concern.8

To date, legal commentators have placed far greater emphasis on the role of planning, sub-division control legislation and zoning laws in solving problems of solar access than on any other means.9 For example, the major recommendation of the 1982 report on solar access in New South Wales by the Total Environment Centre¹⁰ was that section 90 of the Environmental Planning and Assessment Act 1979 (N.S.W.) and Parts XI and XII of the Local Government Act 1919 (N.S.W.) should be amended to enable the overshadowing of adjacent properties betwen the hours of 9 a.m. and 3 p.m. (Eastern Standard Time) to be taken into account by the relevant local council on a sub-division of land. While planning, sub-division control legislation and zoning laws undoubtedly have a role to play in furthering the practical application of solar energy technology, they are mainly relevant to the development of new residential or industrial developments and have little (if any) practical relevance to the use of solar appliances in established suburbs. Such changes to the planning and zoning laws as are necessary to encourage the installation of solar appliances will be unlikely to occur until there is widespread acceptance in the community of the need to plan the development of new suburbs or cities with the use of solar energy in mind. While this may eventuate, it will be in the long-term rather than the short-term. It is submitted that the law of easements is presently of far greater relevance to an individual landowner in an established suburb who wishes to safeguard the right of solar access to his solar collector panels. Even if changes to planning laws such as the creation of solar zoning are later made, the law of easements will still be of vital assistance to the solar user. Whereas zoning

rules are subject to changes and alteration by amendment and are subject to special exceptions, easements, being private interests in land, have the advantage of permanency and are of indefinite duration.¹¹

This article will examine the relevance of the law of easements from the standpoint of the solar user. First, the article will consider the legal status of an express easement designed to guarantee the right of a solar user to the uninterrupted passage of the sun's rays to his solar collector panels (hereafter referred to as the "easement of solar access"). Will such an easement be enforceable at common law as an easement of light, subject to necessary modifications as to the quantum of light? If not, will it be enforceable at common law as a separate, novel type of easement? In the ensuing discussion of these issues, various enactments in the United States designed to secure the recognition of express easements of light and solar access will be considered and the need for similar legislation in Australia will be evaluated. Secondly, assuming that an express easement of solar access is either valid at common law or is introduced by legislation, the article will consider the various forms that this easement might take. Thirdly, assuming that a solar user is unable to protect his need for solar access by an express easement because of the unwillingness of his neighbour to grant such an easement, the article will examine other means by which the law of easements may assist the solar user. In this respect, it will consider whether an easement of solar access can be created by implied grant or by prescription and whether the law on these points is in need of reform. It will also consider the desirability of the uniform enactment in all Australian States of legislation designed to force the creation of easements.

II. THE LEGAL STATUS OF AN EXPRESS EASEMENT OF SOLAR ACCESS

If a solar user persuades his neighbour to grant him a right of solar access by means of an express easement, consideration must be given to the enforceability of such an agreement. An easement of solar access may be treated by the courts as an extension of the easement of light or may be regarded as a separate, novel type of easement. Its classification will affect the enforceability of such an agreement. For this reason its enforceability as an easement of light and as a novel type of easement must be considered separately.

1. Enforceability as an express easement of light¹²

The only State which imposes a legislative restriction on the express grant or reservation of an easement of light is Western Australia. The Property Law Act 1969-1979 (W.A.) section 121 states that an easement of light cannot be granted or be capable of coming into existence for a term exceeding 21 years without the written consent of the Governor, and in any case, unless the grant or other instrument creating the right is registered against the title to the servient tenement.

In the other States the legislation is silent on whether express grants or reservations of an easement of light are valid at law. Based on the High Court decision of *Commonwealth* v. *Registrar of Titles for Victoria*, ^{12a} however, it is clear that express grants of such easements are recognized without any restriction. In this

case, the Commonwealth acquired land "together with full and free right...to the uninterrupted access and enjoyment of light and air to the doors and windows of the building or buildings erected or to be erected...over and across all that strip of land 10 feet wide adjoining the eastern boundary of the said land". The Registrar of Titles refused to amend the certificate of title, arguing that the right to light and air through windows of any possible future building is not an existing easement. The High Court held that an easement of light may be appurtenant to the dominant tenement as a whole, not just to a particular building or the land, and that the rule that an easement of light must be limited to existing defined apertures, which originally arose in relation to prescriptive rights to light, need not be extended to cases of express grant.

Although express easements of light are clearly recognized, this may not assist the solar user as there is still some doubt as to the correct test for determining when an action for nuisance for breach of the easement of light will lie. The established authorities on the quantum of light to which the dominant owner is entitled have suggested that nuisance will not lie for interference with the light as long as sufficient light remains for the purposes of illumination.¹³ The amount of light required by a solar user is far in excess of this standard. The classic statement of the law is that of Lord Lindley, who stated in *Colls* .v *Home and Colonial Stores Ltd*:

...generally speaking an owner of ancient lights is entitled to sufficient light according to the ordinary notions of mankind for the comfortable use and enjoyment of his house as a dwelling-house, if it is a dwelling-house, or for the beneficial use and occupation of the house if it is a warehouse, a shop, or other place of business. The expressions "the ordinary notions of mankind", "comfortable use and enjoyment", and "beneficial use and occupation" introduce elements of uncertainty; but similar uncertainty has always existed and exists still in all cases of nuisance.¹⁴

Other cases, however, have suggested that nuisance may lie in certain circumstances even if the amount of light remaining is suitable for illumination. In Lazarus v. Artistic Photographic Co., 15 Kekewich J. extended the right to light to photography, which requires extra light to effect a chemical process. This is significant in the solar energy context as a chemical process is involved in the conversion by solar equipment of the sun's rays for heating or cooling purposes. The case of Ough v. King 16 is also significant in the solar context. In this case the Court of Appeal held that there is no fixed standard of lighting which can be used as a yardstick by which to assess whether the diminution of light by shading is an actionable nuisance. Lord Denning stated that the notions of mankind on the subject of light have changed and are changing; a judge is entitled to have regard for the locality and to the higher standards expected for comfort as the years go by. 17

The most recent and significant case on this point is Allen v. Greenwood. 18 In this case, the plaintiffs and the defendants were neighbours. The plaintiffs had constructed a greenhouse alongside the boundary over twenty years ago. The defendants later parked a caravan alongside the greenhouse on their side of the boundary and erected a fence only six inches from the greenhouse. The combined effect of the fence and caravan was to deprive half of the greenhouse of direct sunlight and to make it unsuitable for the growing of tomatoes and pot plants. The plaintiffs sought by injunction the removal of the fence and the caravan, arguing

that they had a prescriptive right to the amount of light to enable the greenhouse to be used for the cultivation of plants and vegetables. To achieve this purpose the direct rays of the sun were required. At first instance, Blackett-Ord, V.C. dismissed the action on the ground that a greenhouse requires a special amount of light and that the amount of light reaching the greenhouse was still sufficient to enable it to be used for the ordinary purposes of a room in a house. On appeal, however, this decision was reversed by the Court of Appeal on the basis that the plaintiffs had acquired by prescription the right to that degree of light, including the sun's direct rays, necessary for the growth of plants in the greenhouse. The court held that the correct test as to the quantum of light which must remain in order to avoid liability for nuisance differs according to the nature of the building. If the building is a dwelling-house, the measure of light must be sufficient to maintain reasonable standards of comfort as a dwelling-house. Similary, if the building is a greenhouse, the measure must be related to the reasonably satisfactory use of the building as a greenhouse. Buckley L.J. continued:

It is true that the satisfactory use of a greenhouse may require a freer access of light than a room in a dwelling-house, just as the comfortable use of a dwelling-house may require more light than the satisfactory use of a warehouse; but this in my view, is of no significance. It would in my judgement, and with deference to those who have suggested otherwise, be ridiculous to say that a green house had enough light because a man could read a newspaper there with reasonable comfort.¹⁹

In reaching this conclusion the Court of Appeal did not disagree with the dictum of Lord Lindley in *Colls* v. *Home and Colonial Stores Ltd* that the test is whether sufficient light is left "according to the ordinary notions of mankind for the comfortable use and enjoyment of his house as a dwelling-house", but disagreed with the meaning of the test. Whereas earlier cases had held that there is only one standard of an "ordinary" amount of light, which does not vary with the type of building, Goff L.J. stated:

I confess for my own part that I do not wholly understand the conception of an ordinary amount of light in the abstract. It seems that what is ordinary must depend on the nature of the building and to what it is ordinarily adapted. If, therefore, the building be, as it is in this case, a greenhouse, the normal use of which required a high degree of light, then it seems to me that that degree is ordinary light.²⁰

Based on this dictum, a solar user could argue that as the normal use of a solar collector requires a very high degree of light, that degree is ordinary light.

Although the matter is still not free from doubt,²¹ based on these recent authorities it would seem that the old fixed standard of illumination has been discarded and that where an express easement of light exists, the degree of protection from shading will depend on the use to which the building is put.

On one analysis, the case of *Allen* v. *Greenwood* can be construed as being favourable to the recognition of an easement of solar access as an extension of the easement of light. The fact that the old fixed standard of illumination appears to have given way to a more flexible standard of quantum of light is highly significant. The solar user could argue that under the easement of light he would be entitled to the degree of protection necessary to ensure the efficient operation of a solar

appliance (i.e., direct access to the sunlight for several hours every day). The other significant factor in *Allen* v. *Greenwood* is that under the easement of light the dominant owner was held to be entitled to receive the direct rays of the sun where he could prove that this is necessary for the use of the building on the dominant land.

Despite these factors, however, there are passages in two of the judgments in *Allen* v. *Greenwood* which strongly suggest that the court did not intend its decision to apply in the solar energy context. In two separate passages there is dicta to the effect that a distinction must be drawn between the heat and other properties of the sun and the light which emanates from it. Goff L.J., with whom Orr L.J. agreed, stated:

On other facts, particularly where one has solar heating...it may be possible and right to separate the heat, or some other property of the sun, from its light, and in such a case a different result might be reached.²²

Goff L.J. referred to this issue again in another part of his judgment when dealing with a hypothetical argument made by counsel for the defendants that an owner of a swimming pool, part of which is fortuitously warmed by sunlight coming through a window, could have no cause of action based on an easement of light if the sunlight was blocked and the benefit of the heat or radiant properties of the sun were lost. Goff L.J. agreed that in these circumstances the owners of the swimming pool would have no cause of action for the removal of the chance warmth provided that fully adequate light for the enjoyment of the swimming pool remains.²³

Based on these dicta, it must be considered highly doubtful whether the express easement of light is sufficiently broad to include solar access for solar energy purposes. These doubts are strengthened by the decision in *Tisdall* v. *McArthur & Co. (Steel and Metal) Ltd*²⁴ and *Smith* v. *Evangelization Society (Inc.) Trust*,²⁵ which held that indirect light or light entering through skylights is relevant in determining whether an easement of light has been obstructed to such an extent as to amount to an actionable nuisance. As indirect light loses its thermal energy at the reflecting surface, these cases are further indications of the courts' intention to disregard the heating properties of the sun in assessing the scope of the easement of light.

2. Enforceablity as a Separate, Novel Easement

As a possible alternative to regarding a right of solar access as an extension of the easement of light, the courts may decide that such a right is a separate easement of a novel kind.

Scientifically, there is a good reason for distinguishing between an easement of light and an easement required for solar heating. The sunlight needed for illumination differs in kind and degree from that necessary for the production of energy. While visible light covers only a narrow band of the spectrum in wavelengths from 4×10^{-7} metres to 8×10^{-7} metres, sunlight useable for solar energy purposes ranges in wavelengths from 2×10^{-7} metres to 2×10^{-6} metres.²⁶

The dicta of Goff L.J. in *Allen* v. *Greenwood* discussed above strongly suggest that an easement of solar access for solar energy purposes, if it exists at all, will be regarded by the courts as a novel type of easement. This issue was not settled in that case, however. As discussed above,²⁷ both Goff and Orr L.JJ. expressly stated that

they were leaving open the question whether solar heating would be appropriate for the creation of a new type of easement.

If the right of solar access is to be regarded as a separate easement, it must satisfy the essential characteristics of an easement at common law. ²⁸ Based on the decisions in *Re Ellenborough Park* ²⁹ and *Riley* v. *Pentilla*, ³⁰ the essential characteristics are as follows:

- 1. there must be a dominant and a servient tenement;³¹
- 2. an easement must "accommodate" the dominant tenement;³²
- the dominant and servient owners must be different persons;³³
- 4. the right must be capable of forming the subject matter of a grant.³⁴

Other cases have added the further requirement that the right must not amount to exclusive use of the servient tenement.³⁵ It is submitted that these requirements are satisfied by the right of solar access. The only possible doubt relates to requirement (4). In essence, the meaning of this requirement is that the right claimed as an easement must not be phrased widely or vaguely. In light of the High Court decision in Commonwealth v. Registrar of Titles for Victoria³⁶ that a right to an undefined flow of air can constitute an easement if created by express grant or reservation, a fortiori a right to solar access in favour of specified solar collector panels should have no difficulty in overcoming this requirement.

Even though the right of solar access satisfies these essential characteristics, for a different reason such a right may still not constitute an easement at common law. The issue is whether novel easements of a negative nature (which, if recognized, is how the easement of solar access would be classified) can be recognized at common law. It is clear that the class of possible easements is not closed altogether. Authority for this proposition is *Attorney-General of Southern Nigeria* v. *John Holt & Co. Ltd*,³⁷ where Lord Shaw of Dunfermline, delivering the judgment of the Privy Council, stated:

The law must adapt itself to the conditions of modern society and trade, and there is nothing in the purposes for which the easement is claimed inconsistent in principle with the right of easement as such. This principle is of general application, and was so treated in the House of Lords in *Dyce* v. *Hay* [(1852) 1 Macq. 305] by Lord St. Leonards L.C., who observed: "The category of servitudes and easements must alter and expand with the changes that take place in the circumstances of mankind". 38

The correctness of this policy was affirmed by the High Court of Australia in Commonwealth v. Registrar of Titles for Victoria and in subsequent Australian decisions.³⁹

It should be noted, however, that there is some authority for the proposition that while the categories of positive easements are unrestricted, no new negative easements can be created. The major case in point is *Phipps v. Pears.* 40 In this case, a house had been built in 1930 with its flank wall so close to the wall of the adjoining house that it did not need to be completely weatherproofed. In 1962, the defendant, the owner of the adjoining property, demolished his building causing the unprotected wall to become exposed to the elements. The Court of Appeal unanimously rejected the claim for a prescriptive easement on the basis that an easement to be protected from the weather did not exist at law. Lord Denning M.R.

stated: "Seeing that it is a negative easement, it must be looked at with caution. Because the law has been very chary of creating any new negative easements".

This possible rule that no new negative easements can be created was justified by Lord Denning on the ground that if the law were otherwise it would restrict the development of property. However, as one commentator has observed, this is also true of some positive easements, such as a right of way, and restrictive covenants. In this latter respect, it is noteworthy that Lord Denning himself pointed out that a restrictive covenant might have been used in the context of the facts in *Phipps* v. *Pears* to produce the desired result. While the restriction of the redevelopment of property is a legitimate concern it can be argued that the necessary protection could be achieved more appropriately by a judicious use of the procedures established for the discharge and modification of existing easements rather than by the establishment of a blanket prohibition against all negative easements.

It is still unclear whether novel easements of a negative character may be created in Australia. It is submitted, however, that the more likely position is that novel easements can be created, in the absence of any Australian authority to the contrary, despite the decision in *Phipps* v. *Pears*. This conclusion avoids the the creation of unnecessary divisions in the law and is consitent with the following dictum of Griffith C.J. in *Commonwealth* v. *Registrar of Titles for Victoria*:

In the course of argument I referred to several possible easements novel in kind. For instance, an easement or servitude for the passage of aeroplanes through the super adjacent air of the servient tenement to a landing place, for the passage of an electric current through suspended wires passing through that air, for the free passage of the flash from a heliograph station. Why not also the sun's rays?⁴³

If the easement of solar access is recognized as a separate easement, the issue of who has the responsibility for trimming any vegetation which blocks the solar access arises for consideration. The closest analogy would appear to be the duty to repair a right of way. In this context, it had been held that *prima facie* the onus to repair is on the dominant owner, 44 based on the principle that he who has the use of a thing ought to repair it. 45 If this analogy is accepted, the solar user will have the onus of trimming his neighbour's vegetation. An ancillary easement of a right to enter his neighbour's land in order to carry out the trimming would presumably be recognized at common law. 46 The only circumstances where the servient owner would be responsible for the trimming would be where he bound himself to trim by express agreement, by necessary implication 47 or by prescription. 48

So long as the validity of an easement of solar access remains uncertain, problems of registration in the Torrens register in each State may arise. The role of the Registrar of Titles in this context is specified in the relevant Torrens legislation.⁴⁹ In each State the Registrar must be satisfied that the right constitutes a valid easement before he registers it on the certificate of title of the servient land.⁵⁰ If he is in doubt as to the validity of the easement, he may state a case to the Supreme Court.⁵¹ Alternatively, he may simply refuse to register the right as an easement. In this context, the solar user can either summon the Registrar before the Supreme Court to show cause⁵² or may bring an action for mandamus to compel registration.⁵³ The validity of the alleged easement will then be determined by the Supreme Court.

3. Legislative Recognition of the Easement of Solar Access

In light of the uncertainty as to whether a right of solar access to solar collector panels will be recognized at common law either as an extension of the easement of light or as a separate easement, it is submitted that consideration should be given by the Australian State legislatures to the enactment of legislation declaring the right of solar access to be capable of existing as a separate, novel easement.

A useful precedent for this legislation exists in the United States. In 1975 Colorado became the first State to enact legislation recognizing the easements of solar access. ⁵⁴ As at Januay 1982, the substance of the Colorado legislation had been enacted in the legislation of 24 of the American States. ⁵⁵ The relevant legislation specifies both the manner of the creation of solar access easements and their contents.

On the manner of the creation of such easements, the legislation in all the States is similar. For example, the New York legislation states:⁵⁶

Any easement obtained for the purpose of exposure of a solar energy devise shall be created in writing and shall be subject to the same conveyancing and instrument recording requirements as other easements.

On the contents of solar access easements, however, the legislation differs. Some States permit such easements to be created by means of a descriptive statement of the burden of the easement, while other States require the burden to be stated with mathematical precision. An example of the former appears in the State of Georgia:⁵⁷

Any instrument creating a solar easement shall include, but the contents shall not be limited to:

- (a) a definite and certain description of the airspace affected by such easement;
 and
- (b) any terms or conditions or both under which the solar easement is granted or will be terminated.

An example of the latter appears in the State of New York:58

Any instrument creating a solar energy easement shall include, but the contents shall not be limited to:

- (a) The vertical and horizontal angles, expressed in degrees, at which the solar energy easement extends over the real property subject to the solar energy easement.
- (b) Any terms or conditions or both under which the solar energy easement is granted or will be terminated.
- (c) Any provisions for compensation of the owner of the property benefiting from the solar energy easement in the event of interference with the enjoyment of the solar energy easement or compensation of the owner of the property subject to the solar energy easement for maintaining the solar energy easement.⁵⁹

In determining which of these two types of legislation is an appropriate model for adoption in Australia, it is submitted that provided that the easement is described in such a way that it is not void for uncertainty and provided that the exact nature of the burden is clear, there is no justification for imposing by legislation the requirement that the easement be described mathematically. Such a requirement would substantially increase the cost of drafting a solar easement and would involve the application of stricter rules to easements of solar access than in relation to other types of easements. If a new easement of solar access is to be recognized, it should be

treated similarly to other easements.

Thus, the form of the Georgian legislation is recommended for adoption by the Australian State legislatures. If this recommendation is acted upon, it is considered essential that the phrase "solar energy device" is statutorily defined. Strangely, a definition of this phrase has been omitted in the legislation of many of the American States. A suitable definition of this phrase appears in the relevant Colorado legislation:

'Solar energy device' means a solar collector or other device or a structural design feature of a structure which provides for the collection of sunlight and which comprises part of a system for the conversion of the sun's radiant energy into thermal, chemical, mechanical, or electrical energy.⁶⁰

III. THE FORMS OF EXPRESS EASEMENTS OF SOLAR ACCESS⁶¹

Assuming that the easement of solar access is recognized either at common law or by the later enactment of legislation, the form that the easement should take must be considered. Solar easements will certainly present more than the usual number of drafting difficulties. If the easement of solar access is to avoid a legal challenge on the ground that it is void for uncertainty, the easement must be drafted accurately and intelligibly. When choosing the appropriate form for the easement to take, it is submitted that the goal should be to create a form which gives adequate protection against shading of collector panels to the solar user but does not overprotect the collectors, cause hardship to the neighbour granting the easement or unnecessarily complicate negotiations for the easement. The primary aim must be that of simplicity. If this aim is not achieved it may be necessary to call as witnesses mathmeticians and surveyors to prove the extent of easement if the easement has yet to be proved by court action.

As solar easements are as yet unknown in Australia, there are no precedents as to the forms of drafting which easements of this nature might take. For this reason it is necessary to look to the United States for illustrations of possible alternative types of form.

Three different types of forms of easements of solar access can be identified. The first type is based on time protection. This type of form seeks to ensure that the solar collector panels will not be shaded during certain specified hours of the day. The form requires the shade-protected area to be accurately identified. If, as is usual, the solar collector panels are located above ground level, a three-dimensional space will need to be described. A useful illustration of this type of form has been drafted by Kraemer as follows:⁶²

, hereinafter called Grantor, is the owner of the following descri	bed
property:	
(Legal Description of Grantor's Property)	
, hereinafter called Grantee, is the owner of certain property w	nich
shall hereinafter be called the Solar Property, the following described portio	n of
which shall be protected from shade as provided herein:	
(Legal Description of protected portion of Grantee's Property described in th	ree-
dimension if necessary)	
In consideration of Dollars, the receipt of which is her	eby

acknowledged, Grantor does hereby grant, bargain, sell and convey unto
Grantee, an easement and right-of-way for access to direct sunlight in that
airspace above the surface of Grantor's property necessary to prevent any
building, structure, landscaping, vegetation, or object of any type, from shading
the protected portion of the solar property described above between the hours of
A.M.,Standard Time, and P.M
Standard Time.
No obstruction of any kind or nature shall be allowed to encroach within the
aircnace described or to shade the protected most an afficient a

ace described or to shade the protected portion of Grantee's property.

Under this type of form it will be necessary to determine the length of time during each day when protection from shade will be required. Complete protection during all daylight hours is unnecessary for the efficient use of modern solar equipment and, if granted, would overprotect the solar user. Opinions differ between mechanical engineers as to the number of hours of direct sunlight which is the optimum for shade protection, but the general consensus appears to be that six hours' protection is adequate to enable the solar equipment to operate efficiently.63 The only proviso is that the six hours' period of protection must be centred on the zenith position of the sun (sometimes referred to as "solar noon"), as the amount of energy collected by solar collector panels during early morning and late afternoon when the sun is low in the sky is minimal. The difficulty here is that solar noon does not necessarily occur at midday local time. Solar noon will be reached one hour later during daylight-saving time than during standard time. In addition, solar noon will fluctuate from one location to another depending on the longitudinal distance of the solar collector panels from the standard time longitude meridians.64 If the timeprotection type of form is adopted in Australia, the actual hours of shade protection specified in the form will need to be separately calculated in each case. 65

The second type of form is sometimes referred to as a "setback and heightrestriction easement". It is designed to prohibit a neighbour to the north of the solar user's property from erecting any building or allowing vegetation to grow over a certain height or closer than a specified distance from the solar user's boundary. The following draft of this type of form has been advanced for consideration in the United States:66

Grantor hereby grants, bargains, sells, conveys and warrants to Grantee both an easement and right-of-way for continued receipt of direct solar radiant energy and an easement and right-of-way for continued receipt of light, view and air in and through only so much of the airspace above Grantor's property as lies above an elevation of ____ feet above mean sea level as is required to prevent the construction or placement of any obstruction, including vegetation, which is: A. At its closest point closer than ______ feet to Grantor's northerly⁶⁷ property line, or B. At its highest point higher than _____ feet above mean sea level. As incident to the easements herein granted, the future use and development of the above-described real property of Grantors is restricted such that no structure, vegetation, activity of land use, or other obstruction of any kind or nature shall encroach within the airspace described herein, with the following EXCEPTIONS only: (Here list exceptions for season, existing structures or vegetation, permissible shadow percentage and the like.)

The third type of form is based on planes of protection. The planes can be specified in relation either to a boundary line or to the location of the solar collector panels. The disadvantage with this type of form is the expense involved as it is beyond the competence of a lawyer to draft without the assistance of a surveyor. A surveyor would also be needed as a witness in any later dispute as to the enforcement of the easement. Numerous drafts of this type of form have been proposed. Kraemer suggests the following:68

f the easement. Numerous drafts of this type of form have been proposed. Kraemer aggests the following:68
, hereinafter called Grantor, is the owner of the following described
property:
(Legal Description of Grantor's Property) Now therefore, in consideration of
Definitions used in this Solar Easement: Solar Lot shall mean the lot benefitted and owned by the Grantee. In this Solar Easement the Solar Lot benefited is: Lot 1, Block 1, Sunnyside Estates
Solar Lot shall mean the lot benefitewd and owned by the Grantee. In this Solar reference. In this Solar Easement, the Solar Easement Location Point shall be: The concrete benchmark located at the southwesterly corner of the Solar Lot, which is three feet higher in elevation than the U.S.G.S. Benchmark at the SW corner of Section X. Township Y, Range Z.
Base Point shall mean a point in space above the Solar Lot. In this Solar Easement, Base Point shall be located as follows: Beginning at the southwesterly corner of the Solar Lot, thence easterly along the southern lot line feet, thence angle north feet, thence angle 90 degrees vertically ten feet above the Solar Easement Location Point to the Base Point.
Base Line shall mean the horizontal line created by extending the Base Point east or west. In this Solar Easement the Base Line shall be: A horizontal line extending east from the Base Point feet.
Side Planes shall be the planes created from each end of the Base Line by the vertical projection of a horizontal line from the east end of the Base Line extending south degrees east, and from the west end of the Base Line extending south degrees west.
Base Plane shall mean the lowest boundary plane of the Solar Lot. In this Solar Easement, Base Plane shall be a plane extending southerly from the Base Line a an angle of degrees from the horizontal.
Solar Easement The Solar Easement shall be that airspace above that portion of the Base Plane lying between the two Side Planes.

No tree, building or other obstruction of any nature shall be allowed to encroach within the airspace described.

An alternative version of the same type of form proposed by Burke and Lemons reads as follows:69

The Solar Collector Plane is defined as a vertical plane perpendicular to the Grantee's property and parallel to the common property line between the respective properties of the Grantor and the Grantee. The Solar Collector Plane is located feet north of such common property line.
The Lower Base Line of the Solar Collector Plane is defined as a line parallel to the grantee's southerly property line and is located on the Solar Collector Plane at height of feet above the mean sea level. The easterly end of the Base Line is located feet east of the eastern boundary line of Grantee's property. The westerly end of the Base Line is located feet east of the westerly boundary of Grantee's property. The Lower Base Line extends for a distance of feet.
The Lower Solar Plane is defined as the two-dimensional plane that intersects the Solar Collector Plane at the Lower Base Line and extends through the airspace above the Grantor's property at a vertical angle of degrees from the Solar Collector Plane, at a horizontal angle of degrees from the Solar Collector Plane, at a horizontal angle of degrees from the easterly end point of the Lower Base Line, and at a horizontal angle of degrees from the westerly end point of the Lower Base Line. (Note — if desired, the Lower Solar Plane may be defined as a curved, three-dimensional space corresponding to the course of the sun on December 21st ⁷⁰ of any year. Needless to say, due to the constantly changing solar elevation angles, such a description would be extremely difficult to draft.)
The Upper Solar Plane is defined as the plane created by elevating the Lower Solar Plane by vertical feet, located at a vertical height of feet above the Lower Solar Plane.
The Solar Envelope is defined as that portion of the airspace above Grantor's property which is contained within the Upper Solar Plane and the Lower Solar Plane.
Grantor hereby grants, bargains, sells, conveys and warrants to Grantee as easement and right-of-way for continued receipt of direct solar radiant energy through the Solar Envelope as herein defined. Under the terms of this easement, no structure, object, or tree shall be placed so as to intrude within the airspace above Grantor's property contained within the Solar Envelope as hereinabove defined.

In light of the stated aim of simplicity, the type of form based on planes of protection would appear to be undesirable. The reason for the frequent use of this type of form in the United States is not any inherent advantage in the form but rather the need to comply with the legislative requirement in many States that the easement be described mathematically in terms of vertical and horizontal angles. The other two types of form would not satisfy this legislation. Unless any State legislation is introduced in Australia which specifies the need for the easement to be described mathematically, it is submitted that no further consideration should be given to forms based on planes of protection. In the absence of such legislation either of the other two types of form would be sufficiently certain in their description to ensure that they would not be declared void for uncertainty at common law.⁷¹

The preference of the writer is for a form based on time protection. This form has the advantage over the setback and height-restriction type of form in that the latter does not take into account the changing elevation of the arc of the sun's apparent passage across the sky. Because the sun is at its highest position in the sky at midday, when it is due north, any building or vegetation on neighbouring property to the north will cast shorter shadows at that time than in the morning or afternoon when the sun is lower in the sky in the north-east and the north-west respectively. Thus, the solar user has a greater need of shade protection from buildings or vegetation north-east and north-west of the solar collector panels than from buildings or vegetation due north. This factor is taken account of by the time protection form of easement but not by the setback and height-restriction type of form. The latter type of form overprotects the solar user and unnecessarily restricts the owner of the servient land in that it applies a uniform restriction on all buildings and vegetation to the north of the northerly boundary line of the solar user regardless of whether they are located due north or west or east of north of the solar collector panels. Thus, under the setback and height-restriction form some buildings and vegetation may infringe the easement of solar access even if they do not actually shade the solar collector panels.

If the time protection form of easement of solar access is accepted in Australia, a suitable form must be devised in the context of the Torrens system of land titles registration. The following form is advanced for consideration. ⁷² It is capable of use in all Australian States.

I [name, address, and description of owner of servient tenement] (hereinafter called the transferor) being registered as the proprietor of an estate in fee simple subject however to such encumbrances liens and interests as are notified by memorandum underwritten or endorsed hereon in that piece of land etc. [as in certificate of title] delineated and shown on the plan annexed and therein coloured [red] being all that piece of land being [description of land] and being the whole of the land comprised in certificate of title volume _____ folio [land of transferor] in consideration of the sum of_____ paid to me by [name, address, and description of owner of the dominant tenement] (hereinafter called the transferee) the receipt of which is hereby acknowledged do hereby transfer and grant to the transferee as apurtenant to the land in certificate [land of transferee] — __ folio ___ Full and free right to the uninterrupted access and enjoyment of direct sunlight in that airspace above the surface of the land of the transferor necessary to prevent any building, structure, landscaping, vegetation, or object of any type from shading the protected portion of the airspace above the land of the transferee described between the hours of 9 a.m. and 3 p.m. Australian Eastern Standard Time or between the hours of 10 a.m. and 4 p.m. Australian Eastern Daylight-Saving Time. The protected portion of the airspace above the land of the transferee is [description of shade protected area in threedimensions).

It would be possible to make the use of this form compulsory by including the form in an additional Schedule to the Torrens legislation in each State⁷³ and adding a new section requiring that an easement of solar access shall be in or to the effect of the form contained in the Schedule. Alternatively, the form recommended above

could merely be regarded as a precedent, and the drafting of the easement could be left to the discretion of the parties. The preference of the writer is for the latter. Forms are not prescribed by the Torrens legislation for other types of easements, and the general rule that any form will be enforced provided that it is not void for uncertainty would seem to be equally appropriate in the solar context.

IV. OTHER METHODS OF CREATING EASEMENTS OF SOLAR ACCESS

As discussed earlier, there is some doubt whether an express easement of solar access would be recognized at common law. Even if this doubt is later proved false by court decision or by the introduction of legislation, the express easement of solar access may be difficult to obtain. As pointed out by Zillman and Deeny,74 the newness of solar technology may well work against the solar user. Although his neighbour may be willing to grant a right of way over his land, he may be unsure of the consequences of relinquishing rights to a portion of the airspace over his land. A further difficulty arises from the fact that in most instances it will be necessary for the solar user in a city or suburban neighbourhood to obtain easements from two or more neighbouring landowners to the east and west in order to guarantee sufficient solar access to make the solar device efficient. The possibility exists that one landowner, realizing that his consent is essential for the solar user, may hold out for an unreasonable sum of money as his price for granting a solar access easement.75 This could lead to a huge windfall gain for a landowner who may never have had any intention of developing his property to the extent that the access of sunlight to his neighbour's property would be infringed.

Other financial problems also exist with the system of protection of solar access by express easements. The legal costs of drafting a solar access easement may be considerable. The actual level of the cost will depend on whether the easement is described in general or technical terms. In the latter case, the legal cost of drawing up an agreement containing detailed mathematical calculations which vary according to the topography of the servient and dominant land is likely to be very high. The surveying costs may also be considerable. The final problem is that the entire cost will fall on the solar user and may be so high as to make the solar device an uneconomic proposition and so force the potential solar user back to reliance on fossil fuels. In this way the public policy of encouraging the development of alternative renewable sources of energy will be frustrated.

In light of these problems, it is important to consider whether an easement of solar access may be created otherwise than by express grant. At common law, easements may be created by implied grant or reservation or by prescription. These methods of creation will now be examined in the solar context. In addition to these methods, State legislation exists in Queensland and Tasmania which allows the Supreme Court to force the creation of easements on specified grounds. This legislation will also be examined in order to determine whether it is of assistance to a solar user.

1. Implied Grants or Reservations of Easements of Solar Access¹⁶
In the solar context, implied grants and reservations of easements are only of

marginal significance as easements of this nature will only arise on a subdivision of land. Thus, unless the issue of solar access arises at a time when the land requiring the access is being subdivided, the body of laws on implied grants and reservations of easements will be irrelevant. In the vast majority of cases, there will be no subdivision of land when the issue of solar access is raised.

Where the laws on implied grants and reservations of easements are applicable, the relevance of the various methods of creation of implied easements in the solar context will depend in certain respects on whether the easement of solar access is recognized as an extension of the easement of light or as a separate, novel easement.

(i) Recognition as a Separate, Novel Easement

If the easement of solar access is recognized as a separate, novel type of easement, it is submitted that there are three doctrinal routes by which such an easement may be created by implied grant or reservation: the easement of necessity, the rule in Wheeldon v. Burrows⁷⁷ and the State legislation importing general words into conveyances.

For the argument that a right of solar access has been converted into an easement on the basis of necessity⁷⁸ to succeed, the court must be satisfied that the right claimed is essential for the use of the alleged dominant tenement and is not merely a matter of convenience.⁷⁹ The solar user would argue that the right of solar access is essential to ensure the effective use of the existing solar device. The contrary argument however, is that solar access is never essential as the house or building could be heated by the use of fossil fuels. In light of the emphasis placed by the courts in the past for the claimed easement to be absolutely necessary, it is doubtful whether this test could be satisfied by the solar user.⁸⁰

The rule in Wheeldon v. Burrows was stated by Thesiger L.J. as follows:81

On the grant by the owner of the tenement of part of that tenement as it is then used and enjoyed, there will pass to the grantee all the continuous and apparent easements (by which, of course, I mean quasi easements) or, in other words, all those easements which are necessary to the reasonable enjoyment of the property granted, and which have been and are at the time of the grant used by the owners of the entirety for the benefit of the part granted.

The purpose of the rule is to enable the grantee of part of a subdivided block of land to take as easements the facilities the grantor himself found necessary when the land was in his common ownership. Thus, the rule could be relevant where the grantee purchases a block of land in a subdivision containing a house with solar collector panels where the right of solar access was safeguarded by the grantor in his use of the neighbouring block or blocks of land.

In order to determine whether the rule in *Wheeldon* v. *Burrows* can be applied in the solar context, it is important to determine whether an easement of solar access is capable of satisfying the three elements of the test propounded by Thesiger L.J. First, the alleged easement must be "continuous and apparent"; secondly, it must be "necessary to the reasonable enjoyment of the property granted"; thirdly, at the time of the grant it must be "used by the owners of the entirety for the benefit of the part granted". All three elements must be satisfied.⁸² The most difficult element to satisfy will be the "continuous and apparent" test. The courts have construed this phrase to mean that there must be on the quasi-servient tenement a feature which

would be seen on inspection and which is neither transitory nor intermittent.83 At first glance, it might be thought that an easement of solar access will seldom (if ever) satisfy this requirement. However, it was held by Chitty J. in Phillips v. Low84 that a right to light can satisfy the "continuous and apparent" test. As the correctness of this decision has never been doubted, it is relevant by analogy in the solar context. In relation to the requirement that the alleged easement must be " necessary to the reasonable enjoyment of the property granted", it should be noted that the test of necessity is less strict here than in the case of an easement of necessity.85 According to Mann C.J. in National Trustee Executors and Agency Co. of Australasia Ltd v. Long,86 this element can be satisfied by showing that the alleged easement is necessary to the enjoyment of the dominant tenement or that it is necessary to the enjoyment in a reasonable manner of some permanent feature or part of the dominant tenement. It would appear that a solar user would have little difficulty in satisfying this requirement. The final requirement that the right must have been used by the owners of the entirety for the benefit of the part granted raises a question of fact and should be simple for the solar user to prove if the other two elements are satisfied.

Thus, it is submitted that a solar user may be able to obtain an implied easement of solar access under the rule in *Wheeldon* v. *Burrows*. The final issue to consider is whether this rule is applicable to Torrens land. This issue is vital as the vast majority of city and suburban properties in Australia are subject to the Torrens system. A detailed discussion of this issue is beyond the scope of this article and is canvassed elsewhere.⁸⁷ In outline, however, the position appears to be that the rule definitely applies to Torrens land in Victoria,⁸⁸ South Australia,⁸⁹ Western Australia,⁹⁰ and Tasmania⁹¹ and is definitely inapplicable in New South Wales. The position in Queensland is uncertain.

The legislation importing general words into conveyances is based on the Conveyancing Act 1881 (U.K.), section 6, whereby the British legislature endeavoured to shorten conveyances by enacting that a conveyance of land shall be deemed to include certain specified rights. Each State has enacted similar legislation. For example, section 67 of the Conveyancing Act 1919 (N.S.W.) states in part:⁹²

- (1) A conveyance of land shall be deemed to include and shall by virtue of this Act, operate to convey with the land, all buildings, erections, fixtures, commons, hedges, ditches, fences, ways, waters, watercourses, liberties, privileges, easements, rights and advantages whatsoever, appertaining or reputed to appertain to the land, or any part thereof, or, at the time of conveyance, demised, occupied, or enjoyed with, or reputed or known as part of parcel of or appurtenant to the land or any part thereof...
- (3) This section applies only if and as far as a contrary intention is not expressed in the conveyance, and has effect subject to the terms of the conveyance and to the provisions therein contained.

Thus based on this legislation, if prior to the sale to a solar user of a block of land in a subdivision (the quasi-dominant land) the solar user was legally occupying the quasi-dominant land and pursuant to an informal agreement the owner of the quasi-servient block was trimming the vegetation on his land and respecting the right of solar access to the solar user's collector panels, on a later sale of the quasi-dominant land the informal agreement could be converted into an easement. This will occur on

the basis that the right of solar access is an "advantage ... appertaining or reputed to appertain to the land". An easement will be created in this manner unless the parties express a contrary intention in the conveyance or unless the owner of the quasi-servient land revokes the informal agreement prior to executing the conveyance. It must also be shown by the solar user that the agreement does not constitute an advantage of a purely temporary nature, "but must be capable per se of constituting an easement. On this latter point, the solar user should have no difficulty in the majority of cases.

The issue again rises whether the legislation importing general words into conveyances applies to Torrens land. The conclusion reached elsewhere⁹⁴ is that the legislation applies to Torrens land in Victoria⁹⁵ and Western Australia,⁹⁶ but not in New South Wales and Tasmania. The position in Queensland and South Australia is regarded as uncertain.

(ii) Recognition as an Extension of the Easement of Light

If the easement of solar access is recognized as an extension of the easement of light, a preliminary issue arises as to whether implied grants or reservations of an easement of light will be recognized at all. There are dicta by Farwell J. in Higgins v. Betts⁹⁷ to the effect that an easement of light may not be created by implied grant or reservation. Later cases, however, have taken a contrary position. A useful illustration is Stevens v. National Mutual Life Association of Australasia Ltd,⁹⁸ where Williams J. of the New Zealand Court of Appeal quoted with approval the following dictum of Tindal C.J. in Swansborough v. Coventry:⁹⁹

[W]here the same person possesses a house, having the actual use and enjoyment of certain lights, and also possesses the adjoining land, and sells the house to another person, although the lights be new, he cannot, nor can anyone who claims under him, build upon the adjoining land so as to obstruct or interrupt the enjoyment of those lights.¹⁰⁰

Even if this initial hurdle is overcome, only two of the three methods of creation of implied easements which would apply if the right of solar access is recognized as a separate, novel easement will apply if the right is recognized as an extension of the easement of light. The easement of necessity will be definitely inapplicable in this context. Authority for this proposition is Ray v. Hazeldine, 101 where Kekewich J. held that an easement of light is not susceptible to a claim of necessity on the basis that a room can always be used without light. On the other hand, provided that the three elements of the test of Thesiger L.J. are satisfied on the facts, the rule in Wheeldon v. Burrows¹⁰² should be available to a solar user if the easement of solar access is regarded as an extension of the easement of light. This conclusion is based on Phillips v. Low, 103 where an implied easement of light was held to be created under the rule in Wheeldon v. Burrows. Despite arguments advanced to the contrary, Chitty J. held that a right to light is capable of satisfying the "continuous and apparent" test. It is also submitted that the legislation importing general words into conveyance is relevant in this context. Although there is no authority directly on point, an easement of light would appear to fall within the scope of the wording of the relevant section in each State.104

2. Prescriptive Easements of Solar Access¹⁰⁵

Consideraton must be given to whether an easement of solar access can be created by prescription. ¹⁰⁶ Prescriptive rights in this country are recognized after 20 years' continuous use of the alleged easement. ¹⁰⁷ In all States, prescriptive easements are recognized under the doctrine of lost modern grant, under which a grant will be presumed by the courts to have been made and lost in modern times if enjoyment of the alleged easement for 20 years can be proved. In addition, in South Australia and Western Australia a prescriptive right can be claimed under the Prescription Act 1832 (U.K.), which was either expressly or impliedly adopted in those States. ¹⁰⁸ In Tasmania, the provisions of the British Act were enacted independently in the Prescription Act 1934 (Tas.).

At the outset, it is clear that the doctrine of prescription will only be relevant in the solar context if the easement of solar access is held to be a separate, novel easement. If the easement is held to be an extension of the easement of light, no prescriptive claims will be possible as legislation in each State has expressly abolished the creation of easements of light by prescription. For example, the Conveyancing Act 1919 (N.S.W.), section 179 states:¹⁰⁹

From and after the first day of December. one thousand nine hundred and four (being the day of the commencement of the Ancient Lights Declaratory Act, 1904) no right to the access or use of light or air to or for any building shall be deemed to exist, or to be capable of coming into existence by reason only of the enjoyment of such access, or use, for any period, or of any presumption of a lost grant based upon such enjoyment.

On the assumption that the easement of solar access will be recognised as a separate, novel easement, the various rules for the creation of prescriptive claims must be satisfied by the solar user before an easement will be established. In addition to showing 20 year's use, the following four requirements must be satisfied. First, the use must be of such a nature and frequency as to indicate that the dominant owner is asserting a right.110 Secondly, the use must not be exercised by violence, in stealth or pursuant to a licence granted by the servient owner. 111 Traditionally, this requirement has been said to be "nec vi, nec clam, nec precario", and is summarized by the phrase that the enjoyment must be "as of right". Thirdly, the object over which an easement is sought must be permanent. If the object over which a prescriptive right is claimed was only constructed for a temporary and not for a permanent purpose, the right is said to be precarious and is incapable of becoming an easement even if all the other requirements are satisfied.112 Finally, it is said that the servient owner must acquiesce in the exercise of the alleged easement. The meaning of "acquiescence" in this context was explained by Fry J. in Dalton v. Angus as follows:113

In many cases, as, for instance, in the case of that acquiescence which creates a right of way, it will be found to involve the doing of some act by one man upon the land of another; secondly, the absence of right to do that act in the person doing it; thirdly, the knowledge of the person affected by it that the act is done; fourthly, the power of the person affected by the act to prevent such act either by act on his part or by action in the Courts; and lastly, the abstinence by him from any such interference for such a length of time as renders it reasonable for the Courts to say that he shall not afterwards interfere to stop the act being done.

In the majority of situations, a solar user should have little difficulty in satisfying these common law requirements. As solar collector panels are invariably erected on the roofs of buildings in order to ensure their efficient operation, the right to solar access that the solar user is seeking will be obvious to his neighbours and will prevent the allegation that the right was claimed in stealth or that the neighbour did not acquiesce in the exercise of the claimed right. In addition, as solar collector panels are designed as a permanent source of energy collection it cannot be realistically argued that they were only constructed for a temporary purpose. The fact that individual panels may need replacement from time to time should be regarded as irrelevant.

Thus, assuming that an easement of solar access is recognized as a separate type of easement at common law, in theory a solar user can guarantee his access to the direct rays of the sun by a prescriptive easement. However, as a practical matter the law on prescription is likely to be of little (if any) relevance to a solar user. Based on the present law, the solar user must install and use his solar collector panels for twenty years before his right to solar access will become an easement. At any time during this twenty year period the neighbouring landowner can block the solar access with impunity. Potential solar users who are reluctant to invest in solar equipment if their right of solar access is not legally safeguarded are unlikely to be reassured by the prospect that after twenty years' continuous use their right of access will be safeguarded by the law of prescription.

At present law is clearly ineffective in the solar context, it is submitted that consideration should be given either to strengthening the law on prescription so as to make it effective for the solar user or to enacting legislation declaring the law of prescription inapplicable to the easement of solar access. As a more drastic and wide-ranging alternative, prescriptive easements might be abolished in their entirety.

To be at all useful in the solar context, it is submitted that the period of prescription would need to be reduced to a maximum of six years. It would be difficult to justify this reduced period of prescription, however, with out extending the same reduced period to all claims for prescription. Two possible justifications for this reform might be advanced. The first justification is based on public policy. It might be argued that the solar user should be specially favoured by the law as the use of solar energy can assist in the conservation of fossil fuels and in the long term can make a significant contribution to the nation's total power generation. There are further advantages to the community in the lowering of pollution levels caused by conventional sources of energy production and the long-term reduction in the cost of living. The second possible justification is to draw an analogy with the State legislation on the limitation of actions,114 which imposes different periods of limitation for separate causes of action. Despite these possible justifications, however, it will be difficult to satisfy the State legislatures that solar users should be singled out for privileged treatment in this regard, particularly when solar users are a minority group in the community.

Even a reduced prescriptive period of six years would not be totally satisfactory for the solar user. In order to encourage householders and industries to invest in solar appliances, a guaranteed right of access to direct sunlight is needed at the time of the installation of the appliances, not several years later. For this reason the laws

on prescription can never satisfy the needs of the solar user. Accordingly it is submitted that a more satisfactory alternative would be to abolish prescriptive easements of solar access.¹¹⁵. This could be done by the addition of a new section to the relevant State property law legislation.¹¹⁶ Alternatively, if the earlier recommendation that the easement of solar access is acted upon the abolition of prescriptive easements of solar access could be included in the same section. This form of legislation has been enacted in California and Missouri.¹¹⁷ For example' The Colorado legislation reads:

Solar easements — creation. Any easement obtained for the purpose of exposure of a solar energy device shall be created in writing and shall be subject to the same conveyancing and instrument recording requirements as other easements, except that a solar easement shall not be acquired by prescription.

Three reasons can be advanced for this suggested reform. First, the policy considerations which led the States to abolish prescriptive easements of light and air would seem to apply with equal force to the separate easement of solar access. 118 Secondly, as already mentioned, the solar user needs a guaranteed right of solar access from the time he purchases the solar equipment, and this can never be achieved by the laws of prescription. The final reason is that it is unfair to neighbouring property owners, who in order to prevent the solar access from ripening into a prescriptive easement would be obliged to expend money on constructing an erection to block solar access to the solar collector panels.

This latter problem could be resolved by the enactment in each State of a modified version of the Rights of Light Act 1959 (U.K.). This legislation modified the British laws on prescriptive claims to light by enabling a landowner to register a notice with the relevant local authority stating his desire to maintain his right to obstruct a neighbour's light. 120 The effect of registering such a notice is to bar a later prescriptive claim to an easement of light.¹²¹ The legislation was introduced out of recognition of the practical difficulties caused to a landowner by the requirement that he physically block his neighbour's light. Legislation of this nature could easily be modified to apply to prescriptive claims for solar access and with such legislation the law on prescription would certainly operate more fairly for the quasi-servient landowner. However, on balance it is submitted that legislation of this nature is undesirable in this country in the solar context. As observed elsewhere, 122 while a system of registration would eliminate the problem of neighbours shading solar collectors solely to prevent an easement from arising by prescription, the net result might be minimal protection for solar users as property owners might quickly register the necessary notice in all cases to protect the value of their property, in addition, the enactment of similar legislation would entail the creation of a new bureaucracy and additional public expenditure, which at least until the use of solar energy becomes widespread in the community could scarcely be justified.

A further alternative is to abolish prescriptive easements in their entirety. This course of action was recommended by the English Law Reform Committee in 1966¹²³ but has never been acted upon in either England or any of the Australian States. As this alternative raises broader issues of policy, and as there is currently no move to abolish the doctrine of prescription in this country, it would appear to be simpler and more expeditious to enact legislation specifically abolishing prescriptive claims to an easement of solar access.

3. Forcing the Creation of Easements of Solar Access

The common law on easements concentrates exclusively on the protection of private rights and gives no recognition to the public interest. The protection of the public interest has generally been viewed as a function of the legislature rather than the courts.124 In the majority of disputes involving easements there is a public interest in the outcome of the dispute. Exceptions do exists, however, and in these situations the legislature has intervened to safeguard the public interest. A useful illustration is the prescriptive easement of light, which was abolished in all States shortly after the High Court had held in Delohery v. Permanent Trustee Co. of New South Wales125 that the English doctrine of ancient lights was applicable in Australia. 126 In that situation the public interest was to ensure that the development of cities and towns in this country is not impeded. Another illustration is the need for access to land which is subdivided in such a way as to leave one block of land without a means of access to a public highway. In recognition of the public interest in ensuring the productive use of land, the New Zealand legislature enacted legislation in 1975127 empowering a court to order the creation of a right of way to the landlocked land over any other block of land. 128

It is submitted that the public interest is also sufficiently affected in the solar context to justify legislative intervention. As already mentioned, the use of solar energy technology reduces reliance on fossil fuels, reduces the levels of pollution resulting from conventional fuel supplies and in the long term is capable of reducing the cost of living. Without legislative intervention, the public interest in the furtherance of the use of solar energy can be thwarted by the whim of individual landowners, who may arbitrarily refuse to grant an express easement of solar access over their properties. The laws on the creation of such an easement by implied grant or reservation or by prescription have already been shown to be of little practical significance in this context.

The form of the legislative intervention could be specific to the solar context or could be of general application. Specific solar legislation has recently been recommended in a report on solar access in New South Wales by the Total Environment Centre. 129 The Centre recommended the enactment of complex State legislation to be entitled the Solar Easements Registration Act. Under this proposed legislation an application for registration of a solar easement could be lodged by any person who has an interest in the land which would constitute the dominant tenement in respect of either an existing or prospective solar collector installed or to be installed on the dominant tenement. The matter would be determined by the Land and Environment Court, which would be bound to take into account the objections of any affected party before granting the application. If granted, the easement would be recorded by the Registrar-General in the Torrens register. The consequence of registration would be to create a solar easement which would guarantee that all parts of the collecting surface would be free from shading by any vegetation or structure standing on the servient tenement between the hours of 9 a.m. and 3 p.m. Eastern Standard Time on any day of the year. Except in exceptional circumstances or with the permission of the servient owner, no solar easement would be registrable where the position and dimension of an existing structure or vegetation would cause a breach of the easement if it were registered. In these circumstances, the court would have the power to register the easement subject to a variation in the guaranteed hours of shade protection. Both the dominant and the servient owners would be empowered to apply for a variation of any registered solar easement at any time. The dominant owner would be permitted to apply for a variation in the event that the solar collector is or is proposed to be relocated, enlarged, or modified. The servient owner would be able to apply for cancellation or variation where the solar collector has not been used for a period of one year or more.¹³⁰

While legislation of this nature would undoubtedly be effective in guaranteeing solar access for existing and prospective solar users, the preference of the writer is for the enactment of generally applicable legislation. Rather than viewing the failure of the common law to guarantee a right of solar access as a problem itself, the powerlessness of the courts to assist the solar user should be viewed as merely one aspect of the inability of the courts under the common law of easements to protect the public interest. In addition, the enactment of more general legislation would be politically more acceptable. Specific legislation of the type recommended by the Total Environment Centre would be expensive to administer and would be hard to justify at the present time when the market penetration of solar appliances in Australia is still low. The enactment of specific solar legislation could well lead to claims by other minority groups for similar privileged treatment. This could eventually lead to a plethora of piecemeal, costly *ad hoc* legislation to deal with a general problem which transcends sectional interests.

A form of generally applicable legislation has recently been introduced in Queensland and Tasmania, where the courts are empowered in limited circumstances to impose easements over servient land where this is necessary for the effective use of the dominant land. It is instructive to examine this legislation in the solar context. The relevant Queensland legislation is the Property Law Act 1974-1978, section 180, which reads in part:¹³¹

- (1) Where it is reasonably necessary in the interests of effective land use in any reasonable manner of any land (herein in this section referred as "the dominant land") that such land, or the owner for the time being of such land, should in respect of any other land (herein in this section referred to as "the servient land") have a statutory right of user in respect of that other land, the court may, on the application of the owner of the dominant land but subject to the succeeding provisions of this section, impose upon the servient land, or upon the owner for the time being of such land, an obligation of user or an obligation to permit such user in accordance with that order.
- (2) A statutory right of user imposed under subsection (1) may take the form of an easement, licence or otherwise ...
- (3) An order of the kind referred to in subsection (1) shall not be made unless the court is satisfied that —
 - (a) it is consistent with the public interest that the dominant land should be used in the manner proposed; and
 - (b) the owner of the servient land can be adequately recompensed in money for any loss or damage or disadvantage which he may suffer from the imposition of the obligation; and either
 - (c) the owner of the servient land has refused to agree to accept the imposition of such obligation and his refusal is in all circumstances

unreasonable; or

- (d) no person can be found who possesses the necessary capacity to agree to accept the imposition of such obligation.
- (4) An order under this section (including an order under this subsection)
 - (a) shall, except in special circumstances, include provision for payment by the applicant to such person or persons as may be specified in the order of such amount by way of compensation or consideration as in the circumstances appears to the Court to be just;
 - (d) may on the application of the owner of the servient tenement or of the dominant tenement be modified or extinguished by order of the Court where it is satisfied that
 - (i) the statutory right of user, or some aspect of it, is no longer reasonably necessary in the interests of effective use of the dominant land; or
 - (ii) some material change in the circumstances has taken place since the order imposing the statutory right of user was made;
- (7) In this section
 - (b) "statutory right of user" includes any right of, or in the nature of, a right of way over, or of access to, or entry upon land, and any right to carry and place any utility upon, over, across, through, under or into land;
- (8) This section does not bind the Crown.

This legislation was based on a report of the Queensland Law Reform Commission in 1973,¹³² which approved a similar recommendation made earlier by the Law Commission of England and Wales.¹³³ The Law Commission recommended that a court should be empowered to impose land obligations (*i.e.*, easements) upon land wherever this was in the interests of the improved use or development of other lands.

An examination of the wording of this legislation¹³⁴ shows that a solar user would need to satisfy four requirements before the court would be empowered to impose an easement of solar access over his neighbour's land. First, under subsection (1) he must prove that such an easement is "reasonably necessary in the interests of effective use in any reasonable manner of any land". Secondly, under subsection (3)(a) he must show that his use of the dominant land for solar energy collection is "consistent with the public interest". Thirdly, under subsection (3)(b) he must show that the owner of the servient land can be adequately recompensed in money for any loss. Finally, under subsection (3)(c) he must show that it is unreasonable for the servient owner to refuse to consent to the grant of an easement of solar access.

It would seem to be comparatively easy for the solar user to overcome the first three of these four requirements. In relation to the first requirement, the solar user would argue that the use of the property for solar energy purposes is a reasonable manner of use of his land and that solar access is "reasonably necessary in the interests of effective use" of the solar device. In Queensland, this first requirement has been judicially considered in the context of a claimed right of way to landlocked land in *Re Seaforth Land Sales Pty Ltd's Land*. "35 Douglas J. held, *inter alia*, that the fact that there was an alternative to the easement sought by the applicant in that

it could have gained access to its land by extending another easement over other land was not fatal to the easement claimed. This decision poses no threats to a solar user. By direct analogy to the reasoning of Douglas J., the solar user would argue that the fact that there is an alternative to the easement of solar access in that the house or building on the dominant land could be powered by conventional sources of energy should not defeat his claim for the easement sought.

In relation to the second requirement, several policy arguments discussed above could be cited by the solar user in favour of his submission that the use of his property for solar energy purposes is "consistent with the public interest". On this point the solar user is assisted by the interpretation given by the Queensland courts to the phrase "consistent with the public interest". In the most recent case, Ex Parte Edward Street Properties Pty Ltd, 136 Andrews J. held that the onus on the applicant is not to prove that the public interest would be advanced by the proposed use of the dominant tenement, but rather that the use is not inconsistent with or contrary to the public interest. In reaching this decision, his Honour specifically rejected the judgment of Matthews J. in Tipler v. Fraser, 137 who held that an applicant must prove that his proposed use of the land is in the public interest. Andrews J. considered that this would place a very heavy burden on the applicant. The solar user should easily be able to satisfy this relaxed requirement.

The third requirement, relating to compensation, has not been the subject of any relevant reported decision. The problem here is that the level of compensation thought appropriate by the court may be sufficiently large to make the use of solar energy uneconomic. This is most likely to occur in inner city business districts where the need to guarantee solar access might prevent substantial building developments from taking place. In these circumstances, the compensation awarded would be prohibitive. In suburban and country areas, however, where the permitted density of development is far less, it is unlikely that a solar user's access would inhibit the building plans of his neighbour. Even if this did occur, the problem could usually be resolved by a partial modification or relocation of the neighbour's proposed building. In these circumstances, the likely level of compensation would be low. Thus, except in inner city areas, the requirement for compensation is unlikely to render the granting of an easement of solar access uneconomic.

The final requirement, that the refusal of the servient owner to consent to the grant of an easement must be shown to be unreasonable, is likely to prove the most difficult in practice for the solar user. The neighbour may argue that his refusal to grant an easement of solar access is reasonable as such an easement would prevent or inhibit future specific plans which the neighbour may have to develop his property. As the onus is on the solar user to prove that the neighbour is being unreasonable, an argument of this nature put by a neighbour could prove fatal to a claimed easement of solar access. However, unless the neighbour has formulated definite plans for the development of his property, the court could well decide in favour of the solar user, as it is unlikely to be impressed by vague unsubstantiated ideas as to the use of the neighbouring property which may have been hastily devised to defeat the claimed easement of solar access. In this respect the solar user must rely on the discretion and good judgment of the court.

Consideration should be given to the possibility of removing this difficulty by

legislative amendment. This could most easily be achieved by reversing the onus of proof either generally, in respect of all applications, or specifically in the case of a claim by a solar user. Many precedents exist in other contexts for legislation of this nature. 138 If the onus of proof is to be reversed generally, this could be best achieved by the inclusion of the following subsection as part of the section creating the statutory right of user:

In any proceedings under this section, the burden shall lie on the defendant to prove that his refusal to accept the imposition of an obligation of user or an obligation to permit such user is in all the circumstances reasonable.

If the reversal of the onus of proof is to be limited to the solar context, the amendment could read as follows:

In any proceedings under this section for a statutory right of user in respect of a solar energy device¹³⁹ located on the dominant land, the burden shall lie on the defendant to prove that his refusal to accept the imposition of an obligation of user or an obligation to permit such user is in all circumstances reasonable.

The preference of the writer is for a general reversal of the onus of proof, although this is ultimately a political question.

In addition to the need to satisfy the four requirements above, one other problem remains for the solar user. Even if the solar user fits his application within the wording of the Queensland legislation, the court still has an unfettered discretion to refuse to grant an easement of solar access. This discretion is based on the wording of subsection (1) of the Queensland Act, which states that the court "may ... impose ... an obligation of user". This problem for the solar user is exacerbated by the fact that appellate courts are very reluctant to overturn the exercise of a discretion by a trial judge. Thus, there is little point in a solar user appealing to a higher court against the unfavourable exercise of judicial discretion under this form of legislation.

This issue gives rise to the question whether the present legislation in Queensland and Tasmania should be amended to impose a duty on the court to grant the easement claimed if the various requirements of the section are satisfied. Although this might be advantageous for a solar user, such a change would be difficult to justify on a consideration of wider principles. The court has an equal responsibility to safeguard the legitimate rights of a neighbour respecting the use of his property as it has to a solar user. The whole notion of public policy, upon which the Queensland and Tasmanian legislation is based, is sufficiently vague to make it impossible as a practical matter for the present judicial discretion to be removed if possible injustice is to be avoided. It is also significant that comparable legislation overseas (e.g., section 129B of the Property Act Law 1952 (N.Z.)) invariably preserves judicial discretion in this area.

In summary, it is suggested that the present Queensland and Tasmanian legislation establishing a statutory right of user should be amended in order to reverse the onus of proof where the servient owner refuses to grant an easement on the ground that the claimed right is unreasonable, and this amended legislation should be copied by the Victorian, New South Wales, South Australian and Western Australian legislatures. This will not only enable the courts to protect the need of solar users for solar access but will have the much wider beneficial effect of enabling the court to encourage and maximise the effective use of land in all situations.

V. CONCLUSION

This article has sought to show that the law of easements can assist in guaranteeing the legal right of access to direct sunlight if each State enacts a small amendment adding three new sections to its property law legislation.¹⁴¹ The first section would declare the right of solar access to be capable of existing as a separate easement. The second section would clarify the application or non-application of the doctrine of prescription to this type of easement. The third section would give the courts the general right to force the creation of easements in the public interest in certain specified circumstances. In each instance a suitable draft of the proposed section has been discussed above. The enactment of more complex legislation has been shown to be unnecessary.

In the past, Australian real property law has been noteworthy for the reluctance of the State legislatures to amend their property statutes to accord with the changing needs in society. Numerous illustrations could be given. For example, it is only in Queensland that the State property legislation has been thoroughly re-examined and reformed in modern times. ¹⁴² In all other States, the property legislation is based largely on British legislation which pre-dates the Law of Property Act 1925 (U.K.). A further illustration is the State landlord-tenant legislation, which except in Victoria and South Australia, ¹⁴³ is based largely on archaic concepts irrelevant in modern society. ¹⁴⁴ The majority of the few changes which have been made to the State property legislation have merely copied the form of new amendments introduced in the United Kingdom. This background does not bode well for the introduction of the reforms suggested in this article.

The reason for the reluctance of the Australian State legislatures to innovate in the area of property law reform is a matter for speculation. The probable reason was advanced by Selman, who stated that "the likelihood of change or development in any given area of the law varies directly with the number of persons affected by the particular norm under consideration". 145 If Selman is correct, then in the long-term the likelihood of the enactment of the reforms suggested in this article are excellent. The impending energy crisis, which is likely to hit Australia in the late 1980's when oil reserves run low, will affect all segments of society and will undoubtedly increase the interest in the use of solar appliances. By that time the political pressure to amend the existing property legislation to remove the legal obstacles to the use of solar energy should prove irresistible. Whether these changes are made in the short-term will depend on the foresight of the parliamentarians and the political clout of the solar manufacturing industry.

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FOOTNOTES

- 1 Although all of the earth's energy resources except nuclear energy are indirect forms of solar energy, "solar energy" in this article is confined to energy from the sun radiated through the electromagnetic spectrum and collected by the direct action of insolation on solar collector panels. For the purposes of this article, other forms of solar energy, such as windpower, biomass conversion and ocean thermal energy converson are excluded.
- 2 To date, the flat-plate solar collector for water heating has proved to be the most common way of utilising solar energy. The percentage of the average households annual energy used for water heating which can be supplied by solar energy (the "solar fraction") will vary from location to location. For the capital cities, the range is from 90% in Darwin to 50% in Hobart. The relevant figures for the other capital cities are Melbourne 55%, Sydney 65%, Canberra 70%, Adelaide 65%, Brisbane 80%, and Perth 70%. The remaining energy necessary for water heating is supplied by an electric or gas heater in the storage tank. See I. Pausacker and J. Andrews, Living Better With Less (1981) 45-46. J. Andrews, Solar Jobs in Victoria: The Economic Impact of the Solar Industry (1982) 18A.
- 3 The generation of electricity by solar cells is currently uneconomic for ordinary household use due to the cells' low efficiency and high cost. They are at present only used in isolated places where there inefficiency is compensated for by their low maintenance and reliability. They are presently used, inter alia, to power navigational lights, microwave repeater stations and radio beacons for air navigation. See M. Green, "Electricity from the Sun" (1982) 3 Solar Progress 6; D. Abeyasekere, "Solar Electricity for Homes" (1982) 3 Solar Progress 24.
- 4 For an interesting survey of the solar industry in Australia see J. Andrews, Solar Jobs in Victoria: The Economic Impact of the Solar Industry (1982).
- 5 According to Andrews, note 4 *supra*, 21, Australia is the largest exporter of solar equipment in the world.
- 6 See Sen. J. L. Carrick, Minister for National Development and Energy, Guest Editorial (1982) 3 Solar Progress 3.
- 7 Direct sunlight is essential as diffused and reflected light loses its thermal energy at the reflecting surface. See D. C. Seeley, "Comparative Aspects of Access to Sunlight: The United States, Great Britain, and Japan" (1980) 21 Harv. Int. L.J. 687, 700
- 8 Senate Standing Committee on Natural Resources, Report on Solar Energy (1977) 83-84.
- 9 A plethora of published materials exists on the role of planning, subdivision control and zoning laws in this context. See G. B. Hayes, Solar Access Law. Protecting Access to Sunlight for Solar Energy Systems (1979) 39-75; S. F. Kraemer, Solar Law (1978) 73-116; M. M. Eisenstadt, "Access to Solar Energy: The Problem and its Current Status" (1982) 22 Natural Resources J. 21; Miller, "Legal Obstacles to Decentralized Solar Energy Technology" (1979) 1 Solar Law Reporter 761; M. Schiflett and J. V. Zuckerman, "Solar Heating and Cooling: State and Municipal Legal Impediments and Incentives" (1978) 18 Natural Resources J. 313; Wiley, "Private Land Use Controls as Barriers to Solar Development: The Need for State Legislation" (1979) 1 Solar Law Reporter 281.
- 10 Total Environment Centre, Solar Access Law in New South Wales Legal Report (1982).
- 11 See the discussion of this point in B. L. Myers, "Solar Access Rights in Residential Developments" (1978) 24 Pract. Law. 13, 16.
- 12 See Preece, "Solar Energy and the Law" (1981) 6 Queensland Lawyer 83, 90ff; H. E. Zelling, "Legal Aspects of Solar Energy" in Solar Realities in Western Australia in the 1980's, Conference (1979). For a discussion of express easements of solar access in the United States, see J. W. Gergacz, "Legal Aspects of Solar Energy: Easements for Sunlight and Individual Solar Energy Use" (1980) 18 Am. Bus. L.J. 414, 421ff; P. Spivak, Land-use barriers and Incentives to the use of Solar Energy (1979) 12ff; R. Tiedeken, "Access Rights for the Solar User: In Search of the Best Statutory Approach" (1981) 16 Land and Water L. Rev. 501, 505ff.
- 12a (1918) 24 C.L.R. 348.
- 13 City of London Brewery Co. v. Tennant (1873) 9 L. R. Ch. App. 212; Charles Semon and Co. Ltd v. Bradford Corporation [1922] 2 Ch. 737; Horton's Estate Ltd v. James Beattie Ltd [1927] 1 Ch. 75.

- 14 [1904] A.C. 179, 208; Ambler and Fawcett v. Gordon [1905] 1 K.B. 417, 422 per Bray J.
- 15 [1897] 2 Ch. 214
- 16 [1967] 3 All E.R. 859
- 17 Id., 861.
- 18 [1979] 1 All E.R. 819.
- 19 Id., 828. See also 827, per Goff L.J.
- 20 Id., 825.
- 21 It should be noted that all the above cases related to prescriptive easements of light in England. There is no direct Australian authority on the issues under discussion in the context of express grants of easements of light. The opinion of the writer is that the English cases should be applied by analogy. As stated by Mellish L.J. in Leech v. Schweder (1874) 9 L.R. Ch. App. 463, 476-477:
 - "... it does not make the slightest difference whether the light was acquired by twenty years' user, or whether it has been acquired ... by the disposition of the owner of the two tenements. I think that nothing could be more inconvenient than that there should be two rights, one more extensive than the other, according to the manner in which they had been acquired."
- 22 [1979] 1 All E.R. 819, 828, per Goff L.J.; 828, per Orr L.J.
- 23 Id., 827.
- 24 [1951] I.R. 228.
- 25 [1933] Ch. 515. Discussed in (1933) 49 L. Q. Rev. 476.
- 26 See M. M. Eisenstadt and A. E. Utton, "Solar Rights and their effect on Solar Heating and Cooling" (1976) 16 Natural Resources J. 363, 374.
- 27 Note 22 supra. and accompanying text.
- 28 For a detailed discussion of the essential characteristics of an easement at common law see A. J. Bradbrook and M. A. Neave, Easements and Restrictive Covenants in Australia (1981), paras 103-142; S. G. Maurice, Gale on Easements (1972) pp. 6-34.
- 29 [1956] 1 Ch. 131. 30 [1974] V. R. 547.
- 31 See, e.g. Tuckett v. Brice [1917] V.L.R. 36; Municipal District of Concord v. Coles (1906) 3 C.L.R. 96; Re Ridgeway and Smith's Contract [1930] V.L.R. 111.
- 32 See, e.g. Ackroyd v. Smith (1850) 10 C.B. 164; 138 E.R. 68; Clapman v. Edwards [1938] 2 All E.R. 507; Frater v. Finlay (1968) 91 W.N. (N.S.W.) 730.
- 33 See, e.g. Roe v. Siddons (1888) 22 Q.B.D. 224; Brown v. Clark (1917) 17 S.R. (N.S.W.) 653.
- 34 See, e.g. Mulliner v. Midland Railway Co. (1879) 11 Ch. D. 611; Dukart v. District of Surrey (1978) 86 D.L.R. 3d 609.
- 35 See, e.g. Thorpe v. Brumfitt (1873) L.R. 8 Ch. App. 650; Thomas W. Ward Ltd v. Alexander Bruce (Grays) Ltd [1959] 2 Lloyd's Rep. 472.
- 36 (1918) 24 C.L.R. 348.
- 37 [1915] A.C. 599.
- 38 Id., 617.
- 39 For a discussion of this issue, see A. J. McLean "The Nature of an Easement" (1966) 5 Western L. Rev. 32, 57-60.
- 40 [1965] 1 Q.B. 76.
- 41 Id., 82-83.
- 42 A. J. McLean, note 39, supra, 59.
- 43 (1918) 24 C.L.R. 348, 354, emphasis added.
- 44 Spear v. Rowlett (1924) 43 N.Z.L.R. 801, 803, per Salmond J.
- 45 Taylor v. Whitehead (1781) 2 Doug. 745, 749; 99 E.R. 475, 477.
- 46 See Jones v. Pritchard [1908] 1 Ch. 630, 638, per Parker J.
- 47 Miller v. Hancock [1893] 2 Q.B. 177, 181; Cameron v. Dalgety (1920) 39 N.Z.L.R. 155, 159-160.
- 48 Cameron v. Dalgety (1920) 39 N.Z.L.R. 155, 162; Frater v. Finlay (1968) 91 W.N. (N.S.W.) 730, 734.
- 49 See generally D. J. Whalan, The Torrens System in Australia (1982). In Tasmania, the relevant official is the Recorder of Titles.
- 50 Real Property Act 1900 (N.S.W.), s. 47; Transfer of Land Act 1958 (Vic.), s. 72(2); Real Property Act 1861-1981 (Qld), s. 51; Real Property Act 1886-1980 (S.A.), s. 88; Transfer of Land Act 1893-1978 (W.A.), s. 69; Land Titles Act 1980 (Tas.), s. 105; Real Property Ordinance 1925 (A.C.T.), s. 74.
- 51 Real Property Act 1900 (N.S.W.), s. 123; Transfer of Land Act 1958 (Vic.), s. 106(d); Real Property Act 1861-1981 (Qld), s. 14; Real Property Act 1886-1980 (S.A.), s. 223; Transfer of Land Act 1893-1978 (W.A.), s. 193; Land Titles Act 1980 (Tas.), s. 161; Real Property Ordinance 1925 (A.C.T.), s. 150.

- 52 Real Property Act 1900 (N.S.W.), s. 123; Transfer of Land Act 1958 (Vic.), s. 116(i); Real Property Act 1861-1981 (Qld), s. 27; Real Property Act 1886-1980 (S.A.), s. 221; Transfer of Land Act 1893-1978 (W.A.), s. 203; Land Titles Act 1980 (Tas.), s. 144; Real Property Ordinance 1925 (A.C.T.), s. 148.
- 53 See The Perpetual Executors and Trustees Association of Australia Ltd v. Hosken (1912) 14 C.L.R. 286, 291, per Griffith C.J., and the discussion in S. Robinson, Transfer of Land in Victoria (1979) 431.
- 54 Colo. Rev. Stat. 38-32.5-101 to 38-32.5-102 (Supp. 1978).
- 55 California (Civil Code, s. 801.5; Government Code, s. 66475.3 (1979)); New York (Ch. 705, Laws of 1979); South Dakota (Codified Laws, Ch. 43-13); Oregon (Ch. 590, Laws of 1981); Tennessee (Ch. 259, Laws of 1979); New Jersey (Ch. 152, Laws of 1978); Florida (Fla. Stat., s. 704.07); Maryland (Ch. 934, Laws of 1977); North Dakota (Ch. 425, Laws of 1977); Kansas (Ch. 227, Laws of 1977); New Mexico (Ch. 169, Laws of 1977); Georgia (Act 1446, Laws of 1978); Idaho (Ch. 294, Laws of 1978); Minnesota (Ch. 786, Laws of 1978); Missouri (Mo. Rev. Stat., s. 442.012); Montana (Ch. 524, Laws of 1979); Nevada (Ch. 314, Laws of 1979); Rhode Island (Ch. 292, 1981 R.I. Pub. Laws); Utah (Ch. 82, Laws of 1979); Virginia (Ch. 323, Laws of 1978); Washington (Ch. 170E-1, Laws of 1979); Colorado (Rev. Stat. 38-32.5-101 (Supp. 1978)); Maine (Ch. 341, Laws of 1981); Nebraska (Rev. Stat. 66-901 to 914 (Cum. Supp. 1980)).
- 56 Real Property Law, s. 335-b-1 (McKinney's 1979 Session Laws of New York, Ch. 705).
- 57 Solar Easement Act of 1978, No. 1446, s. 4. Similar legislation also exists in Ohio, Maine and Nevada.
- 58 Real Property Law, s. 335-b-2 (McKinney's 1979 Session Laws of New York, Ch. 705). Similar legislation also exists in Minnesota, Montana, Idaho, Rhode Island, Utah, Nebraska, Florida, Washington, Virginia, Tennessee, North Dakota and New Jersey.
- 59 Different forms of legislation exist in California and Oregon. The Californian Government Code, s. 66475.3 (1979) states:

For divisions of land for which a tentative map is required pursuant to Section 66426, the legislative body of a city or county may by ordinance require, as a condition of the approval of a tentative map, the dedication of easements for the purpose of assuring that each parcel or unit in the subdivision for which approval is sought shall have the right to receive sunlight across adjacent parcels or units in the subdivision for which approval is sought for any solar energy system, provided that such ordinance contains all of the following:

- (1) Specifies the standards for determining the exact dimensions and locations of such easements.
- (2) Specifies any restrictions on vegetation, buildings and other objects which would obstruct the passage of sunlight through the easement.
- (3) Specifies the terms and conditions, if any, under which an easement may be revised or terminated.
- (4) Specifies that in establishing such easements consideration shall be given to feasibility, contour, configuration of the parcel to be divided, and cost, and that such easements shall not result in reducing allowable densities or the percentage of a lot which may be occupied by a building or structure under applicable planning and zoning in force at the time such tentative map is filed.
- (5) Specifies that the ordinance is not applicable to condominium projects which consist of the subdivision of airspace in an existing building where no new structures are added.

The Oregon Rev. Stat. 105.895(1) states:

Any instrument creating a solar energy easement shall contain:

- (a) A legal description of the real property benefited and burdened by the easement; and
- (b) A description of the solar energy easement sufficient to determine the space over the burdened property which must remain unobstructed by means that shall include, but not be limited to:
- (A) A sun chart showing the plotted skyline, including vegetation and structures from the perspective of the centre of the lower edge of the collector surface, and a drawing showing the size and location of the collector surface being protected and its orientation with respect to true south; or
- (B) A description of the solar envelope sufficient to determine the space over the burdened property that must remain unobstructed.
- (3) The instrument creating a solar energy easement, or a memorandum of such instrument or contract, or any other access right to sunlight shall be recorded under ORS 93.170. The instrument shall be recorded in the chains of title of the benefited and burdened properties as a transfer of the easement or access right from the owner of the burdened property to the owner of the benefited property.

- 60 Colorado Rev. Stat. 38-32.5-100.3(1).
- 61 For useful discussions of this topic, see G. B. Hayes, Solar Access Law: Protecting Access to Sunlight for Solar Energy Systems (1979) chs. 2 and 3; J. W. Gergacz, "Solar Energy Law: Easements of Access to Sunlight" (1979) 10 New Mexico L. Rev. 121; Gaumnitz and J. W. Gergacz, "How to Draft and Determine the Value of Express Solar Access Easements" (1980) 9 Real Estate L.J. 128; Riordan and Hiller, "Describing the Solar Space in a Solar Easement" (1980) 2 Solar Law Reporter 299; Burke and Lemons, "Simplified Solar Easements" (1980) 2 Solar Law Reporter 321; Franta, "Drafting a Simple Solar Easement" (1980) 2 Solar Law Reporter 341.
- 62 S. F. Kraemer, Solar Law (1978), 45.
- 63 G. B. Hayes, note 61 supra 22-24.
- 64 For example, at Wagga Wagga, which has a longitude of 147°24'E, solar noon will occur 11 minutes after noon at locations on the Australian Eastern Standard Time Longitude Meridian of 150°E. The time discrepancy increases greatly for locations in the west of New South Wales, at the rate of 4 minutes for each degree of longitude.
- 65 A further complicating factor is the "equation of time", the difference between apparent solar time and mean solar time. Due to the eccentricity of the earth's orbit around the sun and the inclination of the ecliptic, at various times of the year the sun reaches its zenith earlier than the mean solar noon while at other times of the year it is retarded. The amount of variation can be as much as 16 minutes before or after mean solar noon. Although this period is significant, it is submitted that it is too complex for inclusion in express forms of solar easements.
- 66 Burke and Lemons, "Simplified Solar Easements" (1980) 2 Solar Law Reporter 321, 335-336.
- 67 If this form is adapted for use in Australia, "southerly" must be substituted for "northerly".
- 68 Kraemer, note 62 supra 50-51.
- 69 Burke and Lemons, note 66 supra 338-339.
- 70 The significance of 21st December is that it is the date of the winter solstice in the northern hemisphere when the arc of the sun across the sky is at its lowest. If this form is adapted for use in Australia or any other location in the southern hemisphere, the date of 21st June should be substituted.
- 71 For a discussion of this common law principle, see *Halsbury's Laws of England*, Vol. 12 (4th ed. 1975) paras. 1506-1508.
- 72 This form is a modified version of a form of express easement of light and air contained in Form 29, Australian Encyclopaedia of Forms and Precedents, Vol. 6 (2nd ed. 1975) 396.
- 73 The relevant legislation would be the Real Property Act 1900 (N.S.W.); Transfer of Land Act 1958 (Vic.); Real Property Act 1861-1981 (Qld); Real Property Act 1886-1980 (S.A.); Transfer of Land Act 1893-1978 (W.A.); Land Titles Act 1980 (Tas.); Real Property Ordinance 1925 (A.C.T.).
- 74 Zillman and Deeny, "Legal Aspects of Solar Energy Development" (1976) 25 Arizona State L.J. 25, 35. For further discussion of the problems involved in obtaining an express easement of solar access, see Law Reform Committee of South Australia, Discussion Paper Solar Energy and the Law in South Australia, 1978, 103; J. L. Matuson, "A Legislative Approach to Solar Access: Transferable Development Rights" (1978) 13 New England L. Rev. 835, 844; D. D. Goble, "Solar Access and Property Rights: Reply to a "Maverick" Analysis" (1980) 12 Connecticut L. Rev. 270, 279.
- 75 For a discussion of the valuation of express easements of solar access, see Gaumnitz and J. W. Gergacz, note 61 supra.
- 76 For an interesting discussion of the U.S. law on this point, see J. W. Gergacz, note 61 supra, 153-166.
- 77 (1879) 12 Ch. D. 31.
- 78 For a detailed discussion of the easement of necessity, see A. J. Bradbrook and M. A. Neave, Easements and Restrictive Covenants in Australia, (1981) paras 412-420; S. G. Maurice and R. Wakefield, Gale on Easements (14th ed. 1972) 117-122.
- 79 See e.g., Bayley v. Great Western Railway Co. (1884) 26 Ch. D. 434, 453; Union Lighterage Co. v. London Graving Dock Co. [1902] 2 Ch. 557; McLernon v. Connor (1907) 9 W.A.L.R. 141.
- 80 See Note, "Designs on Sunshine: Solar Access in the United States and Japan" (1977) 10 Connecticut L. Rev. 123, 127.
- 81 (1879) 12 Ch. D. 31, 49. For a detailed discussion of the rule, see A. J. Bradbrook and M. A. Neave, note 78 supra, paras 426-432; Gale on Easements, note 78 supra, 92-106.
- 82 This is clear from the judgements of Lord Wilberforce and Lord Edmund-Davies in Sovmots Investments Ltd v. Secretary of State for the Environment [1979] A.C. 144.
- 83 Ward v. Kirkland [1967] 1 Ch. 194, 225; Stevens & Evans v. Allan & Armanasco (1955) 58 W.A.L.R. 1, 15.
- 84 [1892] 1 Ch. 47, 53.
- 85 See e.g., Goldberg v. Edwards [1950] 1 Ch. 247.
- 86 [1939] V.L.R. 33, 39.

- 87 See A. J. Bradbrook and M. A. Neave, note 78 supra, paras 1115 (N.S.W.), 1121 (S.A.), 1127 (Qld), 1132 (Vic.), 1137 (W.A.), 1142 (Tas.).
- 88 Based on the wording of the Transfer of Land Act 1958 (Vic.), s. 42(2)(d).
- 89 Billiet v. Commercial Bank of Australasia Ltd [1906] S.A.L.R. 193, 206, per Way C.J.
- 90 Stevens and Evans v. Allan and Armanasco (1955) 58 W.A.L.R. 1, 18, per Wolff J.
- 91 Based on the wording of the Land Titles Act 1980 (Tas.) s. 40(3)(e).
- 92 See also Property Law Act 1958 (Vic.) s. 62; Law of Property Act 1936-1980 (S.A.) s. 36; Property Law Act 1974-1978 (Qld) s. 239; Property Law Act 1969-1979 (W.A.) s. 41; Conveyancing and Law of Property Act 1884 (Tas.) s. 6. For a detailed discussion of the operation of this legislation, see A. J. Bradbrook and M. A. Neave, note 78 supra, paras 433-445.
- 93 See Wright v. Macadam [1949] 1 K.B. 744; Birmingham, Dudley and District Banking Co. v. Ross (1888) 38 Ch. D. 295.
- 94 See A. J. Bradbrook and M. A. Neave, note 78 supra, paras 1115 (N.S.W.), 1121 (S.A.), 1127 (Qld), 1132 (Vic.), 1137 (W.A.), 1142 (Tas.).
- 95 Based on the wording of the Transfer of Land Act 1958 (Vic.) s. 42(2)(d) and National Trustees and Agency Co. of Australasia Ltd v. Long [1939] V.L.R. 33, 40, per Mann C.J.
- 96 Based on the wording of the Transfer of Land Act 1893-1978 (W.A.) s. 68.
- 97 [1905] 2 Ch. 210, 214.
- 98 (1913) 32 N.Z.L.R. 1140.
- 99 (1832) 9 Bing. 305, 309; 131 E.R. 629, 631.
- 100 Note 98 supra, 1146.
- 101 [1904] 2 Ch. 17, 20. See also *Maioriella* v. *Arlotta* (1950) 364 Pa. 557, 73 A.2d 374, where the plaintiff's claim for an implied grant of an easement of light and air was dismissed on the ground that skylight can always be built into the roof.
- 102 (1879) 12 Ch. D. 31.
- 103 [1892] 1 Ch. 47.
- 104 See Conveyancing Act 1919 (N.S.W.) s. 67; Property Law Act 1958 (Vic.) s. 62; Law of Property Act 1936-1980 (S.A.) s. 36; Property Law Act 1974-1978 (Qld) s. 239; Property Law Act 1969-1979 (W.A.) s. 41; Conveyancing and Law of Property Act 1884 (Tas.) s. 6.
- 105 For an interesting discussion of the U.S. law on this issue, see J. W. Gergacz, note 61 supra, 138-153; W. W. Berryhill and W. H. Parcell, "Guaranteeing Solar Access in Virginia" (1979) 13 U. Richmond L. Rev. 423, 432-434.
- 106 For a detailed discussion of the law on prescription in Australia, see A. J. Bradbrook and M. A. Neave, note 78 supra, Ch. 5.
- 107 The twenty year period was affirmed in Johns v. Delaney (1890) 16 V.L.R. 729 and Delohery v. Permanent Trustee Co. of New South Wales (1904) 1 C.L.R. 283.
- 108 In Western Australia, the Prescription Act 1832 (U.K.) was expressly adopted by the Act 6 Will. IV No. 4 (1836) (W.A.). In South Australia, White v. Mclean (1890) 24 S.A.L.R. 97 held that the British Act is applicable.
- 109 See also Property Law Act 1958 (Vic.) s. 195; Law of Property Act 1936-1980 (S.A.) s. 22; Property Law Act 1974-1978 (Qld) s. 178; Prescription Act 1934 (Tas.) s. 9; Property Law Act 1969-1979 (W.A.) s. 121.
- 110 See e.g., Hanna v. Pollock [1900] 2 I.R. 664, 671; Attorney-General v. Horner (No. 2) [1913] 2 Ch. 140, 178.
- 111 See e.g., Hough v. Taylor (1927) 29 W.A.L.R. 97; Carpet Import Co. Ltd v. Beath & Co. Ltd (1927) 46 N.Z.L.R. 37.
- 112 See e.g., Mason v. Shrewsbury and Hereford Railway Co. (1871) L.R. 6 Q.B. 578; Bartlett v. Tottenham [1932] 1 Ch. 114.
- 113 (1881) 6 App. Cas. 740, 774. See also Piromalli v. Di Masi [1980] W.A.R. 173, 178, per Wickham J.
- 114 See the Limitation Act 1969 (N.S.W.); Limitation of Actions Act 1958 (Vic.); Limitation of Actions Act 1974-1978 (Qld); Limitation of Actions Act 1936-1975 (S.A.); Limitation Act 1935-1978 (W.A.); Limitation Act 1974 (Tas.).
- 115 In the United States, the Environmental Law Institute has recommended that it is not worthwhile introducing new legislation designed to make the laws on prescription effective in the solar context. See J. L. Matuson, "A Legislative Approach to Solar Access: Transferable Development Rights" (1978) 13 New England L. Rev. 835, 841-842.
- 116 See the Conveyancing Act 1919 (N.S.W.); Property Law Act 1958 (Vic.); Property Law Act 1974-1978 (Qld); Law of Property Act 1936-1980 (S.A.); Property Law Act 1969-1979 (W.A.); Conveyancing and Law of Property Act 1884 (Tas.).
- 117 Colorado Rev. Stat. s. 38-32.5-101; Missouri Rev. Stat. s. 442.012-2.
- 118 Note the following dictum of Manning J. in Sheehy v. Edwards, Dunlop & Co. (1897) 13 W.N. (N.S.W.) 166, 168:

"Can one say that a [prescriptive right to light] is reasonably applicable ...? When people were looking forward to the future of this country, to large cities and towns being established, when the streets and roads were first laid out in spots till then uncultivated, was it reasonable that a man, by acquiring a plot of ground and building as they did in those days a small shanty ... should be able after twenty years' enjoyment to prevent his neighbour building so as to interfere with the light entering into that one window? If that were so, a man by buying alternate allotments through ... Sydney would have had it in his power to block completely the erection of any buildings of a more substantial size ...".

- 119 Similar legislation was introduced in Northern Ireland in the Rights of Light Act 1961. The British Act is discussed in Comment, D. C. Seeley "Comparative Aspects of Access to Sunlight: The United States, Great Britain, and Japan" (1980) 21 Harvard Int. L.J. 687, 694-696; W. A. Greene, "Easement of Light" (1976) 126 New L.J. 143; W. A. Greene, "Right to Light" (1978) 122 Sol. J. 515 (Part 1), 534 (Part 2).
- 120 Section 2 states in part:
 - (1) For the purpose of preventing the access and use of light from being taken to be enjoyed without interruption, any person who is an owner of land (in this and the next following section referred to as 'the servient land') over which light passes to a dwelling-house, workshop or other building (in this and the next following section referred to as 'the dominant building') may apply to the local authority in whose area the dominant building is situated for the registration of a notice under this section.
 - (2) An application for the registration of a notice under this section shall be in the prescribed form and shall—
 - (a) identify the servient land and the dominant building in the prescribed manner, and
 - (b) state that the registration of a notice in pursuance of the application is intended to be equivalent to the obstruction of the access of light to the dominant building across the servient land which would be caused by the erection, in such position on the servient land as may be specified in the application, of an opaque structure of such dimensions (including, if the application so states, unlimited height) as may be specified.
- 121 Section 3(1) states:

Where, in pursuance of an application made in accordance with the last preceding section, a notice is registered thereunder, then, for the purpose of determining whether any person is entitled (by virtue of the Prescription Act 1832 or otherwise) to a right to the access of light to the dominant building across the servient land, the access of light to that building across that land shall be treated as obstructed to the same extent, and with the like consequences, as if an opaque structure, of the dimensions specified in the application —

- (a) had, on the date of registration of the notice, been erected in the position on the servient land specified on the application, and had been so erected by the person who made the application, and
- (b) had remained in that position during the period for which the notice has effect and had been removed at the end of that period.
- 122 See P. Spivak, Land-Use Barriers and Incentives to the Use of Solar Energy 1979, 11-12.
- 123 Fourteenth Report on Acquisition of Easements and Profits by Prescription, Cmnd. 3100 (1966). This report is discussed by H. W. Wilkinson in (1967) 30 M.L.R. 189.
- 124 See In re Mirams [1891] 1 Q.B. 594, 595, per Cave J.; Egerton v. Brownlow (1853) 4 H.L. Cas. 1, 123; 10 E.R. 359, 409, per Parke B.; Fender v. St. John-Mildmay [1938] A.C. 1, 10-12, per Lord Atkin.
- 125 (1904) 1 C.L.R. 283.
- 126 Note 109 supra, and accompanying text.
- 127 Property Law Act 1952 (N.Z.) s. 129B. This legislation discussed in Bradbrook "Access to Landlocked Land: A Comparative Study of Legal Solutions", to be published in Vol. 9, No. 4 (1982) Sydney L. Rev.
- 128 For a further illustration, see the Telegraph (Construction) Act 1916 s. 1 (U.K.) and Cartwright v. Post Office [1969] 2 Q.B. 62. See also the discussion by the Queensland Law Reform Commission, Working Paper on a Bill to Consolidate, Amend, and Reform the Law Relating to Conveyancing, Property, and Contract and to Determine the Application of Certain Imperial Statutes, Q.L.R.C.W. 10 (1972) 102-103.
- 129 Total Environment Centre, Solar Access in New South Wales Legal Report, (1982).
- 130 Id., 11-18.
- 131 The relevant Tasmanian legislation is the Conveyancing and Law of Property Act 1884 s. 84J and the Land Titles Act 1980 s. 110(4)-(12).
- 132 Q.L.R.C., A Report on a Bill to Consolidate, Amend, and Reform the Law Relating to

- Conveyancing, Property and Contract (No. 16: 1973).
- 133 Law Commission, Working Paper No. 36 (1971), Appurtenant Rights.
- 134 See also the discussion by H. Tarlo, "Forcing the Creation of Easements A Novel Law" (1979) 53 A.L.J. 254; A. J. Bradbrook and M. A. Neave note 78 supra, paras 308-313.
- 135 [1976] Qd. R. 190. The Full Court of the Supreme Court of Queensland dismissed an appeal against this decision, except on the issue of compensation (Re Seaforth Land Sales Pty Ltd's Land (No. 2)) [1977] Qd. R. 317). 136 [1977] Qd. R. 86.
- 137 [1976] Qd. R. 272.
- 138 See e.g., Residential Tenancies Act 1978 (S.A.) s. 58(4); Landlord and Tenant (Amendment) Act 1948 (N.S.W.) s. 38(5).
- 139 If this form of legislation is adopted, the phrase "solar energy device" would need to be statutorily defined in the definition section of the relevant legislation of each State. See note 60 supra, and accompanying text for a suitable definition.
- 140 See e.g., House v. R. (1936) 55 C.L.R. 499, 504-505; Storie v. Storie (1945) 80 C.L.R. 597; Priest v. Priest (1963) 9 F.L.R. 384.
- 141 See the Conveyancing Act 1919 (N.S.W.); Property Law Act 1958 (Vic.); Property Law Act 1974-1978 (Qld); Law of Property Act 1936-1980 (S.A.); Property Law Act 1969-1979 (W.A.); Conveyancing and Law of Property Act 1884 (Tas.).
- 142 See Property Law Act 1974-1978 (Qld).
- 143 Recent broad-ranging reforms have been introduced in these States in respect of residential landlord-tenant law by the Residential Tenancies Act 1980 (Vic.) and the Residential Tenancies Act 1978-1981 (S.A.). The Residential Tenancies Act 1975 (Qld) introduced only minor changes.
- 144 See generally the reports of the Poverty Enquiry on landlord and tenant law: R. Sackville, Law and Poverty in Australia (1975) Ch. 3; A. J. Bradbrook, Poverty and the Residential Landlord-Tenant Relationship (1975).
- 145 Selman, "Products Liability at the Threshold of the Landlord-Lessor" (1970) 21 Hastings L. J. 458,