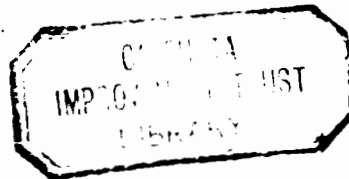


**TOWN PLANNING IN JUBBULPORE.**



**A REPORT TO THE  
MUNICIPAL COMMITTEE**

BY

**PROFESSOR GEDDES**

AND

**H. V. LANCHESTER, F. R. I. B. A.**

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# TOWN PLANNING IN JUBBULPORE : A Report to the Municipal Council,

BY PROFESOR P. GEDDES AND H. V. LANCHESTER F. R. I. B. A.

## I. The General Aspect of the City.

The general aspect of the whole city—the Old Town and the Civil Station alike—has impressed us no less favourably than it does the majority of its visitors. This high, healthy, well watered and beautiful situation, with its prosperous and extensive province, its vigorous and intelligent population, presents the conditions for the development of a city which though necessarily limited in magnitude, may in quality rank among the glories of India. Not only is general opinion recognising this but municipal initiatives give evidence of it, as a rising purpose, indeed an incipient policy; and this will doubtless and before many years define, into clearness of civic conception and persistence in the progressive execution of them.

Time has not permitted us to see anything of the Civil Station, beyond the appreciation of its unusually well planted character. We have concentrated our short stay upon the old city, and its problems of improvement and extension.

We may leave the location of the city for explanation by the geographer, but its development and growth are unusually obvious. First an increase of population upon the well watered region lying around the western extremity of the rocky hill range, with its fine line of tanks from the Benisingtal and Hanumantal southwards. Then the gradual rise of the Bazar street, along the Great Northern road; and next, with the wars of disintegration of the Moghul Empire, the concentration of population into a walled city. Though this wall has been demolished, and only the southern gate remains in good preservation, the piers of the corresponding northern gate attest a long diameter of half a mile. From this the wall would doubtless pass eastward, to and by the Hanumantal; thence, from its south east corner, S and SSW, to the conspicuous junction of five roads, between the Phutatal and its smaller companion the Jurital, to the S. E., of late years filled up. At the centre of this star of roads there doubtless stood the S. E. gate, with its two external approaches, past the opposite sides of the large tank now filled up for the Sunday market. Of the inner three roads the central one runs straight to the middle of the present Bazar street, and those diverging to left and right may broadly indicate the old course of the walls. The wall to the south probably turned S. W. at a minor gate N. W. of Jurital, and is thence indicated by the Purani Bazaji Road running to the mains S. gate; while the road by which we started from the main S. E. gate between the tanks, runs W N W to form with the main street, the

main crossing of the old Bazar, and still broadly defines its most active section. The fine though narrow old street running from the S. W. corner of the Hanumantal, broadly parallel to the Bazar street, with its Palace and mansions, its Temples and Mosque, affords an admirable contrast to the Bazar. Town-planners are now emerging from that confusion of the early industrial and railway age, which thinks that streets have at once to meet the needs of communications and commerce, and of residence and public life as well, and which is thus apt to press the first two, together or by turns, to the neglect and often to the grievous damage of the others. We now see, as did the old planners, whose work the industrial and railway age has too readily destroyed, that while main communications of course require ample and even spacious thoroughfares, the most prosperous and active bazars are those which are not too broad, indeed even narrow. For this is far more favourable to the survey and search of the purchaser and her or his easy crossing from side to side, which doubles the effectiveness of the bargaining quest. Again, though in India, as of old in all countries, the shopkeeper conveniently lived behind or above his shop, the increasing magnitude and variety of stock requires the largest available ground space for display, convenience, and for storage, and the home may move up-stairs. With the rise of rentals and values, housing also becomes more restricted, unsatisfactory and costly. Hence to supply new and more spacious and healthy housing apart from business, yet not too remote from it, is one of the main problems of the re-planning and extension-planning of Indian cities. This is of course everywhere more or less being considered, but generally in too piecemeal fashion. To preserve the old, and often very valuable, residential quarters from the rival dangers which so commonly beset them, of overcrowding or of depopulation, is a further task of city planning. This is apt to be left until one or other form of deterioration has set in, and then to be attempted by too drastic and costly methods. Hence the value of foresight, and of timely action accordingly.

## II. Further Study of City Quarters.

So far the general view and theory, now for application of it. Returning to the fine old Darhai street and neighbourhood, we strongly discourage any proposal of its general widening, as too costly and destructive, and are satisfied to wait until some spot of decay or need of rebuilding may afford the opportunity of local and moderate widening, enough to afford a street siding at occasional points, for the easier passage of vehicles.

The density of population in this quarter, and its repeatedly unsatisfactory record as regards the origin and incidence of plague and other diseases, calls however for remedies. First no doubt the development of attractive sites elsewhere, but also some scrutiny of interior accommodation by the Public Health department, with its educative influences, and if need be its judicious pressure of authority. But mere street widening would only increase crowding within.

South of the Bazar street and outside the City Gate, the market which arises so naturally in such positions has been cleared up by the sound town-planning of "John Company" before the railway age; and on the

whole with good effect. We particularly welcome the pleasing and wholesome presence of the Fountain ; and though it is regrettable that its design should be of the very rudest in existence, this may the more easily be replaced some day by a work of art worthy of this central situation.

The old road running outside the city wall to westward and between it and the fine Jain Temple, has been blocked apparently by the confused growth of comparatively recent times, and its extension to meet the north side of the large Grain Market square naturally suggests itself.

The main westward alignment from the Fountain quarter is obviously of the same date as that of the excellent thoroughfare of Nembhardganj Road, with its two spacious and well planned market squares, to north and south respectively. This is one of the most satisfactory modern features of the city, and one which we shall emphatically hold up as an example in others.

**Market Improvement.** This first impression of its fine general lay-out is not however maintained when we inspect it in detail: but the repair of dilapidations and general tidying up might be readily effected at no great outlay, and the business advantages of its road planning would thus be recovered.

Here moreover is an opportunity which might far more easily be taken than in the crowded grain markets of the most cities for effective measures against that constant spilling and petty wastage of grain which is a feature of eastern markets. This is not only very unpleasing to our eyes, first in itself, as a waste of food, and as a heavy and constant tax on producers and consumers, and also as towards no better ends than those of maintaining a rat paradise, and of creating potential if not active plague centres accordingly. We therefore suggest the experimental construction of a corn-plinth ranging through at least a definite section of the market. This might be of either simple or permanent construction: in the latter case either built as a house plinth or more lightly as a simple platform, gently sloping downwards, say of expanded metal covered with a layer of concrete and raised on iron supports. In any case a projecting ledge would impede the access of rats. A succession of shallow grooves, say 1" broad by  $\frac{1}{2}$ " deep, running from back to front, and at a distance of one or two yards, would stop and collect the overflow from the sides of each grain heap. Each groove should end in a bowl-like hollow, or in a spout projecting an inch or so, to which a little basket might readily be attached. A slightly upturned edge should run continuously along the upper border of the corn-plinth and along the lower and outer edge also, so preventing grain from rolling over anywhere save into the spout. Is it not reasonable to hope that the results of this simple experiment, and those in grain economy let alone remoter consequences, would before long justify its extension? Improvements in detail would doubtless arise in experience, and a finished form be reached, recommending itself for general use in open grain stalls of all kinds. Rat-trapping in its various methods would at the same time be highly expedient, to prevent that deterioration of the rat population under

diminished feeding which may well make them liable to disease, just as it does human beings.

**Traffic.** We confirm the City Engineer's view that a new & more direct route from the Station to the Market is required, and accept his suggestion that this route should make use of the road leading from the Civil Dispensary to the Kadam Tal, along the north side of the Sunday Market. From near the north corner of this open space, and in course of repeated perambulations, we have sketched out a route which seems to us as practicable, and more economical than any of those originally proposed. Our sketches on blue prints may thus readily be worked out into detail in the Engineer's office.

We do not think that within the built up area of the city any further large roads are required, but rather improvements taking the form of small squares and open spaces. We have however a recommendation to make with regard to a new traffic route, on the *Murcherhai Tank* to the Railway crossing (broad gauge) on the Howbagh road, which would connect this important route more directly with the Mirzapur Road, thus providing a good through route, without forcing drovers, and other unsuitable traffic, into the heart of the town.

### **Manufacturing Developments.**

Though Jubbulpore has not hitherto (perhaps fortunately for its amenities) displayed a marked activity in manufacture on modern European lines, it appears inevitable that its central position and good railway facilities will conduce to development in this direction. It is therefore essential that areas should be definitely allocated as suitable for factories, both with a view to these having locations economically advantageous, and at the same time with the object of avoiding injury to those portions of the city where their presence would be objectionable.

The first areas that suggested themselves to us were those lying south and north-west of the Madan Mahal Railway Station; but though these might eventually come into use for this purpose, they are at present too remote from the centres of population. One result might be a serious handicap on the energies of those employed, by reason of their having so far to go; or, in the alternative of their migrating to this district, a proportion of the existing city might become more or less derelict, a disaster that has befallen too many other Indian cities where these considerations have been neglected.

On the whole we therefore favour the proposition that has been submitted us, which consists broadly in bringing the factories near to the city rather than risk the city dragging itself painfully toward the factories. We are the more satisfied with this proposal in that the railway line, for the two miles required, runs for its entire length out of sight and hearing of any residential quarters, or probable residential development.

The proposition is that a line should branch off from the main route west of Madan Mahal Station and run northward about half a mile west of

Ranital, curving eastward to a series of sidings and a good depot north of Cherital. This is in many respects an excellent position for manufacturing purposes, and would bring them within three-quarters of a mile of the centre of the city; and this even after providing an area around Cherital Tank sufficient to allow for the increase of population in this district with the enhancement of its commercial activity.

For this reason, and also on account of the exceptional beauty of the Mirzapur Road, we regard it as essential that no sidings or factory sites should be allowed beyond a line some 300 yards westward of this road. The definite lay-out of this area the limits of time allotted us have not permitted us to accomplish, but we shall be happy to submit a plan if desired.

### **Municipal Building Estates.**

We must warmly express our appreciation of the far sighted policy adopted by the Municipality in taking into its own hands, to such an exceptional extent, the provision for the future needs of those under its care, both in respect of Housing and the provision of Parks and Open Spaces. We shall deal with the latter under a separate heading; and begin with the estates intended or in course of development for residential purposes.

The important extensions south of the city may be divided into four main sections:

- I. The Nemibhardgunj Extension, around its circular Recreation Ground.
- II. The extensive Murcharhai Mohalla, including the Madan Mahal Extension.
- III. The Civil Station Extension westward, between Bhourtal and the Madan Mahal Railway Station.
- IV. The Civil Station westward of Bhourtal.

Taking these in the order named, in the case of I the entire southward section is laid out and largely occupied. But, as this is not the case north of the Recreation Ground, we suggest that the Municipality would be well advised to extend their activities to the northward, and acquire such areas in the Chamar Mohalla as will enable them to bring this district (I) into more definite relation with the centre of the city. While retaining the spacious plotting on the frontages to the circus, we would suggest that the remainder of this site might appropriately be allocated to the rehousing of those dispossessed by the improvements in the central area upon sites more nearly within their means.

II. In the Murcharhai Mohalla, the Madan Mahal Extension is an example of the failure liable to attend all attempts to effect a development other than on lines of natural growth. No doubt the opening of the Railway Station here appeared to offer an inducement; but a previous more careful study of the conditions would have shown, as experience now proves, that this imagined inducement was a fallacious one. At all events it is now clear that the work done here cannot be productive for years to come. It seems

clear that the development of this entire area should commence from the Strangways Memorial Park by a road starting at the N. W. corner of the new Municipal Garden. From this point a road should be formed running westward, which would practically bisect this section, uniting with the existing roads in Madan Mahal.

We are informed that the N. E. portion near the park would be popular with Mohammedans, owing, to the proximity of a good mosque, and it might well be reserved for them.

Another important route is shown as passing through this section, and section IV, from N. W. to S. E.; but this has been mentioned under the heading "Traffic."

We shall be happy to prepare plans showing in detail the methods we would consider appropriate for housing in this section.

In respect to section III we do not propose any modification in the scheme now in course of execution, but a brief reference to the treatment of the southern margin will be found under the heading "Parks."

Passing to section IV, we consider that it would be premature to lay down a definite scheme for this area, as the character of the demand for accommodation here has not so far disclosed itself.

The inspection of an area such as this creates a very strong impression as to the destructive effect of throwing so much land out of cultivation long before it is likely to be required for buildings.

Not only does this entail disorganization and disarrangement in the life of the cultivators, but it represents a large loss of revenue to the city; and we are convinced that this course was quite unnecessary, and to no one's advantage in respect of at least three-quarters of the area of this section.

Having considered the ground now in the hands of the Municipality, we pass on to the districts where it is especially important that the developments should be controlled. Foremost among these is the Cherital area both east and west of the Mirzapur Road.

**Railway Section.** As already stated we recommend that no goods yard or sidings be brought within 300 yards of the Mirzapur Road, as this road forms a strikingly convenient central avenue through this quarter of the city, and would then be taken up, as a residential road, by those occupied at the Railways and factories.

The Cherital Tank will form the centre of a small park for the recreation of the people of this district.

We note possibilities in the remains of the old Government College at the east corner of Cherital district, and would think twice before demolishing them. We do not see that at present any further large industrial area is required in Jubbulpore.

### **Tanks, Parks and Open Spaces : Avenues and Pathways.**

With the coming in of the industrial age in Europe, towards the close of the eighteenth century and the earlier portion of the nineteenth, there



was aroused, no doubt largely by contrast, a great movement of nature-feeling and landscape-appreciation; and this not only in poetry and painting, but in private and public gardening, and park-making also. But with the spread of industrialism, and still more with that of railways, park and garden design and town-planning lapsed together. For though parks were often laid out, as houses were built, the supply of the former has been too strictly considered as a measure of sanitary relief from the over-crowding of the monotonous "bye-law streets" which have been characteristic of this period, and as a supply of playing spaces in which the muscular energy of youth might be kept out of mischief. And both so far well. But the generation which came in with the railways, and that which has followed it, despite eminent exceptions, have been far less awakened to natural and artistic beauty than were the three preceding ones characterised in the west by Turner and Ruskin, by Wordsworth and Scott, by Rousseau and Burns. More definitely stated, the many advances of the physical sciences and their applications in engineering and industries, in sanitation and the like, the increase of wealth and comfort, the progress of political intelligence, of administrative skill, of social feeling, and even those of public instruction also, primary, secondary and higher, have not been accompanied by corresponding advances in our standards of taste, or in our visual appreciation of natural beauty, or of architecture. Hence the links between these, which are or should be afforded by Public Parks and Gardens, as by private gardens also, have become greatly lowered in their design and execution. From the two old styles, the one formal, the other naturalistic, but each beautiful in its own way, we are apt to fall to the monotonous and the confused. Has not this fault too largely befallen the large open spaces and Parks of modern India? And to some extent even in well-planted Jubbulpore?

That the ancient Tank-parks of India are here well represented, our peregrinations and photographs have convinced us. Yet their decline is too much represented also. We strongly dissent from the recent and would be sanitarian movement against tanks; for on the principle of destroying whatever has been allowed to get untidy, or even dirty, what would remain? Streets and roads, fields and gardens, homes and belongings, are all deteriorating day by day, but we do not abandon or destroy these. We repair them as we do our houses; and so must we with tanks, even cultivate them as well.

We have been interested in the abundant water chestnut cropping of the great Ranital Tank; but we specially urge that the best of all cultivation processes, and the most remunerative, is that of fishery. For we would remind our readers that in Bengal the return of a well kept fishery tank rises from two or three times that of the best paddy land, to four and five, even six or seven times, that comfortable amount. We are well aware that all classes of the population do not eat fish; but even those who do not will make few objections to have their taxes lowered by the net amount of tank rentals.

Given however the large Mahratal Tank, now almost completely filled up, at great cost, and by the destruction of the large and once beautifully wooded Bund which was its park setting, one of the problems put to us is how to make the best of this, as a new Park of henceforth predominantly

European character. We have therefore carefully worked out a plan for this, and extended it southward as well; and we trust that it may meet approval. Its main features may be briefly enumerated.

**Fox Strangways Park.** Our prepared scheme falls into three sections, indeed four. First the old Tank area, next the Garden area, third the Athletic Field area; and southmost, a small Park and Tank area again. The first of these, the old Tank area, is incompletely filled up; but the portion intended to be preserved is now too small to be of much use or effect. The sacrifice of the remaining wooded portions of the bund to finish filling this would be disastrous to the beauty of the resulting area. The fine old shrines and trees surviving on the west, and the whole bank to north, should alike be preserved. To raise the ground-level over the main areas to reasonable dryness, and to improve the small remainder of the tank, we propose (see plan) to deepen this and extend it as shown, so affording a little Boating Tank of unfamiliar shape, and with Band-Stand upon its circular portion. The park, at present uninteresting, is thus divided into distinct units, each with its own interest, its own walking and playing spaces, and is redeemed from monotony accordingly. The relation of this lay-out to the adjacent Theatre building has been kept in view.

The large Fruit Garden has been conservatively and somewhat formally treated; and its shrine and great tree utilised as features. The Athletic Field is of course kept open, but our marginal planting will be seen to improve its aspect, both from without and within, and also to include plunge-baths for its players. Finally the neglected ground to southward, with its irregular banks and unshaped tanks, is made the most we can of, without undue outlay.

This finished plan—the only one which our conditions have afforded us time for supplying—will broadly indicate the type of plans for which this preliminary survey, with its notes and photographs, has given us ideas, and some materials for preparing; Hence not only other parks, but communications, improvements of insanitary areas, extensions, etc., may now rapidly be planned out if and when desired.

The surviving Tanks need but little careful planting and grouping to complete their beauty, while those already filled up may also readily be improved. For the small one with the school, and the other smaller one with the slaughter house, much may be done, with little outlay.

But park-making is not merely a matter of particular parks here and there. The larger conception, which even our short visit has aroused in our minds, is one in which these many fine, but still too scattered, tank parks and open spaces of the city are all linked and connected up, by existing avenues and new parkways, into a Park System, which should ramify throughout the entire city, and bring its beauty and health within easy reach of every home. There is in this no prohibitive expense. In fact here in Jubbulpore the preparation of such a comprehensive plan would be peculiarly easy, and its result exceptionally effective, making this more than ever one of the fine cities of India. The many beauties of the city, recorded in the photographs which have aided our study of it, are in themselves ample

evidence of this. Indeed in this connection let us point out that the attention to these beauties which can easily be evoked by the formation and encouragement of a Jubbulpore Photographic Society would be of great help towards diffusing the appreciation of the city by its citizens, and would thus at once facilitate improvements and keep these on good lines. As an instance of this in detail, let us take an example, from what many Jubbulpore citizens and visitors alike must think one of the difficulties and blemishes of the town, the vast and irregular expanses of basalt rocks, as notably east of Hanumantal. Yet here and there already, not only nature with her trees, but man, with his temples and his humblest homes alike, has roamed with these rocks scenes of beauty, even of rare and curious picturesqueness. The further development of such features, upon this at present neglected and comparatively valueless areas, would give them new values, at once economic, healthy and beautiful. Probably even fertile; for basalt rocks yield valuable elements to soil, and small gardens are thus possible. The intense radiation from the rocks would be abated by the vegetation between, and the district thus become more habitable and fertile. Hence here park and village making may go together, and with mutual advantage.

### **General Policy of Improvement.**

Before leaving the subject of Parks and Open Spaces, we would press the importance of making the most of the present possibilities of the city before the advent of the industrial movement which must soon arise, and of which the Industries Commission is but one of the foremost indications. For with this changing viewpoint which it expresses, and for the opening generation far more than for our own, land-values must inevitably rise: hence improvements, comparatively easy and inexpensive now, will thus become far more difficult later, perhaps even prohibitively costly: and this just when they are most urgently needed. Now in short is the time—and probably only a brief time—for enlightened foresight of the civic requirements of a Greater Jubbulpore. Such foresight will be rewarded by the wellbeing and the gratitude of our successors. We all seek to provide for these individually; but the highest function of a municipal council, indeed of all forms of wise government, is to provide for them collectively also.

### **Re-Planning and Thinning of Crowded Quarters**

The timely provision of Open Spaces, and with this of sanitation generally—yet this on the economical lines of the “conservative surgery” we practise and advocate, and not those of the sweeping demolitions which have been and still are too common in other cities—is thus a first recommendation. With this goes naturally the planning out of the future areas of extension, with (a) the industrial areas economically adjusted to main communications by railway and road, and (b) its corresponding areas for dwellings kept distinct from these; and laid out not upon the execrable “Bye-law” plans imported from the standardized slums of Western industrial cities, but upon the far more efficient lines of the Garden Villages which have now happily begun to replace them around the Western hives of industry. We cannot too clearly express our protest against all survivals of such types of planning, now happily rendered obsolete in Eng-

And since the Town Planning Act of 1910; but which, as "cooling lines", "sweepers lines", even "police lines" and of course largely "industrial lines" also, are still being erected in Indian Cities, in this respect belated. Of course with the best intentions: but good intentions are not enough; and ignorance is no excuse. The careful design of the future railway, manufacturing, industrial and commercial quarters, with their various types and scales of dwellings, on village lines, should now be undertaken. There is indeed no better way either of developing old industries or of attracting new ones; and of making the best of them, as they arise; and this for all concerned—labour, capital and city alike. It is one of the many omissions of Industrial endeavours, and of engineers, not yet to have reached this conception; but the present Industries Commission must surely, sooner or later, reach the Town Planning stage.

As an admirable site for such a garden village—indeed it appears to us one of the very first of these—we have gone over, with Mr. Burjorji, the fields at present vacant upon the Cherital Road, conveniently situated as these are to attract residents from the City. No wide thoroughfare is here required: the space should be laid out with fairly narrow roads widening into small open spaces, each with its central or corner trees, and surrounded by homes, each with some garden space, and not merely a small courtyard.

By laying out some such new quarter, and thus at the same time facilitating the improvement and the thinning out of insanitary quarters, new homes can be provided in advance; and thus the present conservatism of the poorer community—hitherto, it must be confessed, far better founded than their too sweeping "improvers" on earlier methods have commonly realized—would be rapidly converted into active good feeling and co-operation. If evidence of this change be desired, it can be readily obtained from Lucknow. There the late Municipal Secretary, now Executive Officer, said lately to one of us, "we never now dispossess any man from his dwelling, however bad, until we are assured that he has either found a new one for himself, or that we have found one for him. That is why our improvement operations are now so easy. We have the people with us, instead of against us."

So far then this Survey and Report, necessarily but a preliminary one. Should further detail be desired, the preparation of a fuller Report with Plans will be comparatively easy. To facilitate such operations, a "City Survey", on the lines avocated at the Cities and Town Planning Exhibition at Nagpur last season, and happily begun for Jubbulpore also, will be found of great preparatory value, and economy.

It only remains to express to the President of the Municipality, Mr. Mitra, to the various members of Council, whom we have met, and their Officials (among whom we must particularly mention Mr. Burjorji, the City Engineer) our best thanks for the kindness with which we have been shown the city, and helped towards such understanding of its main problems and possibilities as we have attempted to express above. Brief and incomplete though this outline necessarily is, it is the result, not only of observation, but of prolonged reflection and active discussion since our visit, as well as during its short three days.

(Sd.) P. GEDDES

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CALCUTTA