

## ESTATE DEVELOPMENT UPON GARDEN CITY LINES

BY H. CLAPHAM LANDER, A.R.I.B.A.

THE Garden Cities and Town Planning Association frequently receives inquiries from property owners and others interested in estate development as to the best means of laying out their land. "What do you mean by 'Garden City Lines'?" it is asked; "wherein do they differ from the older type of estate development, and how can they be applied to the particular area in which I am interested?"

The Garden City idea has become popular, and the term is frequently appropriated by building speculators, and applied to undertakings which do not in the least justify its use. There is also confusion in the minds of many as to the expressions "Garden City" and "Garden Suburb." The former as originally conceived by Mr Howard and carried into effect at Letchworth, requires, as its first step, the acquisition of an area of considerable size at an agricultural price, upon a portion of which a self-contained city is planned and erected, in permanent proximity to the country on all sides—the increment due to the rise in the value of the land being secured to those who have contributed to it. The Garden Suburb, on the other hand, is usually residential in character and comparatively small in area. Further, being near some existing centre of population, the land has already an urban value, and all that remains is to "town plan" it on the best lines.

Owing to the fact that each area, or estate, has its own peculiarities, requirements, and conditions, it is impossible to lay down any definite regulations which would apply in every case. Each scheme requires special consideration. There are, however, certain general rules to be observed, more or less, in all cases.

Until recently each land developer has been content to lay out his land with little or no regard to the development of adjoining land. Plans of single roads and small areas have been deposited and approved from time to time, and the result has been a haphazard and formless expansion of our suburbs rather than a properly regulated growth. The rigidity of the old by-laws has been reproduced in the monotony of the building line and the impossibility of providing different types of roadways for different kinds of use. To the majority of estate developers the creation of ground rent was the main object, and the area was cut up in such a way as to produce the greatest immediate financial return. Trees and other obstacles were removed in order to produce the greatest length of building frontage compared with the minimum amount of road making. The results of these methods are familiar to all. Who has not felt the desolating effect of the cutting up of some fine old estate for building, the ruthless destruction of beauty with the sole idea of crowding on as many houses as possible for the sake of the ground rents created? With the shifting of centres of population and improved means of transit large estates have continually to be cut up into small plots, but the problem may be approached in a reckless or a sympathetic spirit, and it by no means follows that the former method shows the better financial result in the end. A new spirit is at work in the development of estates, a spirit which aims at preserving every feature of interest or beauty and incorporating it in the new scheme. By this means, combined with careful planning and good design, a character and charm may be given to a newly developed district which will render it not only attractive to live in, but profitable as well. Well grown trees give to a new district a mature and settled appearance, impossible to obtain in any other way.

With few exceptions the growth of modern towns has been haphazard and irregular. The desire of an owner to sell or let his land for building purposes, the enterprise of the speculator, railway facilities, or some such extraneous influence hitherto uncontrolled by any public authority, has been largely responsible for causing the development of towns and suburbs to follow the lines it has. Hence most modern towns are formless and inconvenient, frequently straggling round an ancient centre whose narrow, crooked streets are quite inadequate to meet present-

day requirements. Every year vast sums are spent in widening streets, removing obstructions, re-arranging draining systems, and in other ways rectifying defects which need not have arisen had the town been planned as a whole from the start. Before commencing to build a house, plans are prepared so as to secure the accommodation required with the greatest convenience and simplicity, each part bearing its proper relation to the whole. Equal care and foresight is necessary in the planning of a building area if the best results are to be obtained and unnecessary expense avoided. In each district the width of the roads, the capacity of the sewer, and all such matters will be decided upon beforehand, so that every part will fit in with the others in the completed scheme, and no alteration be required. The economy of such a scheme is obvious, and it is also only by such means as these that harmony and order can be secured.

The person proposing to develop any land must first obtain a map or plan of the area. Upon this plan must be indicated the contours, also all existing roads, buildings, footpaths, watercourses, woods, commons, trees, railways, and every object of utility or beauty which may influence in any way whatever the proposed plan. Different soils should be shown by different tints, and any portions unsuitable for building upon should be so marked.

Having provided himself with the fullest information regarding his own area, he should consider its relation to any adjoining land now being, or likely to be, developed. If any existing traffic roads are to be continued across his land he will make proper provision for them; also, any further main roads, to give direct communication with other districts, either as tram routes or otherwise.

The position of any railway station upon or near his estate is a matter of great importance and will exercise a strong influence upon the direction of the principal thoroughfares. Having laid down approximately the position of the through traffic roads, and what may be termed the local main roads, at or near their junctions a certain number of civic centres should be provided. These civic centres will be points of special interest in the plan where a church, a theatre, a free library or other buildings of importance will be grouped, each centre being placed with due regard to natural conditions and designed with a character of its own. The positions of the principal roads and the town centres having been settled the subsidiary roads may be filled in according to the requirements of each district.

Concurrently with the laying down of these main roads and centres it will be necessary to consider the allocation of different areas to different purposes. If it is proposed to reserve any sites for factories, the best position for these should be indicated upon the plan. This selection will be influenced by the proximity of a railway or waterway, by the direction of prevailing winds, in order that the smoke may be carried away from the houses, and other considerations. The houses for the working class should be provided within easy reach of the factories, and yet quite separate from them. A thick belt of trees forms an effective screen for this purpose. The shopping districts would also have to be allocated as well as the purely residential areas. In addition to the sites for public buildings, suitable positions should also be reserved for markets, open spaces, recreation grounds, and an area for sewage disposal, and an agricultural belt if the area of land under consideration should justify it. Experience has proved that the provision of a few large open spaces does not meet the needs of little children who cannot go far unaccompanied. For them a large number of small but easily accessible playgrounds, or gardens, are required. Triangles and odd shaped pieces of land of little value for other purposes are quite suitable. The maximum number of houses to be allowed per acre in each district should also be fixed.

A complete system of drainage should be prepared, to meet the ultimate needs of the district before any section is commenced, and each section as laid should bear its proper relation to the whole system. Vast sums of money are spent every year in relaying and enlarging sewers which have become inadequate owing to building developments for which no provision has been made.

If a district has been carefully planned in advance and its boundaries laid down, the expense of enlarging or deepening sewers and the widening or straightening of roads becomes unnecessary. A separate water system should always be provided for so that the outflow of sewage may be as nearly constant as possible, and unaffected by storms.

The width and character of the roads should depend entirely upon the use to be made of them, provided the distance between houses upon opposite sides of the road is sufficient to admit ample light and air in all cases. Excessively wide roads tend to dwarf the buildings upon them. The width of the portions metalled for vehicular traffic, and that paved for foot passengers, should be regulated by the demand in each case. The remainder of the surface not metalled or paved may be left as grass sward or planted with small shrubs. Much will depend upon whether the road is to be urban or rural in character, and whether the district is likely to be thickly or thinly populated. Grass margins are not to be recommended where traffic is heavy. In country districts the curbing and channelling may be dispensed with. In the subdivision of the total width into the constituent parts to be devoted respectively to vehicular traffic, footways, green sward, tramways, promenade, etc there is infinite variety, and each road must be designed according to the requirements of the case. In some cases one owner may find it difficult to lay out such roads as suggested owing to the want of elasticity of the local by-laws. Where it has not been found possible to get these amended, some authorities have shown themselves willing to overlook a breach of the letter where the spirit is maintained or have accepted a quid pro quo where a literal interpretation would have proved harsh or inequitable. Failing other means powers may be applied for to carry out the scheme under the Town Planning Act. Trees should be planted along roads wherever possible. The best effects are obtained by using the same variety of tree on both sides of the road until a break occurs. The most successful avenues are those in which the same tree has been used throughout. To introduce several kinds in one avenue, or in close proximity, is unlikely to prove satisfactory. Not only is the use of a single kind in one avenue productive of dignity and harmony, but the growth of trees of a kind is likely to be more uniform owing to the peculiarities of soil, etc.

Public gardens in towns should invariably be laid out upon formal lines. Whatever may be said for a freer treatment in the matter of country gardens, the town garden, surrounded as it is by rigid architectural lines, must be brought into harmony with its environment. The so-called landscape garden, with its irregular clumps of foliage, patches of grass, and meandering paths is quite out of place in the centre of a town because it has nothing in common with its surroundings. Such a treatment is admissible only in odd corners and irregular patches too small to be laid out in a formal manner, in the case of existing trees or bushes which it is desirable to preserve and on steep slopes. All new urban public gardens should be laid out with straight paths and avenues with suitable terminal features, rectangular beds and lawns and terraces if the site is on a slope. Any existing trees or other natural objects of interest should be preserved if possible and incorporated in the plan. The direction of roads must naturally depend upon circumstances. It should, however, be borne in mind that a road running due east and west renders necessary a large number of windows looking north, which is the least desirable aspect. A long road following the direction of the prevailing wind is to be avoided if possible. Other things being equal, the best aspect for a house is S.E. and N.W. In such cases every window receives sunlight for some hour of the day. The question as to whether roads should be curved or straight will depend upon the special circumstances of each case. A sharp curve is undesirable, as the plots on either side are likely to be wedge-shaped and difficult to develop. This is particularly so in the case of shops or other property in which the houses are continuous. The difficulty of bending such round a curve is obvious, and can only be got over by adopting irregular shaped rooms or by introducing frequent breaks in the frontage line. Roads devoted to shopping and business purposes are more easily adaptable if designed upon straight, regular lines. A sharp curve also cuts the sewer up

into short lengths, involving more manholes. In the case of a level site, clear of all obstructions, a geometrical plan, with roads mainly straight, would suggest itself as being the most suitable. Undulations in the ground, clumps or rows of trees, or other existing objects which it is desirable to preserve, provide a sufficient reason for a departure from the straight line. Even a good hedge is worth preserving, and may be worked in sometimes as the boundary of a new road. Level ground also suggests a horizontal treatment in which cornices and other horizontal features predominate. Horizontal features which have to be stepped at frequent intervals owing to the fall of the ground are obviously unsatisfactory, and in such a case a vertical treatment is preferable. The direction of a road may be determined by the vista to be obtained from it. It may be so laid out as to obtain the best view of a church tower, or an old house. If no obstacles exist it is generally desirable that main traffic routes should travel direct from point to point, as did the Roman roads. A straight road, however, of indefinite length, is likely to be tiresome, if carried too far. In such cases it becomes desirable to "close in the picture" by changing the direction of the road sufficiently to allow of the introduction of a building which will make a suitable termination to that section of road and prevent the eye travelling on indefinitely. A building, in such an important position must, of course, be designed with especial care, as it will have the effect of either making or spoiling the picture. Smaller obstacles in the centre of the road or in the centre of a circus, such as a lamp, a fountain, a refuge, or a clump of trees are usually considered undesirable as an interference with speed; on the other hand the obligation to slow down on approaching a busier area or cross roads is in itself sometimes an advantage.

The importance of the building line cannot be over-estimated. In the monotony of the speculator's suburb it is not the straightness of the roads which offends the eye, but the rigidity of the building line. This can be obviated by breaking the building line, and setting back the houses in groups or terraces; the end houses of the groups to stand forward, it may be only a few feet, it may be right out to the pavement, the groups on opposite sides of the road always corresponding. Each group of houses may have a different architectural treatment. If the houses which close in the groups are brought forward to the edge of the path, persons walking down the road have presented to them a series of squares, all possibly different, but each with a character of its own, the play of light and shade being immeasurably increased on account of the projecting buildings. By some such means as this a dull monotonous road may be quite transformed without any alteration in the width or direction of the road itself.

Another very unsatisfactory feature resulting from the old type of estate development is the ugly flank walls which occur at the junction of two roads. Terraces are continued until a cross road necessitates a break in the houses. An awkward gap is the result with a dead wall on either side of the entering road, and the terrace begins again.

In order to obtain the best effect it is desirable that the houses on both sides of any given section of the road, or the houses in any square should be designed by one architect. To let or sell separate plots with liberty to erect thereon houses of any type the individual owner may prefer, is not the way to secure a harmonious result. This can only be arrived at by making the square, or the section of road, the unit, instead of making the house the unit. This does not for a moment mean that all the houses within a given section should be alike. On the contrary, as it has frequently been pointed out, it is harmony and not uniformity that is desired. It is hitherto been supposed that the approval of plans would secure this end, but unfortunately in practice, this method has completely broken down. In some cases where it has not been found possible to do more, a certain amount of harmony has been produced by the adoption of a single type of fence for each road.

To secure a pleasing appearance, local building materials should, as far as possible, be adopted. Red bricks should not be introduced into a stone country, neither should slates be used in a tile-producing district.

A very objectional requirement of some local by-laws is the provision of parapet walls above the roof of adjoining houses. They are supposed to prevent the spread of fire; on the other hand, they add to the cost of the building, they tend to make the walls below damp, and they are very unsightly. If the party wall is carried up to the underside of the tiles or slates, and these are bedded upon it, there is little danger of the spread of fire, the wall itself is protected against the weather, and the appearance outside is greatly improved. Every effort should be made to obtain the repeal of the by-law requiring these parapet walls.

Angle sites produced by one road meeting another require special treatment, so that the corner may not look unsightly from any point of view. The houses upon corner plots require to be specially designed for their positions, so as to secure the greatest amount of comfort and light within as well as a pleasing effect when seen from without.

The plan which may be well adapted for the house in a row is not suitable for a house upon a corner site, and the house designed to face south is obviously unsuited to a site having any other aspect.

Odd-shaped areas of back land sometimes occur, which may be best developed as squares, or culs-de-sac. Their seclusion makes them attractive to those who prefer quiet. The roads giving access thereto need only be of sufficient width to meet the requirements of the case, room enough being provided for carts to turn and to pass one another.

Should the depths of plots permit, a strip of common garden may be retained at the bottom of the private gardens, with a separate gate for each householder. These strips, even if only 30 or 40 feet wide, may be planted with a double row of trees and form a pleasant places for little children to play in without having to go upon the road at all. The trees would also form a screen between the back windows of the houses in one road and those of the next road.

The extent to which a central harmonizing control can be adopted will, of course, depend very largely upon the form of land tenure proposed, and whether the owners of the land are also willing to erect the houses and maintain the common gardens and open spaces.

Should an owner desire, not only to develop his land, but also to build the houses and let or sell them afterwards, he is naturally in the strongest possible position for securing a successful and harmonious treatment. A subsidiary company formed with the like objects and animated by similar aims may be considered to fall within the same category.

Such an owner or company acting as benevolent autocrat upon the best professional advice can secure the desired results in the simplest and most direct manner. They may employ one or many architects, but in either case the result would be harmonious, because all would be under a central control, and each section would bear a definite relation to the whole. The town plan having been adopted and development commenced, each architect would be required to design houses of given accommodation within definite limits as to cost, but beyond this he would be allowed latitude of treatment, and would be judged by results. The best effects would be obtained if each architect were allotted all the houses within a given area, say in a road, a section of a road, or a square. By this means that unfortunate irregularity would be avoided which is so destructive of anything like general harmony of treatment or repose. Instead of the house being the unit, the street or the square would be the unit, and much greater breadth of treatment would be the result.

It frequently happens that the owner is unwilling or unable either by himself or through a subsidiary company to do more than develop his land, that is, to lay out and make the roads. He then proceeds to let the sites on building leases. It is customary under such circumstances to require the deposit of plans of the proposed buildings which must be approved by the ground landlord, or on his behalf, before operations are commenced. In practice this approval of plans has quite failed to secure harmony of adjacent buildings or even in the majority of cases to ensure

that each building is satisfactory and pleasing as a unit. Financial considerations are allowed to outweigh the claims of beauty, proportion and harmony. The desire not to lose a possible tenant too often induces the ground landlord to waive his right to insist upon a satisfactory design and the mediocre, the common place, and even the monstrosity is allowed to pass. Buildings passable in themselves clash through being placed next others quite different in treatment. So soon as the owner decides to lease his land, his control over the estate considered as an entity or a complete and pleasing whole is, for all practical purposes, at an end. Should his land be in great demand he may be in a position to enforce his conditions to some extent, but if, on the other hand, his plots are disposed of only with difficulty, his right to approve plans becomes a dead letter.

Covenants which are difficult to enforce in the case of land let upon building lease become still more difficult when the freehold is sold. The results are only too common wherever building estates are being developed. Probably in almost every instance the ground landlord has retained the right to approve plans before buildings are commenced. In spite of this requirement, buildings are erected with badly conceived plans, and crude, ill proportioned, and otherwise in bad taste as to their outward appearance. Houses having no relation whatever to one another are placed side by side upon adjoining plots, whilst contiguous gardens are fenced along their main frontages with close boarded fences, posts and chains, burr walls, or any other variety of enclosure which the fancy of the tenant may suggest.

The unfortunate effect so produced is visible in all our growing districts. In estates described as "Garden City" or "Garden Suburb," however, some more harmonious and comprehensive treatment is to be expected, and this can only be obtained by an efficient and effective central control, a controlling influence which will not only have in view the most perfect house as such, but will also preserve intact the larger unit of the suburb, the district, or the street of which the house forms a part.

The right method is invariably to commence with the town plan, fixing approximately the amount of garden to be allocated to each house, which is then designed to suit the particular site it will have to occupy. The wrong method is to consider the house plan first and then to add house to house and street to street.

Estates laid out upon garden city and town planning lines possess a charm and interest not to be obtained in any other way. Not only are they more pleasing in appearance, but in the long run more profitable. As public taste develops the present incongruous collections of houses will become less and less attractive, and will eventually be as little in demand as the basement kitchens of the last generation. The carefully thought out plan, with its groups of well designed and harmoniously related buildings, disposed according to a definite idea and method, is the key of successful estate development in the future.

In conclusion, should the estate developer desire to obtain competitive designs for the laying out of his land, he is recommended, as a first step, to seek the advice of this Association or of some other competent authority. The preparations of such a competition require some technical knowledge, and in order to meet with the best response, it is desirable that the said conditions should be drawn up in accordance with the recognised standards governing such matters.