

# TOWN PLANNING ACTIONS AIMING AT TOWN FABRIC RENEWAL

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Anything like a building or an institution becomes outdated with time. Then either transformation, updating, or demolition and substitution with a new building have to follow. It is more difficult to perceive the outdatedness of the town fabric; and one action — be it an extensive one — is not sufficient to its updating; a series of actions is needed to cover the total area of the town and to achieve lasting results.

Consequently, the updating, the renewal of the town fabric must be based on a conception determining the actions needed for the undisturbed performance of the main urban functions. Every action in updating the town fabric must be based on the valid principles of urban planning and urban development and must be aimed at changing those features of the present situation which deviate from these principles. The actions aiming at the renewal of the town fabric — taking the double target into consideration — belong to the following groups of comprehensive tasks:

1. *Transformation of land use*: enabling the town quarters of different main functions (dwelling place, workplace, recreation, supply, etc.) to cope with their tasks; extending them over undeveloped areas as needed; their division suiting both the functions and the natural and geographical conditions; finally, an adequate separation of the different town districts and creation of spatial and transport connections needed by their internal functions and cooperation.

2. *Correction of the main road network*: formation of the road hierarchy; separation of long-distance and local traffic; road capacity increase as needed; the completion of the network with new roads; expedient connections between the road network and other transport networks and facilities; finally, coordination of land use with local and long-distance traffic.

3. *Organization of the supply networks*: completion of the public institutions belonging to the town centre as well as of those needed for decentralized supply, increasing their capacities in the needed degree, coordinated location of public institutions, and establishment of the networks of public utilities and traffic needed for up-to-date housing conditions, adequate completion of the existing networks.

4. *Creation of aesthetic harmony of the town fabric* which includes e.g. arrangement of the relations to the landscape elements, re-establishment of the morphological harmony and of the significance of historical town fabric elements, disclosure of ensembles of historic and urban value, compositionally emphasizing the main elements of townscape.

Obviously, such comprehensive tasks cannot be solved in themselves and at once. They are interlaced according to general regularities of urban development, therefore they cannot be separated as to space and networks. Realization of the program takes a long time and is composed of partial tasks delimitable in space and time. Therefore systematic order has a special significance: the reconstructional operations are only efficient if their programming and implementation are based on plans taking every feature of the town into consideration, together with the possibilities of development and the rate of realization.

#### Assignment of operations

Comprehensive as the tasks may be, they involve operations generally emerging in town reconstruction: construction works with the pertaining planning, regulation, land acquisition, demolition, etc. Consequently, the tasks involved in the reconstruction of the town fabric belong to two groups.

The first group includes tasks fundamental for the beginning of any transformation, such as resettling certain industrial plants outside the residential area, demolition of derelict buildings and constructions, preparation of to-be residential and industrial areas for development, the preliminary construction of public utilities, etc. These all are actions of reconstruction but they do not result in the target conditions, but only prepare the operations proper.

Tasks in the other group are meant as to promote directly the reconstruction of the town fabric, involving — usually constructional — operations entering into the collective term of updating the town fabric: changing the land use, correction of the main road network, organization of the supply networks, creation of the aesthetic harmony of the townscape.

It is obvious that the tasks in the second group must be preceded by those in the first one, except when the beginning of the construction works does not require a special preparation or when the actual situation is cleared not to be followed by new development, at most by certain form of terrain correction after the demolition. For part of the reconstruction works, the preparatory and the realization tasks do not absolutely affect the same area. One and the same action may be preparatory from a certain point of view while from another it directly serves the realization of the reconstruction.

A closer look at a relatively simple series of actions, e.g. resettling an industrial plant from the residential area to an industrial area, reveals both spatial separation and the interlacing of preparatory and constructional actions.

The direct aim is to improve the living conditions within the residential area by replacing the removed industrial plant with some establishment of residential utility. But the plant in question can only be resettled when an area is ensured and prepared for it in another part of the town, usually requiring the construction of roads, public utilities, etc. On the prepared area the plant must be built first, the demolition on the old site may begin only after that. These are only essentials of this series of actions likely to increase in complexity from enumerating the environmental effects of the preparation and construction of networks, the inherent actions of industry settlement.

Distinction between preparatories and constructions proper within the reconstruction does not become unnecessary by them being interlaced since it permits to ponder consequences of the different decisions and to survey the series of operations. The needed fineness of distinctions and the depth of exploring the connections are clearly dependent on the nature and scale of reconstruction.

Thus, no particular operation in the complex of town fabric renewal can be considered detached, or decided and realized picked out of its context, raising doubts to the feasibility of all that is considered necessary for realizing the actual town planning concepts, to the existence of all preconditions of the realization. In this respect, neither the consequences of the timely course of preparatory and construction works are unimportant, because the modification of the content and sequence of the reconstructional operations necessarily modifies the process and conditions of achieving the goal, sometimes even the goal itself.

Therefore, in establishing and scheduling the operations aimed at transforming the town fabric, three aspects have to be pondered:

- expected degree of the town fabric updating;
- likelihood of a complete execution;
- possibility of spatial and timely adaptation to the course of town renewal.

Before answering these questions, the means available for the achievement of the main aims of the renewal have to be known. It is namely obvious that in each town different quantitative and qualitative transformations of the town fabric are advisable. For instance, in towns expected to but slightly grow, the main target of the reconstruction is to adapt the town fabric to settlement functions proper to its size, productional and central role. Thus, here the qualitative aspect of the reconstruction gets emphasized, albeit the construction of the necessary establishments, the improvement of housing conditions lead to certain quantitative changes, in most cases to growth (e.g.

by the development of actually undeveloped areas fitting to the town fabric), sometimes to decrease (by detaching residential areas, or creation of green belts by demolishing residential buildings). Therefore, the limits of town fabric renewal are fundamentally set by the actual features because the transformation is not aimed at the radical change but only at the improvement of the existing conditions; the means of development are limited; the envisaged operation series are of small extent; the implementation requires a forced concentration in space and time.

The starting point is different but the considerations are similar in the case of a town with important development factors but limited quantitative growth for some reason, mostly of natural-geographical kind, sometimes due to the peculiarities of existing institutions. In such a case the conception of the renewal depends on the lifting of the limiting factors that may be accompanied by the realization. The abolition of the unfavourable natural and geographical conditions and the elimination of the disadvantageous effects of the establishments are the preparatories of the reconstruction. Therefore, it makes a sense to set only series of tasks comprising these actions; also here, — in spite of the significant means of development — actual features are decisive.

In the majority of our towns, the actual features are less decisive than in the two previous cases. But they can never be neglected and therefore the practice of town planning strives to know the features likely to affect the planning and development of the town. This is, however, not sufficient. The data survey of a given town namely does not distinguish peculiarities from usual characteristics of the majority, or of a given group, of towns. In fact, the reconstruction of every town fabric is a special case from the viewpoint of both its problems and its objectives and possibilities of realization but this speciality — apart from certain exceptions — does not reside in certain peculiarities but in the integration of characteristics occurring separately, in other combinations, in other towns. Therefore important conclusions can be drawn from identities and differences in the situation and problems of other towns. It is particularly desirable to know more thoroughly the characteristics of town fabrics of similar magnitude, in the same region, facing a prospective development similar to the town in question. Thus the appreciation of the actual situation and features of the town fabric yields multiple references; besides of the building stock of the town and comparison with that of similar towns, the evaluation depends on the financial and other conditions of the development. Also assignment of renewal actions requires multiple comparisons.

Updating of the town fabric is not simply the sum of renewal tasks separated in time and space, but these tasks have to be ranged in an order of importance which depends on several factors (extension, situation, sequence,

etc.). Also, comprehensive tasks of town fabric renewal are somewhat overlapping those of local character. Understandably, the significance of an action of reconstruction for the town fabric does not necessarily depend on its extension, there is undoubtedly a hardly tangible lower limit of the extent of urbanistically effective reconstructions. (Moreover, actions of renewal are seldom delimitable in time and space because of their interconnections.)

These practical rather than theoretical distinctions require special considerations in every concrete case, in particular, the ponderation of relativity. The same series of actions transforming certain components of a smaller town fabric causes no considerable change in a bigger one. Similarly, in already highly developed towns an intended important transformation of the town fabric requires serious interventions while in less developed towns even minor reconstructions may be effective in updating the town fabric.

The other group of comparisons involves alternatives of the actions needed to realize certain important targets of reconstruction, in view of the value attributed to certain features, of the stress laid on certain actions, of the conclusions drawn from the material possibilities of development. Apart from the specificity of the town fabric reconstruction, there are several alternatives to the solution of every town planning problem, further, the predictable and unpredictable trend of the conditions and the sequence of the realization require to reckon with different solutions. It is inherent to the reconstruction that the proposition of, and the selection between, the possible alternatives (as part of the planning process) do not exceed in importance the recognition of new alternatives emerging in course of the realization. Even the most systematic planning cannot avoid modifications of character and sequence of actions during the usually long process of renewal — even if the original targets are unaffected.

This does not disturb the reconstruction in the occurrence of a constant monitoring of the realization of the conception and the development of new alternatives coping with the actual needs and possibilities. The work of planning the reconstruction of the town fabric cannot be concluded at a given point of time but it is a process paralleling the implementation. Thus, the sphere of actions cannot be regarded as definite upon deciding over the conceptions but certain proposals may be omitted while others may be imposed. These proposals must not be self-contained since — be the original targets respected or modified — they have to reckon with the situation evolved upon the performed actions, making a proposal a feature.

Besides the mentioned viewpoints of the selection between the alternatives of design and realization, the ponderation of economic effects has a special significance, since reconstruction is an expensive procedure. In fact, the economical evaluation is absolutely coherent with the limits of development and the reconstruction features of the given town, to be taken as fixed

starting data in the economical comparison of functional and town planning alternatives.

There is a profusion of publications on methods of measuring the economic consequences of reconstruction decisions, though differing from each other but having a common starting point, namely to suggest two systems of indices for measuring economic efficiency. One is for quantifiable effects of no cost character, the other for financial effects of cost type.

The indices of quantifiable effects confront the present and the planned situations based on a common criterion. There is a wide range of such indices, e.g. the share of the utilized area (its ratio either to the entire town or to a part of it with definite functions and dimensions; or the areas of invariable function, to be cleared, or to be newly developed with a view to the population or institutions prospectively located in), the rate of demolition (based on the number of flats remaining, to be demolished, to be built and total), and so on. Further indices may confront the volume of new constructions to that of the needed renovation of the remaining housing stock, the arising values to the values to be liquidated, the present and the planned living densities, the densities of floor areas, the densities of workplaces, etc. Here belong the specific indices of the present and planned supply level of the population (capacities of the public institutions, green areas, length of public utilities per capita, etc.).

Such indices are usually developed via simple measurements and calculations, so they can be elaborated for all the alternatives with not too much work. But their use and evaluation raise various problems. First of all, one index may point to a more, the other to a less important economic effect of the alternatives (the more likely, the more indices are developed for a better understanding) still enhanced by the fact that only general features are comparable, the specific economic effects — occurring only in a given alternative — are not. Therefore, synthesis of these indices affords no real overall comparison.

The other system of indices, namely that of costing, consists in financially comparing the most important proposals of the alternatives of town fabric reconstruction. Essentially, a preliminary cost estimate has to be made of actions involved in updating the town fabric, differently forecast in the alternatives (such as the location of new housing at the cost of demolitions or of development of new residential areas; the possible methods of development of public utilities, different tracings of the main road network, etc.). By simply summing the cost effects, or applying weighing by a special consideration, perhaps referring them to one inhabitant or one flat, the less costly alternative can be found.

Still, this laboursome method of cost confrontation is only valid to works of about equal extension and significance and the cost effects of the actions must be examined to similar depths, relying on alternative proposals

elaborated to similar fullness of details. Also, the results of the comparison may significantly change if any cost factor changes on the long run, they may even be reversed. Because of this likelihood during the long period of the town fabric reconstruction, from several reasons (new materials and technologies, general changes in the system of costs and wages) measurement of economic effects also in course of realization may be desirable.

Due circumspection is necessary in calculating and evaluating the economic effects. Economic calculations without thorough exploration, without a systematic method, without the necessary repetitions are misleading rather than helping to select the right solution. Because of the complexity of town fabric reconstruction, the cost effects — otherwise manifest in expenditures — resulting from other actions connected with the main targets of the reconstruction relevant to each alternative are harder to economically appreciate. The indirect quantification of such effects is usually omitted because of their complicated character, in most cases objectively inaccessible, in spite of their marked effect, also economically, on the decision.

#### Material background of updating the town fabric

As it was mentioned previously, the scale and effect of updating the town fabric depend on the possibilities of town development. On the other hand, the town fabric updating must be forecast so as to provide for the most efficient investment of the available means. Investigating these interconnections in the main sectors of town development, the major relations can be summed up as follows:

a) At a significant simplification, the proposals and the circumstances of realizing the town fabric reconstruction can be stated to depend first of all on the *housing activity* in the given town. The housing stock in an existing town can be increased either by redeveloping the previously developed residential areas in a way producing a surplus of flats by altering the character of the development and increasing the density, or by the use of undeveloped areas for residential purposes. So the housing activity is related to the condition and relation inside the town fabric of the previously developed residential areas as well as to the extension and situation of areas now undeveloped but suitable for housing purpose.

The redevelopment of a previously developed area is aimed first of all at the improvement of outdated, unhealthy living conditions, having, by nature, mostly additional flats as concomitant, resulting — apart from certain exceptions — from raising the building height and density of the given residential area. The aspects of economicalness and effectivity require to update the town fabric and land use in areas where the buildings and institutions are

anyhow outdated. The designation of such areas gives for the time being not much trouble. In the present period of the Hungarian town development facing the double problem of updating for a great part outdated town fabrics and residential areas, the mentioned coordination is simple in itself. It is considerably more difficult to select those among the residential areas whose redevelopment — besides of improving the living conditions — would result in the important achievement of updating the town fabric. Since the efficiency and significance of updating either the residential area or the town fabric cannot be evaluated in themselves, the above mentioned comparisons involve manifold transmissions.

As in most towns a part of the residential areas providing outdated living conditions must be designated for redevelopment, a part of the housing stock to be built during the planning period will be used for replacement. Further considerations will decide over the share of the remaining part falling to the areas to be redeveloped from other reasons, and to new developments, taking both the importance and actuality of redevelopment as well as the following characteristics of the areas rating as extensions of the residential areas into account:

- the suitability or adaptability for development (soil and terrain conditions, the feasibility of public utilities, and other characteristics);
- the integration of the area in the town fabric, the actions necessary for the integration (connection with the developed areas, traffic connections, townscape effect, environmental effects, etc.);
- the economic effects of development related to other developed or undeveloped areas.

These are again criteria easier to formulate than to adapt to concrete cases. The housing shortage is a not negligible factor which tempts to make use of undeveloped areas rather than to redevelop by demolitions. Apart from the resulting social and economic disadvantages, from the exclusive aspect of our subject, the town fabric renewal, the danger arising from the use of undeveloped areas for residential purposes has to be pointed out. Namely, the extension of the urban area does not improve the town fabric but in exceptional cases. In fact, the last decades' practice of Hungarian town planning shows examples where newly developed "housing estates" organically joined or completed the existing system. More frequent are, however, the cases where — before making anything for the transformation of the town fabric — new residential areas with high-rise building pattern were added to the town, ignoring traffic connections and/or townscape problems. One may wonder if the subsequent transformation of the town fabric can eliminate the disadvantages originating from the omission of spatial and timely interconnections.



b) The town fabric renewal is influenced both directly and indirectly by *industrial development*. The indirect influence affects first of all the size of the town since the structural characteristics of towns of different sizes are known to develop differently. The other indirect effects — such as the location of additional housing necessitated by the population increase; the change of demands on the residence; the traffic problems due to industrial growth, and in particular, the increasing demands on public utilities — are very important for the town fabric.

Their direct consequences on the town fabric are to require settlement of new industrial plants, improvement of the operating conditions in the existing ones, further the rearrangement of the relation between components of the industry and the town fabric.

In this respect — beside the transport and cooperation demands of the plants — the actions are determined by the protection of the environment from industrial harms. Updating of the town fabric requires to separate most of the industrial plants from the residential areas by different methods and to different degrees, from the allocation of separate buildings to industrial areas concentrating large, environmentally harmful plants.

In the occurrence of an urban area meeting the actual town-planning concept of industrial area this must be considered in reconstruction as a feature of the town fabric. Else, the site of the industrial area must be selected and prepared to suit the settlement of industrial and auxiliary plants. As the industrial area is usually extensive and its site raises special demands on soil, communication, etc., the possibilities of siting are limited. Moreover, the possibilities of land use, of different traffic systems and of the construction of public utilities have to be accommodated to.

These multiple constraints impose to site the industrial area (or areas in major towns) as one of the starting points for the town fabric renewal.

The plants to be settled in the industrial area are either newly established or removed from the residential area. Establishment of new plants is decided by the provisions of the national industrial development but the capacity of the given town is not negligible either, as a factor of the reconstruction. On the other hand, removal of the industrial plant from the residential area is not determined by the national industrial development but by the inner motives of the reconstruction, in fact, by the strive to healthy living conditions. After all, the two kinds of locational and development viewpoints cannot be handled separately.

From residential areas, industrial plants are advisably resettled to existing or to newly designated industrial areas. So the possibility of resettlement is closely connected with the possibilities of expanding the existing, or exploring new, industrial areas, both being too expensive investments to be feasible exclusively in order to resettle the industrial plants. The removal presumes

the establishment of new industrial plants, too, the simultaneous settlement being likely to improve economicalness of the supplementary investments of the industrial areas.

Another significant consequence of the industrial development may be to locate new institutions in other parts of the town, or the expansion or transformation of existing ones, as required by the adequate functioning of the industrial area, involving transports (marshalling yards, railway lines, new roads, maybe special transport facilities), meeting of the demands on public utilities (construction of central plants, development of networks), separation of certain production processes (production, storage and processing of raw materials, storage of industrial wastes) with their land-use, networks and townscape effects.

c) The transformation of the main characteristics of the town fabric imposes certain tasks on the *traffic development*. Among these the road networks must be adapted to long-distance traffic and to land-use features. The tracing of the main lines of the road network — involving the revision of existing roads for function and suitability, the determination of interventions, the choice of the direction of new roads — reacts upon the land use. Namely, the operations on a given existing or planned road do not affect the linear projects alone but require decisions concerning the surroundings of the roads. In addition, the improvement of the traffic conditions may justify the integration of areas to then unimportant for the town fabric, and the allocation of areas for more intensive development. Or inversely, the decrease of the previous significance of certain roads may reduce the town-planning value of the areas served by them. It can be said that the evaluation of an area for its “situation in the town fabric” depends largely on its relation to the traffic network.

The areal facilities pertaining to the road network (traffic junctions, engineering constructions, parking lots), as well as the car servicing and storage facilities demand extensive areas on fixed plots imposed by their function. In most cases these areas can only be provided by demolition, often by transforming the land use and development of their surroundings.

For the transformation of a road network usually several alternatives may be suggested. On the other hand, the existing network of rail and water transport is mostly a feature the reconstruction of the town fabric must be adapted to. Even if the transformation of the rail network is feasible, this operation requires interactions over an extended area to be evaluated, since liquidation of certain railway lines, their shifting to a new track, the removal or resettlement of railway stations entrains the total redevelopment of the environment. As railway lines, stations and waterways raise definite demands on their environment and relations, both the maintenance of the existing situation and its modification mean restrictions of land use and road network.

d) The *development of public institutions* requires the construction of buildings, facilities and networks and determination of the future of the existing ones. The first step is to suggest comprehensive proposals for the future organization of the supply, only followed by the second step, concretizing the partial tasks.

The supply with public institutions has to cope with a population of a number and accommodation forecast by the town reconstruction plan and a group of settlements determined by the future central role of the town, hence also supply demands will differ by volume and spot from the present ones, and so will the expected scope, degree and way of the supply, maybe also by purport and form. Changes in the supplied number and in the supply quality raise often radically new demands. This does not mean that the existing situation of the supply with public institutions — similar to other tasks of the reconstruction — can be disregarded. The existing features act even stronger because the majority of the existing public institutions — depending naturally on their suitability, condition — usually is qualified as to be maintained. Thus, completions prevail in the reorganization of the supply with public institutions.

As the existing higher public institutions used to be concentrated in the town centre or in a part considered as such, this is also the place of completion. It depends on several factors (e.g. the present development and situation of the town centre, the growth rate of the town) whether the extension and external relations of the town centre — its most important features for the town fabric — would change and how, in consequence of the increase of the stock of public institutions. Also the development of the internal structure of the town centre influences the town fabric, to a degree depending again on the actual solution of the supply with public institutions.

The higher public institutions outside, or to be removed from, the town centre require usually an extended area, special environmental and traffic conditions, and are often architecturally emphasized. To create conditions adequate for their function and effectiveness, in certain cases local reconstructions may be sufficient, in other cases transformations affecting the land use, main road network of the town, and the townscape become imperative. So the public buildings (or complexes) act as foci of the town fabric and at the same time initiate actions significant for it.

Also in the supply with primary public institutions — similar to the higher supply — completions are the most frequent. The processes connected to the primary supply have no direct effect on the town fabric. Indirect consequences may, however, occur because of the interaction between primary and higher supply, besides, the completion of the primary supply affects many objects, as an integer part of housing, essential part of the town fabric renewal. The site of the primary public facilities may influence the internal structure

of the residential area, the system of neighbourhood units. Because of its close interaction with the system of neighbourhood units, the above are decisive for the town fabric.

Dealing with the interactions between town fabric renewal and town development, the urbanistic tasks of *townscape development* are not negligible, either. Redevelopments from purely aesthetical motives without a substantial functional target would, however, be meaningless. We restrict ourselves to the remark that functional changes cannot be decided without considering the requirements of aspect, hence every duly considered development is beneficial for the townscape. This coherence is confirmed by the fact that the consequences of the redevelopment on the aspect appear usually sooner than do the functional ones, so they cannot be separated within the process of realization.

### Summary

The reconstruction of the town fabric of existing towns is based on the valid principles of urban development and town planning and aims at the abolition of actual characteristics not complying with these principles. The tasks belong to four groups: transformation of the land use, correction of the main road network, organization of the supply networks and creation of the aesthetical harmony of the town fabric. Before the effective realization of the plan proposals they have to be pondered for the degree of updating the town fabric afforded by them, for the likelihood of their total implementation, as well as for the feasibility of their timely and spatial integration into the process of town reconstruction.

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