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Editor P L Braniff


Pleanail

VOL.1 No.6

WINTER 1986

THE JOURNAL OF THE IRISH PLANNING INSTITUTE

WHO'S
FOR
ERDO



EDITORIAL

1986 has been in many ways a most stimulating year for planning. The great ERDO debate finally heated up, with no little prompting from the Institute. We make no apologies for devoting so much of this issue of *Pleanail* to ERDO. The study is one of the most important planning documents ever published in this country and the issues which it raises need to be fully debated and understood by public, politicians and planners alike before the next step is taken. Already there are renewed calls for more regional autonomy, decentralization of decision making and functions and a greater say for the Regions in the allocation of the E.E.C. Regional Fund. The Institute has led the way in the call for a National Physical Plan and for a strengthening of the Regions. This issue of *Pleanail* contains the text of the Institute's official response to the ERDO study. Taken in conjunction with the other contributions a certain lack of balance is evident. This would appear to represent a genuine consensus of the opinion of the planning profession. However, we would welcome alternative view points for our next issue.

The cities, and particularly Dublin, have also been in the news with the publication of the Urban Renewal Bill and the Dublin Metropolitan Streets Commission Bill, the imminent arrival of the Dublin Transportation Authority and the reorganization of Local Government in the Dublin area. Not all of these measures have been greeted with unanimous approval but the debates they have occasioned, have raised public awareness of and interest in metropolitan planning issues to a level previously unheard of. The reviews of the Dublin City and County Development Plans are now under way. The Corporation planners will need the wisdom of Solomon to produce a plan that will satisfy all of the conflicting demands. We can only wish them well.

No matter how good the plan, implementation is outside of the planners control and the profession is often unfairly castigated for what amounts to failure by others to provide the means for implementation of Development Plan policies. There is however one area in which planners may assert strong influence and that is in the production of Draft Development Plans. However, in the past, the profession seems to have had little chance of promoting Development Plans as a public relations exercise.

It is little wonder that the general public has a low opinion of planning and the profession. Development Plans should be afforded the highest professional standards of design, layout and presentation so that the general public can relate and respond to them in a meaningful way. High quality printing, the use of photographs, sketches and colour are surely not beyond the resources of most Planning Authorities.

Another missed opportunity to improve the image of planners and planning generally is the display of the draft plans. At present most displays are a minimum response to a statutory requirement. Instead of this the display should be professionally designed using the full range of modern techniques, including models, photomontages and video presentations. The display is for the public and it should stimulate and enlighten rather than bore them. Planning Authorities will argue that they cannot afford such frills, but the public has a right to full participation in the planning process and consequently it must be de-mystified and packaged in the most attractive way possible. If the public is sold on the Plan, implementation then becomes an exercise in partnership rather than confrontation, with consequent savings all round.

The Dublin Authorities should set the lead in improving the presentation standards of Development Plans and the forthcoming reviews of the Dublin Plans present the ideal opportunity. For Dublin particularly and perhaps also for our other larger cities, the public relations exercise should go one step further. The Development Plan should be on permanent exhibition in a prominent position and it should be professionally mounted to communicate to the public in the most direct manner using the full resources of modern communications technology. As an exercise in public relations, such an innovation could only be of benefit to all of the participants in the planning process.

The Editorial Committee wish to point out that opinions expressed in articles are those of the writer and do not express the views of the Institute except where explicitly stated.

F Kenny
President

ERDO - THE IPI ANALYSIS

A Critical Analysis of the ERDO Report, Submitted by the Irish Planning Institute to the Board of Directors of ERDO on 14th March 1986

Having carefully examined the report, the Institute is of the opinion that there are five major areas which merit comment. These are each categorized and dealt with separately below. The Institute's conclusions and recommendations are summarized at the end of this analysis.

1 Terms of Reference

Regional Planning, as currently carried out in Ireland, is fundamentally flawed by the lack of National Guidelines and by the lack of a statutory basis. Attitudes to Regional Planning at Central Government level have been characterized by policy statements which have not been matched by any commitment to policy implementation. Consequently, the nine planning regions established in 1968 exist in a vacuum, each without any clear idea of its relationship with the others or its role in the country as a whole. The Regional Plans produced by these organizations reflect no priorities other than those established by the local Regional Development Organisation in response to local pressures.

The fact that the levels of growth forecast in many of these plans are highly unrealistic, with consequent unrealistic demands on finite national resources, that scarcity of capital will render the bulk of them unattainable, or that, in any case, Regional Plans have no legal base and are at best advisory documents, is no excuse for complacency. In the absence of any other guideline, these regional projections will become the basis of statutory local development plans. This is bad planning and must lead to serious waste of national resources.

Because of this background, it was intrinsically impossible for ERDO to draw up terms of reference for their Settlement Strategy Study which would be other than narrowly parochial in their approach. The report is seriously at fault in that it does not attempt to question these terms of reference or the foundations on which they are based. Neither is there any evidence that the study team seriously asked themselves or their Board these questions. Had they done so with any conviction, the case for postponing the study until realistic guidelines were forthcoming from Central Government would have been unanswerable.

2 Population Projections

There is considerable evidence that the population projections put forward in the Report could be considerably overstated in the light of emerging trends. It is now most unlikely that anything like the projected population of 1.85 million people in the region by the year 2011 will be reached.

The study team cannot be faulted on this score since they had to work with the data available to them at the time. However, the implications of the changing demographic trends are such that the conclusions of the Report are now seriously questionable. At the very least a major revision of the Report is even now required. However, when taken in combination with the other criticisms of the Report's conclusions, it is clear that nothing less than the scrapping of the existing Report and a totally new approach is required.

3 Settlement Strategy

The lack of national guidelines, the acceptance by the study team of the defective terms of reference and their narrow interpretation of them, leads to another major defect in the Report - the total disregard of the relationship between the arbitrarily designated Eastern Region and the rest of the country. Many of the region's current problems stem from the 'laissez-faire' approach of the sixties and seventies, when due to a lack of clear-cut regional policy by the State, there was an over-concentration of population and economic activity in the Dublin area. Indeed the Government's only regional policy directive relevant to the growth of Dublin City and County in this period - "that the strategy which the Government envisaged should be pursued over the next 20 years should be such as to accommodate the natural increase of its existing population" (1972) has been consistently ignored, not least by the present Report.

Given this background, it was inevitable that the settlement strategy finally chosen by the study team would recommend more of the same peripheral type of development of Dublin suburban areas as has already taken place in the past two decades. That the Report should reach this conclusion, despite the clear evidence of the failure to properly implement such policies in the past, and the consequent very high level of public dissatisfaction, is, in our opinion, a severe indictment of the fundamental bases on which this Report rests.

4 Transport

Another area of the Report which gives cause for concern is its treatment of transportation. The amount of the Report devoted to transport matters is, in our view, minimal and even that is arguably misdirected.

Whether the failure of the Report to come to grips with Dublin's transportation problems either now or in the period covered by the Report, comes from too narrow an interpretation of the brief or from a genuine belief that land-use and transportation can be handled separately is not clear, but it is the opinion of the Institute that the lack of attention to transport is a major defect in the Report. Such emphasis as there is confines itself to the Dublin approach roads programme and practically ignores public transport and the effect of the increased population and improved approach roads on congestion in the existing city centre. The Report, as presented, gives the impression that the Dublin approach roads programme is the optimal and only solution to the transport needs of the settlement strategy, without any consideration of alternatives.

The ERDO Report continues the fashion first instituted by the Dublin Transportation Study in 1970, that land-use and transportation strategies are not inter-related and do not need to be considered together. The present ERDO Report states that a detailed transportation study was outside of its remit while admitting the necessity for such a further study. It is about time that this bizarre game of ping-pong was concluded, by the clear admission that land-use and transport planning go hand in hand and that any future plan for the Dublin Metropolitan Region should be an integrated land-use and transportation plan, on the model of that already carried out for the Cork Region.

5 Dublin's Inner City

In the context of its wider settlement strategy, the Report's assumptions and conclusions regarding the existing built-up area of Dublin and in particular the Inner City are particularly disappointing and disturbing. The decline of Dublin's inner city is one of the most serious, if not the most serious planning problem in the country and the failure of the ERDO Report to come to grips with this problem in any respect is a major omission. In declining to assign even a small percentage of the projected population increase for the Region to the Centre City, or to put forward any proposals to arrest the projected decline of the population of the existing built-up area of the city, the Report effectively washed its hands of the historic heart of the Region and guaranteed that the future development of Dublin would follow the American "doughnut" pattern of vast suburban sprawl around

a hollowed-out derelict core. This is not acceptable. Despite the enormous challenge, any strategy for the development of the East Region over the next 25 years must specify measures aimed at ensuring that the central core of that Region retains and enhances its vitality.

While accepting that, on the basis of past trends, the assumed loss of population is likely to take place, it is considered that as a policy objective the strategy should be amended so as to seek not alone to reverse this trend, but to accommodate additional population within the existing built-up area including the inner city. Any measures taken to retain or increase the population of these areas will result in a corresponding reduction in the remainder of the population to be accommodated in the Dublin sub-region, with important benefits for the provision of facilities and infrastructure generally.

The fact that many of the centre city's problems are not amenable to change "under present conditions" without legislative action is no excuse. The study team's terms of reference did not preclude them from making recommendations on the types of initiatives which would be required in order to maintain and increase the existing population of the existing built-up area of the city.

It is no credit to the study team that they failed to make any such recommendations, particularly in view of the continuing debate on these matters which has led the Government to take such recent initiatives as the new scale of grants for older houses, and the package of incentives for redevelopment of the designated centre city areas to be included in the forthcoming Finance Act. The Institute heartily supports these initiatives in principle and suggests that the implementation of these alone may warrant a review of the ERDO assumptions.

However, further action is necessary. The Report of the joint Oireachtas Committee on the Price of Building Land contains many useful recommendations, particularly in relation to the reform and streamlining of compulsory purchase procedures, which could do much to revitalize the declining centre city if they were embodied in the legislation. In addition, it is desirable that in the forthcoming review of the City Development Plan, additional areas should be zoned for residential use i.e. docklands, institutional lands and derelict sites. It is submitted that, at current Development Plan density standards, the inner city alone has the capacity to accommodate a population as high as 150,000 people.

While accepting that virtually no private housing development has taken place in the inner city in the 20th century, it is considered that the climate may now be right for such development within the context of a comprehensive regeneration strategy. The Institute therefore recommends that an urgent Action Plan (with statutory backing) be produced for the central city and that adequate resources be assigned to ensure its speedy

implementation. The availability of funding from the European Community for the urban renewal of Belfast is noted and it is felt that Dublin deserves similar treatment.

Conclusions

In conclusion, the recommendations of the Institute can be summarized as follows -

1 Central Government should produce a regionally articulated national physical plan immediately. The Institute believes that an integrated national programme for infrastructural investment is essential if the benefits of economic and social growth are to be shared by all the residents of the State. Policies in areas such as transportation, telecommunications, energy, decentralization and devolution of government functions, agriculture, fishing and industrialization must be less than totally effective if conceived in isolation from related sectors.

2 The Regional Development Organisations should be given statutory powers and increased finances so as to strengthen regional policy and implementation and to prepare regional planning policies, which would form the basis of local statutory development plans.

3 All existing Regional Plans, including the ERDO Report, should be replaced by new plans drawn up in the light of the National Plan.

4 An essential element of national policy should be a commitment to decentralize growth to centres outside the sphere of influence of Metropolitan Dublin. This commitment should be backed up by the provision of the necessary resources for infrastructural development and by leadership and example by Departments of State and Senior State bodies in the matter of decentralization.

5 The reconstituted Plan for the Eastern Region should be an integrated land-use and transportation study.

6 The recommendations contained in the Report of the Joint Oireachtas Committee on Building Land should be implemented, particularly those advocating the reform and streamlining of the Compulsory Purchases procedures. It is felt that these recommendations, taken in conjunction with other recent Government initiatives, and revised planning policies would do much to revitalize the decaying heart of Dublin.

7 A comprehensive strategic Action Plan for the regeneration of Dublin's inner city should be produced as a matter of vital national necessity. The making of such a plan should be made mandatory by means of legislation. The source of funds for implementation of the Action Plan objectives should be underwritten by the Government and by the European Community.

E.R.D.O. AND THE FUTURE OF DUBLIN

R BIDDLECOMBE

Storm in a Tea Cup

I would like to start by suggesting that E R D O may largely be a storm in a tea cup. I have recently carried out sub-regional population forecasts based on the latest C S O out-migration assumptions. These forecasts suggest that population could stabilise after 1986 and by 1991 could be considerably below E R D O forecasts.

Similarly, I have made employment forecasts and activity rate forecasts based upon realistic assumptions and the latest employment data available (the employment forecasts in E R D O are unrealistic). When these are related to the lower workforce that results from the out-migration effect on population, then we get a fairly consistent unemployment forecast - that is unemployment stays at more or less its present level. This would be consistent with the observed relationship between unemployment, out-migration and the British unemployment rate - which shows no sign of altering markedly in the near future.

The upshot of these forecasts is that it is unlikely that the western 'so called' new towns will be filled up by the end of the decade as expected. It is also unlikely that there will be any immediate problem with finding new housing land until at least 1996 and possibly beyond.

Recession and National Planning

Next I would like to reflect on the political effects of recession and long-term high unemployment rates on national or inter-regional planning. My population and employment forecasts would be proved wrong if there was a significant difference between employment growth in Dublin and the rest of the country. This is a plausible scenario as the I D A is now targeting Dublin and Dublin has comparative advantages in many employment areas. If differential employment growth were to occur, we would be back into

the situation found in the 1960s when a Dublin service boom drew a rural workforce into the capital. However this was against a backdrop of out-migration which had been going on for as long as anyone remembered. The E E C inspired boom of the 1970s has raised expectations in rural areas and has laid down large amounts of good quality social capital. It is my contention that these factors will result in overwhelming demands for regional decentralisation - particularly of government services and powers, such that net employment growth in Dublin will not be significantly different from the rest of the country.

Economic recession is viewed differently from Dublin. There is no longer a constituency for urban growth in Dublin. The conflict between providing services for the already committed suburbs and the decaying inner city and providing services for more green field sites is now generally understood. The increasing pollution and the environmental deterioration resulting from past regional planning mistakes are just starting to be recognised. Perhaps more immediately effective at changing opinions has been the public sector led housing growth of the last few years - (exporting largely working class families into the outer suburbs - many without jobs or a decent education) - this is ringing alarm bells in numerous middle class estates and villages. I can, however, put their minds at rest on this score - at least for the next few years - as local authority waiting lists have now largely disappeared and the £5,000 grant will keep the unemployed working class in their place. Perhaps, in this not so cosy environment, the cosy school of planners has it right - perhaps there is now a large enough grouping of political forces that will get behind rational national physical planning.

Suburbanisation and Inner City Decline

Next I would like to leave the national scene and look at the problems associated with Dublin. A number of facts have emerged from the 1981 census which are important to an understanding of Dublin. Firstly, the massive concentration of employment in the Inner City - if one includes the office blocks in the Ballsbridge area as part of the commercial central area, then about half of all the jobs in the sub-region are in the central area. All other employment areas are relatively insignificant - even the hedge industrial area around the Naas Dual Carriageway has only 12 per cent of the jobs in the sub-region.

Secondly, the whole of the sub-region is highly dependent on these central area jobs. In most areas, about half the workforce commute into town, even in the so called new towns the figure only drops to about 40 per cent. If anything seriously affected the job situation in the Inner City, then the

effect would be catastrophic on the rest of the city. Even largely working class areas like Finglas with their own industrial estates have half of the workforce commuting to inside the canal ring. Such a catastrophe in fact happened in the 1970s when the Inner City industrial employment up and left for the suburbs. The social casualties of this movement are still with us. Consider what would happen in the inner suburbs if such a major downfall in Inner City employment was to occur again. Such a scenario is quite plausible without any recourse to inter-regional movement of employment.

Moves are already underway to suburbanise employment. Sub-regional shopping centres - far too large to meet local demand - regional facilities such as teaching hospitals and third level education institutions are all moving out. These moves are facilitated by the Government's orbital road programme. When the western parkway and north-south cross routes are completed, the government will have constructed the backbone of a linear city with a catchment population of about half a million around a decaying urban core.

However, what I have to say about this is somewhat contradictory. While I would expect there to be practically no control on commercial development in this linear city (how could there be with three planning authorities full of rezoning councillors all vying with each other for development?) the exercise won't in fact work, a point that McGrath refers to in his reference to Thomson.

The existing (1981) commuter pattern demonstrates that, in the existing suburbs, only a small percentage of local jobs are held by local workers. This percentage is unlikely to rise as new orbital roads make areas more accessible and jobs become more skill specific. Like all linear cities, the system will tend to congest quickly, particularly at its centre ie. Tallaght - Clondalkin. Congestion will begin to reduce effective catchments and either the drive to suburbanise will peter out or another Motorway will have to be built. Meanwhile, a strategic route which should have been reserved for industrial and through traffic will be full of commuters and shoppers.

Because of the difficulties of purely orbital public transport - particularly to decentralised workplace locations - there will be increasing unemployment in low car ownership areas dependent on Inner City jobs that are moving out and the inner city malaise of the 1970s will begin to spread outward into the inner suburbs. The social and environmental effects of this will be to further drive more affluent families out of the city.

Perhaps the most important effect from a regional point of view will be the weakening of the commercial competitiveness of the Inner City vis-a-vis other cities and regional centres. Some of the attractiveness of the centre will be lost as facilities move out, adequate public and private transport investment will be deferred and the failure to deal with the social problems caused by the reduced employment opportunities will scare away new investment.

E R D O Needs the Inner City But Ignores It

E R D O is ambivalent when it comes to Inner City employment. The study assumes an increase of about 80,000 jobs in the Inner City by 2011. I cannot agree with this figure because of the unrealistic work-force assumptions, however the study tends to over-estimate local service employment, so in its own terms, it is conservative. There are currently about 120,000 commuters crossing the canal ring every morning. Assuming no change in modal split (and with the assumed decline in the inter suburban workforce, this may not be that unrealistic) and given that at present, all the radials are overloaded at peak, E R D O is assuming a massive growth in radial capacity - for every three lanes at present, there would have to be five lanes in future. This would represent a road building programme about three times the size of the existing orbital road programme. Alternatively, there would have to be a considerable change in modal split and massive public transport investment. As McGrath points out, this would have a considerable effect on the location of new peripheral development. It requires, for example, changed assumptions about residential densities (reflecting lower car use) and threshold sizes for settlements (allowing people to walk to the railway stations). This would generally lead to the beaded necklace type of settlement pattern as against the present suburban sprawl which is too dispersed for buses and too dense for cars.

Perhaps most importantly, the ambivalence of E R D O is represented by their lack of any insight with regard to the planning of these jobs - which makes up the bulk of E R D O's expected growth. And here I would like to agree whole-heartedly with E R D O. Despite the fact that this key assumption is relegated to an obscure section of an Appendix, their assumption that their plan vitally depends on employment growth in the Inner City is quite correct and quite justified.

The Inner City has a number of comparative advantages - the highest concentration of the growing service sector in the state - potentially the largest consumer market, including many young affluent workers with high disposable incomes - and an historic centre with great tourist and entertainment potential close by the Island's major airport.

The Inner City offers the greatest opportunities for employment growth in any part of the region - indeed in any part of the state, but only if the planning is not botched.

I would disagree fundamentally with the E R D O analysis - the economic gains from Inner City housing in terms of use of vacant social capital, reduction in commuting costs and most importantly, the interaction with commercial development will be considerable. The costs of not solving the problem and the consequent commercial flight from the city are so high that it is unthinkable to leave the area to fester, as is implied in the E R D O

policy. This contradiction between E R D O depending on vast increases in Inner City service employment and a do-nothing policy in the Inner City is crucial to understanding the other policy mistakes in their report.

An Alternative Housing Policy for the Suburbs

Before any analysis of what can be done about the inner City, can I touch on the current E R D O v Inner City debate. I would like to point out that the problem is wider than the Inner City, E R D O notes the falling suburban population and builds this into its peripheral growth. While this is partly a natural demographic effect, it is also partly due to Government housing policy which persists in taxing second-hand houses and sending young married couples to spend their first years of marriage on remote rural building sites. The infrastructural capital arguments with regard to schools, shops and social facilities apply with even greater force to the mature suburbs than they apply to the inner city. The situation is not seriously affected by the new grants as much of the housing is post 1940. A considerable increase in the efficiency of the existing housing stock, free social capital and a considerable saving in commuting costs could be facilitated by changing existing housing policy and by policies that encourage the private provision of old peoples' flats so as to liberate family housing. Policies that relate private suburban flats and high density housing to the transport system offer considerable scope for increasing density in the existing built up areas. As part of a policy to attract people to existing housing areas, the local authorities could tip the balance in favour of housing as against traffic in the suburbs. The exclusion of traffic would not only improve the residential environment, it would make the far suburbs less attractive by increasing radial congestion.

Three Problems for the Inner City

In the 1970s, there was seen to be a conflict between housing and commercial development in the Inner City. Certainly, the hope value effect of office development still inhibits residential development. Now though, it is obvious that housing and commercial developments are complimentary. It is impossible for commercial development to redevelop the wide swathes of derelict land. The majority of the land must be developed residentially. However, such housing development must be complimentary to the commercial redevelopment of the city. It should, for example, house workers relevant to inner city jobs. It should involve the housing of people

who can use and develop inner city services and the housing itself should contribute to the environmental upgrading that will act as a backdrop to new commercial ventures. Environmental and social improvements, new housing, traffic and parking measures are vital pre-requisites to make the Inner City an attractive commercial proposition.

There are broadly three problem areas that can be identified within this analysis. Firstly social problems - poverty, crime, illiteracy, vandalism - caused partly by structural unemployment and partly by housing policy. Housing policy is intractable because existing political systems support it and yet have not been able to cure the problem it creates. The solution lies in two areas, firstly, radical measures in terms of both education and community development - both very hot areas politically with a number of vested interests resisting change. Secondly, planning and housing policy measures that would eliminate the worst problem areas where residential and commercial conflicts are at their worst, while at the same time, providing a quid pro quo of housing, community facilities and jobs in the less problematic areas. Again, we are talking about very politically sensitive areas such as detenating flat blocks and selling into private ownership, changing tenancy qualifications, sheltered employment and so on.

The second problem area is land prices. In this area, a lot could be done by tightening up and reducing the commercial zoning and increasing residential zoning. However, such a policy must involve sticking rigidly to the zoning if hope value is to be dented and here there will be a problem with the Planning Appeals Board.

If this policy was reinforced by a series of housing and flat packages aimed at different market segments, then any subsidies necessary could be tailored to particular needs. Single workers and young married couples are an obvious first area to look at. In this regard, the Dublin Gas site seems to be an obvious proving ground for such a policy. Eventually both white collar and skilled blue collar family housing could be provided. While this is still a second best to taxing land into use, it will probably work.

The third problem is the lack of any adequate corporate policy to deal with the problem. The Corporation cannot be entirely blamed for this as important elements of the solution (education and training, public transport, industrial development etc.) have traditionally been outside their control - furthermore, there has been continuous ad hoc interference from central government as they have tried to paper over the cracks, for example DTA, Port & Docks Commission, D O E Inner City Committee etc. and now the Metropolitan Streets Commission.

There is an immediate need for a statutory corporate plan covering the entire inner city with a strong interventionist approach and the money to back it. If the Corporation, whether for external political reasons or for internal reasons, cannot produce it, then some alternative arrangements must be made.

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TRANSPORT IN THE E.R.D.O. REPORT

J A CROWLEY

If one were to take its title too literally, this paper would be an extremely short one. There is very little transport in the E R D O Report. What is there is not handled well and some of the really obvious things about transport and development are missing.

One does not like criticising a professional work, one which was obviously carried out with great enthusiasm by its study team, and one which has given considerable attention to both detail and methodology. The report is well presented, honest in its approach and extremely ambitious. It has incurred criticism, from the media and from various groups. This must be somewhat disheartening for its proponents. Perhaps the report's purpose was to provoke debate, and to this extent its proponents may feel it is achieving its objective.

The task of preparing a development plan for the greater Dublin area - for any of the lesser Dublin areas, for that matter - must be a daunting one for those charged with its responsibility. One only has to reflect on

- ★ the geographical size of the region, coupled with its administrative weaknesses and data shortages,
- ★ the lack of explicit overall national plans which might serve to give individual regional plans a context,
- ★ the multiplicity of pressure groups and their collective reluctance to compromise, and
- ★ last but not least - the low budgets made available to planners in this country.

to begin to appreciate the problem.

For the amateur approaching this problem it would seem sensible to split the task into steps:

- 1 Prepare maps, highlighting the region's amenities, resources and infrastructure, population clusters, patterns of development to date, and what one might term the inevitable pattern of development if current behavioural trends were to continue uninterrupted.
- 2 Examine the causal factors influencing development and try to discover what degrees of freedom, or allowable ranges, there are in changing these factors.

- 3 Develop a range of distinctly different development options, corresponding to the causal factors at different settings within their allowable ranges, and evaluate each option against the criteria which the different groups in the population, and in particular their decision makers, hold as important
- 4 Screen out the unpopular options and fine-tune the more popular ones to create sub-options and alternatives. Then return to step 3 iteratively until a popular option becomes preferred by a sufficient majority of the population. This then becomes the development plan, subject to ongoing review and adjustment as circumstances change

There are probably those who will say that this is precisely what the E R D O Report has done. There are plenty of maps showing the constraints, the current development foci, the available infrastructure. There is a recognition of the existence of multiple criteria and an attempt to achieve a balance of their priorities. Various alternative settlement strategy options are presented and analysed. There is even an attempt to analyse the robustness of the preferred options to changes in criteria weightings. All this is good, and as an advocate of multicriteria decision analysis one is impressed to see such a serious and professional use of the technique.

This, perhaps ironically, is one of the problems in criticising the study. One tends to be daunted by the scientific tone of the report, and those who are unfamiliar with the methodology and language of the professional planner must be inclined to assume that since the team seems to know its way around the methodology, the bases for the calculations and the overall study are correct.

The E R D O Report reminds me strongly - almost to the point of *deja vu* of the 1970 Dublin Transportation Study (1). Here, a team of expert planners, predominantly engineers, unveiled the first large-scale application in Ireland of a sophisticated technique, which was relatively new at the time, called Transportation Modelling, and many readers were so over-awed by terms such as trip generation, modal split, cost-benefit analysis that they assumed the study was technically sound. Gradually it became clear that the alleged benefits of the proposed option hinged on a fallacious calculation of time savings multiplied by an inflated value of time, that the traffic projections were based on suspect data (and on an inadequate household survey sample), and that what were presented as options amounted to little more than a three-card trick. Motorway Option (a), versus Motorway Option (b), versus Motorway Option (c).

It is a pity that people seem slow to learn from experience. In a study carried out recently in U C D, due to be published shortly by the European Foundation for Living and Working Conditions (2), it has been found that among the reasons the D T S proposals led to such subsequent controversy are that

- ★ the study team was not sufficiently inter-disciplinary and therefore did not address sufficiently radical alternatives
- ★ too much priority was given to technical objectives, with objectives relating to the quality of life in the city reflecting the values of civil engineering
- ★ participation of the public was inadequate and too late, and was provided for in such a way that it proved explosive rather than constructive, furthermore the technical nature of the D T S report made it difficult for lay people to react adequately
- ★ the exclusion of land-use alternatives from the scope of the study made it difficult to give adequate attention to the potential role of public transport

In reading the E R D O Report I was struck by its similarities with the D T S in regard to all these points, except of course that the position on the last point is the mirror-opposite to that for the D T S , with the E R D O study excluding transport options from the scope of its land-use study

The disconnection of land-use and transportation planning seems to date from the Myles Wright Study of the 1960's, when due to insufficient attention to financial constraints there was a proposal for a grandiose and rather futuristic motorway-based land-use scheme for Dublin, which was fairly rapidly dismissed as over-ambitious and impractical. It would seem that since then the transport planners have as punishment been cast into a subservient role, with a mission to react to, rather than initiate, development plans for the area. Thus it is that, when one reads the E R D O Report, one finds that factors such as sewerage, drainage, and fertility rates figure largely in the deliberations, while transport does not even make it into the 14 objectives used in the multi-criteria evaluation of Chapter 8.

Maybe when one gets too close to a particular specialisation things begin to seem obvious that are not really so. I would certainly have considered it obvious that the amount, type and modal emphases of transport infrastructure in the Dublin region is one of the key determinants of where people will chose to live and work in the future, as indeed it has been in the past. Greystones residents will certainly confirm that they would anticipate substantial benefits in the event of a DART extension southwards, and Tallaght residents will confirm that the absence of adequate public transport services is greatly reducing the town's attractiveness as a living area. One could of course envisage a totalitarian approach, such as that of the Ethiopian government in handling its famine crisis, in which people would be forced to live in areas designated by the land-use planners, but (perhaps sadly for the more perfectionist planners) there is already resentment here against the Tallaght and Ballymun experiments and the market distortions and the polarisations produced by our existing planning laws.

Transport plays a number of different roles in a region - but perhaps principally in the process of commuting. There have been many studies in other countries of the impact of different modes on commuting, and of the impact of commuting on location decisions for both homes and workplaces (3). It is known for instance that speed, cost, comfort, reliability are important variables and that the commuter attaches considerable importance to their improvement. It is also known that the different modes make different contributions to commuting performance. Where homes are dispersed and lengthy walking distances to public transport routes are necessary, car-owners prefer to use their cars, similarly where destinations are dispersed. Where there is no congestion on routes shared by public transport vehicles and cars, it is known that the relative performance of the former continuously disimproves due to the superior manoeuvrability of the latter. When congested roads are widened, it is the duration rather than the intensity of congestion that becomes reduced since motorists tend to adjust their departure times, ultimately road expansion never gets rid of congestion since car usage tends to expand to fill available capacity.

It is also known that the interplay of transport networks and the topography of a region can have a profound effect on the pattern of development of a region (4). A laissez faire approach to car ownership produces urban sprawl, fixed route systems tend to impose order on development and to produce high-rise-ribbon growth patterns, rapid transit is more suited to long-distance commuting between the towns of a region rather than to short-distance suburban commuting, due to the time losses imposed by stopping, busways and bus-lanes offer the benefits of fixed routes but also flexibility against uncertainties. Is it a coincidence that those cities which paid attention at an early stage to the layout of their transport systems are those which have subsequently managed to hold on to their character and which are regarded as reasonably pleasant places to live in and visit? One has only to compare and contrast cities such as London, Paris, Los Angeles, Detroit, Athens, Hamburg, San Francisco, to realise that there is an important relationship between a region's natural geography, its transport networks, and its subsequent pattern and character of development.

Returning therefore to the E R D O Report, it is to say the least disappointing to find a statement as promising as "Journeys to work, to shopping and services, to leisure areas and increased industrial/commercial inter-connections transcend local authority boundaries and indicate a wider approach to planning for future development" (page 8)

followed by no further significant reference in the report to transport until page 241, when a variant of the well-known shopping list for Dublin county roads is trotted out with the following one-sentence analysis

"The road requirements and their costs were identified in this study as part of the evaluation exercise" (page 241)

while the analysis of the potential role of public transport extended to
"The rail analysis carried out concentrated on the extent to which
the current network might need to be upgraded and did not
specifically examine any additions to the system " (page 225)
and

"A crude estimate of the likely number of bus miles to be
operated in the case of each of the options was the basis to the
costing of bus fleet requirements " (page 225)

The section on transport costs indeed ends with a revelation of the study
team's thinking

"The urban strategy proposed in this study will necessitate a
more detailed transportation examination which encompasses
the built-up area of Dublin and analyses the breakdown between
private and public transport in some depth. A detailed
examination of this type was outside the remit of this study "
(page 225)

So, my case against the E R D O Report rests on its own admissions. Not
only does it (a) fail to assess the creative alternatives offered for regional
development in the Dublin area, but it also (b) takes us the full circle in
suggesting a repetition of the 1970 Dublin Transportation Study under
identical terms of reference. So much for progress!

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- 4 J Michael Thomson, "Great Cities and Their Traffic", Gollancz, 1977

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EASTERN REGION SETTLEMENT STRATEGY. 2011, ERDO, 1985

B McGRATH

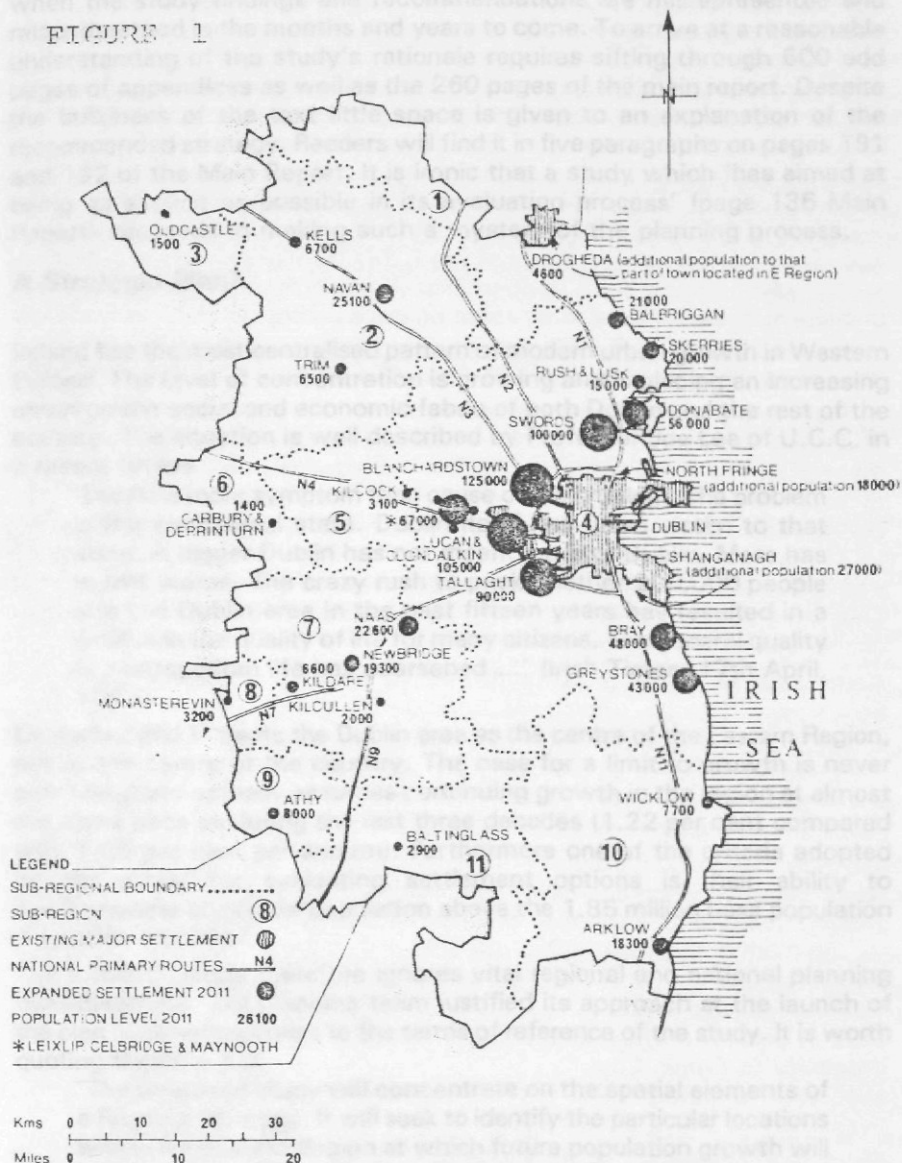
Introduction

By the year 2011 Dublin will be a city of well over one and a half million people. It will have become a semi-circular urban expanse 200,000 hectares in extent, centred on the depopulated eighteenth and nineteenth century core of the city, and stretching from Donabate in the north to Greystones in the south and Maynooth in the west. Four and six lane motorways will connect the constituent parts of this expanded metropolis. The north side of the existing city will be rimmed by a large industrial area. To the north-west Blanchardstown will have mushroomed in size to a population of 125,000. Further north, Swords and Donabate will have become Dublin's newest 'new town' suburbs (See Figure 1).

This, in rough outline, is the future city described in 'Eastern Region Settlement Strategy 2011'. The strategy is the product of a two year study carried out by a technical team drawn from Eastern Region local authorities and other development agencies. The team was headed by Len O'Reilly, Deputy Dublin Planning Officer. Early in 1983 he assembled an eight man technical group to prepare an initial project report. This group was then expanded to sixteen to carry out the full study. The team reported its findings in March 1985 to the Board of the Eastern Regional Development Organisation. As well as the main report and summary which were published in April, eighteen technical appendices are also now available. Given the expectations raised by the commissioning of the study and also given the very considerable investment in manpower resources which the study represents, it is only proper that the report should be judged against the highest standards.

The authors of strategic urban plans have the difficult job of condensing a complex intellectual task into a simple but adequate written account. This transmutation is necessary even in circumstances such as the ERDO study where the work has been done by an 'in house' team. The study report must be persuasive to influence events over a thirty year time period. '2011' is not a well presented strategic report which is an unfortunate fact

FIGURE 1



THE EASTERN REGION: PREFERRED STRATEGY, 2011

confronting an intending reviewer. More seriously, the planning team has missed the chance to make its case effectively and cannot be surprised when the study findings and recommendations are misrepresented and misunderstood in the months and years to come. To arrive at a reasonable understanding of the study's rationale requires sifting through 600 odd pages of appendices as well as the 260 pages of the main report. Despite the bulkiness of the text little space is given to an explanation of the recommended strategy. Readers will find it in five paragraphs on pages 191 and 192 of the Main Report. It is ironic that a study which 'has aimed at being as explicit as possible in its evaluation process' (page 136 Main Report) succeeds in making such a mystery of the planning process.

A Strategic Plan?

Ireland has the most centralised pattern of modern urban growth in Western Europe. The level of concentration is growing and is placing an increasing strain on the social and economic fabric of both Dublin and the rest of the country. The situation is well described by Professor Joe Lee of U.C.C. in a recent article

'Dublin is more symptom than cause of the problem. The problem is the centralised state. Dublin itself has fallen victim to that state. A bigger Dublin has not meant a better Dublin. More has meant worse. The crazy rush to pack another 200,000 people into the Dublin area in the past fifteen years has resulted in a decline in the quality of life for many citizens. The general quality of metropolitan life has coarsened ...' (Irish Times, 17th April, 1985)

Crucially, '2011' treats the Dublin area as the centre of the Eastern Region, not as the centre of the country. The case for a limit to growth is never put. The study actually assumes continuing growth in the region at almost the same pace as during the last three decades (1.22 per cent compared with 1.25 per cent per annum). Furthermore one of the criteria adopted by the study for evaluating settlement options is their ability to accommodate additional population above the 1.85 million base population projection for 2011.

The E.R.D.O. study therefore ignores vital regional and national planning considerations. The planning team justified its approach at the launch of the plan by referring critics to the terms of reference of the study. It is worth quoting these in full.

'The proposed study will concentrate on the spatial elements of a Regional Strategy. It will seek to identify the particular locations within the Eastern Region at which future population growth will be accommodated, leaving more detailed planning, within identified locations to be considered by the planning authorities in the preparation of their statutory development plans.'

In my view this statement was amenable to realistic interpretation and did not preclude an appropriate response. It would have been reasonable for the study team to have made a case for a limit to growth and to have recommended a national strategic plan to tackle the problem of growing regional disparities. Instead the E R D O strategy actually includes a bid for increased resource allocation to the Dublin area in the form of a £50 million overrun in the cost of the recommended suburban road system. The study also assumes that more than twice as much money is needed for the recommended suburban road system as for road improvements within the existing city. Given the very high costs of road building in built-up areas and given the growth emphasis of the E R D O scenario this seems to be an unrealistic allocation, i.e. proportionately much more of the regional road building budget will have to be spent on the existing city and therefore the total road bill of the E R D O strategy is really much higher than projected (See page 224, Main Report and Appendix 2).

At first sight a more perplexing aspect of the '2011' study is the rejection of options which involve a decentralisation of growth to new towns within the region. The study optimistically assumes that the commitment needed to build large, self-contained new towns would be forthcoming from Government. Yet the new town options which are generated fail to stand up to the scrutiny of the E R D O team. This has happened because their evaluation did not take adequate account of either the benefits which might flow from a decentralisation strategy or of the costs which will result from concentrating growth around Dublin.

Arklow and Drogheda are identified by the study as the best locations for new towns. Like the other potential sites identified, they lie on the edge of the region. The E R D O study evaluation is limited to effects within the geographical area of the region so it is unable to properly measure the social and economic benefits which would accrue from the designation of these peripheral centres as growth points.

The economic potential of the different settlement options is evaluated according to existing economic conditions. The surface potential analysis pattern used for this purpose is based on seven factors, which are -

- proximity to town with a suitable workforce,
- local attitudes and physical environment,
- easily developed land,
- ease of provision of services,
- proximity to Dublin City,
- availability of suitable and reliable tele-communications,
- availability of transport facilities.

These headings are not all self-explanatory but from the list it is clear enough that, from an economic development viewpoint, the most desirable pattern of development to emerge from the E R D O evaluation is almost bound to approximate to a consolidation of the existing settlement pattern. The British new town programme is the largest programme of new settlements

which meets the 'self-contained' criterion set by the E R D O team. The programme has come under a great deal of criticism but there is a general acknowledgement that many of the new towns are economically successful. Their success may be due to several factors, eg the planned and co-ordinated provision of services, modern infrastructure and dynamic management by new town corporations. It may have little to do with factors which would have been measured by a Surface Potential Analysis of the new town sites before the towns were built.

The third and most serious limitation of the evaluation process adopted is that it ignores the impact of alternative settlement options on the existing built up area of Dublin. A new town option might have relieved congestion in Dublin. The recommended strategy will exacerbate it.

An Integrated Land Use Transportation Study?

'2011' is a settlement strategy with a recommendation that someone else do a transportation study. 'A more detailed transportation examination was outside the remit of this study' (page 225 Main Report). 'the radial corridors analysed only stretched as far as the urban fringe of Dublin. Because the modelling process did not incorporate intersection-delay into the network the outputs' dependability within the existing built up area could not be considered in any way reliable. a full scale transportation study incorporating aspects like junction delay, banned turns and much smaller transport zones etc. would be necessary to determine reliable urban flows. Such a large scale undertaking was outside the remit of this study' (page 47, Transportation Appendix). The E R D O study does not analyse traffic conditions in the existing built-up area of Dublin and does not evaluate the impact of the different settlement options on the existing city. The report states (page 227) that 'the implications (of the strategy) for transportation within settlements, including Dublin, have not formed part of this study'. There is a comment in the transportation appendix on the phased road building programme recommended which, to my mind, is a masterly piece of understatement.

'A more detailed transportation study, encompassing public transport requirements and needs of the built-up area of Dublin is required and its findings could alter the above cost figures and phasing proposals in a significant way' (page 55 Transportation Appendix).

Most Dubliners would probably expect that existing city traffic conditions would be one of the main issues which a strategic plan for the capital region would address, or at the very least, take into account in its recommendations. The performance of Dublin's transportation system has sharply deteriorated in the last twenty years. The city compares unfavourably with other places in Europe. Few Dubliners, especially those

living in the new suburbs, have the chance to walk to work (see Table 1). Many have no option but to use a motor car. The 1979 report of the Dublin Transportation Consultative Commission chronicled a pattern of increasing delays for car commuters to the city centre. (The recent alleviation of congestion largely as a result of effects of the economic recession is probably a short-lived phenomenon). Transport then, both by itself and as an interacting element with land use, plays a key role in a city's life. The declining quality of life in Dublin in part is related to the nature and performance of its transportation system. The E.R.D.O. team may not have had the resources to do a full transportation study but it did have access to detailed results of the 1981 Census of Population which give a very complete picture of the existing pattern of journeys to work in the metropolitan area. The weakness of the E.R.D.O. strategy in this key area is therefore a surprising one and difficult to explain.

TABLE 1: Methods of travel to work (% of commuters)

	Walking	Public Transport	Car
Metropolitan Dublin 1970 ¹	17	38	34
Metropolitan Dublin 1981 ²	14	28	47
County Dublin 1981 ²	7	20	64
E.E.C. countries 1980 + ³	18	22	44
Greater Stockholm ⁴	20	60	NA

Sources:

1. Dublin Transportation Study, Technical Reports, An Foras Forbartha, 1972
2. 1981 Census of Population
3. The journey from home to the workplace, European Foundation for the Improvement of Living and Working Conditions, Dublin, 1984
4. Popenoe D., The Suburban Environment, University of Chicago Press, 1977

To a large extent the centre of Dublin is Dublin. New and otherwise anonymous suburbs depend for their identity on an increasingly remote association with the historic core of the city. The continuing vitality of this area of Dublin must be a major consideration of a strategic study. As the E.R.D.O. report rejects the centre as a location for population expansion and does not discuss its economic role in any detail one might assume that the recommended E.R.D.O. strategy has a neutral effect on the centre. But this is not the case.

The primacy of the city centre area depends upon the maintenance of two characteristics of the existing metropolitan structure. The centre must retain its status as the most accessible location in the system and it must continue to be served by a large scale public transport system. These two conditions are of course inter-related.

Present day Dublin is a highly centralized city as the comparison with other small and medium sized cities in Table 2 demonstrates. Two-thirds of the jobs in the Dublin sub-region are in the county borough and most of those are in the inner city. Tables 2 and 3 show that, while commuting by private car is very substantial in Dublin, this level of concentration of employment is sustained by the operation of a sizeable public transport service. Apart from the destruction of physical fabric that would be involved, the high land values of central land in a centralized city make a transportation system, wholly reliant on the private car as a travel mode, a prohibitively expensive alternative.

TABLE 2: Metropolitan areas compared *

CITY	SIZE OF METROPOLITAN AREA		DEGREE OF CENTRALIZATION		CAR COMMUTING TO CITY CENTRE JOBS	
	Population (millions)	Area (sq.km)	Jobs in City Centre (' ,000)	City Centre jobs as % of whole population.	Car commuters (' ,000)	Car commuters as % of all commuters
Stockholm	1.3	1,352	120	9.2	35	29
Athens	2.5	410	210	8.2	34	27
Copenhagen	1.7	2,696	150	8.8	n.a.	25 (1965)
Göteborg	0.5	450	40	8.8	n.a.	n.a.
Vienna	1.7	1,700	135	7.9	22	16
Buffalo	1.3	409	49	3.8	n.a.	n.a.
Salt Lake City	0.9	1,700	41	3.5	n.a.	n.a.
Denver	1.4	1,034	42	3.0	n.a.	n.a.
DUBLIN	1.1	2,012	153	14.0	63	42

* Information about cities other than Dublin is taken from J.M. Thompson, 'Great Cities and their Traffic', 1977. Most of this information is now about 15 years old. The Dublin information is based on 1981 Census of Population data. The city centre area used is the inner city as defined by Dulin Corporation Planning Department. The metropolitan area referred to is the Dublin sub-region defined by the 'ERDO 2011' report.

The E.R.D.O. strategy disperses regional growth around the edge of the existing city emphasising the historic centre as the geographical centre of the urban area. 'A more balanced urban structure' results 'with large towns to the south, west and north of the city' (page 256 Main Report). Apart from satisfying a desire for a simple spatial symmetry that has often been evident in town planning designs over the centuries, the only sense that can be made of this planning approach is that it enhances the accessibility of the historic centre. But this is plainly not the outcome in this instance.

Table 3

Transport Method	Workers ,000	Per Cent (rounded upwards)
public transport	54	35
car	63	42
walking, cycling, not stated	35	24
TOTAL	152	100

★ Source: 1981 Census of Population unedited journey to work information.

The '2011' strategy allows that the centre of Dublin will retain its dominant economic role during the plan period. Employment in the inner city may in fact increase by 70 per cent because 'to date efforts to disperse residual services outside of Dublin City have not met with much success'. (page 188, Main Report).

The policy response of the E.R.D.O. team to their perception of Dublin as a centralized city in 2011 is strangely inappropriate. The recommended strategy is an expansion of the orbital motorway network which is already planned. This network has little direct bearing on existing traffic patterns or the future needs of the city centre. But the building of new roads at the periphery will have an overall effect of stimulating private car travel which, in turn, will lead to increased congestion caused by car commuters on city centre bound routes. The E.R.D.O. study has no proposals for these routes yet the report acknowledges that over 35 per cent of the jobs in the Dublin sub-region could be concentrated in the inner city in 2011 (see Transportation Appendix). The E.R.D.O. study 'did not specifically examine any additions to the (rail) system' (page 225, Main Report) even though additions are essential to support the level of employment concentration which the report accepts as a possibility. The study did not examine any settlement options which specifically took advantage of the existing rail

network. The generation of options in '2011' obviously did not take account of French and Scandinavian new town approaches to metropolitan growth. In Stockholm, Copenhagen and Paris the historic urban centres are connected to satellite suburbs by mass transit systems. The satellite areas are not 'self contained' and a significant proportion of their workforce is efficiently transported to the traditional centres of employment (see Greater Stockholm in Table 1).

In the long term the problem posed by a traditional centre isolated from the rest of the metropolitan system by congested traffic routes will solve itself. Nodes on the orbital motorway will eventually supplant the city centre as the most accessible places in the metropolitan area. Service sector activities will begin to choose these suburban locations in preference to the city centre. In time, to use the terminology adopted by Thomson for his survey of cities and their traffic, Dublin will become 'a less centralized city'. (1) Of the three types; centralized, less centralized and decentralized, examples of which are given in Table 2, Thomson reckons the less centralized city faces the most intractable problems. It needs a public transport system as well as roads to get workers to and from the city centre. But the scale of commuting is not substantial enough to support a really good public transport service. At the same time this city also has to invest in and maintain an expensive suburban road system to serve the large volume of non-central traffic.

The transportation side of the E.R.D.O. report is inconsistent. Bracketed with a capital investment programme and a settlement pattern which overwhelmingly favour the private car as a method of travel is the assumption that the modal split will stay the same as in 1981 (page 31, Transportation Appendix). The report itself draws attention to the tremendous growth in car ownership in recent years - a 240 per cent increase between 1961 and 1981. The E.R.D.O. plan, if implemented, would serve to increase car ownership and car usage. But even using high growth assumptions, ownership levels in this country are only likely to be approaching present day levels in France and West Germany by 2011 (2). Today 43 per cent of households in Dublin do not have a car. The percentage rises to over 70 per cent in local authority housing areas (3). In 1981 in these areas more workers probably went to work by bus than by car (4). How will this substantial minority cope in 2011? The poor of wealthier municipalities such as Los Angeles and Milton Keynes have discovered that cities designed for the motor car cannot have a good public transport service as well. Public transport can only flourish if it has a 'built in' advantage over the more flexible private car travel mode in the form of a purpose-built settlement structure. Implicit in the '2011' strategy is this mistaken assumption that the travel needs of a non car-owning minority can be met within a settlement structure which is not specifically designed for public transport. It is neither likely nor desirable that the state will provide

the much higher level of public subsidy that will be needed to run public transport in Dublin in the future under deteriorating operating conditions. C I E was represented on the study team and steering committee of the E R D O study. Given the nature of the final report I am surprised it has not been accompanied by a C I E inspired minority statement.

A Development Plan? A Pragmatic Plan?

The E R D O study team and the technical committee to which it reported were dominated by local authority staff. Perhaps it is not so surprising then that insights into the content and form of the 2011 study and strategy can be gained by reference to the statutory development plan process. Development plans have a schizophrenic nature. On the one hand they are land use zoning ordinances playing modest enabling and regulatory roles in the development process. On the other hand they are vehicles for the promotion of the ambitious engineering schemes of local authority engineering departments. The 2011 study shares this dual personality.

The modest incremental nature of the land use zoning strategy of 2011 is disguised by the magnitude of the overall growth forecast and by the manner in which the strategic choices are presented in the study report. Three choices are postulated, a 'trend choice', dispersal of growth through the region and concentration of growth around Dublin (Chapter 6, Main Report). The 'trend choice', which is an unusual way of describing the implementation of existing development plan policies is eliminated as an option for detailed consideration. The impression given by the study report is that it eliminates existing, incremental development policy from serious consideration and then evaluates strategic options which have the potential to cope with the scale of growth in the region. This seems to me to be a misrepresentation of the rationale of the E R D O study. For more than fifteen years the Dublin authorities with only partial success have tried to implement the ambitious, but wrong-headed settlement strategy of the Myles Wright report (5). The '2011' E R D O study has come to terms with this experience by proposing a much less ambitious settlement plan which is within the capability of planning authorities to execute. It is the '2011' strategic recommendation which is going with the trends. The modest strategic goal of the strategy is to confine substantial growth to greenfield sites in the Dublin sub-region and to preserve the existing settlement character of the remainder of the region. I suggest that this conservative approach to strategic planning helps to explain the limited choice of settlement options, eg the decision to exclude the inner city as a growth option because 'there is not a good case under present conditions for inclusion' (page 119, Main Report).

The strategic content of the settlement plan for the Dublin sub-region is largely shaped by engineering considerations. New growth is channelled to the coastal belt and lower Liffey Valley in order to minimise the costs of effluent disposal. Within this locational constraint a fairly dispersed pattern of growth is made possible by the decision to connect new areas by a motorway network. As I have already indicated, the transportation plan in '2011' will eventually have a radical effect on the pattern of accessibility in the region. The drainage constraint seems to me to be a valid approach to planning the growth of the capital of an only moderately wealthy country. But, by the same yardstick, the motorway plan cannot be justified.

A local authority development plan is a partial, even a biased, guide for development. The scope of the plan reflects the scope of the authority's statutory functions. We live with this imperfection of statutory development planning but it is disconcerting to find the same characteristic in a strategic study. There are numerous examples in the E R D O study analysis and recommendations which illustrate a partial and therefore an inadequate response to development issues. I will mention only the more serious examples.

I have already referred to the treatment of transportation in the study. Like many development plans public transport is virtually excluded from strategic consideration in '2011'. The social aspect of public transport is never discussed. Social and community development issues are resolved into a recommended distribution of serviced residential land (on the basis of 46 persons per hectare within the Dublin sub-region). The report has nothing to say about the physical character and social composition of these new areas. To take one example Swords in 1985 is a sprawling settlement of poorly designed housing estates, overstretched facilities and a bypass which is a bypass in name only. Swords grew rapidly in the seventies in spite of the Myles Wright and development plan policies. It is a much less attractive location for a large new town suburb than Tallaght was twenty years ago.

The E R D O study ignores the issue of the social segregation of residential development in the metropolitan area. A recent E S R I research paper(5) has drawn attention to the strength of class barriers in Dublin compared with class structures in Britain, France and Sweden. It is not unreasonable to make a connection between this finding and the spatial pattern of segregation evident in the urban growth of Dublin. At the beginning of the E R D O report there is a reference to this reality. Among the reasons for rejecting the 'trend choice' are 'increased difficulties in planning for a social mix of population' (page 10 Main Report). It is never made clear how the recommended strategy resolves the problem. For the E R D O planning team urban growth primarily has engineering consequences, 'the main constraints on development are the availability of sanitary services facilities

and the adequacy of the local road network' (page 12, Appendix 13)

The economic development content of the recommended strategy is a distribution of zoned industrial land. The economy of the Eastern Region is dominated by the service sector. The number and distribution of new industrial estates does not have that much relevance to the performance of this sector. Manufacturing and warehousing are the main users of industrial zoned land. A projection for these activities over a 30 year period in terms of serviced land requirements is almost certainly an over ambitious and unrealistic venture. The E R D O projection is made on the basis of a density of 37 workers per hectare of industrial land. This is slightly less than prevailing densities on suburban industrial estates. The intensity of use of industrial land will very likely be completely different in 2011.

My final example of the study's 'restricted vision' is its treatment of conservation and outdoor recreation issues. The Eastern Region has outstanding natural landscape resources compared with other metropolitan regions in Western Europe. There is an urgent need to conserve these resources in the face of increasing population pressures. The E R D O report lists the areas concerned, but its settlement strategy does no more than to not zone these places for development. A much more positive approach than this is needed.

I can imagine that the E R D O team will defend itself against the criticisms I have made by claiming that it has taken a realistic approach to strategic planning. The team will argue that there are enough planning reports in Ireland whose most significant effect to date is the occupation of shelf space in planning libraries. If the E R D O report shares some of the shortcomings of the statutory development plan this is because the development plan is the only mechanism available to implement strategic land use policy. The E R D O team should have challenged this assumption and argued the need to replace or, at the very least, strengthen the development agencies in the metropolitan region. There can not be much doubt that the failures of the Dublin new towns project in the seventies and the early eighties are the result of weaknesses in the management system. The pace of growth was a contributory factor but not, as the E R D O report seems to imply, the main factor. Blanchardstown and Swords, the largest new suburbs in the E R D O strategy will not avoid the problems of Tallaght simply by having slightly slower growth rates (see pages 234-236 of the Main Report).

Conclusion

There is a battery of useful technical innovations in the E R D O study. These include the convening of a resource group to 'weight' planning objectives, the derivation of simple mathematical formulae as objective indices, the application of Multi Criteria Evaluation and Double Index Analysis techniques to evaluate options and the application of robustness tests to the results of the evaluation process. However, I have to suggest that the mathematical dexterity displayed in the E R D O report is also part of a factor contributing to its failure as a planning strategy. It seems that the strategic thinking of the study team has been impaired by the availability of information which can be quantified. The best example of this is the exclusion of the existing built-up area from the transportation analysis and the consequent failure of the strategy to make sense in relation to the city centre.

It is also unfortunate for the E R D O team that their growth scenario is more influenced by the comprehensive statistical record of the seventies than by the less fully quantified but no less relevant social and economic climate of the early eighties. The region's population growth is currently probably about 30 per cent below the growth rate projected in the E R D O plan. The E R D O team have acknowledged that the changed circumstances of the eighties may have a long term relevance. The study report discusses the impact of lower growth on the road and sewer building components of the recommended strategy. A revised settlement distribution is described in Table 10.13 of the report. As natural population increase is the only factor assumed to affect the spatial pattern of settlement the strategy amounts to a policy of allowing existing suburbs to get bigger in proportion to their current size and taking into account existing planning commitments. This is a singularly uninspiring strategic recommendation to emerge from a two year study.

In this review I have indicated some alternative strategic approaches that might have been pursued by the E R D O team. There is nothing new or original about these ideas. I am disappointed that the E R D O strategy does not come closer to my own view of a better, achievable future. But I am alarmed at how narrow the discussion of strategic options by the E R D O team appears to have been. The wisdom and good sense which inform the preliminary analysis of the study seem to have been lost when the time came to take key decisions about the direction of the strategy. A future in which there is 'unlikely to be any significant reduction in formal unemployment', in which there will be 'possible significant shortfalls in traditional formal job opportunities' and a demand for 'greater opportunities for personal development through involvement in decision making and more productive leisure activities' (pages 75, 76 Main Report) is translated into

a strategy comprising a distribution of serviced residential and industrial land (and incidentally an assumption of a 5 per cent unemployment rate according to the Transportation Appendix) A perceived concern by society for 'all aspects of energy conservation' and 'environmental quality' (page 76 Main Report) is linked to a transportation strategy based on the most profligate form of urban transport

Because the E R D O study was done by Irish planners without the help of overseas experts it is being heralded as a milestone in the history of metropolitan strategic planning in this country. If it is such a milestone it shows that planning has lost its way in Ireland. It would be a pity if the profession becomes identified with just this one product of its endeavours. More than anything else '2011' serves to illustrate graphically the futility of an approach to intervention in the urbanisation process that amounts to not much more than the planning of roads and sewers.

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RESPONSE TO MR. B. McGRATH'S REVIEW OF THE E.R.D.O. SETTLEMENT STRATEGY

L O'REILLY

Any strategy produced in respect of the Eastern Region assumes some importance due to the status of the region. It is only natural that responses to its contents should be made by various interested groups and individuals. The present settlement strategy report is a consultative document and explicitly sought a high level of response.

The quality of response will vary depending upon the expertise, experience and detachment of the group or individual making it. In this respect a review of the strategy by a town planner is welcome because one expects such a review to be searching, well-based and balanced. This response to Mr McGrath's review is framed within the context of these expectations.

The review has adopted a scatter gun approach. The Strategy Study is criticised in respect of its style and presentation, its lack of radicalism, the lack of a full transportation study, perceived recommendations in respect of transportation, lack of attention to conservation matters, over reliance on engineering criteria, and of being schizophrenic. Various inferences are drawn from the report, some of which are reasonably accurate. The reviewer's ideas on what constitutes poor planning are clearly evident. His notions on 'good' planning are less clearly set out, so I may have to draw inferences in this respect.

In planning, it is relatively easy to state what one feels to be the best solution. It is much more difficult to explain how one arrived at that conclusion. The Study set out to describe how the strategy was selected as 'best'. This is a technical operation and no apologies are offered in respect of the length of the Main Report or in respect of the numerous appendices that explain the methods or sustain the arguments of the Main Report. I don't think the report is a difficult read, given the nature of its contents, but I have no doubt that on revision it could be improved. There are few things in this world that could not be so improved, including this review of the strategy.

The Reviewer feels that E R D O should have recommended a national strategic plan and that this could flow from our terms of reference. He assumes that the case for a limit to growth in the Eastern Region, in present day economic and political circumstances, is made. He may be correct, but he produces no justification for his point of view. He ignores the

experience of the Buchanan Report, the two Government Statements on national regional development, actual population movements since 1969 and 1972 and the yawning gap between policy and implementation, between aims and what actually transpired. Do we plan for what experience has shown us is likely to happen or for the implementation of oft repeated policies which have not been translated into action? This is a crucial issue which will be referred to at a later stage.

He finds it difficult to accept that 'new towns' within the region were not favoured in the selected strategy. I feel that this concept received very fair treatment in our evaluation. The Reviewer admits that the assumption in respect of commitment necessary for a new town was optimistic. This was a deliberate choice of the Study Team. Without that assumption the notion of a 'new town' could not have been seriously considered. Had the 'new towns' emerged as a favoured option, the practicality and feasibility of that heroic assumption would have required thorough testing before being recommended. The Arklow and Drogheda 'New Towns' were evaluated as part of options dealing with the accommodation of the total expected population of the Dublin Sub-Region. They did not compare well with very similar alternative dispositions of population in the sub-region. This evaluation was on the basis of the fourteen objectives listed in the Report, many of which related to the well-being of the future population of the Dublin Sub-region. It was on this very important basis that the 'New Towns' options failed, rather than any theoretical views on concentration or dispersal. The Reviewer feels that the sites for the British New Towns were not selected on some form of existing potential. Some of them are so closely aligned with main roads, motorways, airports or main railway lines as to cast doubt on this assertion. In this country, with very limited resources, it makes a great deal of sense to capitalise on existing potential. We could not afford to ignore it. Again while many of the New Towns in Britain are financially successful in real estate terms, their lack of office development and service jobs cannot qualify them as economic successes.

It is unlikely that the omission of a 'new town' of 100,000 will thereby significantly exacerbate traffic congestion in the existing built-up area of Dublin. The inevitable job leakage from a 'New Town' to Dublin (assumed at 15 per cent of labour force) and the spread nature of the recommended strategy are the reasons underlying this point of view. The 'New Town' concept, even if politically, financially, or socially feasible in Ireland, did not compare well with other options for the accommodation of the future population of the Dublin Sub-region.

The Study Team did not undertake a full transportation study. The type of data required for such a study was not available. In view of the teams assembled and the times taken to produce the Dublin Transportation and the Rapid Rail Transit Studies in the 1970s, it would have been necessary to reframe the whole context of the E.R.D.O. Strategic Study to

accommodate this type of land use transportation study. The real question at issue is whether or not the extra work, time and money would have had a deciding influence on the comparison of options to accommodate the expected population. It is my personal view that the partial and comparative transportation input into the Strategy allowed a more balanced approach to the evaluative process. The highly developed modelling techniques of a full transportation exercise can have an unjustified overpowering effect on a total study. Further a much more detailed approach on the layout, density and zoning of development areas would be required to properly undertake a full transportation study.

In the E R D O Study, transportation aspects were dealt with under four of the fourteen objectives used to evaluate options. The accent was on comparability.

In the objective to improve access of population to opportunities for work average trip length to work areas of the additional population was used. The option that minimised this average trip length, and hence cost, scored best.

Objective 10 concerned the planning of development so that the cost of transport, sanitary services and other major infrastructure is minimised. Concentration in this objective was on capital costs. Again, the accent was on comparability. A high level of service was assumed for road provision to fully test the results of work done on the capital sums likely to be available for roads over the Study period. Improvements to the existing rail system and additional rolling stock in respect of rail and buses were included. The option requiring least capital funding for roads and public transport scored best.

Objective 11 concerned the exploitation of firmly committed infrastructural investment. In the transportation field, only the road commitments of the Department of the Environment could be classed as firm. These commitments, augmented the existing road capacity by the extent of the anticipated improvements. This decreased the shortfall (if any) in capacity, thereby reducing the capital costs required. The option which showed the greatest reduction from the capital costs, identified in objective 10, scored best in this objective.

Objective 14 concerned the financial implementation of the Strategy. The combined capital costs of transportation and sanitary services were tentatively phased over the period to 2011 and compared with an 'idealised' capital supply phasing. The option deviating least from the 'idealised' pattern scored best.

In all objectives the aim was to achieve comparability between options. The crude quality of the transportation data did not permit an 'absolute' result from our Study but was suited to comparative analysis.

An earlier exercise in the Study investigated the capital sums likely to be available for roads and sanitary services. Due to the very spasmodic capital funding of public transport undertakings, it was not possible to extend this exercise to incorporate future funds in this area. Based on the comparative capital costs of roads, established during the evaluative process, it was possible to compare the supply and demand side of capital over the strategy period. This was to test the feasibility of the options with respect to their implementation. It was meant simply as a crude test and no options were dropped, on this test, as being totally unrealistic. The itemised road schemes and the phasing formed part of the evaluation of options and were later used in the crude option feasibility test. They do not constitute a recommended transportation strategy, which must await a full and detailed transportation study. There appears to be a major confusion in the mind of the Reviewer on this topic. After criticising the Study Team for not preparing a full transportation study, he then proceeds to attack what he terms an orbital motorway network, which he states is our recommendation. This is emphatically not the case, as I have outlined above. Our transport analysis was only comparative - it is not an absolute statement or recommendation on transportation matters. It is worth noting that all the development areas in the Dublin Sub-region, with one exception, have existing rail connections to Dublin City. The one exception, Swords, is reasonably adjacent to the Belfast rail-line and the existing County Dublin Development Plan has reserved a line for the extension of a rapid rail route through the town.

The Reviewer believes that the 'trend' choice is the implementation of existing development plan policies. This is not true. The recent growth of Leixlip, Bray, Greystones, part of the growth of Naas, the pressure on small villages and open countryside of the counties adjoining Dublin did not form part of the planning policies of these counties. Even allowing for the Reviewer's idea of the Eastern Region as being only Dublin, his belief is untenable. The growth of the North County towns and the South Suburbs has been at a pace not anticipated in development plan policies. The unplanned voluntary overspill of private housing to adjoining counties has led to an unbalanced public/private housing mix in parts of the western satellite towns in County Dublin. The strategy aims to properly identify the Dublin Sub-region as at 1981 and to accommodate its future population within its bounds. By adopting a spread of development areas, the impact on each should be lessened and a wider range of residential choice permitted. The recognition of the area of the Dublin Sub-region by all the concerned local authorities should permit a more balanced social mix in each of the development areas.

The decision to exclude the Inner City as a growth option was realistic 'under present conditions'. This may help resolve the present gulf between the much publicised calls for redevelopment and the very evident lack of

commitment for such redevelopment by almost all those parties with control of or discretion over expenditure. If, after public pressure, the ground rules are changed, some population growth might be expected. This would be very important for the physical, economic and social fabric of the Inner City, but it cannot be expected to contribute in a significant way to overall population accommodation in the sub-region of Dublin.

In many ways, the Reviewer's points on the Inner City reflect his other criticisms re conservatism, restricted vision, schizophrenia, etc. The study is condemned on the basis that it can be implemented by the authorities concerned. The omission of 'clarion calls' is regretted. I find this reaction rather strange. This approach reflects the outlook of what might be termed the 'cosy' school of planning. This outlook assumes the right of planners, as such, to change society. Calls for radical action are issued at regular intervals. The results that might accrue from these actions are never fully investigated or produced to sustain arguments. It is enough that the calls for action be made. Like a political party in permanent opposition, the radical actions can be called for in the safe knowledge that they will never have to implement them. In fact, the radical nature of their clarion calls expands as the risk of actually undertaking these steps diminishes. Then, as non-perfect results emerge in a non-perfect world, the comfortable judgement of 'we told you so' can emerge. This is the 'cosy' school.

The E.R.D.O. team sought the best technical solution within the context of what they thought was likely to transpire. They checked the recommended strategy against a significantly lower population growth. If the results are so unpopular that those in the political or big business world are pressured by society into making the changes required to alter the future growth of the East Region, so be it. Past experience does not encourage one to rate the chances of such changes in institutions, finances, power bases etc. as being very high. If, after some inevitable protests, events continue as before, those who will live in this region may be glad that planned provision was made for them even if, as ever, expectations outstrip realities.

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PLANNING ADMINISTRATION IN LOCAL AUTHORITIES

B. J. BOLAND

Background

The Planning Students at University College Dublin held a public seminar some months ago to explore the reality of how local authority planners and administrators interact on a daily basis. The seminar was entitled "Planning v Administration".

I presumed that the students wanted information on how and why decisions are taken on planning matters in institutions which are their most likely source of future employment. It appeared to me to be a good topic for discussion both as to the day-to-day reality and to the efficiency or otherwise of the current system.

Speakers from both the Professional Planning and from the Local Authority Management sides outlined the system as it stands and the relative strengths of one side over the other. One Planner was of the opinion that Planners were not capable of resisting the power of the Manager and would effectively have to live with the fact. Another Planner felt that personality was the key to effective collaboration between Planner and Manager. The two representatives from the Management side outlined the functions which are carried out by the Manager and his staff.

I had hoped that the discussion which followed might have opened up the debate to include a look at the system itself and whether it serves the purpose for which it was intended. In particular, I was interested in what appears to me to be a fundamental question with regard to the local authority structure ie

"Is there any logical reason why there should be two distinct hierarchies within the system when both are supposed to be striving for the same objectives?"

In other words, why do the local authorities persist with a staffing structure which is fundamentally different to the structure which is used by most other organisations both public and private? In this article I hope to open up that debate

Historical Background

In examining the organisational structure within the local authority, it is important to look at the history of the structure in an overall sense. The Irish local government system has a distinctive, almost unique, character. As the new Irish state was being set up, the entire range of state apparatus had to be provided for. This apparatus included the Parliament, the Judiciary, the Civil Service and the Revenue Commissioners, as well as the Local Authorities. A superficial distaste for all things British did not deter the founding fathers from maintaining the existing state administrative system almost intact. The exception to this was the nature of the local authority structure. The Management Acts of 1929 and 1942 provide the basis for this structure.

Effectively, Irish local authorities were influenced by two different organisational models -

- ★ The traditional county council controlled by elected, unpaid councillors who are representative of their constituents
- ★ The City Boss who is a professional administrator with unitary control but subject to re-election periodically

The former model was characteristic of the British administration while the latter was essentially republican (and particularly U.S. republican) in historical origin. These models were applied to the Irish system and the theory was that the best elements of both would be used. Accordingly, the functions of Irish local authorities were divided along the two lines of power -

- ★ The professional City/County Manager appointed by public and non-political competition
- ★ The City/County Council elected by public franchise with a set period of office

The theory was that the Council would set policy and the Manager would be responsible for administering it. In legal terms, the Council has its Reserved Functions and the Manager has his Management Functions. The notorious Section 4 motion is the means whereby the Council can overrule the Manager where required.

Evolution of the Management System

In practice, the dual system has worked very well. It allows the Council to use its limited time for policy matters only and eliminates unnecessary interference with the day-to-day discretion of the Manager.

At the same time, it allows the public access to the decision - making process in a democratic way. The democracy may be slow and unwieldy but access is undoubtedly built into the system.

However, the point at issue in this article does not relate to the Manager's relationship with the Council. What it does relate to is the staff structure within the Manager's office itself. The problem, as I see it, arises out of the very nature of the Manager's role and the process which has to be undergone to become a Manager in the first place. It is to both of these areas that this article will address itself.

Manager's Role

The role of a City/County Manager is similar to that of a Chief Executive in any organisation. His primary responsibility is to do three things -

- ★ To take a policy decision from his Board of Directors and to oversee its implementation
- ★ To assess problems arising on a day-to-day basis and to arrive at an organisational solution to those problems
- ★ To manage the financial and human resources at his disposal to ensure their efficient and effective deployment

The responsibilities above apply in the case where profit is the organisational objective. Equally it applies where the objective is to fulfill the complex legal and technical responsibilities which are the lot of the Manager of even the smallest county. The Manager of a private sector company can be fired overnight whereas a County Manager has much better job security. Nevertheless, their role within the organisational structure is, to my mind, exactly the same.

Deficiencies in County Management

Almost without exception, the County Manager is a product of the Administration system within the local authority network. Typically, he would have joined that network as a Clerical Officer and would have worked through the grade structure in many different departments and in many different local authorities. Quite often, he would have picked up qualifications in Secretaryship or Accounting or Public Administration along the way. County Managers, by and large, are very capable, very manipulative and know the local authority system inside out.

What they don't have are two areas of expertise which are essential to efficient management. These are -

- ★ A grasp of **Strategic Management** whereby priorities in decision-making are established. By this I mean that, not only are the right answers being given but that the right questions are being asked in the first place. The reason why this is so is that Managers have never been exposed to any other management system other than the local authority one and their decision-making values are inevitably very narrow.
- ★ A **Technical Training** in the area being managed, whether it be engineering, community development, planning or whatever the case may be. The Manager may have a working knowledge of the subject but he has not got a conceptual background in the professional theory. This is particularly evident in the case of Town and Country Planning.

As we shall see below, the current system of Planner and Manager is, in theory, designed to make good both those deficiencies. It is my contention that it is not successful in practice.

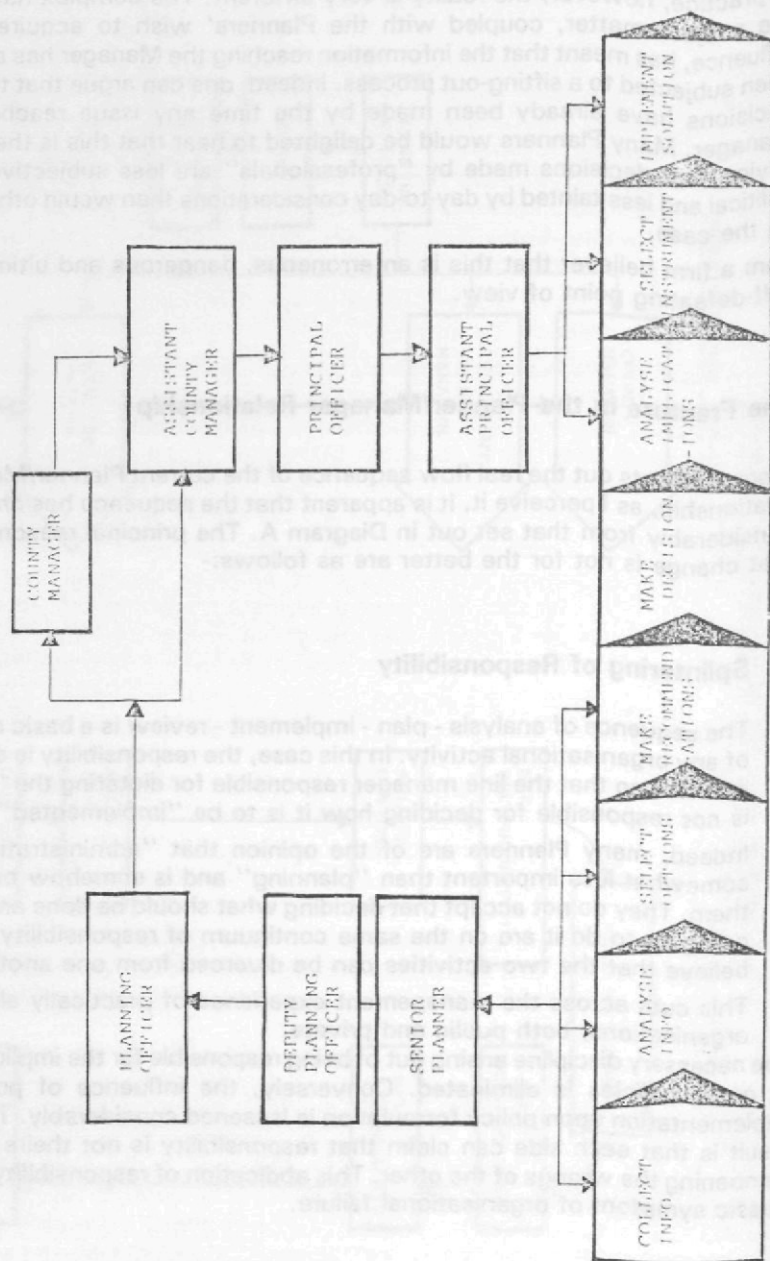
Planner and Manager

The professional hierarchy within the local authority was introduced to make available a corpus of professional knowledge to the Manager to enable him to make better decisions. Diagram A sets out this interaction process for the Planning Department in graphical form.

The theory is that the decision-making power lies firmly in the hands of the Manager and the Planner makes informational inputs to the process at appropriate levels. In its simplest form, the Planner is an aid to decision-making and does not have responsibility for decision-making himself.

The Planner prepares reports of different types based on experience and professional training and allows the Manager to decide upon a course of action. These reports range from a standard office memo right up to the draft Development Plan.

DIAGRAM B - SCHEMATIC OF CURRENT PROCESS



In practice, however, the reality is very different. The complex nature of the subject matter, coupled with the Planners' wish to acquire more influence, has meant that the information reaching the Manager has already been subjected to a sifting-out process. Indeed, one can argue that the real decisions have already been made by the time any issue reaches the Manager. Many Planners would be delighted to hear that this is the case, saying that decisions made by "professionals" are less subjective, less political and less tainted by day-to-day considerations than would otherwise be the case.

I am a firm believer that this is an erroneous, dangerous and ultimately, self-defeating point of view.

The Fracture in the Planner/Manager Relationship

Diagram B sets out the real flow sequence of the current Planner/Manager relationship, as I perceive it. It is apparent that the sequence has changed considerably from that set out in Diagram A. The principal reasons why that change is not for the better are as follows -

1.

★ Splintering of Responsibility

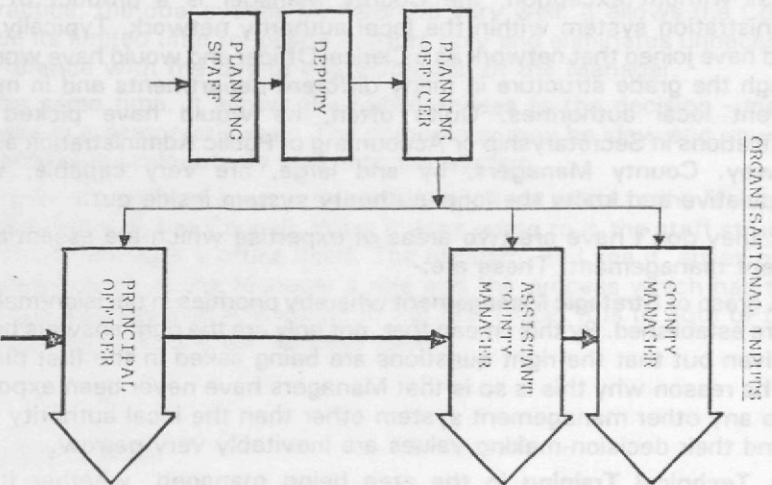
The sequence of analysis - plan - implement - review is a basic dictum of any organisational activity. In this case, the responsibility is divided into two so that the line manager responsible for dictating the "plan" is not responsible for deciding how it is to be "implemented".

Indeed, many Planners are of the opinion that "administration" is somewhat less important than "planning" and is somehow beneath them. They do not accept that deciding what should be done and then going on to do it are on the same continuum of responsibility. They believe that the two activities can be divorced from one another.

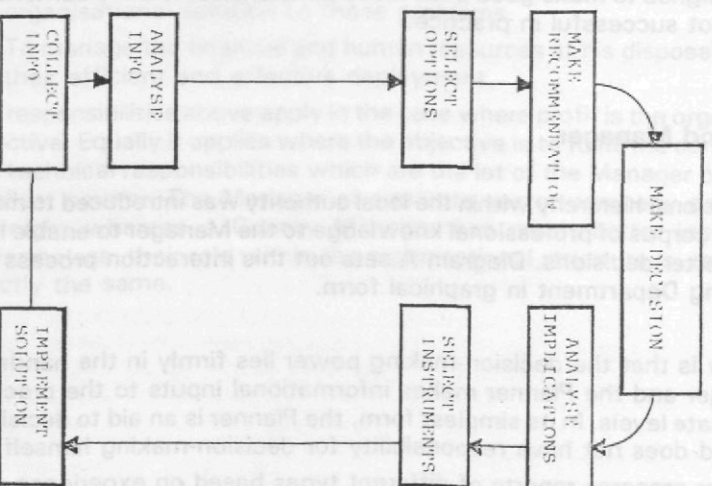
This cuts across the management experience of practically all other organisations, both public and private.

The necessary discipline arising out of being responsible for the implications of one's policies is eliminated. Conversely, the influence of practical implementation upon policy formulation is lessened considerably. The net result is that each side can claim that responsibility is not theirs whilst bemoaning the wrongs of the other. This abdication of responsibility is the classic symptom of organisational failure.

DIAGRAM A - SCHEMATIC OF DECISION PROCESS



PROCESS SEQUENCE



★ The Myth of Technicalities

The practice of town planning has been shrouded in a technical mystique which it does not deserve. In reality, town planning is more of an art than a science. The techniques involved are not highly technical and are not exclusive to town planners. Statistics, aesthetics and land use zoning are not impenetrable to the non-planner and, in any case, are not central to the process of decision-making. The real business of town planning has more to do with establishing priorities and allocating resources than it has to do with scientific analysis. It is as much a question of management as it is of techniques.

Despite this, there exists a separate hierarchy devoted to providing "professional" advice. Planners have letters after their name, give evidence in court and assume ownership of a mythical knowledge of what should and should not be done. This claim is increasingly being viewed as bogus.

★ Dissipation of the Active Role

The 1963 Act was not called the Planning and Development Act by accident. The original objectives were two-fold. One was to regulate the flow of private investment in land development in such a way as to contribute to a better environment. The other was for the local authorities to actively involve themselves in the creation of a better physical environment.

It was intended that the local authorities would achieve the latter either by eliminating the legal obstacles to appropriate development or by engaging in joint venture projects for development themselves. The emphasis on the active was at least as strong as that on the regulatory. Indeed, many public agencies envy the range and variety of legal instruments available to the local authorities under the 1963 Act.

The experience since then has been very disappointing. Firstly, no mention of finance was made in the 1963 or, indeed, in any other Act since then. Secondly, many local authorities struggled for up to 10 years to deal with their regulatory responsibilities. Thirdly (and most importantly in my view), the dual hierarchy system actively hindered the undertaking of active initiatives. The experience has been that, where they were even mooted, the Planners were not practical enough and the Manager abhorred the risk. By and large, such initiatives were left to wither on the shelves of increasingly disillusioned junior staff.

★ Stifling of Interaction

The dual hierarchy system has one other negative effect upon the proper management of local authority activities. At the moment, the career path of either a Planning Officer or a Management Officer is clearly defined and clearly distinct. In the course of their work, one can certainly gain a good knowledge of the work of the other. Some planners have a good grasp of the law, for instance, even to the extent of gaining a qualification at the Bar. The reverse has also been the case with a few Managers having a better grasp of good planning than many Planners.

However, both sides jealously guard their career opportunities with the Planners relying heavily on their "professional" status to close ranks.

To my mind, it is not possible to have sufficient experience of the whole spectrum of skills needed for a Manager's job simply by looking over the shoulder of the Planner at work. The converse is also the case.

In every other type of organisation, the General Manager has usually had direct line experience of several areas of responsibility on both the administrative and front-line sides of operations. Even in the Army, successful generals are those with at least some experience of both brigade and staff responsibilities.

A partial solution to this deficiency could be where professional staff can compete for Managerial posts. This has been the case in at least one instance where an engineer moved across to a Management position. However, the movement has only been one way and, understandably from the Management's point of view, has been resisted at every turn.

An Alternative Structure

Having made sweeping charges against the current system, it is incumbent upon me to come up with an alternative. This I hope to do now.

I take the business firm as my organisational model. I accept fully that the functions, responsibilities and motivations of the private sector organisation can be vastly different from those of the public one. Nevertheless, the manner in which the business firm deploys its resources is subject to the discipline of profit maximisation which is a strong discipline indeed. I see no reason why the deployment of public sector resources should not strive for the same discipline and cost effectiveness.

The private firm operates under the general principle that **specialisation** is only required in a very limited number of cases. This is not to say that all staff are generalists with no particular training or experience. What it does mean is that the situation is not tolerated whereby an executive is only fitted for one job and cannot be redeployed.

It means that staff are fitted to the job that needs to be done and **not** that the job is fitted to the person available to do it. This flexibility is crucial to the survival of a business firm. Without it, it will find itself expert in making/doing things that nobody wants to pay for anymore. To my mind, the Planning Authorities are in that exact position at the moment.

The structure as proposed has two elements to it - the division of responsibilities and the profile of the staff operating it. I shall deal with each in turn.

Division of Responsibilities

Diagram C sets out an Organisation Chart for the alternative structure. The essential points relating to it are as follows -

- ★ The existing **dual hierarchy** is merged into one under a County Planning Executive.
- ★ Where **specialisation** is maintained, it is of a very high order and it is available to the organisation on an advisory, not a managerial basis.
- ★ The organisation is divided on a **functional basis** and not a staff qualification basis.
- ★ The **Divisional Manager** has responsibility for the entire functional process from identification through analysis to implementation.
- ★ Each Division has the full **range of staff** available to it including managerial, technical, clerical, draughting and accounting.
- ★ The structure allows for **staff movement**, based on promotion by merit and qualifications.

Staff Profile

At Executive/Middle Management level, in this alternative structure, the profile of the staff involved will be somewhat different from that at present. The main characteristics are -

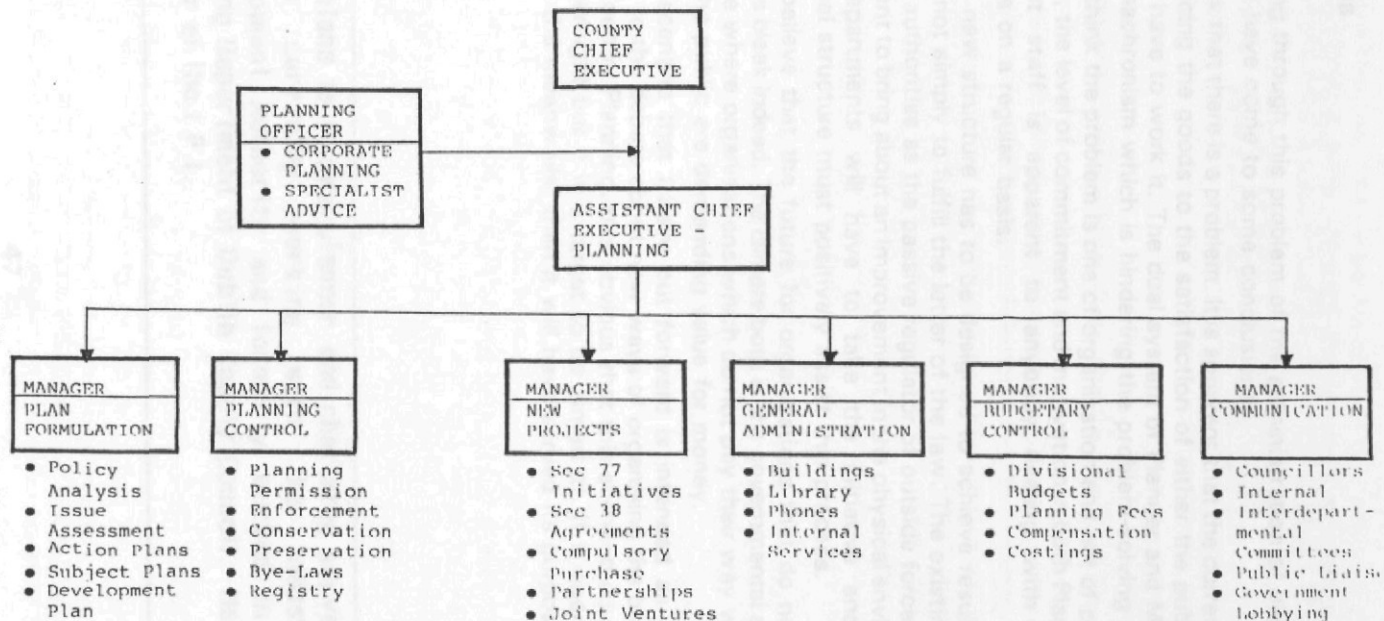
- ★ That **career orientation** will be Managerial as opposed to Professional
- ★ That the **skills and capabilities** required will encompass all aspects of line responsibilities including planning techniques, policy analysis, staff management, operations administration and budgeting
- ★ That middle management can have **come originally from either** the existing Professional hierarchy or the Management one
- ★ That individual executives will have ambitions to **move across** the different divisions in order to prepare for promotion upwards
- ★ That staff will consider it as important to **attempt new initiatives** as it is to carry out existing responsibilities more effectively
- ★ That **performance assessment** will be done on the basis of results achieved and not work performed
- ★ That pay increases should be **linked to performance**

Implications

The proposed change is not without its costs and implications. It is my opinion that the results would justify these but it is only fair that they should be spelt out clearly to allow for an assessment to be made. They are -

- ★ That **promotion** through the system would be open to all
- ★ That a large measure of both on-the-job and off-the-job **training** would be essential to the success of the system
- ★ That existing **demarcation lines** between Planner and Manager would have to be dismantled
- ★ That there will be a perceived short-term **loss of status** to the Planning profession
- ★ That **staff resistance** would be quite strong to a change in the status quo and that the process of change can be painful

DIAGRAM C - ALTERNATIVE ORGANISATION CHART



Conclusions

From thinking through this problem of the administration of planning for this paper, I have come to some conclusions.

Firstly, I think that there is a problem. It is apparent that the current system is not producing the goods to the satisfaction of either the public or the people who have to work it. The dual system of Planner and Manager is a historic anachronism which is hindering the problem-solving process.

Secondly, I think the problem is one of organisation and not of personnel. By and large, the level of commitment and motivation in both Planning and Management staff is apparent to anybody dealing with Planning Departments on a regular basis.

Thirdly, any new structure has to be designed to achieve results on the ground and not simply to fulfill the letter of the law. The existing stance by the local authorities as the passive regulator of outside forces has not been sufficient to bring about an improvement in the physical environment. Planning Departments will have to take the initiative and a new organisational structure must positively assist this process.

Fourthly, I believe that the future for organisations that do not reform themselves is bleak indeed. The climate both in the governmental and public arenas is one where organisations which do not pay their way will not be tolerated. The public are demanding value for money.

Lastly, the scenario that I have put forward is intended as a serious contribution to the debate about new ways of organising the business of Town and Country Planning. It is obvious that this scenario could not be achieved overnight but it is a target to be aimed at. If it opens up the argument in the meanwhile, then it will have served its purpose.

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PLANNING FOR A CHANGING RETAIL SCENE

B McHUGH

It is only within recent years that retailing has been perceived as an important generator of physical planning activity within the domestic scene. The significance of retailing in the national economy is underlined by the findings of the most recent Census of Distribution (1977) which recorded some 32,000 retail outlets employing 80,000 persons directly and generating an annual turnover of over £5,099m at 1985 prices. Retailing is also one of the most important and extensive land uses within our cities and towns, where it interacts with various other service functions to form the commercial core upon which is organised the business, cultural and social life of these places. Shopping therefore is very much more than a mere economic activity. It is a social process in which the entire population is involved to some degree at various times. For some members of the community, such as our senior citizens, it is a basic means of maintaining daily contacts with their neighbours and friends, through their local retailer. In recent years key issues such as

- How much shopping provision is required to service consumer needs?
 - What types of shopping facilities, in terms of scale and choice, are required?
 - What is the optimum locational distribution of shopping facilities?
- are of increasing concern to planning authorities, in both rural and urban areas within the State. The enactment of the Local Government (Planning and Development) General Policy Directive 1982 and the publication in 1984 of Development Plan Manual 3 "The Demand for Retail Space" both underline the importance of retailing as a generator of land use and transportation needs which must be satisfied in the development plan and accommodated within the development control system. Unfortunately, the degree of consideration devoted to retailing as a land use activity in the majority of development plans is still somewhat perfunctory and it is not unusual to find a policy statement to the effect that "any additional shopping floorspace needs within the period of the plan can be accommodated within the town centre". A further difficulty which should be mentioned concerns the poor quality of published statistics related to retail activity and land use. The paucity of official statistical data which is available on these topics is all too obvious, as is the inordinate delay between data gathering and publication. At the time of writing, it is not certain if or when there will be another Census of Distribution.

The purpose of this paper is to mark out some of the relationships between retailing and planning, with reference to the following areas of concern

- (1) Retail experience in Ireland between 1970 and 1986
- (2) The system of physical planning and how it affects the provision of shopping, and
- (3) What the future holds as regards trends and prospects

Retail Experience in the Republic of Ireland 1970-1986

The 1970's marks a turning point in the history of retailing in the Republic of Ireland. During the 1960's, a small number of planned shopping centres opened in the Dublin Region starting with Stillorgan in 1966. Nineteen-seventy represented the beginning of the new trends in earnest, with the opening of the first purpose-built shopping centre in Cork. In the decade that followed, some 68 new shopping centres were opened, with 35 of these located in the Greater Dublin Area, 10 in Cork City and 23 spread among other cities and towns. All of these had certain common characteristics, typically the new purpose-built shopping centre was located in a suburban or edge of town location, had convenient access to a main road and was served by a large area devoted to parking for customers.

The Reasons for Change

The amount, type and distribution of shopping facilities within the economy are determined primarily by the level of aggregate demand which, in turn, is influenced by such factors as population size and structure, disposable income levels and consumer tastes and references. Demand for retail facilities is therefore exerted through population growth, increases in personal incomes and changes in consumer preferences.

The 1960's marked the beginning of a new demographic era in Ireland. The 1961 Census of Population recorded the first overall increase since the foundation of the State and this positive growth has been sustained since then. Between 1961 and 1981, national population increased by just over 22 per cent from 2,818,341 to 3,443,405. Significant changes have also taken place in the distribution of this increasing population. Over the period 1961-1981, population in the Dublin Area grew by just over 80 per cent, whereas the aggregate population of all urban areas in the Republic

increased by nearly 45 per cent. In marked contrast to these trends, the aggregate rural population fell by nearly 4 per cent over the 1961-1981 period. The pattern of development which emerged to accommodate this increasing urban population was predominantly suburban in character and this led in time to demand for suburban shopping facilities, as people became increasingly more mobile and more conscious of the problems of congestion and lack of car parking in many of our cities and town centres.

This process of change was not an even one across the State. The major urban centres of Cork, Dublin and Limerick absorbed large numbers of increased population. Changes in retail income were unevenly distributed throughout the State also. For example, during the mid-seventies, the National Economic and Social Council's report on Personal Incomes by Region revealed that between 1974 and 1977, personal income grew by 12.3 per cent in the East Region, but only by 7.1 per cent in the West and Midlands Region. Per capita income in 1977 was estimated at £1,821 in the East Region, £1,358 in the West Region while the Midlands recorded £1,242 for the same year. These factors have a significant bearing upon the demand for additional shopping facilities. Thus the East Region, including Dublin, recorded the fastest rate of growth in population and income levels during the 1970's and it had the highest level of per capita income in 1977. Not surprisingly, the East Region also had the highest concentration of purpose-built shopping centres. At the same time it is important to note that, even within large urban areas, there are significant degrees of difference in socio-economic conditions.

All of these factors, therefore, influence the level of demand for additional shopping facilities. However, they are complex factors and are often not fully understood by some of the key decision makers within the local authority context.

The Increasing Influence of the Multiples

The increasing market share of the main multiples (Dunnes Stores, L & N, Quinnsworth, Roches Stores, Superquinn and H. Williams) is closely bound up with the development of planned shopping centres and their diffusion among urban centres throughout the State over the past 15-16 years. It is reckoned that these multiples have now secured approaching 60 per cent of the grocery market in the Republic. Their widespread presence is underlined by Table 1 which shows the relative situations in 1977, 1983 and 1986.

AREA	NUMBER OF STORES		
	1977	1983	1986
Dublin Region	61	64	68
Rest of Leinster	33	43	46
Munster	34	41	45
Connaught/Ulster	13	13	13
TOTAL	141	161	172

TABLE 1 Multiple Grocery Supermarket Stores

By Geographical Area 1977-86

Sources: A.C. Nielsen of Ireland Limited

Reid McHugh and Partners

The average size of planned shopping centres has steadily increased since the 1970's. Typically, this was of the order of 25-30,000 sq.ft. in the early 1970's, but the increasingly predatory nature of the multiples has pitched this scale to a present level of 40-50,000 sq.ft. and upwards.

The Independent Retail Grocery Sector

Estimates based upon surveys undertaken by A.C. Nielsen of Ireland Limited, the Central Statistics Office and RGDATA suggest that the independent grocery sector has been contracting in numbers over the same time periods. Relevant figures are set out in Table 2.

STATE	NUMBER OF INDEPENDENT GROCERY OUTLETS		
	1977	1983	1986
	11,000	9,000	8,500

TABLE 2: Independent Grocery Outlets 1977-86

Sources : A.C. Nielsen of Ireland Limited

Central Statistics Office

RGDATA

It is significant to note that the present estimate of independent grocery outlets is only half the total number of similar outlets recorded in 1966. Since then, there has been what amounts to a retail revolution in the Republic of Ireland. This revolution however, has not had a uniform impact within the Republic. Rather, the process has been most pronounced in the larger urban areas, especially in the Dublin Region. The retail economy in Ireland now consists of a "two-tier structure" on the following lines:

- (a) a highly developed sector based in the Greater Dublin Area, the Greater Cork Area and a limited number of other cities where shopping facilities and competition are comparable with advanced locations elsewhere in Western Europe and
- (b) a more traditional retailing system distributed among a large number of towns and villages, where each serves an extensive rural hinterland population.

In the Greater Dublin Area, the retail grocery trade is now almost totally dominated by the major multiple groups and there is considerable evidence of a "cannibalisation phase" where, having effectively removed the independent sector, the major multiples are now competing fiercely with one another for territory and customers. Recent examples of this are where multiples have opposed planning applications by their competitors at Nutgrove and Finglas in Dublin, and at Douglas in Cork City; the takeover of the Tesco empire by H. Williams is another such example.

The pattern of settlement in the Republic of Ireland also has an influence upon the provision of shopping facilities. The settlement pattern is most developed south of a line between Dundalk and Limerick (Figure 1). Here, there are a large number of medium-sized towns distributed so that each has its own well defined hinterland. North of this notional line, the settlement pattern is more scattered, with few large urban centres and each such centre serves an extensive rural hinterland. Medium and smaller sized towns, as a consequence of the service role which they provide for the population in their rural hinterlands, frequently maintain a shopping floorspace very much greater than would be warranted to serve the population of the centre itself. Having evolved over a long period of time such floorspace has, in many instances a low level of use or efficiency, with many premises on the main streets only nominally operating as shops. The impact of planned shopping centres located on the edge of such towns therefore can be very significant, both upon the existing commercial core and on shops scattered throughout the rural hinterland.

FIGURE 1



Towns of More than 5,000 Population in 1981

Planning and Retailing

Physical planning legislation came into effect throughout the Republic of Ireland on 1st October 1964. Since that date, all development requires planning permission unless it is expressly exempt under the Act or the statutory regulations. Development, as far as retailing is concerned, can consist of two things:

- (1) New buildings including extensions to existing structure
- (2) Changes of use from non-retail to retail use

New buildings or extensions, in every instance, legally require planning permission before they can be built. Changes of the use of a premises from a non-retail to a retail use always require planning permission. Once a shop is legitimately established, however, and provided no special conditions apply, it can be used for any type of retailing without having to again apply for planning permission, with the following three exceptions:

- (a) A fried fish shop or a shop for the sale of hot food for consumption off the premises
- (b) A shop for the sale of pet animals or birds
- (c) A shop for the sale or display for sale of motor vehicles other than bicycles.

The logic for these exceptions, where specific planning permission is required for a change of use, is that these could be "bad neighbours" to nearby housing by reason of noise, smell or unsocial hours.

While the principle of physical planning concern with the provision of shopping facilities is rarely in dispute, there is a continuing debate on the degree to which planning should intervene, especially in regard to the impact of proposed new shopping facilities on existing established shops. Arguments in favour of intervention by planning in the sphere of competition stem from the facts that:

- (1) Particular types of shopping development (eg. major new edge of town shopping centres) mostly benefit only those sections of the community with access to cars and thus a fall in business in existing centres as a result of the opening of new purpose built shopping centres would adversely affect the weaker groups in society such as the poor, the infirm, senior citizens and those persons dependent upon public transport.
- (2) In the event of a significant diversion of trade away from established shopping areas to new centres, these older areas become susceptible to rundown and dereliction and since it is an objective of physical planning to promote an attractive built environment, shopping policies should reflect this aspiration.
- (3) Existing shopping facilities constitute valuable infrastructure and investment and it would be wasteful to duplicate these with new development. It is therefore argued that planning should seek to maintain a balance between supply and demand in the sphere of shopping facilities.

Counter arguments to the foregoing hold that it is not the function of land use planning to prevent competition between retailers or between methods of retailing nor to preserve existing commercial interests as such. It is argued that, while physical planning is entitled to consider competition between retail interests at a very broad level, there is no basis for such scrutiny in terms of individual shops. Paradoxically, the question of impact of a proposed new shopping centre on existing retail facilities in a town frequently poses the issue of comparing the expected performance of a single new operation with the combined resources of all of the existing shops in the particular town.

As a result of the confusion which exists in this area, there have been very many planning appeals in Ireland concerned with the impact of proposed new shopping centres. Studies prepared by both sides in these planning appeals have been inconclusive in certain respects due to a lack of reliable data on turnover being available. Physical planning assessments of proposed major new shopping centres have consequently relied upon environmental factors such as traffic and land use zoning when reaching a decision on whether planning permission should be granted or refused.

The practice in many other EEC Member States is in marked contrast to the Irish experience. The EEC experience points to the fact that schemes for large new shopping developments are usually assessed in the following respects -

- (1) The share of the national market which the proposing group enjoys, so as to deter a tendency where any one group would secure a monopolistic position in the retail market.
- (2) Examination of existing shopping trade patterns and facilities, frequently with the assistance of an independent retail research organisation.
- (3) Examination by local committees which are representative of both local traders and the Chamber of Commerce.

The importance attached to the possible impacts of large scale retail developments in Ireland was underlined when in 1982, the then Minister for the Environment issued a directive pursuant to Section 7 of the Local Government (Planning and Development) Act 1982. In the press release accompanying this directive, the Minister stated his concern for

" the effects which large-scale retail outlets may have on existing communities, including effects on existing shopping and in consequence on the social fabric and quality of life in urban areas. The Minister is also concerned that these developments may aggravate the problems of maintaining viable, central urban areas and of promoting urban renewal and full use of existing infrastructure in urban areas.

The General Policy Directive of 1982 is unique in that it is the only planning directive issued by central government, even though powers to issue such instructions have existed in legislation in Ireland since 1976 in the case

of directions to the Planning Appeals Board, An Bord Pleanála, and since August 1982, in the case of both An Bord Pleanála and all local planning authorities. The General Policy Directive states that

"Policy in relation to planning and development requires that the establishment of retail shopping development which would represent a large-scale addition to the existing retail shopping capacity in a locality should be guided by the following considerations

- (a) the adequacy of existing retail shopping outlets,
- (b) the size and location of existing retail shopping outlets,
- (c) the quality and convenience of existing retail shopping outlets,
- (d) the effect on existing communities, including in particular, the effect on established retail shopping outlets and on employment,
- (e) the needs of elderly, infirm or disabled persons and of other persons who may be dependent on the availability of local retail shopping outlets,
- (f) the need to counter urban decline and to promote urban renewal and to promote the utilisation of unused infrastructure facilities in urban areas "

The General Policy Directive is thus concerned with proposals for major shopping facilities which may occur as objectives in local development plans or in the form of specific planning applications. The degree of competition or complementarity as between existing shopping facilities and proposed retail development is thus now a legitimate concern for planning authorities to determine

Enactment of the Local Government (Planning and Development) General Policy Directive 1982, together with its 1981 predecessor, was an important, if belated, acknowledgement of the importance of retailing as an agent of physical change in our cities, towns, suburbs and rural areas. Application of the General Policy Directive has not proved to be straightforward. Because the General Policy Directive is couched in descriptive rather than prescriptive terms it has not easily lent itself to precise measurement or interpretation. Thus while the General Policy Directive is increasingly cited in planning appeals and objections, there is little if any agreement between opposing parties and local planning authorities as to the particular interpretation which may be most appropriate. An overview of the impact of the General Policy Directive upon the retail development scene since 1981 reads as follows

- Since 1981, over 500,000 sq ft of new retail floorspace has been constructed within the State in a range of new developments. The great majority of these developments is located outside the Greater Dublin Area

- Since 1981, planning permission has been granted (on appeal in almost every instance) for a further 1,000,000 sq ft of new retail floorspace. For the most part, this quantum has not been commenced, suggesting that the market may be largely saturated at present.
- Planning permission for an additional 1,000,000 sq ft on new retail floorspace has either been refused or is currently being considered by local planning authorities or is on appeal with An Bord Pleanála.

The combined scale of these proposals may be appreciated by contrasting these with the aggregate retail floorspace recorded for the State as a whole, according to the most recent Census of Distribution. Retail floorspace proposals since 1981 represent an additional increment of the order of 10 per cent in terms of the State as a whole. A further dimension to the retailing scene was added recently with the publication of the final report of the Oireachtas joint committee on small businesses. This acknowledged the need to create additional safeguards so as to ensure healthy competition in retailing and to protect the consumers' interests by recommending

- (a) A ceiling on the growth of multiple organisations whereby no supermarket chain could control more than 25 per cent of the national market
- (b) A ban on below cost selling, and
- (c) Elaboration of the Local Government (Planning and Development) General Policy Directive 1982 so as to render it more amenable to measurement and thus easier to implement and enforce.

At the date of writing, none of these measures has been taken up by the Government.

What the Future Holds . Trends and Prospects

Given the momentum that has built up over recent years, it is likely that further applications for major shopping developments will continue to be made. At the same time, certain directions and trends may be anticipated that are, in turn, likely to temper this process in the following manner:

- (1) The demand for new purpose built large shopping centres and stores is likely to focus more intensely upon smaller towns, particularly those within the population range of between 5,000 and 10,000 persons.
- (2) Multiple groups will continue to challenge the independent retail food and clothing sectors for trade in both urban and rural locations, but these groups will also compete more intensely with each other than heretofore. The recent sale and break up of the Tesco empire in Ireland is evidence of this. It may be expected that where a medium sized town already has a purpose built shopping centre, further planning applications for additional retail floorspace will be forthcoming from rival multiple organisations, thereby intensifying the pressures upon established retail outlets.
- (3) Major road building projects announced by the Government in January 1985 predict the expenditure of over IR£500m on improvement works throughout the State during the period 1984-87, with a continuation of this trend into the next decade. Works involved include both route improvements and by-passes to a number of towns. The implications for retail developments are likely to be both negative and positive. On the negative side, the provision of major new motorway type routes in the Greater Dublin and Greater Cork Areas is likely to create pressure for regional scale shopping developments on free standing edge of town sites. In the Greater Cork Area, there is evidence of this already where a controversial 200,000 sq ft regional shopping centre at Douglas is presently being considered by the planning authority. In the Greater Dublin Area, there have been proposals for a similar type of centre but planning applications for this type of development have not been successful to date. On the positive side, the removal of through traffic, much of it made up of heavy goods vehicles, from the centre of many cities and towns will create a more pleasant and relaxing environment for shoppers in the traditional commercial main streets of these centres. This will favour established shops there as they may be expected to benefit from easier access and improved car parking which should emerge in due course. Planners should make the case to their local authorities for the provision of adequate resources to be used to enhance the physical environment of those town centres which will benefit from the removal of through traffic, with schemes for tree planting and landscaping, the provision of street furniture and greater emphasis upon pedestrian priority in such places.

- 4 There is growing evidence of a remarkable resilience in what may be termed the "local corner or neighbourhood shop", traditionally selling mainly foodstuffs. These had adapted to increasing competition by broadening their product range, building upon their principal strength of personal service by extending opening hours often on a seven day week basis. Planners in Norway, Italy and the U.K. are now looking to ways which can assist in maintaining these facilities because of their social as well as commercial value to the communities which they serve. In the wider European perspective, as numbers of large hypermarkets and discount stores increase, but at widely spaced geographical locations, gaps appear in the spatial provision of retail facilities and it is here that small shops have a viable role to play, either as part of a voluntary group or as independent operators.

There is every reason to believe that the independent retail grocery shop has a good future, based not on conflict with the major multiple operators in terms of scale, but on the basis of complementarity. Where the independent retail grocer is likely to flourish is in providing a progressive, personal and efficient service to the local community, based upon a widening product range and face-to-face contact and support. This is something that the multiple operators have tried hard over the years to cultivate but they have not yet succeeded in this aspect and they do not seem to be properly equipped for such a role.

At the end of the day the purpose of physical planning, as set out in the preamble of the Local Government (Planning and Development) Act, 1963, is

"to make provision, in the interests of the common good, for the proper planning and development of cities, towns and other areas (whether urban or rural) including the preservation and improvement of the amenities thereof."

Retailing is a key activity in this process and the interests of the community as a whole require that local shopping facilities should be encouraged and assisted, because of their social and economic contribution to our society. This applies both in urban and rural locations.

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FARM DEVELOPMENT AND WASTE MANAGEMENT

J SHINE AND C TRACEY

On farms where modern methods of stockraising are used the likelihood of developments occurring which will be of direct concern to the Planning Authority is much higher than with older methods of farming. Buildings are likely to be larger and their siting dictated by economic considerations rather than concern for appearance. The construction materials used are dictated by the same considerations while by-products and their handling are more likely to be potentially polluting to watercourses or other sources of water supply or to give rise to offensive smells.

Stocking Rate

May be as high as 1.2 cows or equivalent per acre

Feed

Grass will comprise the main feed and animals will feed in the fields for as long as possible in the season. They will be housed for the winter period and fed mainly with fodder grown on the farm. Farmers would try to have stock out on grass in paddocks by 1st March and to have each paddock grazed twice in the season. Fodder is most likely to consist of silage.

Silage

Generally two cuts of silage taken in each year will produce enough winter feed i.e. 15 tons per acre of silage cut, or about 3.2 months feed for a cow at a consumption rate of about 4.2 tons per cow over the winter.

Cutting Silage

First cut - about 45 per cent of farm area is closed to grazing early in April, and the grass is cut by about mid-May to early June, yielding about 9 tons per acre.

Second cut - about 30 per cent of the farm is used for this and the cut is taken about 7-8 weeks after the first one, yielding about 6 tons per acre. (A third cut may sometimes be taken on parts of some farms, depending on weather conditions, but will not add very much to the total feed available.)

Storage

Silage is stored on an impervious slab convenient to where it is to be eaten. Usually stored about 6 ft high, it weighs about 0.2 tons per cu yard requiring about 1 sq yard of storage area per ton or 4.2 sq yards per cow equivalent. When stored, effluent with a very high capacity for pollution (B.O.D. up to 65,000 P.P.M.) will flow from the silage at a rate of 10-100 gallons per ton depending on the moisture content of the grass when placed in position. It is safer to assume a rate of discharge of not less than 50 gallons per ton (or 225 gallons per cow). It will be necessary to direct this liquid to a holding tank, from which it can be disposed of at intervals of 7-10 days by spraying on land at rates of application low enough to avoid scorching of the ground. The flow of effluent from the stored silage will have ceased after about 2-3 weeks.

Feeding

Animals will either feed at a self-feed area (ie. the face of the bank of silage) at which a length of feed face of 6 inches for small cattle, and 9 inches for fattening cattle is required (it should never exceed 12 inches per animal to avoid waste) or else the silage is brought to a feeding area within a wintering house (see below). If the feeding area is a self feed one it is likely to be combined with an open exercise yard on which faeces from the animals will be dropped and from which they will have to be removed for disposal. Rainwater falling on the yard will be polluted. Open yards are usually combined with covered cubicles for the animals and waste from both yard and covered area is stored in a watertight holding tank as slurry or in a dungstead where much of the liquid can be drained off and disposed of separately.

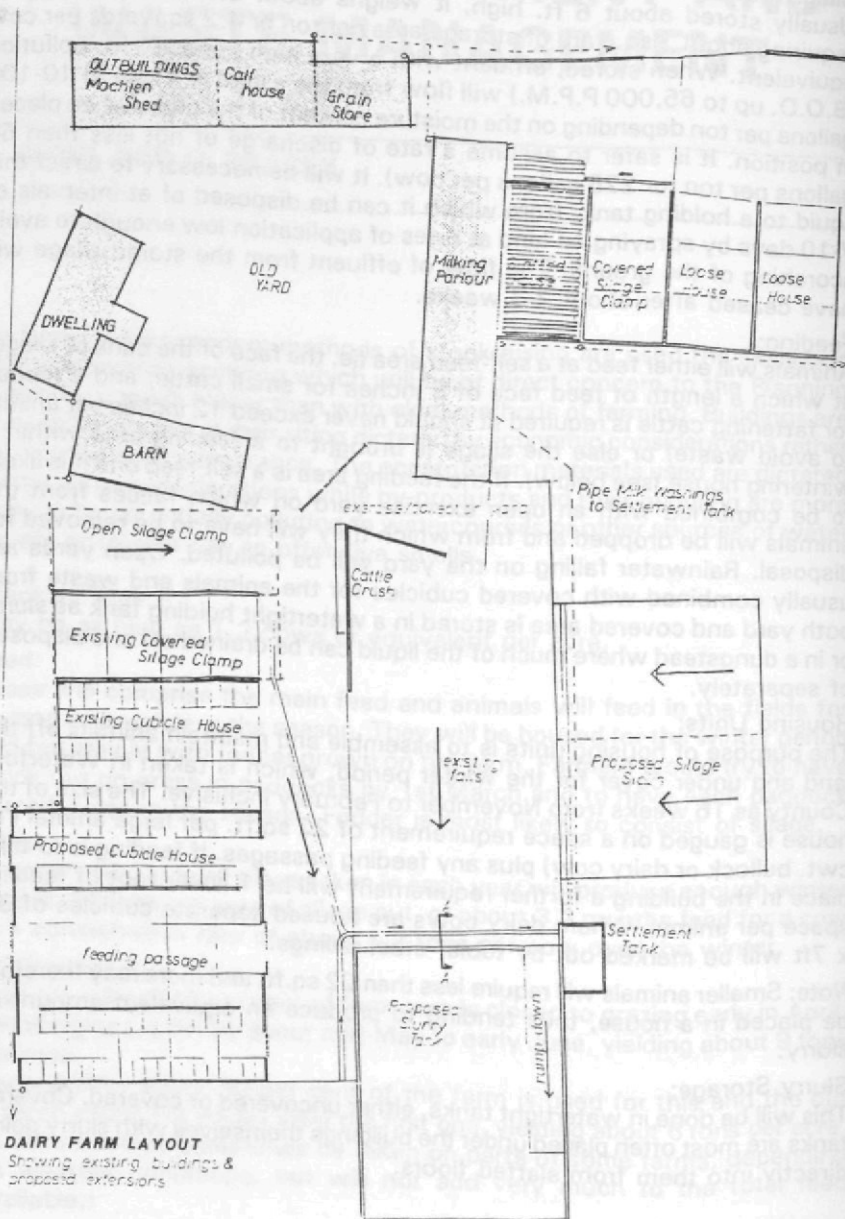
Housing Units

The purpose of housing units is to assemble and maintain animals off the land and under cover for the winter period, which is taken in Waterford County as 16 weeks from November to February inclusive. The size of the house is gauged on a space requirement of 22 sq ft per large animal (10 cwt bullock or dairy cow) plus any feeding passages. If feeding is to take place in the building a further requirement will be 1 linear foot of feeding space per animal. Where dairy cows are housed separate cubicles of 3ft x 7ft will be marked out by tubular steel railings.

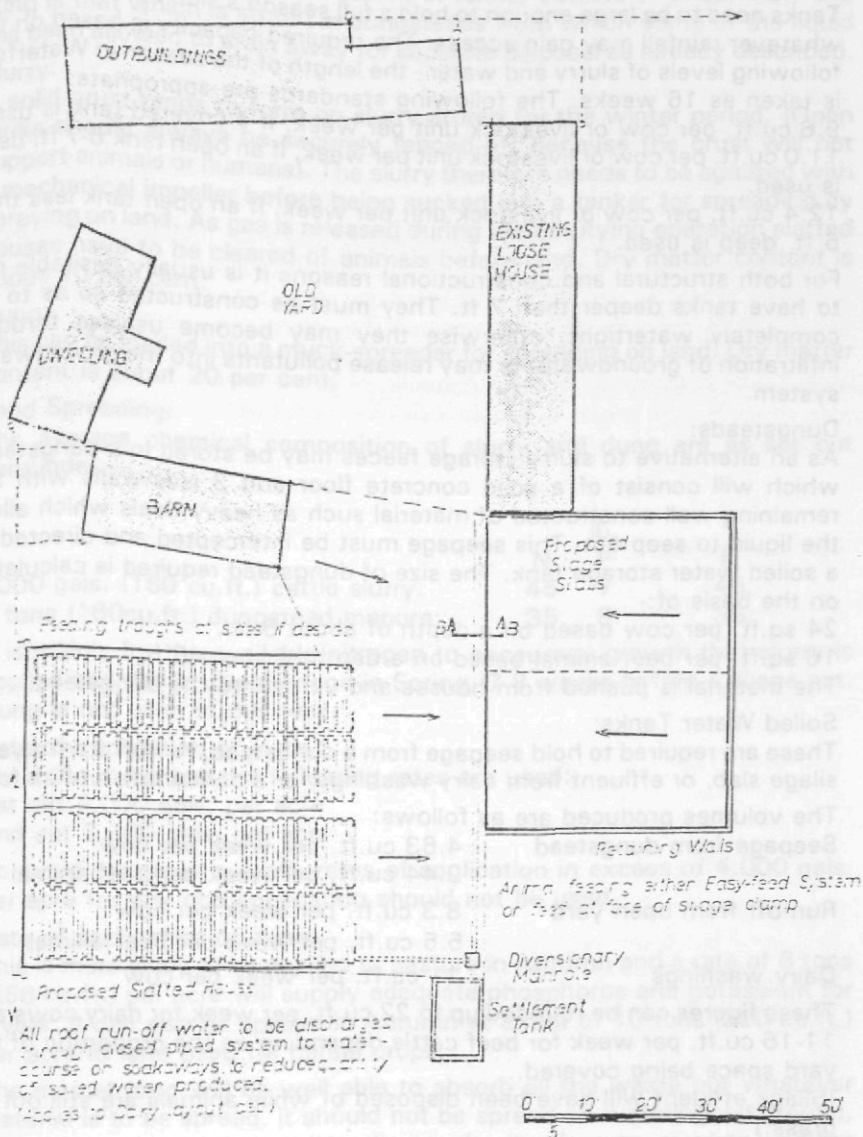
Note: Smaller animals will require less than 22 sq ft and more may therefore be placed in a house, thus tending to produce an equivalent amount of slurry.

Slurry Storage

This will be done in watertight tanks, either uncovered or covered. Covered tanks are most often placed under the buildings themselves with slurry going directly into them from slatted floors.



DAIRY FARM LAYOUT
 Showing existing buildings &
 proposed extensions



Storage Capacity:

Tanks need to be large enough to hold a full season's slurry production plus whatever rainfall may gain access. The required capacity is based on the following levels of slurry and water - the length of the season in Waterford is taken as 16 weeks. The following standards are appropriate:

9.6 cu.ft. per cow or livestock unit per week, if a covered tank is used.

11.0 cu.ft. per cow or livestock unit per week, if an open tank 6-7 ft. deep is used.

12.4 cu.ft. per cow or livestock unit per week, if an open tank less than 6 ft. deep is used.

For both structural and constructional reasons it is usually desirable not to have tanks deeper than 7 ft. They must be constructed so as to be completely watertight; otherwise they may become useless through infiltration of groundwater or may release pollutants into the groundwater system.

Dungsteads:

As an alternative to slurry storage faeces may be stored in a dungstead, which will consist of a solid concrete floor and 3 side-walls with the remaining wall constructed of material such as heavy deals which allow the liquid to seep out. This seepage must be intercepted and directed to a soiled water storage tank. The size of dungstead required is calculated on the basis of:-

24 sq.ft. per cow based on a depth of about 5 ft.,

16 sq.ft. per beef animal based on a depth of about 5 ft.

The material is pushed from houses and yards into the dungstead.

Soiled Water Tanks:

These are required to hold seepage from a dungstead, run-off from a yard, silage slab, or effluent from dairy washings, or a combination of all four.

The volumes produced are as follows:

Seepage from dungstead	4.63 cu.ft. per week per cow
	2.44 cu.ft. per week per beef animal

Run-off from open yard	8.3 cu.ft. per week per cow
	5.5 cu.ft. per week per beef animal

Dairy washings	11 cu.ft. per week per cow
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These figures can be rounded up to 22 cu.ft. per week for dairy cows and 11-16 cu.ft. per week for beef cattle depending on the proportion of the yard space being covered.

(Silage effluent will have been disposed of while animals are still out on grass.)

The disposal would need to be carried out at intervals of 7 to 10 days and the capacity of the tank designed on this basis.

Disposal of Slurry and Dung:

In this context, slurry is that stored in tanks, outside or underfloor, and dung is that which is stored in dungsteads from which some of the liquid has been allowed to drain away for separate disposal as already described.

Slurry:

A solid crust tends to form on slurry stored for the winter period. (Open tanks should always be securely fenced off because the crust will not support animals or humans). The slurry therefore needs to be agitated with a mechanical impeller before being sucked into a tanker for spreading by spraying on land. As gas is released during the emptying operation slatted houses have to be cleared of animals beforehand. Dry matter content is about 10 per cent.

Dung:

This can be loaded into a muck-spreader for spreading on land. Dry matter content is about 20 per cent.

Land Spreading:

The average chemical composition of slurry and dung are as set out hereunder:-

	lb.		
	N	P	K
1000 gals. (160 cu.ft.) cattle slurry:	45	7	45
5 tons (160cu.ft.) dungstead manure:	35	9	35

It is mainly for the available nitrogen to encourage growth that slurry is applied and this is usually done in Spring, 7-8 weeks before a silage cut. Dung is not used in this way.

Rate of application of slurry:

For a 2 cut system the following rates are used:

1st cut 4,000 gals. per acre

2nd cut 2,500 gals. per acre

To avoid danger of run-off, rates of application in excess of 4,000 gals. per acre for any one application should not be used.

Rate of application of dung:

This is more likely to be applied to pasture in Autumn and a rate of 8 tons (256 cu.ft.) per acre will supply adequate phosphorus and potassium for a year. It can also be applied in Autumn at a rate of 10 tons (320 cu.ft.) per acre to land used for cereal crops.

The normal farm will be well able to absorb all the waste but whatever material is to be spread, it should not be spread on waterlogged ground, adjacent to watercourses, or too close to dwelling houses, or when weather conditions are such as to cause overground flow of water polluted by slurry or manure.

Buildings

Run-off from building roofs will be clean and should be disposed of separately, either to a watercourse or to a soakway. Care should be taken to ensure that roof water does not discharge onto yards used by animals and thence to the slurry tank, soiled water tank or dungstead. The design criteria used for these tanks do not allow for this. This aspect of the design of roof water drainage systems is frequently not allowed for but can be very significant for the proper functioning of the whole system of pollution control.

Other matters in relation to the siting and appearance of buildings will have to be considered in each case on their individual merits. In general, tree planting, either to screen the structures completely, or to help to soften their outline, may be an easier option than trying to use more attractive materials in the construction itself. With corrugated iron buildings which will, when weathered, require painting to protect them from rusting, the use of matt dark green or brown can help considerably in blending in the building.

PIG FARMING

Pig farming is fundamentally different from dairying or beef raising in that the scale of the operation is in no way dependent on the capacity of the farm to grow feed material. Generally, the scale of a pig rearing operation is likely to be fairly large if it is to be economical and the feed, meal or whey, etc. will be brought in from outside the farm.

The land attached to the piggery will therefore need to serve both as a disposal area for waste from the operation and as an area to grow cash crops or fodder crops for other animals. It is therefore necessary to know what the other uses on the farm are proposed to be in order to fully assess the impact of a pig rearing operation.

Piggeries

The general operation of a pig unit will involve dry sows, boars, farrowing sows and their litter, weaners and fattening pigs. A sow will produce approximately 18 bonhams per year. The litter is removed from the sow at about 4-2 weeks and kept as weaners for about 9 weeks after which time they should have reached about 70 lb. weight. After this they are placed in fattening pens and fattened to about 180 lb.

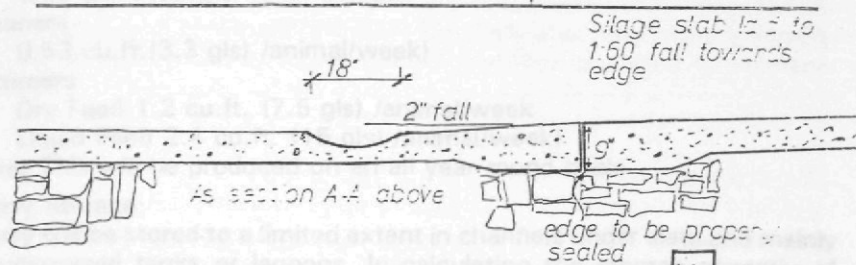
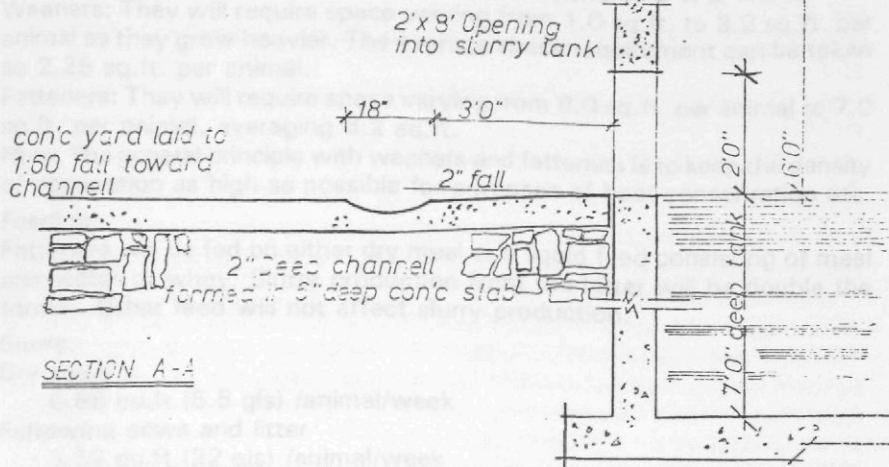
Numbers

A complete pig unit will have the following proportions of different categories of animals per 100 sows -

75 dry sows, 25 farrowing sows, 200-250 sucklers, 200-250 weaners, 400-500 fatteners

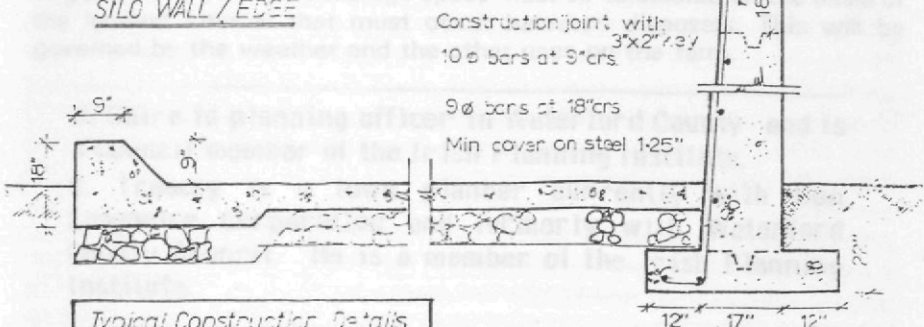
If the unit is efficient the higher figures will be achieved and they should be used in calculating slurry production.

0 1' 2' 3' 4' 5' 6'



SECTION B-B

SILO WALL / EDGE



Typical Construction Details

Space Requirements

Boars and Sows: They will be housed in pens or tethered in cubicles of 2 ft. wide x 7.2 to 8 ft long. Sometimes boars may be given more space than this.

Sows and Litter: These will occupy separate pens of 5 ft x 7.2 ft.

Weaners: They will require space varying from 1.0 sq.ft. to 3.2 sq.ft. per animal as they grow heavier. The average space requirement can be taken as 2.25 sq.ft. per animal.

Fatteners: They will require space varying from 6.0 sq.ft. per animal to 7.0 sq.ft. per animal, averaging 6.2 sq.ft.

Note: The general principle with weaners and fatteners is to keep the density of occupation as high as possible for purposes of heat conservation etc.

Feeding:

Fatteners will be fed on either dry meal or a liquid feed consisting of meal and water or whey. Slurry production from the latter will be double the former. Other feed will not affect slurry production.

Slurry:

Dry sows

0.88 cu.ft.(5.5 gls) /animal/week

Farrowing sows and litter

3.52 cu.ft.(22 gls) /animal/week

Weaners

0.53 cu.ft.(3.3 gls) /animal/week)

Fatteners

Dry Feed 1.2 cu.ft. (7.5 gls) /animal/week

Liquid Feed 2.4 cu.ft. (15 gls) /animal/week)

Note: This will be produced on an all year round basis.

Slurry Storage:

Slurry will be stored to a limited extent in channels under slats and mainly in uncovered tanks or lagoons. In calculating the storage capacity of channels, clearance of 1 ft. between the top of the slurry and the bottom of the slats must be allowed for to ensure that space is left for accumulation of gases. The combined storage space must be calculated on the basis of the longest interval that must occur between disposals. This will be governed by the weather and the other uses on the farm.

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DEVELOPMENT ON THE FORESHORE

The Legal and Administrative Context

J. REID

The complexity of planning and development on the foreshore is increasing, not only because of growth in the volume of activities but also because of their ever-widening range. New activities include those linked with the oil and gas industries, with mariculture and with tourism and recreation. The legal and administrative context of such planning and development can be complicated by the number of and overlapping responsibilities of the agencies involved in promoting, controlling and licensing them. Along all of the coastline the agencies involved are the State (in the person of the Minister for Communications), the Department of the Environment, local planning authorities and An Bord Pleanála. On limited stretches of the coastline an additional agency is involved in the form of harbour authorities.

The Foreshore Act, 1933

In the Foreshore Act, 1933 a distinction is made between "foreshore" and "tidal lands". Foreshore is defined as "the bed and shore, below the line of high water of ordinary or medium tides, of the sea and of every tidal river and tidal estuary and of every channel, creek, and bay of the sea or of any such river or estuary". Tidal lands are defined as "the bed and shore, below the line of high water of ordinary spring tides, of the sea and of every tidal river and tidal estuary and of every channel, creek, and bay of the sea or of any such river or estuary". Thus tidal lands can occupy a more extensive area than foreshore. A third term, "seashore", is defined as "the foreshore and every beach, bank, and cliff contiguous thereto and includes all sands and rocks contiguous to the foreshore". As a general rule in this jurisdiction, foreshore belongs to the State and it has been official policy almost since the foundation of the State to dispose of foreshore by way of leasehold rather than freehold. Thus, continuing State control can be exercised over demised foreshore by means of covenants attached to the leases, including a power of re-entry on the breach, non-performance

or non-observance of any covenant by the lessee. There are areas of foreshore in private ownership, eg those in the ownership of harbour authorities, but these represent only a minute proportion of the total foreshore within the State.

Certain provisions of the Act of 1933 facilitate development on the foreshore by private parties both on publicly and privately owned foreshore areas. In the case of publicly owned foreshore, the Minister distinguishes between developments of varying nature and extent. In dealing with what might be viewed as development of a substantial nature such as the reclamation of foreshore for the construction of a marina, the Minister, pursuant to Section 2 of the Act of 1933, may grant a lease to the prospective developer. As in any lease, the lessor (in this case, the Minister for Communications) can operate a considerable level of control over any development to be carried out. Specifically, Section 2(b) states, "Every lease under this Section shall contain such covenants, conditions, and agreements as the Minister shall consider proper or desirable in the public interest and shall agree upon with the person to whom such lease is made". In dealing with development of a less substantial nature such as the use of foreshore for the placing of shellfish storage cages, the Minister, pursuant to Section 3 of the Act of 1933, may grant a licence of foreshore. As in the case of Section 2 leases, the Minister can exercise continuing control by means of covenants, conditions and agreements attached to the licences.

The maximum period for which a lease may be made or a licence granted is ninety-nine years and there is a statutory prohibition on the inclusion of any covenant or agreement guaranteeing the renewal of a lease or a licence. As regards the rights of third parties, if the Minister thinks fit, he can give public notice of any application for a lease or a licence and can stipulate the time, manner and place in and at which objections and representations of interested parties may be made. These procedures are analogous to those contained in Section 21(2)(c) of the Local Government (Planning and Development) Act, 1963 for the hearing of objections and representations on a draft development plan. In addition or in the alternative, the Minister may hold a sworn public inquiry in regard to the making of a lease or the granting of a licence, as he thinks fit.

As regards tidal lands which are in private ownership, Section 10 of the Act of 1933 bestows upon the Minister certain powers over the erection of "any building, pier, wall or other permanent structure". An application for approval must be made to the Minister and in considering such application, he is limited to considering whether the proposed development would cause or be likely to cause an obstruction to navigation or to fishing.

As regards enforcement over developments which are completely unauthorised or which have not been carried out in accordance with approved plans, in the case of Section 2 leases and Section 3 licences the

Minister has the normal facility of enforcement of covenants, conditions and agreements through the civil jurisdiction of the courts. In the case of Section 10 approvals the Minister may serve a notice requiring the structure in question to be removed. If the notice is not complied with, the Minister may carry out the removal and recover the costs of the removal as a civil debt.

The Planning Acts

The second code governing development of the foreshore and tidal lands is that contained in the Local Government (Planning and Development) Acts, 1963 to 1983 and Regulations made thereunder. The agencies involved under this code are the Department of the Environment, local planning authorities and An Bord Pleanála. Given the nature of the physical boundaries of maritime local authority areas, a basic question arises over the jurisdiction of those authorities as regards the planning code. Delineation of the seaward boundaries of local authorities is not standardised throughout the State. In most cases it is high water mark but there are exceptions such as in the case of Dublin County Borough. Complications can arise in estuarine contexts where the land bodies of contiguous local authorities may face each other across narrow channels below high water mark. This can even involve more than two local authorities such as in the Suir estuary where there are four such authorities involved, Waterford County Borough and the County Councils of Kilkenny, Waterford and Wexford.

As regards the jurisdiction of planning authorities under the planning code, Section 2(2) of the Act of 1963 states,

“In this Act “planning authority” means —

- (a) in the case of a county exclusive of any borough or urban district therein, the council of the county,
- (b) in the case of a county or other borough, the corporation of the borough, and
- (c) in the case of an urban district, the council of the district.”

Section 1 of the Local Government (Ireland) Act, 1898 created administrative counties and Section 21 of the same Act created certain county boroughs which were declared to be administrative counties in their own right. Other boroughs and urban districts were, for the purposes of the 1898 Act, to be situated in and form part

of the administrative county which they adjoined. As regards the management of these administrative counties, Section 68 of the 1898 Act provided that,

“ the first Council elected under this Act for a county shall, subject as hereinafter mentioned, be elected for the county as bounded at the passing of this Act for the purposes of the grand jury (in this Act referred to as the “existing judicial county”) ”

A definition of the term “existing judicial county” is given in the unreported Supreme Court judgement of 9th February, 1979 in the case of *Browne -v- Donegal County Council*. It was stated therein that the boundary of the “existing judicial county” was defined by the *ordnance* survey maps prepared pursuant to the Boundary Survey (Ireland) Acts, 1854 and 1859. Since the preparation of the first maps under these Acts, many changes have occurred in the boundaries of local authorities and in their status within the local government hierarchy. For example, there have been boundary changes of county boroughs and urban districts made by the Minister for the Environment or his predecessors in title under Article 25(1) of the Schedule to the Local Government (Application of Enactments) Order, 1898, new county boroughs have been created such as in the cases of Dun Laoghaire in 1930 and Galway in 1986.

Thus, in order to ascertain the area of jurisdiction of a planning authority under the planning code, the boundary of the existing judicial county must be determined from the relevant *ordnance* survey maps and this information should be updated in accordance with statutory changes since then.

Since the area of jurisdiction of a planning authority is defined as described above, it follows that the jurisdictions of the Department of the Environment and An Bord Pleanála are similarly defined in matters pertaining to the planning code. Thus, for example, it would be *ultra vires* the powers of a planning authority to prepare a development plan for areas of seashore, foreshore or tidal lands beyond the area of the administrative county concerned. Equally, in say the case of a development such as a marina which had works and/or uses straddling high water mark and where high water mark is the boundary of the administrative county involved, it would be *ultra vires* the powers both of the planning authority to determine an application for planning permission for the seaward portion of the development and of An Bord Pleanála to adjudicate on such portion of such an application.

The Harbours Act, 1946

In some parts of the coastline the situation is made more complex by the existence of harbour authorities. These bodies owe their present constitution to the Harbours Act, 1946. This consolidating Act sets out inter alia their general powers and duties and their areas of jurisdiction. As regards areas of jurisdiction, these can and do overlap with those of planning authorities and with that of the Minister for Communications.

As regards the powers and duties of a harbour authority it could be stated that in general they are of a regulatory and supervisory nature. Some guidance on this matter is given by item one of the second schedule of the Act of 1946 which specifies the purposes for which byelaws may be made by a harbour authority. "For regulating the use of the harbour or any docks, graving docks or quays within the limits thereof". The word "use" brings to mind the concept of "use" under the planning code but it appears by inference from the specification of "docks, graving docks or quays" that the term is to be more strictly construed. Similarly, under item 19 of the said schedule a harbour authority may make byelaws "For preventing and removing obstructions or impediments in or on docks, quays, works and roadways". These byelaws seem to confirm that a harbour authority's responsibilities relate to a harbour as it finds it and do not envisage a role for the authority in the consideration of proposed development within a harbour. Section 47 of the 1946 Act seems to confirm this. "A harbour authority shall take all proper measures for the management, control and operation of their harbour".

The "development" of the harbour referred to in the long title of the Act of 1946 appears to vest in the Minister for Communications, who under Section 134, may "authorise a harbour authority to construct such docks, piers or other works as may be specified in the order". Even though under Section 138 of the said Act "A harbour authority may apply to the Minister for a harbour works order", the overall control seems to rest with the Minister. This conclusion seems to be confirmed by the provisions of Sections 2, 3 and 10 of the Foreshore Act, 1933, already referred to, which give the Minister overriding control.

Section 88(1) of the Act of 1946 states that "it shall not be lawful for a person to put, or cause or allow to be put, ballast, earth, ashes, stones or any other substance or thing into waters within the limits of a harbour unless the harbour authority for the harbour have authorised him so to do". It would seem that this section does not give to a harbour authority any general power to control development analogous to those of a planning authority since the application of the *eiusdem generis* rule of construction would appear to limit such control to matters of dumping. This view seems to be confirmed by the byelaws of certain harbour authorities.

Section 55 of the Act of 1946 states,

“A harbour authority may appropriate any part of their harbour (including, in particular, any of the following or any part thereof, that is to say, any dock, pier, quay, wharf, jetty, boatslip, works, plant or equipment) to the exclusive use of any person, trade or class of vessels and may make up such appropriation either gratuitously or in consideration of the payment to them of such charges as they consider reasonable”

The reference to “gratuitously or in consideration of payment” seems to clothe an appropriation in the mantle of a lease and as such could be applied only to properties over which a harbour authority would have powers of disposal, ie properties within their ownership or in which they had some other power of disposal. In other words, appropriation under Section 55 is in no way analogous to zoning under the planning code or to the granting of planning permission.

It is when a development is completed and fails to be supervised by a harbour authority that they come into their own. At this point the authority has wide powers of control over the actual operation of a development. Many of the matters over which a harbour authority is empowered to make byelaws pursuant to the second schedule of the 1946 Act are analogous to conditions which might be attached to a *planning permission*, eg the hours of opening of the gates of any docks or quays, or the manner in which goods may be placed on docks or quays.

The Procedures

A private body wishing to carry out development on the foreshore has no set of statutory procedures to give guidance as to how the overlapping jurisdictions of the Minister for Communications, the local planning authority (and An Bord Pleanála) and a harbour authority should be related to each other. Empirical procedures have been evolved which to date appear to have worked well in legal, administrative and technical terms. There are a number of situations wherein one or more of these bodies is involved and a further dimension is created by the public or private ownership of the foreshore in question. Each of these contexts will be looked at in turn.

The Minister Alone

The simplest context is one in which the foreshore in question lies outside the area of an administrative county and where there is no harbour authority in existence. In such a circumstance the only authority involved is the Minister for Communications. In the case of publicly owned foreshore a Section 2 lease or a Section 3 licence will be sought pursuant to the Foreshore Act, 1933. In considering such applications, the Minister may consult informally with the planning authority (or indeed any other body) as he sees fit and he may hold a public inquiry, again as he sees fit. Enforcement of unauthorised development is by way of a normal civil action for trespass or breach of covenant. In the case of privately owned tidal lands an application for approval is made to the Minister who considers the application within the context of navigation and fishing. There is no provision for a public inquiry. Enforcement is by means of the serving of a statutory notice and, in the event of failure to observe such notice, the Minister may have the necessary work carried out and may recover the costs as a civil debt.

The Minister and a Planning Authority

The second context is one wherein the foreshore falls within the area of a planning authority and where no harbour authority exists. In the case of publicly owned foreshore the statutory provisions are similar to those described above as regards leases and licences but the procedures used are a little different. In the first instance an application for a lease or licence is made to the Minister who defers consideration of the application until such time as an application for planning permission has been determined by the planning authority or an appeal determined by An Bord Pleanála. In advising the applicant for a lease or licence to proceed with the making of a planning application/appeal the Minister accomplishes several things. In the first instance he is postponing consideration of an application for a lease or licence for a proposal which eventually might not get planning permission, thus avoiding possibly unnecessary work on his part. Secondly, he is consulting the planning authority indirectly. In the event of a refusal of planning permission by the planning authority or by An Bord Pleanála, the Minister is most unlikely to make a lease or grant a licence. Thirdly, in instructing the applicant for a lease or licence to make a planning application on foreshore owned by the State, the Minister has enabled the applicant to show that they have the permission of the party which has sufficient interest or estate to enable them to carry out the development.

proposed. In the case of privately owned tidal lands, the same procedures are followed except that in such a circumstance the Minister does not need to bestow upon the applicant a permission to make a planning application as regards interest or estate. The Minister is not bound by the decision of the planning authority or An Bord Pleanála and a successful applicant for planning permission cannot proceed with the development in the absence of a Ministerial lease, licence or approval. Recipients of planning permission are reminded of this by the provisions of Section 26(11) of the Act of 1963: "A person shall not be entitled solely by reason of a permission or approval under this section to carry out any development".

The Minister, a Planning Authority and a Harbour Authority

The third circumstance is one wherein the foreshore in question is situated in an administrative county and in a harbour within the meaning of the Harbours Act, 1946. The procedures are somewhat similar to those described above in the second context. In the case of public foreshore, the Minister advises the applicant for a lease or licence to make a planning application and only when the application and any attendant appeal have been determined will he consider the question of a lease or licence. Assuming that the prospective developer has obtained planning permission and has been granted a lease or a licence, they must now deal with the harbour authority. It is at this point that a complication arises, as yet unresolved in the courts or by the legislature. It is open to a harbour authority to claim that in order to carry out development on a foreshore within a harbour, authorisation by a harbour authority is required pursuant to Section 88 of the Act of 1946. It is the view of the author that the provisions of Section 88 do not apply to "development" within the meaning of the planning code but to dumping and such like activities. A procedure which can be utilised by the Minister is for him to lease the area of foreshore in question to the harbour authority with certain covenants, conditions or agreements attached which are then passed on without alteration in a sublease between the harbour authority and the developer. The harbour authority is thus responsible for enforcing the lease and can ensure that any regulations made in accordance with their byelaws are in harmony with the terms of the lease. The situation is somewhat less complicated in the case of privately owned tidal lands in that the question of leases and subleases does not arise.

The Minister and a Harbour Authority

The fourth and final situation is one wherein the public foreshore in question lies within a harbour but outside any administrative county. In this situation the Minister decides on the matter of a lease or licence, possibly in consultation with the harbour authority and the contiguous planning authority or authorities. As in the situation described above, the Minister in making the lease can use the device of leasing to the harbour authority and then the foreshore is sublet by the harbour authority to the developer, with a harmonisation of leasehold covenants and any regulations stemming from byelaws. In the case of private tidal lands the procedures are similar.

Conclusion

The demarcation of responsibilities between the various agencies is clear enough and the sequence in which the various permissions and authorisations are sought is also self-evident. In this regard the Department of Communications issues to applicants an information sheet which refers to the need to obtain planning permission. The role of harbour authorities is not mentioned in the sheet. It is in the matter of these latter bodies that the possibility of confusion can arise and in particular as regards authorisations pursuant to Section 88 of the Act of 1946. There is a need for direction from the Minister for Communications as to the nature of the powers of harbour authorities under Section 88 and, to a lesser degree, under Section 55 of the same Act.

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THE APPLICATION OF A MICROCOMPUTER DATABASE PACKAGE (dBASE II) TO DEVELOPMENT PLAN PREPARATION IN LIMERICK CORPORATION

R. TOBIN

Introduction

The purpose of this article is to briefly outline the application of dBASE II, running on a SIRIUS 1 Micro-Computer, to Development Planning, based on our recent experience in Limerick Corporation

Limerick City has a population of about 80,000 people and the built up area covers approximately 5,000 ha. The Planning and Development Division has a total staff of ten. The author is the Senior Executive Planner in charge of Development Planning and has two part-time technicians in assistance. Another Senior Executive deals exclusively with Development Control and Building regulations, amounting to 300 files per year involving some 100,000 to 200,000 sq m. of building projects. A third administers the Division and deals with land purchase and compensation. Current Government restrictions forbid the expansion of staff, and this combined with other matters, forced us to consider the intensive use of information technology, especially Micro-Computers, in preparing for the Development Plan review which will be effected in 1986.

Irish Background

Irish Local Authorities are responsible for a limited range of services. These include

- (a) Building and Environment Regulation (including Development Planning)
- (b) Water Supply
- (c) Sewerage and Refuse Disposal
- (d) Fire Fighting Service
- (e) Provision of Housing to Low Income Families
- (f) Road Construction and Traffic Management
- (g) Recreation and Amenity Development

In general, Irish Local Authorities have no direct responsibility for Education, nor for Energy Utilities. (Limerick Corporation, however, is unusual in that

it owns and runs a Gas supply utility) However, we do assist the Education, Industrial Development and Energy Utilities by supplying projections and appreciations of population, housing and employment demand Thus, the principal objectives of the Information System which supports our Development Plan preparation and review are

- (1) (to monitor and anticipate trends in the Social Economic and Physical Environment,
- (2) to assess the probable impact of such trends and,
- (3) to advise the Local Authority decisions with a view to ameliorating or eliminating undesirable consequences and promoting beneficial consequences

Conceptual Organization

Before adopting our present system, we had defined our Information System needs as consisting of a collection of people, procedures, a database and a data processing system organized to meet the strategic decision requirements of the Corporation's Development Plan review We then set out to assemble such a system, trying to keep overheads as low as possible by utilizing existing procedures and people from within the Corporation and by "contracting out" survey and data preparation

Our fundamental review suggested that the Relational Database model provided by dBASE II represented the most easily understood concept and placed the least initial restriction on the form and comparability of data

The Micro-Computer, in addition to providing data storage, editing and validation as well as word-processing, was also employed as an "intelligent terminal" to the specialist computing facilities at the nearby Plassy Technological Park This gave us access to SPSS for statistical analysis, and enabled us to develop and run Statistical Mapping packages and Network analysis packages and trip interchange models

We have found that even on a Micro, the number of Tables that can be handled by dBASE II can easily become so great that it is essential to maintain an up-to-date Index of the contents and description of each Table On Mainframe systems, this facility is normally supplied as a part of the system itself It is usually not incorporated in Micro-systems and it is something that the user must provide

In the Limerick system, the contents of the database are continually monitored and a "data-dictionary" cross-references the description of each attribute of each Table known to the system This dictionary gives the file name containing the attribute, the name, size and type of each attribute and a 60 character description of the nature of the attribute All of this

information is contained on the system disk and is automatically checked at intervals to ensure validity of the current file structures. The program which performs the checking is written in micro-PROLOG.

Specialized enquiry programs have also been developed in the dBASE II language, which permit "point-in-polygon" and other spatial searches of data containing digitized locational information. Others guide the user through the process of setting up data files which can be transmitted to programs for Water and Gas Network Analysis and other Mathematical Models. The next logical phase of development, now in its preliminary stages, will be the creation of a specialized "Data Dictionary", a "Gazetteer" which will enable the automatic linkage of all data relating to particular places. Thus, queries to the gazetteer should confirm the existence of attributes pertaining to any non-residential property in the City. This development will be essential if the database is to be shared "live" by users from other Departments and when it contains a greater range of data. It is also a development that is fraught with uncertainty because there is, as yet, no agreed standard in Ireland for the construction of a Gazetteer and even the spatial referencing conventions used by the Central Statistics Office can vary unpredictably from one Census to the next.

Some Examples of Use

(1) General Population Forecasts

The basic model used is a Cohort-Survival Population Projection which generates future estimates of population for the City as a whole, subject to various assumptions and trends in Births, Deaths and Migration operating over 5-year intervals. In addition to population by age-group, this model generates the expected total workforce, expected total number of separate households, expected total primary and secondary pupils for each projection date.

The model is developed on a Spreadsheet system called SUPERCALC, and the data required is contained in the Database as a series of tables which are drawn from the Censuses of Population and which may be edited and aggregated in whatever manner is required. The result is linked via intermediate "data-exchange" files first to analysis spreadsheets which establish trends and make projections in the birth, death and other rates, and thence to the actual projection model sheets by way of stored command sequences.

While the database system is an invaluable tool in the capture, storage, manipulation and retrieval of data, its utility would be considerably less, were it not for the ability to link the database directly to a Spreadsheet.

System which provides for the more complex manipulation and calculation involved in assessing trends and examining alternative scenarios concerning future developments

(2) Projecting Small Area Population Change

The global projection for the City as a whole must be disaggregated by Ward (of which there are 37 in the City and 5 in the Suburbs) for use in other models such as traffic generation and water quality monitoring. This disaggregation is achieved with reference to the total number of occupied dwellings and total institutional population in each ward. This estimate can be updated annually from returns of Local Taxation.

Future ward populations are estimated by a careful monitoring of building intentions of developers in the area. Each builder is interviewed and his expectations of activity over the next 5 years are recorded by location and year and a ten-year forecast extrapolated on the basis of available serviced land and planning commitments.

The utility of the database system, in this instance, is that it permits the periodic flexible recording and aggregation of data in a standard way, so that comparable analysis can be repeated as often as desired. The systems which were formerly used, required data in very rigid format and this data could not then be made available (without programming effort or manual re-entry) for other analyses.

(3) Impact and Projection of Demand for Retail Facilities

Ward populations are also used in the estimation of likely future demand for retail facilities, in conjunction with information obtained on present shopping patterns from direct surveys of household behaviour, together with assumptions regarding future patterns of consumption. Thus, tables of surrogate expenditure flows from zones of residence to zones of shopping have been estimated and the likely impact of proposed new shopping centres is assessed by analogy with the performance of existing centres and the shopping behaviour of households.

(4) Monitoring Other Development Commitments

Utilizing the programming language incorporated in the dBASE II system, it was possible to quickly write a very simple system which provided a useful service to the Administration of Development Control, reducing the cost of that service and simultaneously achieving the "capture" of all current development decisions.

Under Irish Law, permissions cease to have effect if development is not commenced within five years of the date of being granted by the Local Authority. Thus it was also necessary to create a table of all permissions granted and still "live" so that an ongoing register of active permissions could be maintained.

Thus the advantage of the database system in this case rests on its flexibility in being able to provide an operationally useful service and simultaneously its ability to focus attention on cases which are of importance to the strategic planning of the city

(5) Monitoring Land-Use and Land Use Change

While applications for planning approval are an important source of information concerning impending change in the distribution of structures and activities throughout the urban system, a comprehensive monitoring of changes in the area is also carried out by the Corporation through its activities in collecting local taxes in the form of rates from businesses. Approximately 2,500-3,000 premises are liable for payment of rates and records of these premises are maintained on the Corporation's Mainframe computer. In order to estimate the employment content of these various commercial and industrial activities and their distribution throughout the city, a copy of this file has been imported by the Micro Database from the Corporation's Mainframe. Each record contains the name, address, and general description of the premises, together with a special reference code which keys the location to an index map. A Table has been compiled which relates the rates descriptions to a standard Land-Use Classification system. The "join" of this table to the premises table results in the automatic classification of each premises according to the Standard Land-use Code. Our primary interest in analysing Land-use, however, is not for its own sake, but rather as a means of monitoring the economic activities involved.

Since we require only aggregate information on employment by zone for Strategic Planning purposes, we have adopted the practice of carrying out an "in depth" survey of the 250 largest employers (constituting almost half of the total employment) and a sample survey of the remainder. All information collected is linked back to the basic Land-use table by way of spatial reference keys drawn from the rates file.

The development of a Gazetteer as outlined above, which will link tables produced from such regular surveys of employment and school enrolment as well as Planning Permissions, to that available from the rates file, will give a relatively inexpensive and reliable system of monitoring land-use, land-use change and employment.

Potential Future Developments

I have outlined above something of the power and flexibility offered by modern inexpensive Database Systems running on low-cost Micro-computers. Given the relatively modest data requirements of Strategic Planning at the level of small urban Local Authorities, Micro-databases, in conjunction with Spreadsheet systems and Communications Software, offer a cost-effective tool for the preparation and review of Development Plans.

It is tempting to speculate on the degree to which systems now running on mainframe computers could be replaced by Micro-based systems. However, I consider that this is not the most fruitful area of development. There is an inherent danger that such "flexibility" could lead to systems that become configured to individual requirements and when individuals die or seek employment elsewhere, the system left behind could be in danger of being incomprehensible to the next user.

Mindful of this problem, we have recently begun to examine the possible application of Artificial Intelligence principles to the task of incorporating as an adjunct to the database, the practical knowledge of how to use and apply the information contained in the database to strategic decision making. This project will have the objectives of both simplifying the casual use of the database for non-computer (and non-professional) personnel and capturing the "local knowledge" needed to successfully apply the information from the Database to practical decision situations. We would hope to further this experiment with the assistance of students, staff and the resources of Plassy Technological Park.

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TOWN LAYOUT AND ITS POSSIBLE REGULATION IN VIKING AGE DUBLIN:

P.F. WALLACE

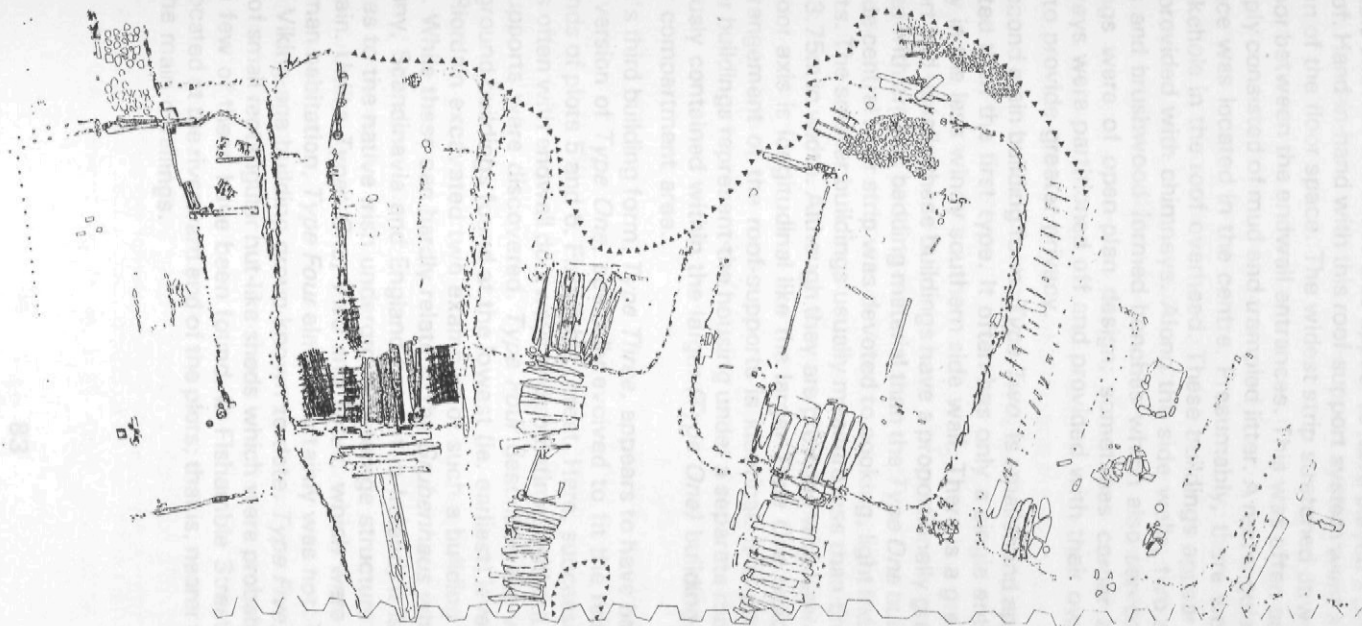
The present short essay for the *I P I Journal* will summarise what is now known of the layout of Viking Age Dublin. Over one hundred and fifty often perfectly preserved foundation remains of buildings of houses as well as a succession of nine different waterfronts have been unearthed in the course of the Wood Quay/Fishamble Street excavations between 1974 and 1981. These were the subject of a lecture to the *I P I* in 1982 and will be treated of in detail elsewhere.

The National Museum of Ireland's twenty year excavation campaign in the heart of old Dublin encompassed sites on both sides of the high natural ridge on which tenth century Dublin was established and where Christchurch Cathedral now stands. These sites include those at High Street and Christchurch Place on the south slope of the ridge and Wood Quay/Fishamble Street, John's Lane and Winetavern Street on the north or riverward side. Although some of the sites were relatively small, that at Wood Quay/Fishamble Street was very large. Taken together, the sites can be used to advance certain generalisations about the layout and character of Viking Age Dublin. Unfortunately, our excavations did not unearth evidence for the ninth century Viking *longphort*. It is possible that this was located upstream at Islandbridge/Kilmainham where an enormous Scandinavian-style cemetery was unearthed in the last century. It is also regrettable that, to date, there is such little archaeological evidence for the houses and street layout of Anglo-Norman and later medieval Dublin - a situation that hinders our understanding of the probable impact of the Viking Age townscape on the later town.

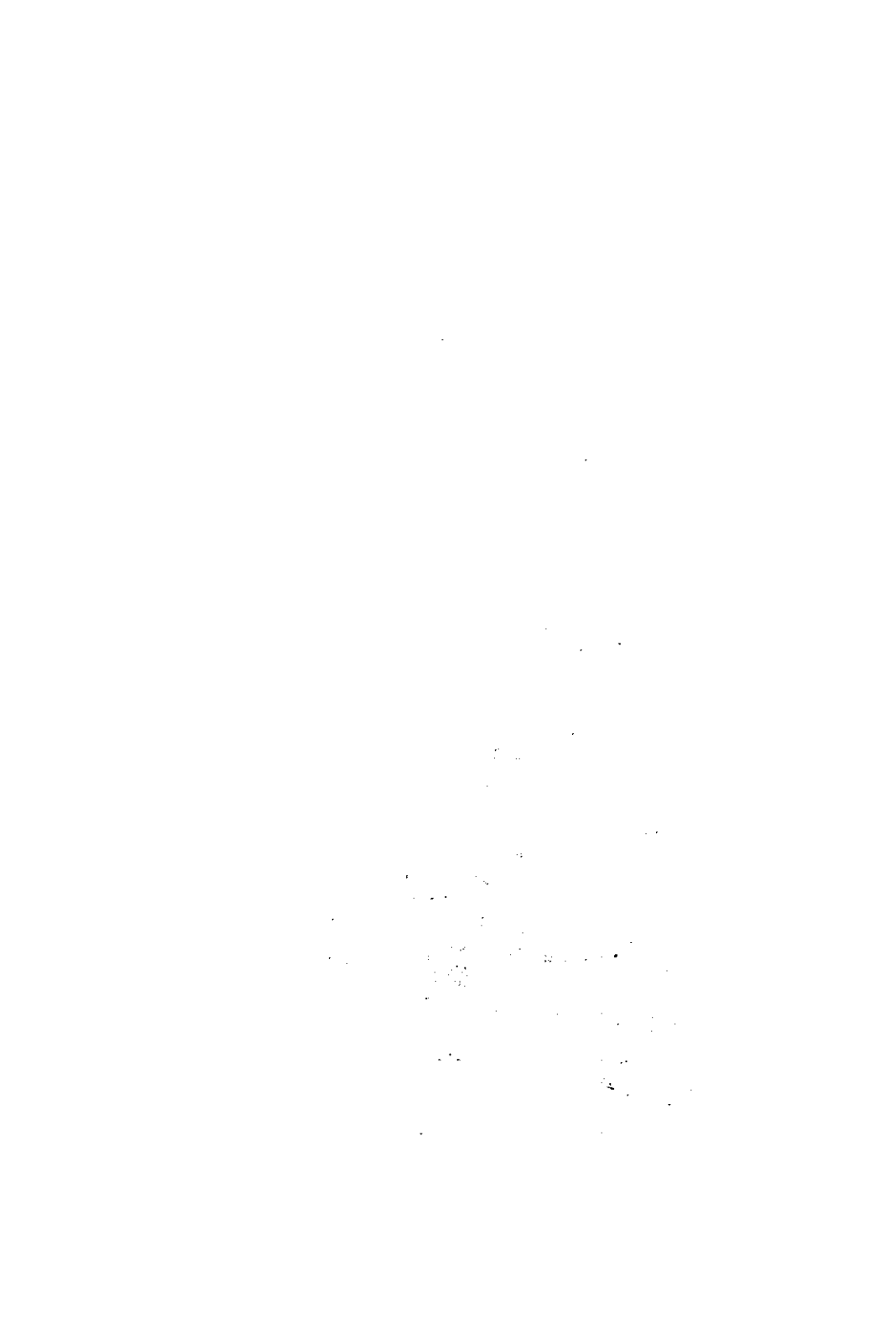
The major significance of the Wood Quay/Fishamble Street excavations must be their contribution to our understanding of the layout of tenth and eleventh century Dublin. Because such a large area was available for excavation, an 'open area' approach was decided on, whereby the emphasis was placed on uncovering the maximum area of ancient landscape, keeping the intrusion of baulks and section controls to the essential minimum. This approach allowed the ancient topography to dictate and control the area and size of the excavation and contrasts with other excavation systems which sink in rigid, pre-arranged spits or take place within a honeycomb of rectangular baulks which can obscure an overview of the original topography.

Fourteen plots or tenements (Fig. 1) of the Viking age were excavated along the Fishamble Street side of Wood Quay. This is the equivalent of one side of a street. Thanks to the remarkable preservation of organic elements in these plots, it was possible in our 'open area' excavation not only to observe intact house foundations but also to see how the houses related to the plot boundaries, and to other buildings, pathways and rubbish-pits within the individual plots. A whole townscape was uncovered and not just of one period but of as many as thirteen successive levels within the tenth to eleventh century period. The floors of the houses and the yards outside became higher all the time accordingly as buildings were being rewalled and freshly thatched, as pathways were renewed and as rubbish and occupation debris were trampled under foot. By the time a house became obsolete and was due to be demolished, its floor level was often 20cm higher than when the building was first occupied. When the old building was demolished and removed, the foundation was left behind. Thanks to the damp climate and the wet anaerobic conditions into which pathways and foundations were often depressed, the foundations are often perfectly preserved along with the bedding materials and occupation trample. Successive house foundations are often preserved like layered carpets of time, one on top of the other. So good was the preservation of organic remains at Wood Quay, that some of the bedding materials occasionally still preserved their original green colours.

Scores of intact house foundations have been excavated and recorded. Coupled with the earlier excavations of Dublin Viking-age buildings at High Street, Winetavern Street and Christchurch Place, it is now possible to be confident about Dublin's basic building traditions and house types. Five main house forms have been identified. All are rectangular in plan, most appear to be hip-roofed rather than gabled and nearly all must have been thatched. The principal building form, my *Type One*, (Fig. 2) was a rectangular structure about 8.20m long by about 4.75 wide. The wall was usually low (about 1.25m high) and almost always of post-and-wattle construction. The roof was supported on four main posts or groups of posts arranged in a rectangle within the floor area. The large door-jambs at the almost



ARCHAEOLOGICAL SITE DIAGRAM



invariable endwall entrances also appear to have played a part in supporting the roof. Hand-in-hand with this roof-support system went a three-fold subdivision of the floor space. The widest strip stretched down the middle of the floor between the endwall entrances. This was often paved, gravelled or simply consisted of mud and trampled litter. A rectangular stone-kerbed fireplace was located in the centre. Presumably, there would have been a smokehole in the roof overhead. These buildings appear never to have been provided with chimneys. Along the side walls, two areas of raised turves and brushwood formed benches which also served as beds. The buildings were of open-plan design; sometimes corner areas near the doorways were partitioned off and provided with their own entrances in order to provide greater privacy.

The second main building form, *Type Two*, is smaller and apparently better insulated than the first type. It often has only a single entrance and this usually in the less windy southern side wall. There is a greater accent on comfort and usually these buildings have a proportionally greater floor area covered with organic bedding material than the *Type One* buildings in which the wide central floor strip was devoted to cooking, light industry and craft pursuits. The smaller buildings usually measure less than 5m in length and about 3.75m in width. Although they are provided with lateral access, their roof-floor axis is longitudinal like the larger *Type One* buildings to which the arrangement of the roof-supports is identical. It is possible that the smaller buildings represent the housing under a separate roof of a function previously contained within the larger (*Type One*) buildings, possibly the corner compartment area.

Dublin's third building form, *Type Three*, appears to have been a slimmed-down version of *Type One*, specially evolved to fit the relatively narrow east ends of plots 5 and 6, Fishamble Street. Here, successions of narrow houses often with endwall doorways and sometimes without visible internal roof-supports were discovered. *Type Four* describes the very rare semi-underground buildings found at the lowest (ie. earliest) levels of the sites. Mr O Riordain excavated two examples of such a building in Winetavern Street. While these can hardly relate to the *Grubenhaus* which is found in Germany, Scandinavia and England but not in Ireland, it is possible that it relates to the native Irish underground storage structure known as the souterrain. Unlike *Types One, Two* and *Three*, which were primarily built for human habitation, *Type Four* almost certainly was not. The only other Dublin Viking-age building group known to date, *Type Five*, consists of a series of small rectangular hut-like sheds which were probably for storage. Only a few of these have been found. In Fishamble Street, they tended to be located at the riverward end of the plots; that is, nearer the waterfront than the main dwellings.

Apart from the information provided on house form and building type, the Wood Quarry/Fishamble Street excavations have provided considerable data on construction methods and building fashions. In regard to the latter, certain architectural details such as wooden floors, grooved sole-plates for vertical revetment planks etc., appear to be common at certain levels and not at others. A marked improvement in the carpentry skills used in housing was detected in the later eleventh century. This may have been related to the Hibernicisation of the town at a period from which it was politically dominated by Irish kings - the famous series of 'Kings with opposition' of the later eleventh and early twelfth centuries.

To return to the town layout, it was established that the individual plots were mostly of trapezoidal shape with their widest ends fronting onto what is presumed to have been the original Fishamble Street and their narrowest ends near the earthen embankment which defended the town at the waterfront. The continuity of the boundary lines of these plots is most significant. Apart from one shift (possibly related to the slight expansion of the town towards the river, with the erection of a second large defensive embankment), the lines of the properties or plots remained consistent throughout the tenth and eleventh centuries. While the post-Norman/medieval plot levels did not survive - and it is therefore impossible to speak confidently of the continuity of plot boundaries from the Viking into the Norman period - such an inheritance can be postulated from the direction of property lines even as late as the eighteenth century by reference of Rocque's map of the area. The implication of the continuity of the lines of the Viking age properties is that they are the products of an ordered, urbanised society in which property was respected and its regulation possibly controlled by the legal force of an urban authority. It is impossible for the archaeologist to go any further than this, but the town layout of Fishamble Street at least supplies the social historian and student of town planning with the stage on which to make further and more informed speculation.

In contrast with the apparently rigidly overseen plot control, it seems that a much greater freedom was allowed to the individual plot owner within the area of the plot. The size, position and number of buildings within the plot varied from plot to plot and from one level to the next. The only consistent characteristics noted within the plots were the invariable location of the long axes of the main buildings parallel to the lengths of the plot, with the end of the house facing the end of the plot (and presumably the street) and secondly, the consistent provision of an individual access through each plot. It seems as though the provision in each plot of a woven wattle, log or stone-paved pathway was mandatory. Houses which spanned the whole width of a plot had to have doors at each end. It is possible that access to such pathways was at the discretion of the individual plot owners.

Although of low proportions, plot boundary fences appear not to have been broken by gateways, the inference being that it was not usual (or not encouraged/expected/or even permitted?) to cross from one plot to the next other than by using the pathway (from the street?) to the streetward entrance of the main dwelling. Again, it is impossible to be sure whether many of these inferences are the result of the imposition of law or of the force of tradition and practice. That we are not simply speaking any longer just about the physical make-up of the town and its buildings, businesses, environment and economy but about the layout and use of property as well as of concepts like access, tradition and authority is, for me, the major significance of the Wood Quay excavations. The closer the physical layout of the townscape brings us to the mentality of its occupiers, the better.

While the Fishamble Street plots were mostly separated by boundary fences such was not always the case, especially at the south end of the street where earlier levels did not appear to have been demarcated. Although actual plot boundary fences did not always survive, boundaries were discernible from differences in stratigraphy at each level. In many cases, a fence wall was heightened by simply driving extra posts into the existing line around which organic waste and rubbish was piled or had accumulated. In others the walls of houses acted as boundaries.

Although no complete Viking Age plot has yet been excavated in Dublin, the original lengths of many of the Fishamble Street plots can be estimated by reference to their assumed projection onto the present line of Fishamble Street on one hand and, on the other, to the inside edge of the waterfront embankment onto which some at least backed. The shape of the modern excavation sites meant that more extensive parts of some plots were available for excavation. Generally greater lengths of plots nearest the waterfront were available than for those higher up the hill at the south end of Fishamble Street. It is likely that many plots mirrored the layout of those most extensively investigated and that one or more larger houses were built at the front of the plot (i.e. at its widest near the street) while smaller buildings and sheds were built at the back. It should not be assumed that because smaller buildings, outhouses and pathways were not found that they did not exist in the original plots. This is especially true for the south part of Fishamble Street where only the east (or street?) ends of plots were available for excavation.

There is no doubt that, despite their common radial location off the presumed original Fishamble Street, plot areas varied greatly in size. While they probably varied in width, depending on the relative span of the two great determinants of length - the street and the waterfront, it is impossible to be absolutely certain about this because the fronts and backs of plots were not found. There is no doubt about the variety of plot widths. The trapezoidal rather than rectangular shape of many of the Fishamble Street plots makes their respective areas even more difficult to gauge. It is

presumed that the trapezoidal shape of the plots was due to the sinuous line of the original street relative to the waterfront. This contrasts with some of the southerly or uphill plots in which the positions of the respective plot widths were reversed. It is assumed that the original street line from which the plot lines were set out was sinuous rather than simply curved in an arc as it ascended the hill.

Fishamble Street plots 2 to 8 are widest at their east (or presumed streetward ends) in contrast with 9-12 which are widest at their west ends. Plots 13 and 14 also appear to have been widest at their east ends. Only in plot 13, which was delimited by a fence across its east end, was it possible to be certain of the width of any plot end. However, original widths of front and back ends of many plots can be estimated by projecting the lines of the plot sides to meet the line of the presumed street on one hand and that of the waterfront embankments on the other.

About 18m of plot 2 survives and its average width was about 5.4m. A similar length of plot 3 was excavated. The available west and east ends respectively measured 7.6m and about 4m. The east end of this plot was only about 2.2m wide at some of the lowest (ie. earliest) levels. The plot width at this end was gradually increased at later levels at the expense of plot 4 onto the original lines of which it appears to have encroached. Plot 4, in turn, was also widened on its southern margin at the expense of plot 5 in a plot boundary change which may not have been unconnected with a realignment of plots due to the erection of one of the larger earthen embankments. Seventeen metres of plot 4 were excavated, revealing a 9.4m width for the available west and 5m for the available east ends respectively. A similar stretch of plot 5 produced respective available east and west end widths of 4.6 and 2m. A 17.6 length of plot 6 revealed east and west end widths of 5 and 2m respectively showing the relative equality of size of neighbouring plots 5 and 6. As has been noted, a particular house type seems to have been specially designed to cope with the relative narrow 'street'-ends of these two plots. Plot 7 appears to have been wider with respective available end widths of 5.4 and 4m respectively in the 17.4m investigated. Plot 8 was still greater in size with respective end widths of 6 and 5 in the 17m which could be measured.

Plot 9 was 7m wide at its available west end but was 9m at the west end in the 13m stretch which was excavated. 13.4m of plot 10 showed that it was much smaller than its more northern neighbour as available respective east and west end widths of 4.6 and 5.2m were recorded. Plot 11 had even narrower east and west end widths of 3m and 5.2m respectively in the 12m stretch which was excavated. Plot 12 was at least 28m long and had respective west and east end widths of 5.4 and 5.2m, showing that it was of rather more rectangular plan than any other known Fishamble Street plot. Plot 13 measured 34m to the back of the plot at its 3.2m wide east end and was 5.6m wide at the surviving west end. About 13m of plot 14 was measured. Its respective east and west available end widths were 5.4 and 4.4m.

The most extremely east and west plot end widths measurable show that the Dublin Viking Age plots varied considerably in size. Some plots, especially 4 and 9, were extremely wide and some, like the contiguous pair 5 and 6, were extremely narrow. The discovery of relatively wide plots alongside narrower plots shows that properties of approximate size were not grouped together. Plots 5 and 6 are an exception and have a sequence of consistently narrow houses, specially designed to fit into relatively tiny plot spaces which may have resulted from the sub-division of a single plot at a relatively early level.

Widths seem to be a more reliable indicator of plot area than lengths (although the latter also probably varied considerably in accordance with plot location). Not all plots can have been as long as f3, which had a length in excess of 34m. The trapezoidal shape of the majority of the known Fishamble Street plots makes it difficult to assess the width-depth ratio of plots as is possible with certain English medieval towns.

Although it is tempting to conclude that plot size was an indicator of the owner's wealth, the Fishamble Street evidence warns against such a deduction. The relatively large houses which are often found in the larger plots appear to be related to plot area and shape rather than to the quality or quantity of the artefacts found in them. If coins are an indicator of wealth and their circumstantial survival and discovery admitted to be reflective of the wealth of the owners of the buildings and plots in which they are found, it is important to note that plots 3 and 8, which were noted neither for their own size nor for that of the buildings which stood in them, yielded more coins than the other plots. While the consistent location of large well-built houses in plot 9 cannot be denied, it would be wrong to accept this as the only criterion of the wealth or importance of the owners.

Plots were separated from one another by low post-and-wattle fences which usually consisted of posts, either driven into the ground and around which were woven horizontal wattles or, less commonly, by low screens which were propped by forked timbers. Elsewhere, occasionally, the fences were topped with woven thorns. Although fairly low and more of a demarcating than a dividing or defensive nature, the absence of gaps or gateways from the fences so far excavated seems to suggest that they were not meant to be transgressed. This idea seems to be further supported by the provision of pathways (sometimes along the line of the fences) within individual plots. The fences must have had some kind of legal status, judging by the continuity of their lines over several generations.

Not all Dublin plots may have fronted or backed onto streets. Some may have fronted onto public laneways of the type unearthed at Christchurch Place. It may have been such a laneway which divided 'properties' 1 and 2 in High Street II, thereby explaining the apparent divergence in plot

orientation between the east and west ends. The possibility of such laneways recalls an intra-mural lane or path at Fishamble Street and another postulated for Winetavern Street. If public lanes or paths such as these were of such narrow dimensions, it is possible that none of Dublin's streets were very wide (indeed possibly no wider than any of these lanes) in the Viking Age. The street widths which have been postulated in the townscape reconstruction here are based on the widths of excavated streets in contemporary English and Continental towns, as well as from the logistical necessity of having a few thoroughfares wide enough to accommodate busy pedestrian and possibly pack-horse traffic as well as the occasional street market or small fair.

While the lines of the property boundaries remained constant, the positions of the houses, outhouses, pathways and pits often changed with each new building phase (ie. each generation?). While successive buildings appear to have been built, in many cases, in different places and to different scales and designs from those of their predecessors, it was noted that houses in neighbouring plots were often built at the same end of the plots, almost as if to afford mutual shelter. This was particularly evident on level 4, Fishamble Street, where a row of at least five houses, each with a pathway to its end door, was built side by side.

The most consistent feature noted in relation to the organisation of the space within the plots in Fishamble Street was the provision of access to each plot. Each plot seems to have had an individual pathway leading to and from the waterfront and probably to a main street. The pathways were about 1.2m wide, and usually consisted of a wattle screen or series of screens laid one on top of the other. Less commonly, the pathway consisted of logs in the round or half round laid on horizontal runners. Pathways of stone and gravel were rare and even rarer were log pathways made with tapered transverses or boards pegged to runners. It seems to have been desirable, if not mandatory, that there be free access through each property. Whether this was for the proprietor and his family or for the public at large is impossible to say.

Pathways often led to and from the doors of the main houses - the doors were in the ends of houses. It was therefore possible to walk through each plot, but not to walk across the plots other than over the boundary fences! It was found that, while houses with a door at each end were allowed to occupy the entire width of a plot because pedestrians could walk through them, houses with only one door were set in from one of the fences and had a pathway along one side. Pathways therefore tended to go down the side or to be laid through the middle of tenements. In cases where houses of different types occurred at the same building level, pathways often zig-zagged around them.

It is impossible to say whether the provision of pathways and drains for individual plots was obligatory and required by the ruling urban authority that has already been postulated, or whether pathways resulted from the necessity of dealing with an original layout of tenements in which the property boundary was sacred. It seems likely that individual pathways originated from this kind of layout and possibly, that their maintenance was monitored by some authority. Even though it seems as if each tenement was owned by an individual family, it is impossible to say whether access through the plots was confined only to members of the household or extended to the public at large or, more likely, left to the discretion of the owners. It is unlikely that householders would favour pedestrians passing through their houses other than their friends, relatives, customers, clients and those in their service.

It is difficult to prove the existence of an urban authority purely from the archaeological evidence for property layout and pathway provision as at Fishamble Street. Such a supposition has to be measured against the experience of other contemporary sites and against the documentary evidence, which usually ignores such detail. It is even possible that such an authority monitored the pitches of roofs, the selection of building materials and advised against the dangers of fire. The form and plan of the houses and the standard of their construction probably resulted more from the dictates of tradition and experience than from any legal or civic requirements. On the other hand, some form of urban ordinance may explain the provision in some houses of underground drains, which were designed to convey riverwards surface water from higher ground. In spite of the danger of flooding to properties on the lower ground, the building of such drains need not be seen as the altruistic response of their public-spirited owners, but could have been a requirement attached to these properties, which may have been acquired more easily or cheaply than the better drained plots farther up the slope.

There are a few literary references which support the suggestion of an organised urban authority and reinforce the acceptance even by native chronicles of Dublin's plots. As early as 942, the Annals refer to the destruction of Dublin with 'its houses, divisions (= *airbeadh*), shops and other structures'. According to F. J. Byrne, the earliest dated use of *garrdha* in the annals is under the year 989 when the High King Maelsechnaill imposed a tax of an ounce of gold on every *garrdha* or plot in Dublin. The idea of levying a single cess on each individual plot suggests that already the plots were owned by the equivalent of a later medieval burgess.

An early eleventh century ransom levied a penalty on every plot. It is significant that the Irish word for plot (= *garrdha*) is borrowed from the old Norse *gardha* and is known as 'garth' in English. Russia, where the Vikings played a significant if not formative role in the establishment of towns was known to the Norse as *Gardhariki* or 'the land of towns'. There are several

references to 'divisions' within Armagh and other Irish monastic centres which C. Doherty suggests 'could have served as fire breaks particularly if they were surrounded by earthen banks' as late medieval maps of the town seem to imply. F. J. Byrne believes that, when tenth and eleventh century writers came to describe imaginary glories to the long deserted Tara, they 'may well have had Dublin in mind' when they assigned special quarters to craftsmen like cobblers and comb-makers. It will be recalled that Dublin's comb-makers appear to have been concentrated on High Street, the metalworkers on Christchurch Place, the lathe-workers/cobblers on High Street, the amber-workers and wood-carvers on Fishamble Street and other craftsmen outside the banks/walls.

The annals also indicate that, as early as 1015, Dublin was no longer contained within its banks as, in that year, houses both within and 'outside the *dún*' were burned. This may have implications for the apparent westward expansion of the settlement already noted from the suggestion of the archaeological evidence as well as possibly for the conclusion of the larger embankment around the town. The closeness of the buildings to one another is obvious from annalistic references and appears to be paralleled at the second Viking town, Limerick, where in 968 (after the Battle of Sulchoit), the Vikings were followed 'into the fort' where the Dal Cas 'slaughtered them on the streets and in the houses'. There are references to gates in the banks which enclosed both Limerick and Waterford these were probably matched in the Dublin banks.

Although the leader of the Dublin Vikings is referred to as 'tanist of the foreigners' as early as 848 and subsequently in 950, there are few references to the actual government of Viking Dublin. Five of the annals record how, in 1023, Donnchadh, King of Brega was 'taken prisoner by the foreigners in their own *aireachtas*'. This was probably the Viking Thing or assembly that presumably met at the Thingmote, which was located outside the town near the site of the present Andrew's Street Church where it survived until 1683, when a mound (240ft in diameter and 40 ft high) was levelled by Sir William Davis to raise the level of the present Nassau Street by about 3m. The position of Mormaer was in existence in Dublin by 1146, presumably to distinguish the head of the Scandinavian community from native rulers which were imposed to control Dublin from the middle of the eleventh century onwards. Presumably it was Thing which was the municipal authority which laid down the rules which have been inferred from the archaeological evidence, especially in regard to plot boundaries and access as well as matters of public interest such as the defences and the streets. It is impossible to gauge the extent of such a government and to be certain that the town had the services of an officer like a reeve who, in contemporary English towns, attended to such details as the preservation of the correct distance between houses, (which, in ninth

century Canterbury, was two feet) The rigid control of Dublin's weights, which can be inferred from the two hundred and fifty surviving weights which adhere to the Carolingian ounce, suggests the existence of municipal authority which the continuity of plot boundaries and the reference to the *aireachtas* seem also to support

It is unfortunate that the great continuity of property boundaries and plot/garth locations from the tenth to the early twelfth century cannot be extended into the later period Had the property boundaries of the Anglo-Norman period survived, it would have been possible to compare the layout of the pre-Norman with the later town It would also have been possible to gauge the extent to which the layout of the thirteenth-century town was inherited from the pre-Norman (ultimately Scandinavian) settlement Did the Anglo-Norman town planners and new burgesses take over the existing layout and make their new burgess plots coincide with the old Hiberno-Scandinavian garths or with multiples or parts of them, or did they lay out the town *de novo* without being influenced by the topographical and psychological constraints of the existing layout, after they had banished the Scandinavian Dubliners to Oxmanstown, north of the Liffey It is unfortunate that the historical record is silent on this point Only by future archaeological excavation can we throw light on this most important problem about the layout of the Anglo-Norman town

In an 1192 confirmation of the grant of Dublin to the men of Bristol in 1171/2, there is clear reference to the expansion of the town beyond the walls In this address, citizens 'dwelling both without the walls as within' were recommended to 'make buildings wherever (they) shall upon the water (ie river)' The implication is that some 'messuages' or burgage plots were to be laid out over the water, thus implies reclamation and for this there is now ample archaeological support A text of 1202 confirms the church of the Holy Trinity in its numerous possessions 'with their appurtenances in churches and chapels, in sands and mudbanks/in *sabulis et glisseris*'

Archaeological excavation at Wood Quay unearthed a 35m long 1m high line of post-and-wattle fence, parallel to and 25m north of the city wall, at its riverward side, in the river gravel This appeared to have been to provide a stabilising core or retaining fence for an embankment which predated the large wooden revetments built across the site It was linked by six lines of post-and-wattle to the wall While these may have been erected to facilitate reclamation, the possibility that they are the actual lines of the messuages mentioned in 1192 should also be considered The post-and-wattle lines which were erected north/south on the slopes of the large Viking Age defensive embankment appears to have extended into the waterfront beneath the later stone wall The extent to which these join with the north/south post-and-wattle walls at the riverward side of the wall and beyond the thirteenth century revetments with the north/south walls or groynes which were built even farther out in the bed of the river remains to be checked

Fortunately, the documentary sources shed some light on the sizes of the original thirteenth century burgage plots. A Simms draws attention to a thirty feet wide plot front in thirteenth century New Street and an early fourteenth century St Patrick Street plot 'containing in front thirty-four feet, in rear sixty-six feet, and extending in length from the High Street (*alto vico*) on the west as far as Peter's Lane on the east, containing in that length five score and nineteen feet'. Although it is impossible to say how generally representative such sizes were of post-Norman plots, the 6:1 depth to width ratio in this Dublin plot is paralleled in England. On present evidence, it would seem that, while the depth to width ratio may not have been substantially different in Dublin's Viking Age, the plot sizes were smaller than in the later period.

The fact that the development of Dublin by the Anglo-Normans appears to have been delayed until the economic boom of the thirteenth century could mean that they were happy to take over unchanged, the existing properties and that, because they were already well settled in these plots when the town expanded, the layout of the thirteenth century town within the area of the pre-Norman walls may have echoed, if not substantially followed, the layout of the Scandinavian town. The line of the present Fishamble Street and possibly High Street appears to be inherited from very early (tenth century?) streets, which may not have been altered very much in the Anglo-Norman period. The Anglo-Norman town planner would have had much more freedom of expression outside the pre-invasion town walls where he would not have been hampered by the inherited constraints of a tenth-century street layout when, in the thirteenth century, the town boundary was gradually expanded westwards and northwards into the Liffey, in order to build the large new port for which we now have so much evidence at Wood Quay.

Simms' summary of the historical evidence for the westward expansion of Dublin's suburbs after the coming of the Normans, for the enclosing of a western suburb within the defences about 1200 and her noting the legacy of the early thirteenth century defences in Rocque's map are significant. It seems that 'substantial changes were made to the defences' after the 1221 murage grant 'in aid of enclosing the city and for security and protection of it as well as the adjacent parts'. Simms' view that the line of the medieval wall along Cook Street dates from this period is alright if it does not conflict with Clarke's references to it as a 'strand' as late as the thirteenth century. However, excavation suggests that 'the section of this wall (which) continues across the Wood Quay site' is earlier than Simms implies.

The more straight north-south and east-west lines in the reclaimed areas at Wood Quay and the lower or northern part of Fishamble Street contrast with the curved line of the upper or southern part of Fishamble Street. As has been seen, this contrast is echoed in the property layout of the area, even in the eighteenth and nineteenth centuries. It may show that the Anglo-Norman town layout followed the inherited plan of the Scandinavians within the walls of the pre-1169 town, whereas the layout outside the walls was set out in straight lines and long strips more typical of Anglo-Norman town planners and in a tradition well known at other centres such as at Drogheda.

Despite the apparent preference for straight lines which the larger urban areas reclaimed and settled by the Anglo-Normans allowed, Bradley's map of Medieval Drogheda is a reminder of the overall similarity of the town planning approach of both the Vikings and the Anglo-Normans for it would appear that a similar organic approach to layout was applied by both groups, that streets followed natural contours within defences which were sited around natural heights and that plots or properties fronted onto such streets. It is possible that Dublin's Viking period plots were smaller than those of the thirteenth century and that the blocks defined by such streets were more frequently sub-divided by communal lanes in the earlier age.

Given that the Norman approach to town layout in Dublin appears to be not dissimilar to the attitude which produced the layout of Viking Dublin and that the approaches of both ages appear to have more in common with each other than with the late Saxons and their planned towns, it has to be asked whether this parallel is coincidental or whether (because of their ultimate ethnic origin) the Normans inherited this from their early tenth century Viking ancestors in Normandy. The early date of the Viking settlement of Normandy, the comparative lack of urbanisation elsewhere in the Viking World at this time, the rapidity of their acceptance of French traditions and their exposure to English and Welsh conditions all argue against any direct Viking influences on Anglo-Norman town planners. It seems safest to conclude that resemblances in Viking and Norman town layout as found in Dublin and mapped in Drogheda and elsewhere is little more than the coincidence of the sensible balance of the best street and plot plan to the most effective defensive circuit, making the maximum use of a high vantage point overlooking a potential port site, although future excavations of early sites in Normandy and England may modify this by demonstrating a continuity which, on present evidence, cannot be upheld.

Our conclusion must be that the layout of Viking Age Dublin conforms to what Carter terms 'a high street layout' that is 'a medieval plan unit (having) traditional long strip plots or deep burgages arranged in a series on either side of a major traffic street'. The recognition of this layout at a relatively early date and its implication for the existence of burgess-owned plots

foreshadows much of Europe's later urban character. Some of the typical characteristics of the medieval town are much older than is often supposed. Our survey also suggests that the Normans appear to have persevered with much of the existing layout and only brought any changed attitudes to layout to bear on areas they developed outside the Viking Age core area. It is also suggested that this core area expanded westwards during the Viking Age and that the Viking town grew organically. A case can be made for a western Viking approach to town layout which allowed natural contours to dictate street positions which, in turn, determined the arrangement of plots. This is probably the most original Viking contribution to the urbanisation of England and Ireland and appears to be represented at Dublin and York and probably also at Limerick, Waterford, Wexford and lesser urban settlements. Although the plot sizes of eighteenth and nineteenth century Fishamble Street do not match those of the tenth and eleventh centuries, it has to be conceded that the direction of the later plots and the general layout of this part of Dublin were inherited from the Viking Age.

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AMBIVALENT BELFAST

M McELDOWNEY

To describe someone in Belfast as 'two-faced' is not generally regarded as a compliment but to describe the city itself as 'two-faced' is a recognition of reality. Belfast has two distinct and discernible faces - one forward, one backward, one positive, one negative - the inevitable impression of a city whose future is dogged by its past but whose spirit and character survive. I was asked to write an article contrasting the Belfast of the 1970's with the Belfast of the 1980's, and I have taken a liberal interpretation of that brief to look backwards and forwards in a personal vein - a planner's perspective on the commercial and environmental life of the city as it emerges from a difficult era and looks forward to a more fulfilling one.

I left Belfast in 1971 and returned to it in 1981. The decade between these dates was probably the most traumatic in the city's history - massive depopulation and migration, wholesale destruction of parts of the built environment, political and social polarisation on an unprecedented scale. Having left what was, at least in environmental terms, a substantial and vital Victorian city, I returned to an extreme example of recession - hit urban decline with its own very particular emphasis - to the universal problems of unemployment and inner-city decay were added the local problems of community strife, terrorism and political stalemate.

What I was not aware of then was the fact that, even in 1981, Belfast was in the throes of a remarkable recovery - if not in basic economic terms, then certainly in environmental and commercial terms. The city centre, long neglected by daytime shoppers and night-time entertainment seekers, was beginning to attract both back in substantial numbers, the Northern Ireland Housing Executive was beginning to unveil residential environments of the highest quality from behind its corrugated-iron site-screens, essential de-congesting road schemes such as Westlink were nearing completion and, in general, the heart of the city (a favourite term for the city's promotion then and now) was beginning to beat faster. Since that time this recovery has continued apace, and it is my intention in this article to examine some of the components of that renaissance. In so doing, however, I am continually aware of the second, troubled, face of the city, anything that is achieved in Belfast is achieved against odds that few cities have to contend with, so it is only by recognizing the difficulties that such achievements can be properly appreciated.

The Belfast Economy

This ambivalence in Belfast's image is well captured in a recent 'Financial Times' survey of Northern Ireland (1)

"At first sight, one notices well-stocked stores, busy with shoppers, plenty of smart restaurants and fast-food outlets, late model cars on the streets and thriving theatres and cinemas. A second sight is less reassuring - a block of offices swathed in scaffolding while bomb damage is repaired, a few streets away a derelict terrace of houses, their windows bricked-up, in the distance the giant gantry cranes of the Harland and Wolff Shipyard"

The implication here is a 'bubble' of consumer spending on the shaky foundations of a divided community and uncertain economy. There is obvious truth in that, but within that same economic survey there are encouraging signs of a stabilization in Belfast's traditional industries - Harland and Wolff have a £200m order-book and are moving from public subsidy towards economic self-reliance, Short Brothers have announced a £0.2m profit for 1984-5 (its first for 10 years), both the textile and food-processing industries show increased output and investment - manufacturing industry generally having grown by 7 per cent in both 1984 and 1985. Unemployment, however, is still growing, community tensions are unabated and government subsidies for housing and the public services, long the envy of other parts of the U.K., are now showing signs of lessening.

Of one thing, however, there is little doubt - Belfast's commercial life (and the image of the city associated with it) is increasingly buoyant - consumer spending grew by 2.2 per cent in 1985 (2.2 per cent predicted for 1986), personal loans by 16 per cent and car registration by 11 per cent. Whatever the motivations, and regardless of its justification in real economic terms, this is entirely beneficial to the city and the environment. Both of these elements - commerce and the environment - and their mutual interdependence I will now consider in more detail.

Commercial Belfast

"The city centre suffered a staggering decline in the early 1970's but has experienced a no-less spectacular renaissance in the last few years"

Stephen Brown, in June 1985(2) documented the city centre's drastic commercial decline (from 33 per cent of total retail expenditure in 1965 to 21 per cent in 1975) and attributed it to 'the endemic forces of retail decentralisation - population dispersal, growth of car ownership, suburban shopping developments' but primarily to 'the prolonged period of political unrest' (the destruction of 300 establishments and the loss of 25 per cent of retail floorspace) which in turn necessitated restrictions on parking and environmentally - disruptive security measures. Since the nadir of 1975, however, and particularly in the last 5 years, a combination of tightened security, Department of the Environment financial and environmental support, national retailing investment trends, and, most significantly, the efforts of city-centre traders themselves, have effected a dramatic recovery. Brown rightly regards this recovery as a belated 'catching up' on current retailing trends by a city held back during the 1970's by particular and totally atypical problems. It is tempting, nevertheless, to look for symbolic turning-points in the city's fortunes: the refurbishment of the Grand Opera House - an expensive but ultimately immensely valuable re-assertion of confidence in architectural tradition, the opening of the Westlink bypass road - a victim of its own effectiveness in easing congestion in that it soon became congested itself, the easing of the security measures, or the introduction of late-night shopping in 1982, all of these are quoted as significant and pivotal events. It should not be forgotten either that changing retail trends made their impact outside the city centre as well(3) between 1971-76 Springhill, Clondeboyne and Ards shopping centres were developed to serve prosperous and expanding North Down and Ards, and in 1978 the massive Abbey Centre to serve north Belfast, more recently Antrim and Ballymena have opened town-centre schemes and, in inner-city Belfast, Connswater and Park Centre successfully cater for one-stop shopping. Whilst all have an (often over-estimated) impact on the city centre turnover they probably had a more positive psychological benefit in stimulating city centre traders' attitudes. A balance is now being arrived at, and attention is being focused on the major Castle Court development to re-assert the centre's traditional dominance in the retail hierarchy.

Castle Court(4) is being promoted as a 'heart transplant' for the city centre, and, in commercial terms - with 400,000 s f of additional shopping (and a major Department Store) - it will make a significant shift of balance northwards, possibly benefitting the declining northside area. In many ways this is the most important symbol of all - it represents, at long last, a significant investment from major British retailers and institutions in a city and province that annually provides £200m in insurance premiums and pension funds, hitherto for little return investment(5) because of the city's 'troubled' image. In financial terms Belfast is now a good institutional investment, particularly in the retail sector where rental growth and trading figures for established multiples have been much higher than the U K average in the last 10 years, rates as a proportion of rents and occupancy costs have been lower and freehold ownership of property has been possible. The fact that many of the major up-market U K stores - John Lewis, Habitat, Mothercare, Laura Ashley, Sainsburys etc - have still not ventured into Belfast, while being something of an indictment of the city's image, is also a positive development feature - an untapped potential - which may well be exploited by Castle Court and its successors.

There is, however, another interesting ambivalence here, as indicated by Judith Huntly in Property Business 1984 survey of Belfast (6)

"largely because of the restricted nature of retailing, the returns for the new indigenous developers have been very good indeed. So good that a split in interest is apparent between those that have done very nicely thank you out of the market and the Government which for political and economic reasons wants to get U K institutions to invest."

Lack of comparable information and the difficulty of making comparable valuations are problems compounded by the fact that most of the large U K chartered surveying companies are unrepresented in Belfast and there is a general concern about the long-term possibility of 'selling-on' assets. What we have, therefore, is a provincial property market with somewhat ambivalent aspirations about joining the wider U K market - a view reflected in current political postures also, perhaps, and based on the painful experience of over-reliance on outside investment in manufacturing in the past.

Whatever the future holds, there is no doubt that Belfast's commercial life, having come back from the dead of 10 years ago, is now in a pivotal position. If we decided to go for growth there is much to be learnt from the experiences of other U K cities in the past 2 decades - Belfast can 'get it right' in social and environmental terms - and here our natural scepticism of 'outside' influences may be a beneficial thing - if sufficient attention is given to the context and impact of new proposals and if the natural qualities of the city's character are protected and enhanced.

The Belfast Environment

Much has been written about the city's natural setting - the Northern Ireland Tourist Board describes Belfast as a 'Hibernian Rio', and, whilst many Brazilians would no doubt dispute the 'Rio' (and many Ulstermen the 'Hibernian') there is no doubt that we enjoy one of the best urban locations in the U.K. Only Edinburgh and Bristol could claim comparably dramatic sites and most of Belfast's Victorian contemporaries - Glasgow, Liverpool, Manchester, Leeds and Birmingham - are built on featureless plains, by comparison.

The main element in the (quite successful) preservation of that setting has been the 'Matthew Stopline' of 1964 - the only enduring legacy of that period's utopian planning strategy. That line, in fact, was well-drawn, and, whilst now under consideration as part of the Belfast Urban Area Plan review, the topographical amenity-defined sections will no doubt remain largely in existence.

That however, is a preservation policy and requires merely control, what is much more difficult is a positive environmental enhancement policy - which is what is very much required for the second element of Belfast's natural setting - the river. The Lagan Valley Country Park is a very positive example of utilising the river's potential in its upper reaches, it is now essential that the lower reaches - which relate directly to the heart of Belfast - are approached with the same degree of commitment. The Civic Trust has already drawn attention to this great environmental opportunity in seminars, publications and its 'Fresh Flows the Lagan' school project. It will continue to do so, as will all the other concerned individuals and organisations, but what is required from now on is the complete integration of the riverside into commercial, social and environmental planning for the city centre - the review of the Belfast Urban Area Plan gives an opportunity for that - and possibly, as advocated at the Civic Trust seminar,(7) the establishment of an independent authority to co-ordinate initiatives and promote investment and development related to the river. Dockland redevelopment will be a major theme of the 1990's, with British cities following the trans-Atlantic models of Boston, Baltimore, Seattle and San Francisco. It is not fanciful to regard Belfast in this company - Liverpool, Swansea, Glasgow and Bristol have all made impressive progress in this area - some with independent authorities, some with enterprising local councils - and, in the view of American developer J. Rouse, Belfast has the same potential (8).

"Cities are beginning to understand the new potential of the waterfronts - strong impressions are irresistible and one such was the impression that the waterfront at the foot of High Street constituted a huge potential opportunity for Belfast. In a perverse way the present image of Belfast might even be made a plus in attracting people to its dramatic new waterfront. There is excitement in finding things different than expected, in finding good where there is supposed to be bad, in a spirit of venture into what may seem a little dangerous"

Here again we are faced with the Belfast dichotomy - the 'good where there is supposed to be bad' impression which, uncomfortable as it may be, is something we have to recognize and live with

As regards Belfast's built environment rather than its natural one the two faces of the city are very much in evidence - some of the worst examples of inner city decay and some of the most salubrious suburbs in U.K., some of the worst examples of high rise housing and some of the best modern domestic vernacular designs, some peculiarly - Ulster 'show-off' architecture, some subtle and sympathetic additions to existing townscapes. As with its commercial and economic life, however, there has been a distinct improvement recently in the city's built environment - much to do with the consequences of commercial buoyancy but also to do with public environmental management and with the significant contribution of the Northern Ireland Housing Executive and Voluntary Housing Authorities.

The N.I.H.E.'s contribution is important in its comprehensiveness - by 1986 it had built 13,000 new houses, its Renewal Strategy(9) encompassed 27,000 dwellings in more than 70 redevelopment areas, it had designated over 30 Housing Action Areas, specified 25 Private Investment Priority Areas and by its efforts over a 10 year period had reduced the 'unfitness' level of housing from around 25 per cent to around 12 per cent - a figure still, however, higher than average U.K. rates. The Executive is currently working on around 1,500 houses on 70 different sites throughout Belfast. All this has been financed from a housing budget - largely publicly funded - which over the past few years has been almost 4 times that of comparable Housing Authorities in England and Wales, and the results in environmental terms are obviously impressive. The city's 'late start' in comprehensive housing renewal has been beneficial in that mistakes made elsewhere have been largely avoided - the standard N.I.H.E. designs, based on low/medium density 'mixer-court' concepts, are of proven high quality, particularly obvious since 1980 when many schemes have emerged from behind the site-boardings. Some of the Poleglass schemes are illustrative of this quality, but in terms of their contribution to existing townscape the many schemes on both sides of the Albert Bridge - Cromac, Short Strand, Albert Bridge Road, Mount Pottinger Road etc. - are probably more significant.

Albertbridge Road in general has benefitted greatly from N I H E attentions - infill housing improvements as well as painting and landscaping initiatives via other agencies - and is indicative of the positive change wrought over a relatively short period

Environmental management in a more general sense - via conservation, landscaping, public open space provision, amenity schemes, etc - is now making an obvious impact after a relatively dormant period (In a city which lost 25 per cent of its shopping during the bombing campaign of the 1970's an over-emphasis on environmental considerations could easily have been regarded as flippant) Now, however, the first Conservation Area has been designated, urban 'pocket' parks are being proposed, tree planting (at a rate of 500 per year) schemes have been initiated and the pedestrianisation/landscaping schemes in the vicinity of the City Hall have enlivened the heart of the shopping centre Even some of the ambitious and innovative ideas from the 1969 Urban Area Plan civic design proposals are being dusted down and re-examined in the light of current circumstances - tied to the possibility of E E C financing through the Integrated Operations initiative

My feeling is that positive civic design is what is now required in Belfast if full advantage is to be derived from the many initiatives currently under way This city is not Bath, nor Edinburgh, nor York - for whom looking backwards (in architectural terms) is a positive policy Belfast's character derives from the beauty of its siting, the robustness of its buildings, the spirit of its traders - from overcoming, in environmental and commercial terms, the odds dictated by history and circumstance We cannot, therefore, afford to be too precious in our approach to conservation, although the loss of something like the Post Office is much to be regretted The Ulster Architectural Heritage Society's poignant comment on this (10)

"Belfast is exchanging fine Victorian townscape for a building which will have all the charm of a tower-block laid on its side "

is an understandable, but over-dogmatic reaction Castle Court, together with riverside development, cross-harbour transportation links and all the other ideas from Integrated Operations and the Belfast Urban Area Plan review represents the new face of Belfast and it's up to all of us to ensure that it accords well with the old Whilst the retrospective view is instructive, even salutary, the face of Belfast, perhaps more than any other city in view of its troubled history, should now be looking to the future

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HOUSING ACTION AREA POLICY IN BELFAST - AN EVALUATION

A S ADAIR, J N BERRY and W S McGREAL

Introduction

Mass urbanisation in the 19th century saw the development of Belfast as Ireland's leading industrial city. Belfast's population increased sevenfold from 50,000 to 350,000 persons during the period 1830 to 1900. This promoted poor housing conditions and overcrowding. As early as 1890, government tried to remedy the worst conditions by unfitness and closing orders but it was not until 1956, with the passing of redevelopment legislation, that the local authority had the powers to deal comprehensively with poor housing. The 1960's philosophy was one of large scale slum clearance with the population decanted to redeveloped and greenfield sites. Decline of manufacturing industry in the 1970's produced further economic and social decay in the inner city. This was compounded by civil unrest and by the delay in implementing the urban transportation strategy.

The poor quality of Belfast housing stock was highlighted in 1974 by the first house condition survey of the then recently established Northern Ireland Housing Executive (NIHE) (1). Unfitness levels of 25 per cent were recorded. Consequently, the NIHE saw as one of its principal objectives the improvement of Belfast housing stock. Under the Housing (NI) Order 1976, it continued the policies of redeveloping the worst areas of housing and introduced new policies of rehabilitation through an extensive programme of Housing Action Areas as well as promoting the greater use of renovation grants for the improvement of existing houses. Yet, by 1979, unfitness levels were still high - 15 per cent of dwellings were unfit and 29 per cent lacked one basic amenity (2).

Belfast Housing Renewal Strategy

The early 1980's saw a major change in urban planning policy in Northern Ireland, with the Department of Environment (NI) defining its major priority as the rejuvenation of the inner city area of Belfast. Part of this priority was an attack on poor housing conditions and to achieve this, the NIHE introduced the Belfast Housing Renewal Strategy. The NIHE sees the strategy, embracing a wide range of public and private sector housing initiatives, as follows -

Firstly, the continuation of renewal of redevelopment in areas where the housing stock is economically beyond repair,

Secondly, the continuation of renewal by rehabilitation, mainly through Housing Action Area designation where the housing stock is structurally sound but lacking in basic amenities, and

Thirdly, the introduction of an extensive range of Private Investment Priority Areas (PIPA's) where the NIHE and Building Societies will provide financial assistance to owner-occupiers of properties in need of improvement or repair

Within the strategy, there is a heavy commitment to improve housing conditions in the private sector. It is the intention of the renewal by rehabilitation initiative to achieve this by encouraging owner-occupiers in H A A s to take either an improvement grant which will help pay for major improvements such as enlarging a bathroom, or an intermediate grant which will help pay for installing basic amenities (fixed bath, wash hand basin, sink, inside W C , hot and cold water supply), or a repair grant which will help pay for essential repairs to roofs, window frames etc. The intention of this grant system is that owner occupiers should be paid a proportion of the total costs of the work necessary to bring their dwellings up to the relevant standard. The amount prescribed for most purposes is 75 per cent but depending on the NAV of the property and in cases of financial hardship, (where the applicant is dependent on Housing Benefit, Supplementary Benefit or Family Income Supplement), a higher level of grant aid can be obtained (3). However, in order to impose some control on NIHE expenditure in this sphere, a maximum eligible expense limit is set for each type of grant. The maximum permitted amount in respect of each is currently £10,200 for an improvement grant, £5,275 for an intermediate grant and £4,800 for a repair grant.

Obviously the grant system offers incentives to the owner-occupier but, at the same time, imposes restraints. To gauge the effectiveness of the system, a socio-economic and *building* condition survey was carried out in one of the many housing action areas of inner city Belfast. Mountcollyer, the case study area selected, is situated in the north inner city but is in many ways typical of housing and social conditions throughout the whole inner city area. While *detailed findings of the survey* have been reported elsewhere,(4) it is nevertheless useful to briefly examine the salient characteristics of the area.

Housing Characteristics

The housing stock in the study area is entirely terraced property, two-thirds of which are of pre-1919 construction. Property values are low - 38 per cent have an NAV of £60 or less. In terms of tenure, 55 per cent of the properties are owner-occupied, 23 per cent are rented from the N.I.H.E. and 22 per cent are privately rented. The housing stock is deficient in many aspects, for example 35 per cent of properties have no bath, 29 per cent lack a wash-hand basin and hot and cold water, 33 per cent still rely on the use of an outside W.C.

Although the general structure and stability of most houses is good, there are additional problems of disrepair. The greater part of the housing stock suffers from defects such as dampness, poor insulation/ventilation/heating and inadequate facilities for the preparation and cooking of food whereas, in 40 per cent of the properties, features such as roofs, chimneys, doors, windows and rainwater goods require major repair or renewal. Yet at the time of survey, the level of grant uptake was low - only 20 per cent of owner-occupiers had sought grant aid.

Socio-Economic Characteristics

In 29 per cent of households the Head of Household (HOH) is retired, furthermore one-third of HOH's are single, widowed or separated. The ageing population of Mountcollyer is reflected in the below average household size of 2.2 persons. Indeed 67 per cent of households have no dependent children, whereas 2 out of every 5 households have at least one old age pensioner.

Economic inactivity is high - 58 per cent of HOHs are unemployed/retired/handicapped/student/housewife. In addition the majority of 'economically active' households are headed by persons in either semi-skilled or unskilled occupations. As a result spending power is low, indeed the average income of HOHs in full-time employment is £73.82 (1984 figures). Hence a high dependency is placed upon additional income sources such as welfare benefits - 21 per cent of households receive supplementary benefit, 18 per cent receive income supplement and 36 per cent receive state and widows pensions. Given such statistics, it is not surprising that almost two-thirds of households in Mountcollyer have no savings and hence lack the capability to improve their households under the grant system as presently constituted, even with the higher level of grant aid available for households in these categories.

Evaluation

Within the context of the Belfast Housing Renewal Strategy, priority grant aid and assistance is directed towards stress areas like Mountcollyer for improvement and repair of those dwellings which have a rateable value of £225 or less. However, the present structure appears to indicate that the grant system has greatest impact on those households best placed financially to improve their dwelling conditions and least impact on those properties and households most in need of assistance. This is primarily due to the fact that as house improvement grants are always paid at less than 100 per cent of eligible costs, households are left with a sum to find from their income or savings and for many, that sum can be considerable. On top of this, there is a very substantial cost difference between the maximum amount paid in an improvement grant and the average cost of full rehabilitation. The maximum eligible expense in a Priority Improvement Grant is currently £10,200(5) whereas the actual cost of rehabilitation to the ten point standard is in the region of £17,000-£19,000. With such a system it is impractical to expect grant aid to have a significant impact on those households which lack spending power and which are unable to guarantee loans or mortgages from banks or building societies.

This poor targeting of grants to those most in need has been identified by the N I H E in the light of the House Condition Survey 1984 (6). This report showed that progress had been made in housing conditions, unfitness levels in Belfast declined from 15 per cent in 1979 to 12 per cent and dwellings lacking at least one basic amenity dropped from 29 per cent to 14 per cent. However, over the same period, the number of otherwise fit dwellings in serious disrepair has increased to such an extent that 40 per cent of the housing stock requires repairs over £2,500 per dwelling and 19 per cent over £7,000 per dwelling (1984 prices) to meet the ten point improvement grant standard.

Research by the N I H E has shown that the £43 million of grant aid budgeted in 1983-84 (£48.2 million in 1984-85 and £57 million in 1985-86) did not always reach those households most in need,⁽⁷⁾ yet the Government's Green Paper 'Home Improvement - A New Approach' stresses that in allocating grant aid "priority should be given to those whose means do not enable them to borrow on normal terms or who do not have enough savings to meet the costs of the necessary work" ⁽⁸⁾ The need for better targeting of grants has been given greater impetus by the severe reductions in public spending for the current year. While the total amount of expenditure allocated to housing in 1986-87 is £351 million, there has been an overall reduction of £44 million in the N I H E's budget. An immediate effect of this has been a temporary freeze on all improvement and repair grant preliminary applications. The N I H E has also announced changes in its grant policy designed to steer aid to those occupiers most in need by excluding all non-priority improvement grants or repair grants to properties built after 1945 unless the applicant is elderly, disabled or in financial hardship. However the N I H E's response is far short of what is required for the effective targeting of financial assistance in Housing Action Areas like Mountcollyer. The only way in which this can be achieved, according to the government's Green Paper, is "to introduce a system under which eligibility is determined by the financial circumstances of the owner's household" ⁽⁹⁾ In the light of this statement, a more practical approach would be to permit eligible expense limits to vary in accordance with a household's income level and, by means of positive discrimination, to encourage those on higher incomes to finance rehabilitation costs from their own resources, thereby permitting a higher level of grant aid to be targeted to those on lower incomes. Households in receipt of Housing Benefit, Supplementary Benefit and Family Income Supplement might provide an operational definition of the target group.

A further inherent problem which the grant system presents for the elderly and low income groups is its unnecessary complexity. This can lead to a lack of understanding of the procedures in applying for and obtaining grant aid. In essence, the grant system needs to be overhauled by legislation to make it more responsive to the prevalent social and economic conditions. The government no longer sees housing as its number one priority and the N I H E seems certain to find it even harder in future years to tackle the continuing and increasing housing repair problem. If the progress already made is to be consolidated, there must be effective targeting of scarce financial resources, otherwise the rehabilitation process may well be stifled.