



English Partnerships



**Utilities Infrastructure Study
Executive Summary**

April 2002

Purpose of the study

English Partnerships' Research Group and Best Practice Unit identified a general problem of the utilities market not meeting the needs and priorities of the regional economic strategies of the English Regional Development Agencies (the RDAs and the London Development Agency) in the advanced servicing of development sites. English Partnerships (EP) is the Urban Regeneration Agency responsible for advising the UK Government on regeneration issues. EP commissioned this report to survey the problem, research the current responses, consider the issues, and identify innovative, cost effective and sustainable solutions that could have general application.¹

Study Brief

The study brief required research to be undertaken into the workings of the utility market in relation to the servicing of public sector developments and the identification of innovative solutions that have been adopted. The key objectives of the study were to:

- identify and understand the current utility primary infrastructure issues;
- research innovative solutions particularly those that are cost efficient and environmentally sustainable; and
- evaluate best practice and identify directions for change.

Methodology

Our approach comprised the following:

- consultation with RDAs and other UK development organisations, local authorities, and Urban Regeneration Companies to identify the relevant issues and development projects where the local servicing of development has been an issue, constraining economic expansion;
- identification of examples of development being impeded and best practice solutions in each regions;
- an examination of the utility market for serving new development on green and brownfield sites – considering the current position and trends in the market for the local distribution and supply of utilities, the perspective of the utility companies themselves, the regulators, and other development players, and an overview of the more effective interventions by the public sector; and
- a survey of current research involving construction, professional, trade and university bodies.

Outline of the Report

The full report is structured as follows:

- Section 2 outlines the nature of the utilities infrastructure problem under consideration;
- Section 3 examines the market for each of the four utilities being considered and the implications for this study;
- Section 4 presents the findings from our document review and survey of local authorities and development agencies to provide a overview of current issues and responses to the problem;
- Section 5 contains a number of detailed case studies;
- Section 6 examines the issue from the perspective of the newly formed Urban Regeneration Companies;
- Section 7 contains a summary and presents our conclusions and best practice lessons.

¹ It should be noted that since compiling this report, many if the responsibilities attributed in this study to the DTLR have now transferred to the Office for the Deputy Prime Minister (ODPM).

To obtain a copy of the full report, please refer to the last page of this Executive Summary.

Summary and Conclusions

1. There has been a fundamental change in the UK in the provision of utility reinforcement and upgrades since the privatisation of utility industries. Instead of a more open and transparent programme of upgrade and provision, the process has become commercially sensitive and generally rationed to meet stringent corporate investment criteria. The market focus of the utility companies has meant that they have had less understanding and concern for the impact of their conduct on commercial and development customers and the longer term effects on the prosperity of their areas. The strict regulatory regime has reinforced this process to achieve year on year reduction in costs for the consumer and the efficient use of investment resources.
2. Before privatisation the utility companies were characterised by under investment and their decision-making often lacked commercial focus. As a result there has been a run-down of historic capital such as we have seen in the main drainage system. Historically, the utility companies were structurally part of the public sector with interlocking directorships with other public bodies, particularly local authorities. There was a strong tradition, culture and common identity with public purpose and the objectives of local authorities and with their long-term plans for the development and extensions of their areas. This was the product of “municipalisation” which had produced the utility companies from within the Borough Corporations to provide services and to serve expanding cities.
3. The privatised utility companies now operate within a regulated environment and act in their shareholders best interests, maximising their income returns and minimising their market and development exposure. They respond to cash backed orders and do not engage in speculative developments. Within the strict terms of the corporate and regulatory framework they can not be criticised and there have been major benefits in new investment and reduced commodity prices.
4. However, competition has been largely for retail commodity customers and the privatisation process has stultified traditional distribution networks. Sitting utilities have therefore continued to dominate their areas, a process reinforced by an emphasis on technical standards and liabilities. In very few cases have the utility companies had the incentive and the ability to pursue out of area trading and the regulatory process has not actively encouraged it.
5. The consequences of the present arrangements have not been formally recognised by any of the parties concerned in relation to utility reinforcement although they are a daily occurrence to developers and existing businesses. We have not been able to identify the level of annual investment in utility reinforcement because the figures are not recorded separately, even when projects have to be fully appraised. However, we believe it to be a significant investment. This cost is largely falling to the public development sector, essentially DTLR and DTI, to pick up. From examples quoted, such as the reinforcement to the Millennium Dome site, the cost is in millions of pounds every year. There is also the delay and abortive costs which by the nature of the process we expect to be very high. The consequence of this is that the effective regeneration budget in the UK is less than it would appear as funds are diverted within the hard development schemes to finance utility infrastructure. The competitiveness of the development industry is being considerably reduced.

6. The project by project nature of the public and private development process drives thinking and the budgeting which seeks to remove development constraints as speedily and cost effectively as possible without considering better solutions. If a project overruns, has an undiscovered shortage of a utility or has to go over budget to meet the requirement, these features have become almost an accepted fact of life by managers and financial controllers. It is seen as an inescapable cost.
7. The process of buying utilities does not seem to be subject to the normal EU and UK rules of procurement. There is evidence that the scoping and costing procedures involved systematically understate the nature of the problem to be addressed, and there is a general lack of responsibility and understanding on the part of principals and consultants such that normal procurement procedures and tests have not been applied.
8. This is partly the result of the utility companies less than open disclosure of information on contract proposals and lack of effective competition in the market to provide comparative prices and contracting alternatives. In most cases there are no price comparators for contracted work, and there is no effective benchmarking of the industry. Most contracted work takes the form of single action tenders for the price quoted by the utility company with less specification than is normal in contracting, with no evidence of the utility company's own competitive procurement for subcontractors, and a requirement for the customer to pay design and other costs up front. From the evidence we have, the audit and appraisal process when reviewing these cases seems to overlook the consequences and accept these procedures.
9. Accepting that this process provides the plant and equipment on and off site to service new development and business expansion, the repayment process through the end user tariff is also a concern. Understanding the basis of this repayment, effectively monitoring it and ensuring processes are in place to fully recover it from the utility company are often lacking. Ensuring that repayments passed from the end user to the landlord who has paid for the upgrade generally does not occur. What appears to be the case is that the initial developer pays the capital cost, develops out the estate and sells on the completed scheme to an institutional fund. There are no procedures as part of disposal contracts to recover any income generated. This needs to be investigated further because clearly this is not the case with large experienced estate owners and developers, such as Slough Estates.
10. We have found some evidence of established businesses suffering problems when it comes to expanding or changing their requirement for utilities. The evidence suggests that inefficiencies in this area could be a serious constraint to competitiveness. The problem centres on the high cost of utility improvements and the market procedure whereby the first customer pays for the capital plant which can then be used by others. The consequence is that, in addition to being called upon to justify the capital outlay, the customer must then use the additional capacity provided or be prepared to forego it if other customers arrive subsequently. The supply can only be secured if paid for. Consequently, there are examples of businesses paying for upgrades and not getting the full benefit, particularly as they often have to buy a considerable step in capacity. Thus plant can be in place with sufficient capacity but then this leaks away before the original customer can fully take it up. This is efficient use of capital investments but has negative consequences for particular business.
11. The regulatory framework for the utilities should in theory be a safeguard for the developer customer. The practice seems to be that the regulators have not been aware of the issues despite our discussions with them in 1998, and have taken the view that the priority is the retail customer. Business

customers are considered able to look after themselves. The evidence suggests this is not the case because of the weak competitive market in utilities and a lack of normal price information. Where the regulator has been asked to intervene, the procedure is cumbersome and protracted and loaded against the developer customer.

12. The regulatory process could assist by encouraging the general introduction of off the shelf models which would help open up utility markets, in much the same way as inset appointments in the water industry. Generally this has not happened. Another area that would help is more openness in the relationship between local investment and upgrading of infrastructure on the part of individual utility companies and price setting, particularly on transporter costs. Having local investment plans published would be a start. However, it would be helpful if there was some reasoned justification attached that related the investment to projected regeneration and economic changes.
13. The position is therefore that the effects of the operation of utility market and utility companies are poorly serving the development process, including business expansion. There is a lack of transparency and price competition in the transportation and distribution of utilities which is reflected in a higher than necessary development cost. This process reduces and distorts the development budgets of development agencies, local authorities and EP. The impact of this is felt in business expansion and competitiveness and in the general ability of the development industry to service efficiently regeneration objectives. Ironically, the DTI (as sponsor of the RDAs) has within its remit regeneration (shared with DTLR), the regulation of the utilities and competition, and business competitiveness. To date there is no evidence we have been able to discover that the issues we raise are even recognised within the Department as meriting concern.
14. Finally, there does not appear to be any structured relationship between the development industry and service providers at a national, regional or local level and in relation to particular development organisations. The level of understanding and resolve to consider mutual problems is therefore low.

Best practice and recommendations

The subject area is complex and involved and simplistic solutions may not be necessarily appropriate in addressing some of the more fundamental problems highlighted in this report. This study has also been selective in considering certain aspects focusing on the interests of the development industry. However, we have identified a number of best practice lessons and a number of areas that can be examined further by the DTI/DTLR, development agencies and EP. These are presented below:

Relationship between the Development Industry and Utility Providers

- There needs to be a national forum for considering the subject with representatives of the development and construction industries, public sector bodies, EP/DTI/ DTLR, the regulators and utility companies;
- For each region the development agency needs to co-ordinate relationships at Board and technical levels with the sitting utility companies and interface with the local development industry;

- Where new settlements, URC's and other types of longer term comprehensive developments are planned, the sponsoring organisations ought to consider the appointment of a Utility Liaison Officer.

Utilities and the Business Customer

- The problem of business wholly financing new plant and equipment for local reinforcement without being able to offset or share with other potential customers should be investigated and solutions considered;
- The principle of the provision of extra capacity by the customer also securing the supply of the commodity with the onus put on the utility provider needs to be considered further; and
- Acceptable methods for joint purchase of reinforcement by a consortium of customers, which could be encouraged by the utility companies, need to be developed.

Improving the Utility Market

- Transparency: in achieving improved relationships it will be important to agree to provide more transactional and technical information for local utility reinforcement and a basis which can be compared with other tenderers;
- Number of contractors: the industry should not be content with the level of competition which encourages single action tenders on a regular basis and actions to encourage more players are required;
- Comparative costs: the providers of transport networks should develop and agree procedures and full capital, financing and revenue cost basis for proposals which are understandable by the development industry;
- Alternative solutions: innovation is important in saving cost and devising better technical solutions and need to be encouraged with the bidding cost falling on the utility provider;
- Design and investigation costs: generally these should fall on the provider as part of the pre-contract and bid preparation but where it is felt they should be shared with the end user they should be set out clearly within a specification and the service offered at cost to be recharged to the project if the scheme proceeds;
- Competition: to improve the level of competition the industry and regulators need to encourage out of area contracting and the basis on which this can proceed, addressing technical, warranty, costing and contracting issues;
- Investment programmes: the regulators should require disclosure on local area five year investment programmes for upgrading and extending plant and equipment with the onus on providers to disclose the supply implications to customers;

- Levels of investment in the network: this needs further investigation to establish what is a reasonable level of investment and to clarify the technical and investment rules governing decisions made by utility providers and the interface with customer responsibility;
- Contracting network extensions and upgrades: bids by utility providers need to be specified in as much detail as possible, and where subcontractors are used, evidence provided of cost efficiency;
- Contract evaluation: this needs to be undertaken applying the same procurement tests and procedures as required by EU / UK regulations;
- Transporter costs: these need to be separately identified within the bid with reference to the cost breakdown and benchmarking so that value for money can be established;
- Programme and procedures: these need to be specified by the provider to the customer at the outset for incorporation into the customers planning process and then within the bid for the execution of the work;
- Repayment procedures: these need to be clearer and set out explicitly in the works proposal;
- Quality control: providers should give consideration to improving the level of quality control over the advice pre-application and in bids that they provide;
- Multi-utility solutions: these present technical and regulatory as well as commercial constraints but should be investigated and encouraged by the industry;
- Appeal procedures: these current provisions for customers appealing to the regulators for a decision on a price or contract terms need to be reviewed to ensure that they are commercially based and achieve the desired equity balance between customer and contractor;

Public Procurement

- Large developments need their own utility adviser to develop a close working relationship with the sitting utility companies and out of area ones which may be interested in supplying. Their role is to provide assistance in supplying comprehensive information on the development so that the utilities fully understand what is required and the programme;
- Where possible public developers should band together and share experience and explore joint procurement to increase the value of the works and make best use of their combined purchasing power;
- Where a number of sites are being developed together and have common requirements, it is particularly important that joint procurement and user agreement is established with rules for allocating demand on growth;
- The same VFM and quality tests should be developed and applied to utility reinforcement as those in use for most other commodities. If these are not readily available they need to be generated and

pooled by the major developers and regularly updated for local areas to ensure accurate comparisons when negotiating prices;

- Public sector compliance procedures: contracting utilities works is subject to the same EU / UK procedures as other purchases but this needs to be effectively applied by managers and auditors;
- Private sector procurement: where the public procedures have been adopted there have been considerable cost and other benefits and the advantages of this best practice need to be publicised to the industry;
- Simple models for joint purchasing: the advantages of bulk purchasing of utility improvements for a number of sites need to be developed with the application of simple and executable low cost models.

Development Information

- Development planning: the planned approach to utility provision is predicated on the public sector developing and committing to programmes and projects, and producing realistic development briefs. These can then be used by utility companies with a greater degree of confidence than at present;
- Regional, sub-regional and local development frameworks: the regeneration and development aspirations of the public sector need to be expanded in Regional Economic Strategy formulation to consider utility implications of the economic priorities, and sub-regional and local implications for reinforcement;
- Network studies: these need to be adopted with a technical specification and standards developed so that they become more useful, cost effective and user friendly;
- Planning obligations: utility reinforcement needs to be considered as an essential element of the planning obligation list for identification and costing at the time of outline planning approval;
- Interchange of technical information: a higher level of technical information on the utility requirements of developments needs to be generated in the public domain and made freely available to parties on a regular basis;
- Integration with utility asset planning: development and economic planning carried out by public authorities needs to be integrated into asset maintenance and enlargement programmes of utility companies and a higher level of confidence developed between the two processes.

Technical Understanding

- Development principals: are responsible for complex projects with considerable utility implications and they need to fully understand this and the technical and procurement options available through better training and comparative experience;
- Technical consultants: need to improve their understanding of a planned approach to utility reinforcement, including the funding and procurement aspects, and be able to fully advise clients;

- Specialist advisers: there would appear to be a shortage of up to date technical understanding of the utilities because of the lack of interchange with the utility companies. There is a need to improve the level of understanding of project managers which may be assisted by encouraging the training of specialists;
- Providers prioritising development inquiries: currently it would appear that in general utility providers are overwhelmed by technical inquiries regarding the needs of developments and have various means of processing and handling these. This process is not communicated to or understood by developers / customers. It is suggested that the industry standard needs to be reviewed with a view to improving handling times and quality and informing the customer;
- The DTI needs to develop benchmark costs and standards for use in utility contracting and pricing and institute a permanent method of updating and publicising similar to building cost data;
- Landlord and tenant agreements: need to incorporate provisions for developers to retrieve repayments from utility companies to end users for capital equipment provision and for the position to be jointly monitored.

Green Solutions

- Green alternatives: the nature of the development process has tended to adopted standard solutions for power and water supply and consideration needs to be given to devising best practice green alternatives;
- Locally generated power solutions need to be further encouraged if they are to be equally considered with standard solutions;
- The use of grey water and the production of better quality water for specialist uses need to be more widely considered;
- The widespread availability of methane in former coalfield areas co-insides with these priorities for regeneration and therefore the use of methane for power generation needs to be more actively considered in new development by EP and the RDA's.

Funding Reinforcement

- Utility studies: these need to be a fundamental part of development planning stage following masterplanning and visioning, and funds need to be provided on a generic basis for local area studies and then in devising particular solutions;
- Identification of potential cost savings: the DTI need to investigate the development funds spent on utility reinforcement to provided bench marks for potential savings to be achieved by the public sector through the planned approach and procurement and to justify expenditure on studies and investigation;
- Joint funding models: simple low cost models compliant with State Aid rules need to be identified and developed, publicised to the industry;

- Applicability for public sector funding: the provision of capital funding investment from the public sector is necessary to resolve some of the area based shortfalls. Also, a means of undertaking this and recovering costs from developers and private businesses needs to be considered and developed;
- Private sector developers with large portfolios and development programmes need to consider the benefits of central purchasing of utilities services and capital provision for improvements through a fully specified and competitive process;

Planned Approach to Utility Reinforcement

- Our research has demonstrated that utility reinforcement to service existing business and new development is currently a weakness in the development process. General consideration needs to be given to how this can be fully addressed and efficiencies introduced to improve the level of competitiveness in the utility industry. There would seem to be considerable merits and cost savings to be gained from developing a planned approach to utility reinforcement by the public sector and reintroducing some of the techniques used previously in comprehensive development schemes.

A copy of the full report in pdf format may be downloaded free of charge from the publications section of the English Partnerships web site at www.englishpartnerships.co.uk (please note that applicants will be required to complete a monitoring label prior to download).

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