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THE SANITARY ASPECTS OF THE LONDON BUILDING ACT, 1894.

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THIS is the second time within the last few months that I have had the honour of being called upon to address you, and on both occasions on very much the same subject. To-night, however, I do not propose to deal with the general question of the crowding together of houses, but rather with the actual position in which London is placed, or will be placed, by the alteration in its Building Laws after midnight of December 31st.

Everyone is agreed that the London Building Act, 1894, is a very extraordinary measure; some people think extremely so. It is extraordinary in many ways. In the first place it passed Parliament as a Private Bill, repealing in whole seven public Acts of Parliament and partially repealing seven others. It is a Private Bill consisting of 218 clauses and 4 schedules. It is such a large work that without mentioning names of specified individuals I may say that prominent and experienced government officials up to the last did not think the Council was serious in its attempt to pass that measure. We did so, however, and this shows that we were not so foolish as some people imagined. I do not intend to tell you to-night how this measure differs from the original measure that was introduced, nor to tell you that the Council or I myself are personally disappointed in the result, nor to argue in favour of this or that clause. As many of you present are practically concerned in carrying out this Act, the

best thing I can do is to take you clause by clause through those parts of it which have a bearing of special interest to members of The Sanitary Institute.

Of course there are many clauses which are directed to good construction and so have a sanitary bearing, but I allude rather to those with a more direct and immediate sanitary bearing. Whatever else may be said it is well to know that this volume contains the entire statute law of building for London as it will be after the beginning of the new year, whereas formerly it had to be searched for, through twenty Acts of Parliament. I am not prepared to say that it is free from ambiguity. I may even say that we have instructed eminent counsel in one case to tell us what the Act means. I may, however, say in justification of this condition that we are not asking for an interpretation of any clause as it stood when we introduced the Bill, but of the Act as it emerged after it had run the gauntlet of two Select Committees. I wish to say, moreover, in justice to the Opposition, that the Bill as originally introduced was very impracticable. It was not intended to be practical in its then form, but I am perfectly convinced that we adopted the right plan in introducing it as we did. Had we attempted to meet the opposition at that early stage we should have had a far less useful measure than at present, because it was not until we were brought face to face with our opponents that we could see where the shoe pinched. I am prepared to go even further, and say that although the utility of some portions of the Bill was marred by people attacking it in all directions, this measure in its present form is more practical than when it was introduced by the Council this time last year. I do not think London on the whole need regret the opposition that was made to the Bill. This, of course, is a general statement, because there are undoubtedly individual instances in which the difficulty of working has been increased. Unfortunately, there is not in this country any machinery for re-drafting a Bill after it has left both Houses of Parliament. There are things in this Bill which do not express the views of the opposition, and they would probably be prepared to accept my amendment thereof.

To begin at the beginning, the first thing is the definition clause. There is one definition which has only an indirect interest for you, but it is so important that I wish you clearly to understand it. It is as to the height of houses. The 21st definition as to the height of buildings deals with matters not generally understood of the people. The height of a building does not mean the height of a building, *i.e.*, not the height from the pavement to the top of the gable or ridge of the roof, but the height from the pavement to the parapet, the eaves, or the

base of the gable, so that a limitation to 60 feet in height means 60 feet to the eaves, top of the parapet, or base of the gable.

The 25th definition defines a dwelling house as a building constructed wholly or partly for human habitation. This is plain enough for ordinary common-sense people. A domestic building includes a dwelling house and other buildings. The parts of the Bill which deal with domestic buildings are mostly concerned with dwelling houses.

The 37th definition defines the expression "inhabited," as applied to a room to mean a room in which some person passes the night, or which during the day is used as a living room. That definition you will see differs from the old legislation in regard to underground rooms. If there be a fair presumption that it is used as a living or as a sleeping room it is to be held to be so unless the contrary be proved.

I now pass on to Section 13. Curiously enough it is a section which passed with very little trouble, yet it is to my mind worth the whole of the rest of the Bill. It is said that this Bill cost the promoters £10,000. Well I consider that this sum paid by the ratepayers of London as the price for Section 13 is one of the cheapest bargains they have ever made. This is the clause which has a marginal note in reference to new streets to the effect "that no person shall erect a building nearer than 20 feet from the centre of the street unless it be upon the site of an old building." There is very little difference except in matters of words between this and the present law. If you attempt to put up a building where no building previously stood abutting on a narrow street, a gentleman will come down upon you and you will have to pull the building down and set it back. But that only applies to ground upon which no building previously stood. Where the building previously stood you had a right before and you have a right now to erect a new building, provided it does not go nearer to the centre. So far there is no gain, but near the end of the clause come the words "provided always that no dwelling house to be inhabited, or adapted to be inhabited, by persons of the working class, shall, without the consent of the Council, be erected or re-erected within the prescribed distance, to a height exceeding the distance of the front or nearest external wall of such building from the opposite side of such street." Let us take for example a street with a width of 15 feet. There are old buildings on either side which are 30 feet high. If these are houses in some crowded part of London inhabited by many families, anyone can at present pull them down and can re-erect upon them so called model dwellings to as great a height as he likes short of 90 feet. He

would probably draw a line at 50 feet, because the upper parts of the building would be unlettable. If the County Council condemned these houses as unfit for human habitation they might be built 30 feet higher, all crowded with families of the poorer class. Whatever the internal improvements, with regard to the overcrowding, the last stage would be worse than the first. If, however, in future we were to condemn them as unhealthy, the owner might put up warehouses; but if he wanted to erect buildings which were suitable for habitation by the working classes, he would be limited to the width of the street, viz., 15 feet. If, therefore, we close the houses as unfit for human habitation, we know that the worst that can happen (if he build on his old foundations) will be that he will build buildings not exceeding 15 feet in height. He has another alternative: he may widen the street just so far as he thinks proper, and in this proportion he may increase the height of his buildings. You have then this important result: there are many areas in London, like the famous Bethnal Green area, where the streets run from 18 to 25 feet, and contain houses two or three storeys high, the general structural condition of which is very bad. The question is what to do with them. Under Cross's Act, all that could be done was to buy the whole thing out and reconstruct it, for this reason: if you condemned them the owner always had it in his power, when rebuilding, to raise them to a greater height, and while there is no objection to a height of 20 feet in a street of 20 feet wide, there is great and obvious disadvantage when you run the buildings up to 50 feet. When, therefore, it was argued that we ought to have gone to work with the Bethnal Green area in another manner, my reply is, that it was the only manner which was open to us. The cost was something over £300,000. This simple law might not apply to the whole of that area, but it would apply to a great deal of it. We shall now be able to force owners of the land to lay out their buildings in a reasonable and sensible manner. The importance of that clause is not I think sufficiently understood except by those members of Council who have worked at the subject for years past.

We will now proceed to the celebrated Part 5 of the Bill, the one about which most of the fighting before Parliament took place. This is called "open spaces about buildings and the height of buildings." The first section starts with the assurance that offices and counting houses are not domestic buildings. This concession was necessary because it allows buildings to be crowded together on the exceedingly valuable land in and near the City to a greater extent than would otherwise be possible. There are few people, and practically no children, who have to

spend their time there, so that no sanitary evils are likely to accrue from this aggregation of buildings.

Clause 41 is the "angle clause." I have heard it spoken of by some blaspheming Philistines as the "Longstaff Clause," but I repudiate the charge. I go further, I prefer to put it in other language. I am not able to claim the honour of having originated the principle upon which it is based, but the gentleman to whom this honour belongs is here this evening. I am alluding to Mr. Goldstraw, Building Surveyor of the City of Liverpool. This is a very simple matter, but this is all the more to his credit. The genesis of this clause was thus wise. Liverpool, having suffered more than other places from overcrowding, some years ago adopted the model bye-laws of the Local Government Board in reference to space at the rear of houses. This is in effect that there must be a space free from any building extending from the back wall of the premises in proportion to the height of the building. He found in Liverpool that it was considered a great grievance that they were not allowed to build one-storey buildings for wash-houses, &c., on this vacant space. He did not consider that much harm would attach to such a practice, but said there was already a sliding scale of a certain kind, and he urged that it would be better to say that 10 feet must always be left free at the rear, and then draw an angle of 45° within which limit the builder could do what he liked. That is the one and only means of laying down the height of a building in a way that is equitable in all cases. That was the clause of the original Bill. Since that Bill became law I have gone over slums in Liverpool that were re-constructed under the original rule. I do not believe that there is an architect present if he were to go and see these buildings as they are who would not admit that these buildings are as close together as buildings ought to be placed. It may be sufficient, but it is not greater than is fair, right, and proper. Parliament, however, thought otherwise. The existing law is that every building should have a space exclusively belonging to that building free from any erection above the level of the ground, having an area of 100 square feet. The same rule applied to a big hotel as to a small cottage. It is better than nothing, but it proved wholly inadequate. The Metropolitan Board of Works in 1882 succeeded in getting Parliament to allow that the space should be a depth of 10 feet extending throughout the whole of the rear of the building. It only went up to 450 feet it is true, but this was a great advance on 100. That limit covered most buildings, but the, to my mind, serious objection is that the Act of 1882 allowed buildings all over the ground floor.

Well now as regards buildings erected hereafter, upon streets laid out hereafter, what Parliament has given us is this: a clear ground space of ten feet, free from all building, and extending throughout the whole frontage. They then give us the angle of $63\frac{1}{2}^{\circ}$, so that the distance from the rear boundary wall to any part of the building is equal to half the height of the building. Anything you put beyond the ten feet must be built within this angle. This has the same fundamental virtue of equity that applies to any angle, but it does not give as much space as I should have liked. Still the result works out not so very badly. It follows that the buildings abutting upon one street will be separated at the back from those abutting on the next street, by a distance equal to their height. That will be the state of affairs in the new London. When we come to the more central parts, and in all streets made prior to 1895, there is the ten foot distance, but like the Act of 1882, owners are allowed to cover the ground floor with buildings up to the height of sixteen feet. Then the same angle of 63° is struck from that point, and consequently if they build with a ten foot limit they can get their building twenty feet above the flat roof of the one storey addition. I admit that there are a number of streets which have been laid out so close together that it would be exceedingly hard upon landlords to enforce the first rule, and this second, modified rule, is better than the present law.

We go still further than this in the endeavour to meet vested interests: if a man has old buildings on his land he may replace them, however bad they may be, but he may be prevented from making them worse than before, hence the new bill will not improve old sites. People earning 25s. or 30s. a week may have some relief even from this clause. We have these words which occur in the 41st section "except in the case of dwelling houses inhabited or intended to be inhabited by the working class." This is class legislation it is true, but if you are in the unhappy position of being the promoter of a bill, the goal that you aim at is to get these mystic words "royal assent" printed on the first page, and you must make concessions with that object in view. Beyond motives of expediency there are other motives which are logically or legally correct. We say, the offender in this question of class legislation was the Parliament which passed the Housing of the Working Classes Acts, placing these buildings in a different category from those of the people who, like you and me, only work without belonging to the working classes; Parliament having made that distinction by throwing here in London, upon the County Council, and elsewhere, upon the appropriate authority, the imperative duty under certain circumstances, and at whatever cost, to buy out unhealthy

dwellings of the working classes, and to see that more suitable buildings are erected thereon. And the Council held that Parliament having insisted upon that, it was only fair that Parliament should give us the power to say to owners "you shall not make any more of these slums which we are compelled to buy up afterwards and pull down." I think that is an unanswerable argument to the objection. It is evident that the worst class of dwellings will usually only be erected for these people who can pay but small rents. Next, after the downright slums, comes the modern "mansions." We have succeeded in dealing with these in a different manner, and in a manner which I think will prove effectual.

Section 42 deals with the erection of working-class dwellings not abutting upon any street at all, *i.e.*, built upon back land. When you cannot conveniently get at land at the back of main streets, it has become the practice to construct large blocks of dwellings. We have now got a clause which compels persons who are going to erect such buildings to submit their plans to the County Council. There is a limit set to this. I take the credit of having put that limit. We are not allowed to raise the standard above a certain point. Clause 44 interests the owners of large estates. Mr. Cubitt Nichols pointed out to us that where it is desirable to reconstruct an area altogether, to put three streets where there were formerly five, and so on; that in these improvement schemes the landlord invariably considerably improved the conditions compared with what they were before. But such streets might be held to be new streets, and the ground might be of such great value that it would not be fair to oblige the owner to deal with the land as though he were dealing with virgin land at Tooting or Streatham. This clause allows the County Council, subject to his submitting his plans, to make such modifications as they may think proper from the restrictions which might be legally enforced, and I think that that is a very fair concession. The great landlord often gives us for nothing a scheme fifty per cent. better than we had before, and we should be grateful to him.

Now as to Clause 45. This is a very remarkable Clause. I had no reason to accuse the distinguished Counsel who harried me in Committee with being asleep, but they were certainly asleep when this particular Clause was passed. It gives no discretion to the County Council, and it allows no appeal! I said just now that next to the slums the blocks of modern mansions were the worst. They are the worst because they have so little space about them. Take a given area. The builder covers nearly the whole of his land, and endeavours to get light and air by ridiculously small shafts or internal courts.

I have always maintained that this is a thing that ought not to be allowed. I see here to-night a medical officer of health who, I believe, dwells in a house of this kind, which he considers is a model of insanitation.

Now we have provided for a certain proportion between these holes and the size of the building. We insist upon the admission of air from the bottom. Further, we say no habitable room shall be constructed looking into such a court, unless such court shall be equal in width to one-half its height (or depth). We give them in the ground floor, but we say you shall not run the building up higher than twice the width of the court, measured from the window-sills of the first floor. Of course, if you use these courts merely for ventilating water-closets, larders, and the like, as these are not habitable rooms within the meaning of the Act, this clause would not operate; we say it is not right to put even domestic servants in such rooms. We have even gone a step further: There is a pattern of dwelling in London which may be described as the "comb" pattern. It consists of a pectinated building, in which a long frontage has sprouting out from the rear a number of back buildings joining with the main building at a right angle. You will see that by this arrangement the lower rooms where the angles join can have little chance of light and air. Yet remember, this is a plan constantly adopted in the construction of artisans' dwellings. Where it is a large house and the people can move about from room to room, it does not matter so much, but where they are fixed to these one or two rooms, the conditions are obviously very unfavourable to health. Here we have a similar rule to the other. The builder is not allowed to construct these courts of such a proportion that their width would be less than one-half their depth. This means that you will get perhaps one block less in such a building, but it ensures a semblance of sufficiency of light and air throughout.

I shall not go into questions of corner plots and things of that kind, but I will mention one matter more in reference to the height of buildings. The new Act does not deal with the question of height in the beautiful symmetrical way that the original Bill did, but we have touched it in three points: (1) The limiting angle at the rear; (2) When the County Council asked for a limit of 70 feet for the height of the eaves in 1890, they were opposed by a certain important institution, and the height was altered to 90 feet. Subsequently the said institution met us and agreed to a 75 foot limit. The new law differs from the old in this small respect: That whereas a building commenced before the 31st of this month can be erected to a height of 90 feet, if commenced after that date it will be

limited to 80 feet. (3) There is, however, another limitation in another part of the Act. Some architects grumble, but I do not think they have much to grumble at. There was, once upon a time, a man who wanted to build a mews. Mews we always consider to be inherently unhealthy, and we have always insisted that a mews must be as wide as a street. This man was only going to make his 20 feet wide. We said he might do so if his buildings did not exceed 20 feet in height. So far so good; but he proceeded to construct what he called a roof containing two more storeys. It was merely a slightly slanting wall. We have got him now under Section 71, which says that no part of a roof except a spire shall exceed an angle of 75 degrees. We throw the roof in, in measuring height, but if so it must be a genuine roof.

Section 69 insists on the ventilation of staircases in large buildings, and Section 70 for the first time in London legislation (borrowed from the model bye-laws of the Local Government Board) insists on all inhabited rooms having windows of sizes proportionate to the rooms.

Section 70, sub-section E, provides that rooms over stables shall have such construction of floor that emanations from the stables below cannot get into the rooms above.

Section 97 very indirectly touches upon health matters, but it does so in some parts of London. That is the clause limiting the method in which you may stack timber and firewood. We say that if a man stacks timber on the fore-court of his premises he must dress back to the general line of buildings.

I have now come to the end of my programme, and I shall be glad to explain any matter which I may have left in doubt. Those of you who are practically concerned with public health will I think see that at all events whatever else may be said of the London Building Act it is a very important measure. Personally, and this is an opinion founded on experience gained years ago, I think this is a more important sanitary measure than any passed hitherto for London. Most public health legislation deals with things which are more or less temporary in their nature, but the bad laying out of a town, the construction of the streets which are too narrow, of buildings which are too lofty or too close together, are ills which are practically irremediable. Therefore a measure designed to prevent the occurrence in a city of such evils, is a measure of the very first importance. Anyone who has seen the slums of Liverpool will see what a gigantic evil arose from that city expanding at an unparallelled rate at a time when there was no sanitary supervision, and he will know the evil inheritance that has fallen upon Liverpool. He will see on the other hand

the great activity of the Municipality of Liverpool in striving to remedy these evils. But at what a cost to the ratepayers, all for the want of sanitary legislation! Liverpool, however, has now a better building code than even London will have in 1895.

Mr. W. GOLDSTRAW (Building Surveyor, Liverpool) said: London is to be warmly congratulated upon obtaining such a very beneficial measure as the new Building Act, and the County Council is to be equally congratulated on having such a Chairman of the Building Act Committee. As we have long been in the habit of speaking of Cross's Acts and of Torrens's Acts, &c., it seems only right and natural that in years to come we should allude to this as the Longstaff Act. He should like to express a confident opinion that the Bill as originally introduced was better than the Act as now finally passed; not better in point of form, because he was sorry to say it was never good in this respect, but in regard to the matter of it. For an illustration he said he would not travel further than the Section which deals with the question of angle. He thought it was better with the proposal for a limiting angle of 45° than with a compromise of $63\frac{1}{2}^{\circ}$, speaking more particularly of the regulation as it would have applied to dwelling houses. He thought that as it does actually apply under the Act to all domestic buildings, perhaps this was fair compromise; but he could not help thinking that if the angle of 45° had been retained as applicable to dwelling houses, and the other angle had been applied to domestic buildings, or some of them, the regulation would have been better than it is. Being a compromise it has this drawback, that the regulation as it now stands applies to some cases in which it need not in fairness have applied. The definition clauses are highly important as bearing on this question. Take a workshop 100 by 50 by 30 feet. Such a workshop must have an open space throughout the rear. This may sometimes seem a hardship; and he would have felt inclined to say that, in such a case, asking for an open space along the back of the workshop was needlessly severe; yet it is a necessary outcome of the section as it stands.

Dr. LONGSTAFF: It would probably come under the workshop class, and so be exempt.

Mr. GOLDSTRAW: Then, with regard to the question of the 45° angle. When he was last in London, walking on the Embankment he noticed at the end of a street running down from the Strand a block of buildings cut off behind at the angle of 45° , apparently for the purpose of avoiding a question of light and air to the buildings at the rear. They did not appear to be at all damaged by the restriction; the offices were very light, and they were exceedingly ingeniously constructed. It seemed to him that if this kind of architecture were

generally adopted, it would not lead to an ugly style. If it was not an overwhelming hardship to have to cut off the building at an angle to avoid litigation with the neighbours, it would not be a very great hardship if it were curtailed to the same extent to comply with the London Building Act.

Mr. H. P. BOULNOIS (City Engineer of Liverpool) thought that it was a pity that this otherwise admirable Act is not more of a consolidation Act. It is a fact, as Dr. Longstaff has said, that the provinces have undoubtedly been ahead of the Metropolis in all sanitary measures; but nearly all the London Building Acts were originally passed under the influence of the panic caused by the great fire of London, and therefore they contain a great many constructive clauses which hamper builders and holders of property, but do not touch upon the great sanitary questions which have since so much occupied the attention of the country. A point on which he was opposed to Dr. Longstaff was the question of carrying the party wall through the roof. He looked upon that as an unnecessary and harassing measure, and if these and other similar provisions were taken out and more sanitary provisions put into it, he thought the Act would have been greatly improved. This Bill was heartily supported by Medical Officers of Health and other sanitary medical men, but did not receive the support that it should have received from the architects as a profession in the Metropolis. He supposed they felt that the interests of their clients as owners of property required to be protected. With regard to the proposed area to be left in front, the Bill, as he understood it, does not in any way confiscate the property of owners. With regard to the area at the back, he agreed that it was a pity that the 45° was not accepted as to dwellings, and after that modifications might have been made in respect of every other building. In this way the supposed hardship of the angle of 45° would not have been felt. On the question of area at the rear of dwelling houses, he had had sufficient experience with regard to this space to say that it is inexpedient to have too much area at the ground-level. It is often misused and becomes a receptacle for rubbish of every description; but this idea of an angle of 45° gives, as it were, a plane of space on every storey, and this space increases as you go up. He would like some explanation in reference to this peculiar angle of $63\frac{1}{2}^\circ$. Perhaps Dr. Longstaff would enlighten him on the sanitary reasons that led to this angle being chosen.

Dr. LONGSTAFF: The angle of $63\frac{1}{2}^\circ$ is the angle whose tangent corresponds to 2. It is beyond question the angle of all angles which the unskilled mechanic can apply with a foot rule.

Mr. BOULNOIS (continuing): Section 49, with regard to the height of chapels and churches, might advantageously have included gasometers; they are sometimes carried up to a great height excluding

light and air, and he did not find anything in the Act to prevent that. He heartily congratulated Dr. Longstaff upon the success of his labours in carrying through this Bill.

Dr. L. PARKES (London): As to the utility of such an Act anyone who walks about London must be perfectly convinced. New buildings, in many instances were being raised to double the height of the old buildings; and many of the principal streets for some years past, had been steadily deteriorating as regards light and air. The L. C. C. had done a great work in carrying through so large a measure as this Act. Dr. Parkes endorsed everything that was said with regard to lofty blocks of mansions, so many of which had been built of recent years. In some instances, inner rooms were lighted from narrow shafts measuring not more than seven or eight feet across, and perhaps eighty feet in height; and it was not uncommon for servants to have to live in rooms lighted and ventilated entirely from these shafts. Inasmuch as servants were indoors most of the day, the want of light and air in the sleeping chamber was likely to be especially prejudicial. If these shafts were only used for ventilating closets and larders there would not be so much to which exception could be taken, though he did not admit that it was desirable to have larders ventilated from the same shaft which gave air to the W.C.s. It was truly ridiculous that in the past, buildings should have been allowed to have been erected, some of the rooms of which medical officers of health have declared to be unfit for human habitation. In some districts, such buildings have been run up despite the protests of the M. O. H., who was, however, unable to intervene until they were finished and ready for occupation.

Mr. EDWIN T. HALL (London) protested against the assertion that architects did not support the Act. That was not a fact. The Royal Institute of British Architects did their best to make the Act the best possible. What they did was more than that. They were he thought the original cause of this Bill being brought forward at all. The late Government in 1887 produced a Bill for the consolidation of all the Building Acts in London, and wrote to the Institute of Architects for suggestions. The Institute replied advising that the Acts should be at the same time amended, and they appointed a Committee not only to consider the consolidation but to draft a satisfactory amended Bill. It is to the credit of the County Council and Dr. Longstaff that they took up the subject and brought it to a successful issue. The Institute gave them every assistance, furnished them with their own draft, and were in constant correspondence with them, their sole object being to get the best Bill from a practical point of view. It is a fact that the Institute of Architects was obliged to oppose certain portions of the Bill, but this was only to make it more perfect. We must not forget that the Bill as drafted was very confiscatory in many of its clauses. It insisted that every house after destruction or pulling down should be set

back 20 feet from the centre, but there are over 30 miles of streets in the city of London less than 30 feet wide, and it would have involved twenty millions of pounds loss to the owners, not of the land only, but the ratepaying owners of the houses, to carry this provision into operation. That has been removed from the Act, and he maintained that under these circumstances the Institute of Architects were justified in opposing the clause. They were anxious to get an Act for the benefit of the whole community with due regard to private interests. It is regrettable that the Act does not contain any provision dealing with the drainage within the curtilage of the building. It is true that power is given under another Act, but the jurisdiction is different. As to the difficulty of interpretation, it is of course very difficult when a clause has been cut about and altered line by line and word by word in a committee room of the House to make it comprehensible. That is not the fault of those in charge of the Bill. There is one other point as to interpretation, and that is that the definition of inhabited room in this Act differs from that of the Public Health Act passed only three years ago, and this he thought was regrettable. It was proposed to have a separate definition for rooms in which people pass the day but not the night, and that would have been an improvement, if it had been possible. The great feature claimed for the Act is the angle in Section 41. One gentleman has said that it would have been much better to have an angle of 45° , but as originally proposed this would have applied to every building in London, not only houses, but warehouses, shops, and offices, and the effect would have been to sacrifice an amount of property which could hardly be estimated in figures. With regard to houses in the suburbs it might be reasonable enough, but the Institute had to deal with the Bill as they found it, and so opposed it. There ought, we are told, to have been an area at the back free down to the ground. He put it to them as men conversant with London, if in the case of a shop with no living rooms beneath, where a ground floor is not carried over the back area this does not become a refuge for rubbish? It is much better that the small area should be made into a show room than a dust-hole. Under existing Acts it was said that 450 square feet was the maximum at the back of a building, and that as a fact gave you 10 feet between the building and the rear fence. That is not so, for there was nothing to prevent your making part of your building right up to the fence. The Institute of Architects suggested that the 10 feet should be carried the whole width of the building and not to the ground floor only but also to the basement if there were any dwelling rooms there. As to the rear outline, he thought the enacted angle of $63\frac{1}{2}^{\circ}$ is a fair and reasonable compromise, having regard to the immense value of land in London. With regard to exceptions in favour of the working classes the legislature has laid down the principle that dwellings intended for their use should be treated on different grounds from those erected for persons who are more free agents. Labourers have to live in whatever is provided for them close to their work, while ordinary individuals can

go and live in the suburbs if they think fit, and therefore do not need any protection. Dr. Parkes was undoubtedly right in his remarks as to the mean little shafts in the modern mansions, but there is another shaft which is not mentioned. With regard to the question of the height of buildings, Dr. Longstaff was in error in ascribing the 90 feet of the County Council General Powers Act of 1890 to the action of the Institute of Architects. He had the honour of representing the Institute of Architects in Parliament on that Bill, and what happened was this: we had proposed 75 or 80 feet, but the other opponents got 90 feet, because it was found that the handsome mansions erected in recent years on the Grosvenor Estate were in parts nearly 85 feet high, and it was for this reason that the Committee consented to 90 feet. Dr. Longstaff does not refer to the damp-proofing of the underground rooms, but in 1891 a very important sanitary improvement was obtained by providing that not only were the floors of basement rooms to be protected from the uprising of damp and ground air, but also that the walls of such rooms should be similarly made damp-proof. That was obtained on the representation of the Institute of Architects. In conclusion, he desired to bear my testimony to the important services rendered by Dr. Longstaff to the public, in carrying through this most important and beneficial Act, a task most arduous and deserving of our warmest recognition.

Prof. BANISTER FLETCHER (London) said he should like to know what is the meaning of Clause 45, as to the adequate provision for the ventilation of courts by means of a "communication" at the lower end of it. What is the communication to be? He supposed some would use a tube, but possibly Dr. Longstaff would tell us what the Council had in view in putting these words in; because they certainly are not clear as to what is the kind of communication required. Another point he would call attention to was the taking of the angle from the sill of the window to regulate the height of court. That does not seem wise. In fact it is a great pity, because the line being taken from the sill, the builder will be tempted to get his light in width, in order to raise the sill, and thus the lower part of the room will be dark. As to the diagonal line, he thought that this would lead to a great amount of bad building. You can go up a number of storeys, and everyone of your back rooms will be set back upon girder after girder or sloped back with all the objections of dormer windows on every floor. With regard to Section 13, sub-section 15, upon which Dr. Longstaff has laid so much stress, he would like to point out what it appears to him the injustice—supposing houses require re-building as Dr. Longstaff has pointed out, and assume that on one side of the street are houses occupied by the working classes the owner of such houses will be forced to re-build limited in height to the width of the street, whilst the owner on the other side, if his houses are *not* occupied by the working classes, can go to a very much greater height and gain an unfair advantage. If the operation of the Act could be

so limited so as to give equal justice to all, he thought it would add to the great merit of this great labour.

Mr. W. W. BRUCE (London County Council) said that many of the sanitary clauses of this 1894 Act may be taken to be the necessary corollary and sequel of the previous health legislation, which has been referred to several times this evening. If we had tried to incorporate in this Bill any portion of the Public Health (London) Act, 1891, as has been suggested, it is highly probable that you would not have seen this Bill on the statute book. The supervision of the carrying out of the Housing of the Working Classes Act, and also of the Public Health (London) Act, 1891, and in some cases the actual carrying out of the Acts rests with the committee of the County Council, of which he was vice-chairman, and it was in the day-to-day working of this committee during the last few years that the necessity of these sanitary clauses in the new Act was demonstrated. Very much of the value of these two Acts was entirely negated by the old and very bad Building Acts. One or two illustrations will show how they hampered the Committee. Dr. Longstaff has referred to that large unhealthy area of Bethnal Green which the County Council has been clearing, and which contained fifteen acres of narrow slums. There were 5,700 people upon this area and 69 different sets of freeholders. The claims amounted to £457,000 and were settled for £266,000, the actual loss to the rate-payers of London being £280,000 for clearing away that insanitary area. The death-rate in that area was upwards of 40 per 1000. What struck the Committee most of all was that whilst they were spending this money there were other unhealthy areas in London actually being constructed, which they might be called upon to destroy. There are in some parts long parallel alleys varying from nine to twelve feet wide, having on either side little two-storey houses, very old and completely worn out, and the leases of which have run out. Under the Housing of the Working Classes Act they were being closed, but under the old Building Acts there was nothing to prevent the speculative builder building houses in these alleys to the height of 90 feet. He would certainly go much higher than the present two storey buildings without widening the alleys. Just look what that means. This is a clause in the Housing Act. It says that "where it is shown that the narrowness, closeness, or bad arrangement of streets or houses within such area, or the want of light, air, or ventilation are dangerous or injurious to the health of the inhabitants," it is the duty of the Council to clear that area at the public expense, to pay compensation to the owners and occupiers, and after having reduced it to bare land to reconstruct streets with proper dwellings, so that whilst they were acquiring one insanitary area for clearance purposes, these other areas were being built elsewhere which actually came under this very clause, and they could be called upon to destroy houses that were being built strictly in accordance with the Building Act then existing. On pointing this out to the Building Act Committee, the result was the introduction of these sanitary clauses into the Bill. If we

take the case of dwelling-houses the Housing of the Working Classes Act requires that any house unfit for habitation shall be closed by the magistrate, and under certain conditions a demolition order should be obtained for it. But the Building Act allowed that houses so closed might be rebuilt in an even more insanitary condition than those pulled down. There are many courts in South London where the houses are built against commercial buildings, with no back yard or back windows. A family is living in every room, the water-closet, laundry, &c., is in the basement, and you may imagine the result of the effluvia going up through the house, there being no through ventilation. If we closed these buildings, the old Building Act allowed them to be put up again even worse than before, because they could be built much higher. This shows the importance of those clauses which require a space of 150 square feet at the back of dwelling houses and 10 feet depth from the front to the rear of such space, which increases in depth as the height of the house increases. If we go from these old houses to those quite recently put up, you will find there are blocks of artisans' dwellings five storeys and more in height, with, in some cases, only six feet between the back wall of the house and warehouses 60 or more feet high; those were built in accordance with the old Building Act. There are even worse cases than that. In one case a man has managed so cleverly that he has only left three feet free behind a block of dwellings, and has covered that space with a balcony of three feet, so that if the owner of the neighbouring land had put up a back workshop, as he was entitled to do, all light and air would have been excluded altogether; he had made up his 100 feet by leaving spaces at the side of the building. He had also pulled down two old houses and put up one big block on the site of the two, and still only had to leave the 100 foot space. These cases coming before us one after another, showed us the necessity of getting the old Building Act altered, and on that account we urged upon our friend, Dr. Longstaff, to undertake this great work. We have, however, not yet reached the bottom of the difficulty. There is another question which should claim your attention and serious consideration as a Sanitary Institute, viz., that in many of these areas you cannot destroy the houses and put back under sanitary conditions the same number of people on the ground as those you have displaced. The problem is—what are you to do with the balance of people whom you cannot put back on the ground? Workmen, when proper means of conveyance are provided, will live outside London. You can see this at Walthamstow where there is, compared with the central districts, an ideal condition of existence. He thought it would be a very good thing on the part of this Institute to seriously take into consideration this very formidable difficulty, and to try to devise some practicable way of overcoming it.

Mr. T. BLASHILL (Superintending Architect of Metropolitan Buildings) said: We have to prepare ourselves for an entirely new state of things, and that will take up our Christmas holidays. He was not so satisfied with the Act as perhaps he ought to be. Any-

one familiar with continental cities, whether of the older type or of the new type, will be much dissatisfied with it, and will listen with very little appreciation to such remarks as fall from our architect friends as to hardship upon owners in respect of width of streets, back areas, &c. It is like another world to get into such a city as Berlin, where, instead of streets of this beggarly width of 40 feet, you get streets 150 feet wide, and on going to the suburbs you lose the street in the horizon. Some of the witnesses upon the Bill took a strong view as to the non-necessity of carrying party walls above roofs. He had no opinion on the subject, but listened to those who had an opinion, and was very much impressed with the evidence of Sir Eyre Shaw and with that of the present chief of the fire brigade. They gave their evidence very strongly in favour of the system. What he wanted to know was the experience of fire experts when there was no party wall. In every large continental city that he knew they had a party wall where a party wall is necessary, but it is exceedingly rare to find two houses together of the same size, as here, and if one house is higher than another the fire cannot easily communicate.

Dr. LONGSTAFF, in reply, said: Mr. Boulnois spoke of the gasometer. This was not a building, it was a structure; it was not, however, a temporary structure, and he was afraid the London Building Act did not touch it, unless the line of frontage be exceeded. Our original Bill defined both "building" and "structure." But the legal mind has a horror of definitions, and conjured up no end of bogies as to what would happen if we defined what was a building. For instance, it was pointed out that according to our definition (drawn up by the Institute of Architects), three sticks stuck in the ground with a hat upon the top would constitute a building. So they struck out the definition, and we are no wiser than before. Mr. Boulnois complains that this volume does not contain all the law relating to building in London, but he is not likely to get it in one volume for some time to come. Dr. Longstaff objected to one point in Mr. Hall's remarks. We are much indebted to the Institute of Architects and to Mr. Hall as Secretary of their Special Committee, and shall agree that a great deal was done by coming to as many agreements as possible out of court, and quite 100 clauses were thus disposed of; but when he tries to claim for the Institute of Architects that they initiated the new Building Act, that the Institute set the Government right when they were lagging behind there, he must differ from him. He (Dr. Longstaff) was appointed in 1889 a member of the Building Act Committee, and within a few weeks he was also appointed a member of the Sub-Committee on the Building Laws, which began its work at once. For six long years did he labour on this Bill, which has now become law, and therefore must claim precedence. Mr. Hall complains that originally we wished to set back all buildings. Mr. Banister Fletcher shows what injustice may arise from our only setting back some of them; we must set one objection against the other.

As regards ventilation of courts, the Institute and the Council were pretty nearly at one as to what was required, and the Council had very precisely fixed what was meant to be provided in the way of ventilation, but the Committee put in the words "adequate ventilation," without stating that the Council or anyone else should judge of the adequacy. The sill of the window objection did occur to the Council, but it will be found that it is limited in its operation by other clauses in reference to windows of habitable rooms, not completely but to a large extent. It was thought that it was rather hard to measure the line from the ground floor of the room and not to give in these three extra feet. As regards the space and the diagonal line, of course if men are perverse enough to do so we shall have some interesting structures, but the diagonal line only limits the space within which you *may* build, and as a matter of economical construction in the great majority of cases it will pay to make such sets-off in the building that you can carry your walls straight up. The Council could not deal with these very extreme cases. The reply to Mr. Hall is also an answer to Mr. Bruce's criticism, "that his committee urged his friend Dr. Longstaff to do this," but his friend Dr. Longstaff had his Bill in a very advanced state before the urging began. As regards the two sides of a narrow street, what Prof. Fletcher said is very true. This only shows the equity of the universal rules of the original Bill. To a certain extent, however, he has unconsciously exaggerated the bogey he has raised, because these narrow streets occur chiefly in very small properties, and under the provisions of this Act it will not profit individual small owners to make reconstructions, but as a necessary consequence people building on such property will have to deal with it in blocks of some size, so that both sides of the street will probably be dealt with at the same time. The object of the County Council was to prevent, as Mr. Bruce put it, the making matters worse than they are now. The sensible man will take care to acquire both sides of the street, and so be able to make the best use of the land.