

# Economic Life and Conservation Community Impact Analysis of Baixa Pombalina : a Case Study in Lisbon, Portugal

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## **Introduction**

The principal objective of this paper is to evaluate a detailed Conservation proposal for Baixa Pombalina, evaluated with reference to the alternative *Piecemeal Redevelopment*, illustrating the situation as it exists or has evolved in recent years. It represents a particular attitude towards the built heritage, based on the sole objective of maximizing profit and is characterized by the demolition of buildings to free the site for new development. By contrast the option presented here is *Comprehensive Conservation*. It represents the confluence of regional planning, town planning and architectural needs, and above all, the international consensus towards heritage conservation. This approach is not limited to preservation but seeks creative continuity by promoting vitality of use of the environment while ensuring that change is observant of the quality of life of both present and future generations.

These two alternatives are not the only options available for the area. Nevertheless, by comparing the consequences of piecemeal redevelopment with that of conservation, the major advantages and disadvantages of each will become clear, given that piecemeal redevelopment is synonymous with the present situation which we will follow by presenting. It is discussed here essentially as a basis for comparison with the alternative of comprehensive conservation. The evaluation of costs and impacts for each approach will be carried out below.

The reason why the Economic Approach is needed is because it is complementary to approaches of other

disciplines. Using the historic approach as an example, from the historical point of view the building is viewed to see what individual qualities and characteristics it reveals to us of the cultural heritage, it deals from the point of view of the supply. The economic analysis on the contrary studies the problem of conservation from the point of view of the demand, thereby dealing with the future use of the heritage, its site, the demand for it. The economic approach aims to identify, measure, value, and compare costs and consequences of the alternative being considered.

The economist's contribution is related to his assessment of the nature of the costs and benefits to all or some sectors of the community which will experience them. It is also his assessment of the relationship between such costs and benefits which enables him to provide advice on particular economic criteria. He can register the price of goods and services and what people are prepared to pay for them, however he does not have a direct way of giving them an "economic value" especially with regard to cultural heritage. He can help in the decision on conservation through various means i.e. minimal work, restoration, rehabilitation, redevelopment, etc., by comparing the values established for the heritage with the opportunity costs of the proposed action. However these comparisons cannot be expressed in money terms. Forte attempted to measure in money terms the different benefits and costs attributable to conservation of heritage, but there is no general agreement upon using his method.<sup>1</sup> Also Girard, by assessing the social cost of conservation, dealt more closely with the problem, but

that will be decided by determining the opportunity cost for each of the interested parties.<sup>2</sup>

Our option was to follow the Community Impact Evaluation a system widely developed and used by Lichfield.<sup>3</sup> The reason why *Community Impact Analysis and Evaluation* was selected from the group of methods used to evaluate and choose between alternative urban projects is because through this analytical method one attempts to cover the whole range of sectors and externalities involved in a project. This aim would not be possible through a financial or economic analysis because this is concerned first with those who are promoting the project, (nor through a social financial analysis, because the offsite costs are excluded), nor would it be possible through the social cost benefit analysis which does not deal with the whole community. The reason why the social cost benefit analysis has some limitations is related to its economic basis, therefore it tends to consider primarily the economic impacts and consequently to ignore aspects such as the social and environmental, which cannot be measured by money, or predicted on the national income accounts. Cost benefit analysis is concerned with the net change in economic output from the project but does not show the distribution of the costs and benefits between the sectors.

The concept of efficiency is applied in Community Impact Evaluation by stating its objective for each of the community sectors its objective, and judging which of the options they would prefer on that particular basis, i.e. which will be the most 'efficient' for them. If all the community sectors prefer the same option then, that particular option would be the most efficient, even though the excess of benefit over cost had not been measured. On the contrary if the sectors differ in their preference (as it usually happens), the conclusion is not clear.

This evaluation is based in specific inputs and outputs either for what exists on the site and what will exist at the completion of the project. One will be

able to compare ordinal rankings on efficiency, by comparing marginal outputs with marginal inputs, even though not valued or even fully measured. Although facing many problems, we now intend to follow by evaluating the cost impacts of the options.

For our impact evaluation we used the 'Points System' which will provide each of the entities with a simple method of assessing the different conservation options. It is therefore possible by simple comparison of different solutions to a particular situation, by using the points system to determine their likely relative future implication costs.<sup>4</sup> The Points System is intended to provide a simple tool which can assist planning teams at the earliest stages of the process of evaluating implications costs of different design options. It provides a systematic way of analysis which can be used as an aide-memoire in the preparation of approval principle submissions.

#### The case study

The 1755 earthquake brought about the transformation of the city in a way that was as important and unique in Portugal's history as it was rare in European town-planning. King José I, who reigned between 1750 and 1777, almost abandoned power, yielding it to the future Marquis of Pombal and Count of Oeiras, Sebastião José de Carvalho e Melo. 'What is to be done', exclaimed Dom José, 'to meet this infliction of divine justice?' ...'bury the dead, and feed the living,' was the calm and immediate reply of Pombal.

Baixa was the area mostly affected completely demolished and levelled, and the gradients of the steep western slopes were reduced. The architect Manuel da Maia then set up a competition between his architects, commissioning six teams to study an equal number of solutions, with different conditions fixed at the outset, to an area with 212 thousand square metres (560 North-South × 380 East-West) excluding the two squares. The whole area was about 630 thousand square metres. A special office was set

up "Casa do Risco das Obras Públicas", for the reconstruction project. The effect of military discipline is clear in the proposed solutions, and in the construction and the technological process employed. This office "invented" a construction system called a "gaiola" or cage, almost similar to the "balloon-frame" introduced in Chicago at the beginning of the twentieth century. We may also note the standardized elements of the wooden structures which were erected at high speed and then covered with brickwork. (see Figure 2.1)

The city was rebuilt for the new middle class, as was clearly expressed in the new Square of Commerce, where the Royal Palace also was located, giving it the name of "Terreiro do Paco" Eugénio dos Santos used a system of land registration in which the limits between public and private were very clear, by establishing "quarters" which would be divided into lots on the basis of criteria of proportion and proximity, with the transfer of proprietors from the old fabric to the new grid. This scheme was suitable for the establishing of activities both because of the simplicity of the scheme of distribution and because of the dominant typology of the houses for rent. The present change from housing to offices is due to this flexibility. Blocks with continuous uniform facades were planned, covering an area 350×500 m. excluding the three squares.

The area concerned in this study contains **556 buildings** and the population living in the area is estimated at **5799 inhabitants** accommodated in **1693 flats**. The **average number of families per flat in Baixa is 1.5** and the **average number of inhabitants is 3.4**. The census showed that all the flats have electricity, water and drainage systems. Almost all the flats have a **toilet (89.33%)**, but only **64.72% have a proper bath**. The majority of the flats contain **3 or 4 rooms**. (see Figure 2.2)

The area can be considered as deficient in services, social equipment and commerce. Facilities for elderly people are also missing. This situation is

the result of the continuous change in land use. Shopping for daily needs is not available to the households within the area. It is even difficult to find an open restaurant or a coffee house in the evening. The existing schools are located in the Pombaline buildings and reveal a lack of basic conditions for that activity. Safety and security are important problems in the area, and these can only be solved by the reintroduction of housing. Recreation areas are confined to the three squares, but they are presently not used for that purpose.

A general survey was carried out by the author in the three quarters. It consisted of an observation of what is superficially visible and the deductions of such symptoms. In the surveyed area the buildings are in various states of repair and maintenance. Many buildings are structurally sound but at the same time in a poor state of repair, others are apparently bad externally while the interior is in good condition. This is the result of continual change which Baixa Pombalina has been undergoing over a long period of time. Generally, the buildings are old and badly conserved and show urgent need for repair. It is even surprising that the amount of decay is relatively small if one realises that these buildings have been neglected for many years. (Works of repair and maintenance are recorded in the City Council Archives only for buildings where new structures were introduced).

In Baixa one sees a close correlation between building condition and economic prosperity. While the commercially successful shop fronts are reasonably well maintained, the upper floors (commercial activities and offices), the less successful shops and the residential floors are all tending to deteriorate. In the case of older rented accommodation it is very often unprofitable for a landlord to pay for an improvement to a house: the low rent cannot justify the expense leading to that is often called rental obsolescence. Even in the case of owner-occupied housing (which comprises only 6.3% of the total) the owner may not be able to afford the cost of proper maintenance, although

Figure 2.1  
Lisbon before the earthquake  
The rebuilding plan and building elevations

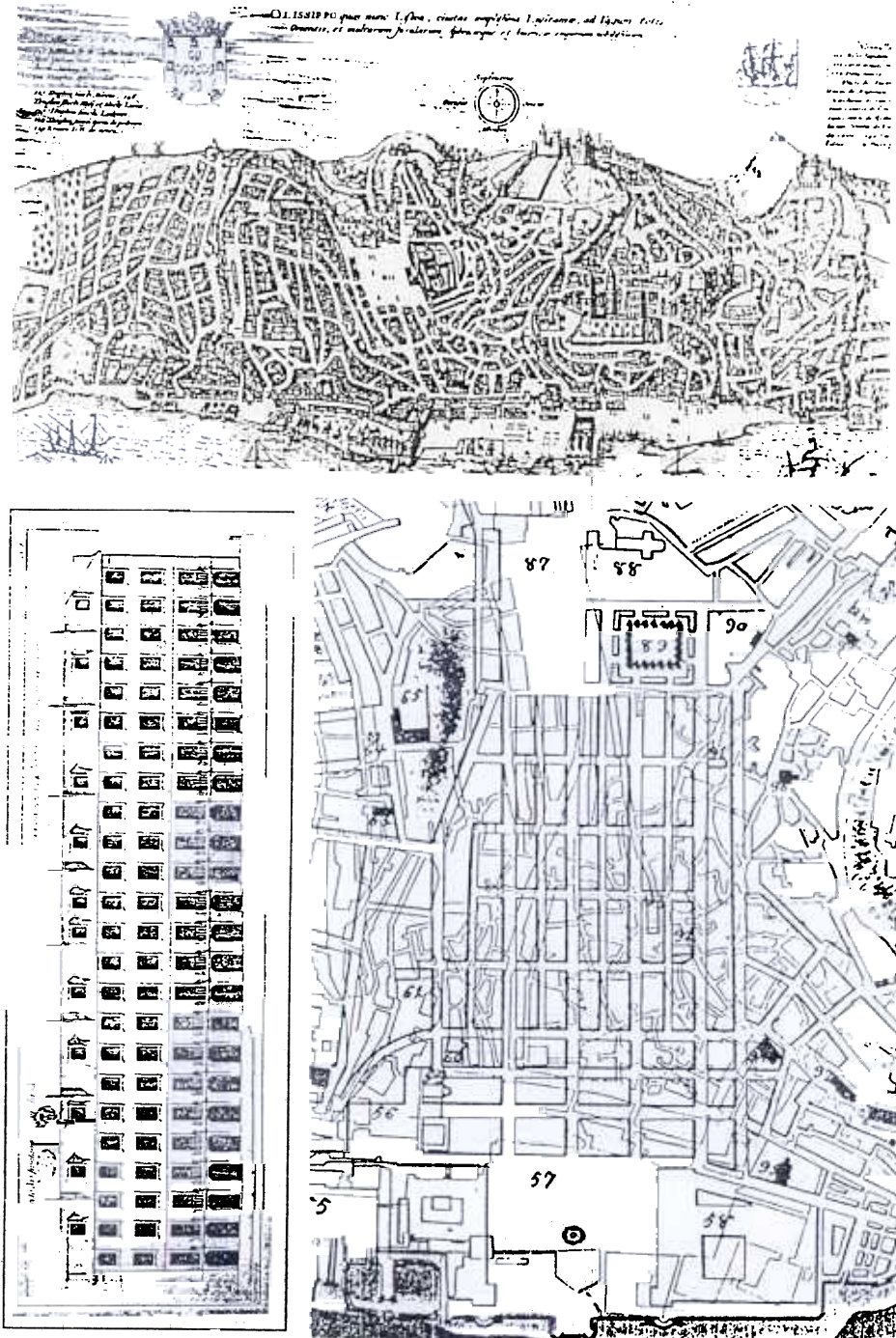
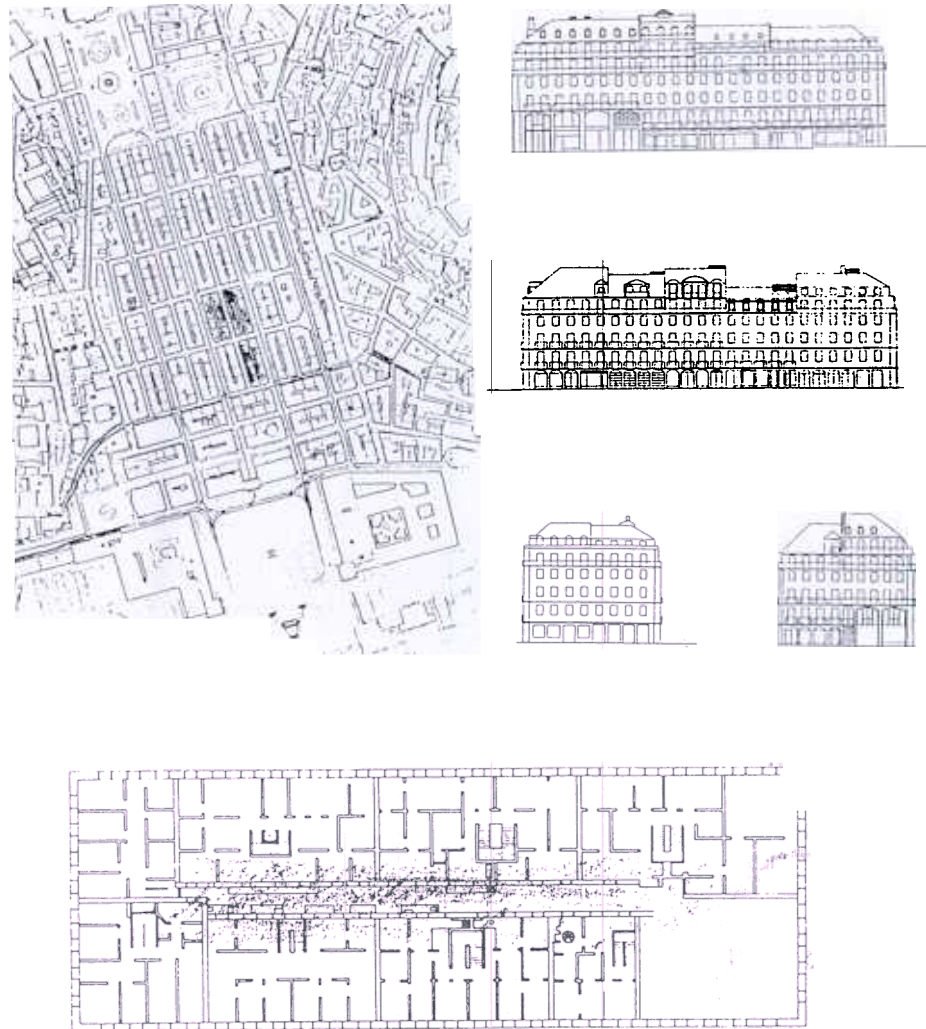


Figure 2.2  
Baixa Pombalina study area  
The surveyed blocks, and its proposal



improvement grants do much to alleviate this problem. This is often the case when the occupants are old or on a low income.

At the moment landlords believe that the most profitable course of action is to spend nothing on the maintenance of the building even after physical deterioration has set in, even knowing that this leads to rental obsolescence because their expectations are to demolish the building or sell it for another purpose. Owners believe that by allowing the building to decay the

termination of the lease will be accelerated and therefore they will be able to improve their property and let it at a higher rent. In Portugal the lease system changed very recently, but the procedure is still very restrictive. On other occasions owners believe that maintenance is not worth while because they are going to redevelop in "short time". Both attitudes arise from a legal imposition on the landlord which does not allow him to increase the rent during the lifetime of the lease. Another aspect to take into consideration is the very

recent process the landowner uses to move an occupier from the flat by paying him some compensation.

The area does not provide sufficient conditions for a healthy neighbourhood. This is the reason why Baixa has come to be inhabited by the old and less prosperous, and it is directly related to lowered rents.

There is a reciprocal relationship between these three factors and so it is often difficult to discern the original cause of decline in the area. Most often there is a straightforward progression from functional obsolescence to structural deterioration to a decline in the surrounding environment, (that is the case in several quarters in Prata street). Physical, economic-functional and cultural obsolescence go hand in hand.

The buildings have a natural life, depending on maintenance and adaptation of the original design and all those forces that may lead to functional-economic obsolescence. The main cause for the decline in Baixa is related with the process of functional change. One must realise that these buildings have been constantly adapted to new uses, however they reached a state of functional obsolescence mainly related to the residents low income, unable to support any maintenance works, whose repercussion is structural deterioration and decay. The best way to prevent the decay of Baixa Pombalina's buildings is to allow them to be adapted once again to other functions and to be used.

Lisbon's traffic problems are no different from those one finds in other historic towns and cities. There is no doubt the desire to own a car is both widespread and intense and when that is achieved the city centre and the urban environment in general becomes an undesirable place to live in. The streets are congested and polluted ; less space is available to the pedestrian as more area is required for roads and parking the street is no longer a playground or a meeting point for the community, existing housing is disturbed by the intense traffic and sometimes even destroyed, people suffer from noise, fumes, smog, dirt and danger.

Having presented the case study we now follow to *explain the two chosen options* for the conservation of Baixa Pombalina.

#### **piecemeal      Redevelopment      *vr* Comprehensive Conservation**

Piecemeal Redevelopment is a natural attitude towards buildings that have become economically obsolete. It takes place within the existing pattern of land ownership and usually avoids the complex political and legal problems of unbuilt areas. It can appear to maintain continuity in a sense with the past because it often preserves the distinctive character of the city centre by retaining buildings of historical and architectural interest. It does however, tend to change the pattern of uses with concentration on a single use.

In the case of Baixa it consists of the destruction of the existing building's interior, with facade retention in some cases or more often their reconstruction according to the original design, and the replacement by a completely new structure inside. This is followed by a change in uses, basically from commercial and offices (as the few residents at the time of the redevelopment have already left) to offices and services, especially banks.

Piecemeal Redevelopment is a gradual process which conforms to present tendencies in the Portuguese urban planning. This attitude is characterized by the drawing up of master plans and legislation of zoning which creates single-use areas of considerable size. Those areas of urban specialisation and concentration of activities are based on profit maximization which is often confused with economic efficiency. Few social costs are usually taken into consideration and the risk of partial breakdowns is constant because in these overspecialized areas adaptability to change or to new conditions is rare.

There are, however, some forces against redevelopment. One difficulty is the fact that the existing property is a

fixed commodity which cannot be replaced immediately and, therefore, there will be a delay between income returns on an old property and the new. Another obstacle is the pattern of fragmented ownership of property within the city centre and in each building, which makes it difficult for the redevelopment operation to be profitable in small size parcels. Opposed to this, one must consider the importance of the property development companies which are in a very good position when compared with the individual owner, the former are able to overcome the above problems because they usually have diversified investments enabling them to withstand delays in economic returns. Also, such companies generally have access to large amounts of capital and a better understanding of the property market.

The alternative of Comprehensive Conservation aims for the re-utilization of the existing architectural heritage through restoration and rehabilitation. Emphasis is put on better living conditions and promotion of the establishment of community facilities. Its objective for the historic centre is to moderate the growth of the tertiary sector and the reintegration of housing if possible with the development of housing policies, including a large number of housing alternatives, low cost-units among them. Easing of congestion in the central area by the avoidance of major employment and traffic generators is also stressed. A plan is developed and safeguarding measures are established. Basically, it represents a positive and deliberate attempt to keep what is of value in spite of the inevitable pressures of redevelopment.

The following proposal for Baixa shows a combination of official consideration regarding the appropriate future of the central area and the values and aspirations of the various groups involved or affected by the plan. The proposal's major objective is to achieve a heterogeneity and integration among people, activities and buildings. It is useful to begin by recalling that the present study adopts three distinct levels

of analysis with regard to the area of interest. The first, denominated the area of intervention, is the parish administrative perimeter and its adjacent area, the second level is referred to as the blocks, while the third is the building (see Figure 2.2). A detailed building survey was carried out for a group of three blocks. Given the repetitive nature of the blocks in the area, these three can be regarded as a paradigmatic example from which conclusions might be derived for the Pombaline area as a whole. This is clear when a project for the blocks and buildings is presented and used as a model.

The proposal for the conservation of a building should be thought of in conjunction with the conservation of the block to which that building belongs, because they depend on one another. What is proposed here refers to the conservation of a whole block. However it must be taken into account that several intermediate phases of achievement might occur depending on each building's specific problems.

It is proposed that the ground floor should remain for commercial activity, but food retail and personal services should be introduced to support the residential population. The first floor could have a mixed use of commercial and office space. The second will be devoted to offices, the third and higher for residential use. This kind of use distribution in the building differs from that previously established by the Pombaline plan because originally the building was developed entirely for residential use apart from the ground floor. However, this design was hardly ever followed and very soon the first floor also became commercial. What is proposed, more or less in accordance with the original plan, is the differentiation in distribution of commercial activities along the three types of streets. For the main streets special and personal supplies are planned. For the secondaries and crossing, food retailing and services, along with personal services and supplies should prevail as those streets should

have a more private character supporting the neighbourhood amenities.

The most progressive alteration to the building and the block structure is the proposal for a large cut in the interior in order to solve the functional problems. (see Figure 2.2). The building will have a reduction in construction area from the third floor upwards, where residential use is included in order to provide the necessary conditions of ventilation and privacy. An increase in floor area for the other three floors below the residential ones is proposed through the occupancy of the existing lightwell, because commercial and office use can work without direct natural light and ventilation.

A model for the new blocks is proposed which comprises in its transversal section two flats of eight metres long and a courtyard in between, also with eight metres transversal. This measurement results from the minimum area a dwelling required and from the existing structure of the building. A new interior facade will be built, and the proposal is for a frame which will allow for the existing different floor construction to the attached without structural problems. This frame should

elevators next to the staircases. The proposed frame will go through the first three floors, cutting through the office and commercial spaces and will have its structural pile foundation at the level of the existing one.

A courtyard at the third level would be provided for the residents, and would develop as the rehabilitation of the other buildings is completed reaching by the end an average of 354 square meters.

The following Table 3.1 shows three blocks' floorspace by activity as proposed for the three blocks studied. At the ground level is proposed the use of unoccupied area of 859.5 square metres plus open space for commercial activities. On the first floor the area used as warehouses and industry will change to commercial, while space for storage will be provided at the back of the shops.<sup>5</sup> The existing unoccupied area, will provide 973 square metres for offices, 1727 for commercial and 495 for hotels. The second floor is mainly used for offices, excepting the case of the building where a hotel exists.

From the third floor upwards, residential use will take over, apart from the hotel space. Here there is an increase of 67.8% in useable area, although the

Table 3.1  
Blocks, Total Floorspace by Activity (m<sup>2</sup>) for the Proposal  
Comprehensive Conservation

	Block A	Block B	Block C	Total	Area
	% Area	% Area	% Area	Area	%
Housing	4180	3093	2844	10117	35.0
Offices	2762	2919	2084	7765	26.8
Commerce	2488	2331	2109	6928	23.9
Warehouses	0	0	0	0	0.0
Hotels	0	130	2897	3027	10.4
Unoccupied	0	0	0	0	0.0
Open Space	384	343	336	1063	3.6
<b>Total</b>	<b>9814</b>	<b>100</b>			

follow the Pombaline rhythm used in the exterior facade and will permit the use of new materials. It will support the introduction of toilets and kitchens which will face the interior of the courtyard as well as the introduction of

virtual built area decreases from 29.306 to 28,900 square metres. The total area devoted in this proposal for housing is 10.117 square metres, which is a 35.0% increase ; in the existing situation it only reaches 20.5%. Commercial activities



also increase from today's 18.8% to 23.9% in the proposal. Office space was intended to decrease and the proposal achieves 7%. Along with this it is possible to create an open space area of 1063 square metres, in the interior of the block, providing better living conditions for the residents.

The achievement of the block conservation depends on the individual building rehabilitation, which in this specific case is in a first phase dependent on the intervention to the opposite building that is the facing building in the transverse and not so much on the next-door neighbour, because without both interventions contributing to the interior gap, the minimum standards of living conditions are impossible to achieve.

#### Economic Analysis

Two elements characterize economic analysis, regardless of the activities to which it is applied. Firstly, it deals with both inputs and outputs, sometimes called costs and consequences, of activities. It is the linkage of costs and consequences which allows a decision to be made. Secondly, economic analysis concerns itself with choices. Resource scarcity, and the consequent inability to produce all desired outputs, necessitates that choices must, and will be made in all areas of human activity. These choices may be made in two broad contexts, first, when it must be decided what course of action is best in the planning of conservation for the whole community or various groups of people. It is with the latter set of choices that we will be mainly concerned.

Some choices for the community may be between objectives such as, is it better to build a new housing estate or to rehabilitate an old district? Other choices may be between different means of achieving a given objective as is it better to provide regular annual maintenance to a building and repair minor problems every year, or to do major conservation works every five or ten years? In fact, any form of action towards the *heritage requires* answers to be given to the following questions: which buildings should be conserved,

when should the works of conservation begin, where to repair, rehabilitate or conserve, how much should be repaired?

Appraisal is concerned with the analysis of alternative courses of action with a view to assisting choice. There is not a simple basis for making community-wide choices, it is possible to identify a number of relevant criteria for choice. One such criterion is *economic efficiency*.

The community engages in conservation activities in order to derive benefits for its members. The same is true for other activities, such as the provision of health, education and housing. The need for *efficiency* in all these activities arises from the fact that there will never be enough resources to satisfy human needs completely. Economists refer to this as the notion of *scarcity*. Given scarcity, it follows that use of resources in a given beneficial activity inevitably involves a sacrifice. That is, the community forgoes the opportunity to use the same resources in other beneficial activities.<sup>6</sup>

The economist's concept of cost derives from this notion of alternative uses for scarce resources. The *cost of a unit* of a resource is the benefit that would be derived from using it in its best alternative use, hence the economist's term, '*opportunity cost*'. This concept should be contrasted with a strictly financial concept of cost, which relates to the cash outlays for units of resource.

*Economic efficiency* implies that choices in conservation should be made so as to derive the maximum total benefit from the resources at the community's disposal. In practice this involves the appraisal of conservation alternatives through the calculation of the amount by which the benefits generated exceed the costs (sacrifices) incurred.<sup>7</sup> Therefore, it is implicit in the efficiency criterion that a given procedure cannot be preferred over another solely on the basis of being more beneficial, or solely on the basis of being less costly. The choice will depend on both relative benefits and relative costs.

This basic notion of maximizing the total benefits to the community for the use of its resources is unlikely to have many objections, and it can be seen that the discussion of efficiency raises many issues. Who are, or what constitutes, the community? What are the benefits arising from conservation programmes? How are the benefits and costs estimated, and by whom? Is it important to know the distribution of the benefits on conservation programmes amongst different groups within the community? Most of these issues will be examined here.

At this point one might be tempted to ask whether economic appraisal provides the answers to all questions of choice in conservation. The answer is 'no' and for two reasons. First, economic evaluation is highly dependent upon the underlying technical appraisal. For instance, the assessment of the cost and benefits of alternative approaches in conservation requires details of the range of feasible alternatives, the resource requirements of each alternative and the results (or outcomes) produced by each alternative. Here the economist is very much in the hands of the relevant technical experts. Economic evaluation should, therefore, be viewed as a *complement to conservation techniques*, rather than a substitute for it.

The second reason why economic evaluation cannot provide all the answers is that efficiency may not be the only criterion for judging conservation alternatives. *Equity*, is often suggested as another relevant criterion. Equity is concerned with the justice or fairness of the way that goods and services are divided between different members of society.<sup>8</sup> However it is not easy to define equity and this can have several notions: equal access to housing by geographical area, equal shares between groups, equal access irrespective of income, and equal access for equal need. One way round the problem of multiple criteria would be to allow equity considerations to act as a constraint on how far one would pursue efficiency. That is, one would appraise alternatives in accordance with the

efficiency criterion, selecting the most efficient alternative, subject to certain equity considerations being met. Le Grand and others,<sup>9</sup> conclude that in the real world, where the amount people produce may depend on the rewards they receive, there may be a *trade-off* between equity and efficiency, the single-minded pursuit of one may result in the other not being achieved and vice versa.

The Cost Impact approach attempts to examine the incidence of costs and benefits upon the various involved groups who might have different aspirations with regard to a particular plan. For this reason and for this specific purpose a system of evaluation is proposed. That is the *Cost Impact Evaluation also developed* by Lichfield for the evaluation of the implication of the adoption of alternative approaches to a project, which will measure and value the benefits and costs to people as perceived by them. One will be able to cover the whole range of sectors and externalities involved in the different options for a specific project and then decide upon one.

#### The two options

Comprehensive Conservation and Piecemeal Redevelopment are the two alternative options to be considered in this evaluation. The values presented referred to the total of the three blocks, the ones for which a detailed analysis was carried out. The decision to use the three blocks totals and not just one of them is related to the difference they show in the present, in the conservation option and on the development, therefore the group values can represent a wider range of blocks we could find in Baixa Pombalina.

From an evaluation perspective, given the two alternatives, the problem becomes one of anticipating and predicting the changes in the use pattern and activity mix of the area which is likely to arise from each of the options. This of course can change due to any external constraint, such as a natural disaster or changes in planning control.

Redevelopment, therefore, tends to occur when the current financial returns from improvements drop below the potential returns available from redevelopment, returns being calculated on the basis of rental income minus expenses such as building costs, maintenance, rates and so on. Some of the buildings are in the right condition to be redeveloped, owing to their relatively low current use value and high maintenance costs, in others, where there is a unified ownership. It should be assumed that some of these redevelopment proposals might be frustrated by planning permission restriction, because they involve change of use. However, permission is generally allowed by the local authorities with few restrictions being applied.

The effect of the mixture of new uses created by a comprehensive conservation policy approach is anticipated, obviously including the reintegration of residential premises, in the light of current market conditions and in support of the idea of a better urban system in which stability, integration, flexibility and variety are

the components. The developer of the Baixa believes that offices are the most profitable space use, together with the large areas of shopping which have already been used in the Chiado reconstruction.

The time-frame used for prediction is twelve years, which is based on the fact that conservation effects being evaluated take at least that period, as confirmed from other experiences.

Table 4.1 shows the three blocks total floor space by activity for the piecemeal redevelopment. In this prediction for piecemeal redevelopment it is assumed that housing will only remain in the top floor of some of the buildings, that is on the fifth and sixth floor. The tendency will be for its complete disappearance, however that will take longer than the twelve years established. Warehouse and unoccupied spaces will disappear altogether being the unoccupied space at the ground level reintegrated in the commercial activity, the other in offices, reaching respectively 58.1% and 20.6%. Hotels will remain very similarly as well as the open space.

Table 4.1  
Blocks, Total Floor Space by Activity (m<sup>2</sup>) for Piecemeal Redevelopment

	Block A		Block B		Block C		Total Area	Area %
	Area	%	Area	%	Area	%		
Housing	1202	11.9	840	9.5	783	7.5	2825	9.6
Offices	6594	65.6	5735	64.8	4723	45.3	17052	58.1
Commerce	2136	21.2	2157	24.3	1765	16.9	6058	20.6
Warehouses	0	0.0	0	0.0	0	0.0	0	0.0
Hotels	0	0.0	0	0.0	3019	29.0	3019	10.3
Unoccupied	0	0.0	0	0.0	0	0.0	0	0.0
Open Space	116	1.15	118	1.3	118	1.13	352	1.2
<b>Total</b>	<b>10048</b>	<b>100</b>	<b>8850</b>	<b>100</b>	<b>10408</b>			

Table 4.2  
Floor Space by Activity in Comprehensive Conservation and Piecemeal Redevelopment (m<sup>2</sup>)

	Comprehensive Conservation		Piecemeal Redevelopment	
	Area	%	Area	%
Housing		35.0		9.6
Offices		26.8		58.1
Commercial		23.9		20.6
Warehouses		0.0		0.0
Hotels		10.4		10.3
Unoccupied		0.0		0.0
Open Space		3.6		1.2
<b>Total</b>		<b>100</b>	<b>29306</b>	<b>100</b>

In Table 4.1 is presented the variation in total floor space by activity in the present situation and in piecemeal redevelopment. There is mainly an increase in office space of 104.5% and a decrease of housing area of 53.1%. A further prediction for housing will be for its complete disappearance in future. Warehouses and unoccupied spaces will also disappear and will be subsequently replaced by offices. There will be no variation in the amount of open space.

Finally, Table 4.2 presents a comparison between comprehensive conservation and piecemeal redevelopment. It can be clearly seen that the redevelopment and the conservation schemes involve substantial different increments in certain types of use and large reductions in others. For example, offices rise from their present space occupancy in the piecemeal redevelopment to 58.1% and in the comprehensive conservation it decreases to 26.8%. In contrast, housing increases 35% in the conservation and fall to 9.6% in the redevelopment. Additionally the open space will increase 3.6% in the conservation plan.

#### Application of the Cost Impact Evaluation Method<sup>10</sup>

By definition, conservation is promoted and undertaken for the benefit of a wide range of people, many of whom might be foreign to the country (visitors and tourists), and also for the benefit of future generations. However, the costs of conservation fall on the owners and occupiers of the property and also on the community of the administrative area in which the property happens to be sited. But one must first ask how to assess the true costs and benefits.

In essence the beneficiaries are those who would lose if there were no attempts at conservation, that is the owners/occupiers, the local community and visitors and the future generations. The true cost is the social opportunity cost, seen from the viewpoint of those who benefit from the conservation. The true benefits of conservation are the heritage values which would be lost if the heritage is allowed to erode.

But, who exactly benefits and who loses? To answer, one should analyze the practical measures which are the means of achieving the conservation benefits and imposing costs.

(i) *general influence*; the owners and occupiers should adopt a "conservation ethic" in their management, since the conservation idea becomes accepted they will voluntarily absorb any costs.

(ii) *urban and regional plan making*; the plans policies and programmes will impose costs on the owners and occupiers of the heritage, because they will not be free to establish their management objectives

(iii) *designation for conservation*; also when there is designation for conservation there is a diminution of benefit for the owner/occupier in their management freedom.

(iv) *financial intervention in the market*; the direct costs which fall on the owner/occupier can be financially subsidised by the government, which can be through grants, loans or tax rebates, therefore reducing the financial costs to the owner/occupier and passes it into government (the local and central taxpayer).

(v) *environmental improvement*, the local authority finds it desirable or necessary to invest in improving the local environment, thereby enhancing the values that would be obtained by the private owners following conservation. the private owner will have an indirect cash benefit and the local authority will bear the cost.

(vi) *government occupation*; when there is no agreement on the future new use of a building, the government has the opportunity to propose their own use. This means that the second best option is taken, so that the occupation conditions might be inferior for the price. The government is financially subsidising the owner in order to assist in conservation. The extra financial costs would be met out of taxation. The costs and benefits are non equal in their incidence, neither on contemporary people nor between generations.

The following Table 4.3.1 shows the sectorial distribution of benefits and costs of comprehensive conservation. Because the impacts are not uniform on the community the table presents various sectors involved, namely the producers and operators and the consumers of the generated services. For each of the sectors the nature of the impact of the conservation proposal is described. The costs and benefits are shown not to be uniform in kind and significance, so also affecting incidence and that is referred in the type of cost. Three categories of costs and benefits will be used for evaluation, including :

(i) *Direct costs, (D)*, which consists of the costs of organizing and operating the conservation programme. The identification of these costs often amounts to listing the 'ingredients' of the programme, both variable costs (such as the time of conservation professionals) and fixed or overhead costs (such as construction costs, design costs, land costs or capital costs) experienced directly by the sectors.

(ii) *Indirect costs, (I)*, are the costs experienced indirectly by the sectors. These include any out-of-pocket expenses incurred by the sectors as well as the value of any resources that contribute to the conservation approach.

(iii) *associated costs*, or costs borne externally to the conservation programme which falls on the remainder of the community. These can be subdivided in: associated real (AR) representing the real costs, or associated financial (AF), not real but transfer costs falling on the remainder of the community.

(iv) *Direct benefit* consists of conservation outcomes or effects of the alternatives in question. Normally, these effects are changes in the physical, social and emotional functioning of each individual (effects). These can be subdivided in changes in the resources use (benefits) or changes in the quality of life of the users (utility).

(v) *Indirect benefit* are the production gains as a result of conservation.<sup>11</sup>

(vi) *Associated benefits* are the benefits arising externally to the conservation programme falling on the remainder of the community. This also can be subdivided in associated real, which are the real benefits or associated financial, not real transfer benefits falling on the remainder of the community.

For any particular resource there will be an owner, occupier, operator, financier, etc., who may be private or public or both. When the interests are all financial, each will have different sub-objectives: (i) *the owner* regards the property as an investment and therefore focuses attention on his returns, (ii) *the occupier* will consider the property as a base for his activities, and will look to profitability (in production services) or satisfaction (in consumer services); (iii) *the financier* has in mind the return on his loan and its security.

Cost Impact Evaluation is used in order to measure, and if practicable to value, *the benefits or costs to people* as perceived by those same people. This is a different measurement from that of the *impact assessment*, where the magnitude and scale of the output which is generally in question, is measured in some scientific terms for comparison with standards. This is measured when necessary in two cycles; in the first the impacts are measured only in respect of the data which is readily available. From this there will be sufficient elements for a conclusion on evaluation, if this is not the case, one should do a second measurement by selecting the impacts which appear to be critical for choice between the options. This formula thus ensures that the measurement is carried out only on those impacts which are relevant to the evaluation.

The following two tables show in summary the steps of the analysis of changes visualised by the two different projects in order to achieve the evaluation itself. The first column specifies the community sector which is subdivided in Producers/Operator and

Consumers. The sectoral objective is expressed in the second column. In each case the question is asked by comparison of the state on completion of option (R) (Piecemeal Redevelopment) with completion of option (C) Comprehensive Conservation.

option. The weighing can be changed from case to case, here we decide to give a higher value to those sectors directly involved in the site.

This will be between "100" and "600" with higher scores indicating the

Table 4.3.1  
Distribution of Benefits and Costs of Comprehensive Conservation  
Impact of conservation

Community Sector	Description	Type
	Property benefits	D
		D
		AF
	Occupation benefits	D
		AR
		AR

Criteria was established allowing the measurement of the two options. This will help people with different knowledge to achieve the best results without counting twice the same problem or benefit.<sup>12</sup> By using the "Point System" we are able to score the sectors on a six point scale between "1" and "6". A score "1" represents the worst situation the sector can realistically imagine (this is not necessarily as bad as the worst that can ever happen). A score of "6" represents the best situation that can realistically be imagined, /which is not the same as the 'utopian' situation). The scores multiplied by the relevant weighting can then be added together to give an overall total value for each

preferred option. The option's total score, determined by the selection and weighting can be used to place it in one of a series of groups of significance. The following example uses four general groups, (1) if the total points area between 450-600 the proposal with this value is of major significance which means that there is no dough on its implementation ; (2) if it is between 300-349 the option is of importance for the area and should be implemented ; (3) if the total values are between 250-299 the proposal is of value but should be revised and evaluated again ; (4) when the proposal's values are between 100-249 they are of no importance and should be abandoned.

Table 4.3.3. shows that Comprehensive Conservation option reached 506 points which means that it is of major importance for the area and that most of the sectors favour this intervention. the other option reached 201 points being considered of no importance therefore it should be completely abandoned. The only sector for which this last option had advantages is for developer/financier. The community preference on efficiency is clearly for the Comprehensive Conservation option, and as the distance in weight is considerable, at this point we assume that this option should be implemented.

### Conclusion

This evaluation turns to be a simple method of assessing different conservation options which enables by simple comparison of different impacts to a particular option, by using the points system, to determine their future implication in a large number of interested sectors of the society. This constitutes a helpful instrument for those working in city planning, a clear way of presenting facts, to bring out the equity implications of efficiency judgements to those dealing with the decision.

The point system is a crude instrument therefore it is not very convenient to use fractions, pretending to show precision, which is neither necessary nor intended. The value of the points system consists on the possibility of providing a method of ranking different options and not in comparison of such options with any external reference point. That is the

reason why it is necessary to first assess the current situation and this will be used as the "status quo" reference point. These must assess real situation without the influence of a minimal upgrade work which would normally be part of the 'do nothing' option. Having scored the status quo, various options can be scored against this reference point however, during this process the project team may have to revise its scores for this base position. The points system is a crude tool as only measured expectations should be made of its application to an early stage appraisal.

Regardless of the scope for empirical study, there appear to be three aspects of economic appraisal that are potentially beneficial to clear thinking in urban or architectural conservation. First it embodies a systematic approach to decision-making, allowing them to test the implications of each decision against all the objectives that they set themselves. Second, economic assessment recognizes the scarcity of resources and the principle that decisions should depend upon benefits foregone as well as benefits obtained. Third, it offers a framework in which value judgements can be made explicit. Of course the economic assessment has some disadvantages and those are for example related with those elements which are difficult to measure and consequently forgotten. Therefore the need to keep the enumeration, measurement and explicit valuation stages separate in the assessment. Community Impact assessment is helping in this way, however much work has to be developed.

<sup>1</sup> Forte, C., 'Il Problema Economico dei Centro Historici', *Restauro*, n°7, 1973.

<sup>2</sup> Girard, L.F., 'Economic Theory and the Valuation of the Cultural Heritage', *Restauro*, n° 83, 1986.

<sup>3</sup> Lichfield, N., 'Economics in Town Planning', *Town Planning Review*, n°39, 1968, pp. 1-23; 'Cost-Benefit Analysis in Town Planning, a case study: Swanley', in *Urban Studies*, n°3 1964, pp. 215-250; *Economics in Urban Conservation*, Cambridge University Press, Cambridge, 1988.

<sup>4</sup> The Points System was largely developed in 1987 when the Institute of Advanced Architectural Studies at the University of York was commissioned to research in a method to increase the availability of the large amount of expertise and experience in design and operating costs, which had been built up in some NHS planning teams over many years. By producing a Point System it was hoped to distil this knowledge into a system accessible to non-experts and non-specialists. It was initially designed for use on major redevelopments of District General Hospitals, however the experience of using the scheme over the last years has shown its value for smaller enterprises. Institute of Advanced Architectural Studies, University of York, *Doc Points System, A Points System for Evaluating Development options to Reduce Operating Costs*, I. o A.A.S., 1990.

<sup>5</sup> It is important to note that warehouse and small industry use is found in the building up to the fifth floor. They exist because those floor rents are very low due to the poor maintenance conditions of the buildings, but they are areas of danger because of the large quantities of materials stored there.

<sup>6</sup> Le Grand, J., Propper, C., Robinson, R., *The Economics of Social Problems*, Macmillan, London, 1992, p. 9-13.

Harvey, J., *Urban Land Economics*, Macmillan, London, 1987, p. 3-12.

<sup>8</sup> Le Grand, J., Propper, C., Robinson, R., *The Economics of Social Problems*, The Macmillan Press, London, 1992, p. 3.

<sup>9</sup> Le Grand, p. 19.

<sup>10</sup> This method has been used by Lichfield and also by Alexandre Ian. What is presented here is an *Adaptation* of this method to our specific case study, therefore it constitutes *another single approach* which is *pretended to be a way of evaluating conservation projects*.

<sup>11</sup> This might be an arguable "benefit" as the first point is that the conservation evaluation should confine itself to changes in resource within the conservation sector only, rather than the entire economy. The second objection is the assertion that changes in the output of individuals or groups are not the grounds upon which we usually make resource - allocation decisions concerning the conservation of buildings of those involved. The third argument is that the valuation of indirect benefits (usually through increased earnings of individuals) makes a series of value judgements and assumptions which may only be appropriate in a limited number of cases. It is important to conclude that the inclusion of indirect benefits in a cost-benefit analysis may not be straightforward.

<sup>12</sup> Still it is important to note that these judgments depend on the different community sectors as well as on the values change over time, which implies that if one wants to have an accurate valuation, it is necessary to update records.

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Community Sector	Sectoral Objective	Type
	Increase land value	D
	site	Minimise disturbance
		D
11. Users of site		D
12. Other occupiers	Increase occupation value	AR
		D

Community Sector	Conser.		Redev.	
	Weighting	Score	Weighting	Score
Producers and Operators				
1. Landowners	1 2 3 4 (5) 6	$\times 10 = 50$	(1) 2 3 4 5 6	$\times 10 = 10$
2. Developer/financier	-		-	
3. Municipality on site	1 2 3 4 5 (6)	$\times 6 = 36$	(1) 2 3 4 5 6	$\times 6 = 6$
4. Government : nat. heritage	1 2 3 4 5 (6)			
5. Other landowners	1 2 3 4 (5) 6			
		$\times 10 = 40$	1 2 3 (4) 5 6	$\times 10 = 40$
	1 2 3 4 (5) 6			
8. Government budget	1 2 3 4 5 (6)	$\times 5 = 30$	-	
9. Current occup. on site	1 2 3 4 5 (6)	$\times 10 = 60$	(1) 2 3 4 5 6	$\times 10 = 10$
				$\times 6 = 6$
				$\times 5 = 20$
				$\times 5 = 5$
14. Taxpayers (city population)	1 2 3 4 5 (6)	$\times 5 = 30$	(1) 2 3 4 5 6	$\times 5 = 5$
15. Travellers	1 2 3 4 5 (6)	$\times 5 = 30$	(1) 2 3 4 5 6	$\times 5 = 5$
	1 2 3 4 5 (6)			
		= 506		= 201