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Management of Utility Street Works: An International Perspective

Background

Street works refers mainly to the work carried out by statutory utility providers in order to access buried apparatus. These 'street works' are of course very necessary as they help maintain and improve essential infrastructure, however, they come at a considerable cost; as shown by the European Gas Research Group (GERG):

> *"The direct cost of utility street works and highway works in the UK alone is more than **£1.25 billion per year**, with indirect costs associated with waste materials, disruption, traffic delays, environmental pollution and a reduced quality of life for citizens bringing costs to around **£6.5 billion per year** which equates to almost £1 million per hour. On a European level these costs are now estimated at €80 billion per year (€10 million per hour)".*[1]

Taking this into consideration, it comes as no surprise to learn that there has been a concerted effort in recent years, by all stakeholders to try and mitigate the associated direct and indirect costs of street works through effective management and innovation.

[1] (GERG) European Gas Research Group (2009) "Street Works Position Paper in support of Underground Technologies" GERG: Brussels [online] accessed 27/05/2010 available from: http://www.gerg.info/publications/position_paper_jan09.pdf

Outline

This briefing paper examines what has been done in recent years to address the negative impacts of utility street work through various means including: policy; technology; innovation and management. To achieve this, this paper will provide an international perspective of street works looking first at the policy based approach adopted in England which is in contrast to the industry led approach in New Zealand and Australia. In order to provide a European perspective the paper examine at policies in Germany where there is a combination of regulation and goodwill shown by utility companies.

England

Street works carried out by public utilities are undertaken by virtue of a statutory right or licence granted under the *New Roads and Street Works Act 1991* (NRSWA); the Act stipulates that the relevant companies do not need prior consent by the highway authority. Problems with the provisions in this legislation arose with the increase in the number of utilities, [due to technological advances, growth and deregulation] with over 150 companies now able to conduct street works,[2] leading to problems which could not have been foreseen at the time of its inception.

The *Traffic Management Act 2004* (TMA) was introduced to try to deal with many of the most palpable problems associated with street works such as, "the quality and speed of reinstatements, the notice given of forthcoming work and the co-ordination of the work."[3] Since the introduction of the TMA the Government has introduced updated codes of practice dealing with these issues[4] and a series of regulations for permit schemes[5], notices of work[6] and penalties for offences.[7]

In October 2009 the Department for Transport (DfT) hosted a street works summit in which leaders from the major utility companies, local authorities and contractors came together, led by the Minister of State for Transport with the main aim of "tackling the unacceptable disruption on our street caused by street works."[8] This led to the publication of the Street Works Summit Report and Action Plan in December 2009; this identified a number of actions that would minimise the disruption of street works:

- increasing overrun charges for traffic sensitive routes;
- revising the specification for the Reinstatement of Openings;

[2] Butcher, L. (2010) "Roads: public utilities and street works". House of Commons Library: Briefing Note [online] accessed 28/05/2010, available from: http://www.parliament.uk/briefingpapers/commons/lib/research/briefings/snbt-00739.pdf
[3] Ibid (page 4)
[4] See: http://www.dft.gov.uk/pgr/roads/network/local/streetworks/cop/
[5] SI 2007/3372
[6] SI 2007/1951
[7] SI 2007/1952
[8] Rt. Hon. Sadiq Khan MP, Minister of State for Transport in: DfT (2009) "Street Works Summit Report and Action Plan" [online] accessed: 28/05/2010, available from: http://www.dft.gov.uk/pgr/roads/network/local/streetworks/streetworks-summit-report/pdf/streetworks-summit.pdf

- increasing the rigour and frequency of inspections while targeting consistently poor performers; and
- introducing lane rental charges for the most congested urban areas

Permits

A key element of the TMA is the permitting scheme which **allows authorities to be more proactive in the management and control of activities taking place on the highway**; The major differences between the NRSWA system whereby the utilities are entitled to occupation of the street and must simply notify the highway authority of their intentions and the TMA are that:

- Works Promoters must book occupation of the street for a **specified period** of time and for a **specific purpose**;
- Highway authorities' **own works** are included;
- The Authority can attach to a **permit constraints** on dates, times and the way work is carried out;

The main benefit is that the permit will promote better time management for completion of works, as the authority has control over the variations to the conditions set out in the permit.

London

London was the first part of the UK to introduce a permit scheme as part of Mayor Boris Johnson's "war on road works".[9] The Mayor has worked with utility companies to sign up to a code of conduct to cut the delays and congestion caused by road works. One area covered in this code is a pact to try to avoid disruption during peak hours. Another example is an agreement to cover areas not being worked on with high strength plates so people can use those stretches of road that would previously have been cordoned off. Providing people with information about the work is also a key theme of the code with roadwork sites required to display details such as: who is doing the work; how long it will last; how work is progressing; and any reasons for delay or inactivity.

It was hoped the scheme would reduce the 300,000 holes dug in London's roads each year by utility companies, by encouraging companies to work together[10] and there is at least anecdotal evidence to suggest that the permit scheme is proving

[9] Greater London Authority (2010) "Declaring war on road works" [online] accessed 01/06/2010 available from: http://www.london.gov.uk/priorities/transport/smoothing-traffic-flow/delayed-road-work-penalties

[10] Greater London Authority (2010) "London's drivers first in the country to benefit from roadwork's permit scheme"

successful, with the Sunday Express reporting that road works were down [in March 2010] almost one third on the corresponding month in the previous year.[11]

Lane rental

The Mayor takes the view that this current permit scheme is merely an interim measure before the introduction of a 'full lane rental scheme'. Currently Transport for London (TfL) is in discussions with the Department for Transport about the possible introduction of such a scheme to replace or run alongside the permit scheme on the Transport for London Road Network. This would require utility companies to pay a rental charge for every day that they are working on a street, rather than a one off charge, encouraging the utility companies to manage their work time more efficiently.

As a note of caution Les Guest, Chief Executive Officer of the National Joint Utility Group Ltd suggests that the volume of street works is unlikely to decrease given the poor condition of the infrastructure and the need to upgrade as well as cope with the pressure of new development. **In his view the codes of conduct are vital, and he encourages the more widespread adoption of these.[12]** While he sees the lane rental scheme as an option he warns about over use, highlights the need for trial and suggests, as is perhaps obvious that the consumer will ultimately foot the bill.

Kent

Along with London, Kent was one of the first authorities in England to introduce permit schemes and according Kent County Council's cabinet member for highways; Cllr. Nick Chard, it has proved very successful:

> *"By working with utility firms to regulate the work they want to do on our roads we can significantly cut congestion and traffic jams, making Kent a - better place to live and work. Recently, work at the busy Oakfield Lane and Hawley Road junction in Dartford, pooled proposed major roadworks by Thames Water with those of a gas company, BT and four Kent Highway Services jobs to just six weeks.* ***This cut potential delays to drivers by 17 weeks****".*[13]

Kent Highway Services' Head of Network Management David Beaver further suggests that positive results have come much quicker than expected, saving

[11] Jones, G. (2010) BORIS JOHNSON'S 'WAR' ON ROADWORKS: END OF THE ROAD FOR GRIDLOCKED BRITAIN" The Sunday Express, June 6th 2010 [online] accessed 8th June 2010 available from: http://www.express.co.uk/posts/view/179437/Boris-Johnson-s-war-on-roadworks-End-of-the-road-for-gridlocked-Britain

[12] NJUG response to Conservative Party call for lane rental - 22/04/10 [online] accessed 02/06/2010 available from: http://www.njug.org.uk/uploads/1004_Conservative_Party_Response_v2_final.pdf

[13] Kent News (2010) "KCC hails success of roadworks permit scheme" 10th April 2010 [online] accessed 03/06/2010 available from: http://www.kentnews.co.uk/kent-news/KCC-hails-success-of-roadworks-permit-scheme-newsinkent34704.aspx?news=local

over one year of road occupation in the first quarter. Mr. Beaver also suggested that the utility companies were benefiting from the scheme through better coordination and a better working relationship with the council;[14] while the scheme would also reduce the chances of more punitive measures such as the lane rental scheme which has been suggested by the Conservative Government and the City of London.

Australia and New Zealand

Industry led solutions

From an International perspective, the UK legislation for managing the work of utilities in the road is more advanced than perhaps anywhere else[15] although in terms of good working practice other countries have led the way; something which will no doubt be addressed with the most recent codes of practice. New Zealand and Australia provide good examples of where the utility companies are proactively seeking to better coordinate their activities with legislation coming retrospectively.

New Zealand Utilities Advisory Group

In New Zealand legal access to the road is currently covered by numerous Acts regulating various industries, such as the Gas, Telecommunications and Electricity Acts and it varies considerably between one utility and another. This and the absence of any co-ordination in street works spurred the various competing utility operators and the representatives of the road controlling authorities to begin working together to arrive at a solution; this led to the formation of the New Zealand Utilities Advisory Group (NZUAG).

NZAUG recognised the need for best practice standards to be used at every road works site throughout New Zealand and in conjunction with Standards New Zealand[16] established a national code of practice in 2003 that promotes national consistency for working in the road corridor. It sets out the roles and responsibilities of Road Controlling Authorities, principal providers and contractors. It provides guidelines for road works notification, including the provision of a road opening notice process. There are also technical guidelines relating to site construction and safety processes.

[14] Personal correspondence with Kent Highway Services' Head of Network Management David Beaver

[15] Based on personal correspondence with Dr Mike Farrimond Director – UKWIR (email: 24th May, 2010) [online] accessed 01/06/2010 available from: http://www.london.gov.uk/media/press_releases_mayoral/londons-drivers-first-country-benefit-roadworks-permit-scheme

[16] Standards New Zealand is the governing body for Standards New Zealand and is an autonomous Crown entity operating under the Standards Act 1988. See: http://www.standards.co.nz

The infrastructure Bill

Legislation in the form of the Infrastructure Bill was introduced to the New Zealand Parliament in September 2009 and is due to be passed by the house in June 2010. This Bill is the result of extensive lobbying by NZAUG and its purpose is "to progress a broad suite of amendments, across several Acts, to facilitate infrastructure development by removing unnecessary barriers and improving the consistency of regulatory arrangements".[17]

The Bill amends the Telecommunications Act 2001, the Electricity Act 1992, the Gas Act 1992, and the Local Government Act 1974 to provide for consistent provisions in those Acts for access to the corridors, allocation of costs when utility operators are required to move assets, and time periods for notification and response. The Bill will further provides for the creation of a national code of practice governing how utility operators and corridor managers co-ordinate their activities[18].

(Australia) New South Wales Streets Opening Conference

The New South Wales Streets Opening Conference (the Conference) was established voluntarily over 100 years ago and incorporated a group of representatives with an interest in underground services. The Conference seeks to "…co-ordinate the interests of utility/service providers, local councils and any body which has a requirement to excavate within the public right of way";[19] to be achieved through:

- Fostering co-ordination of underground utility works in order to avoid damage and minimise their negative impacts;
- Establishing and agreeing footway allocations and practices;
- Minimising interference with traffic and pedestrian flow; and
- Encouraging the use of agreed codes of practice.

Its guidelines are not legally binding but its members will generally adhere to them and they are seen as industry best practice; This is founded on the premise that "coming to an understanding on co-operative processes provides the key to better meeting the objectives of the communities to which both Council and Utility/Service Providers supply their respective services".[20]

[17] Infrastructure bill see: http://www.parliament.nz/en-NZ/PB/Legislation/Bills/7/b/e/00DBHOH_BILL9307_1-Infrastructure-Bill.htm

[18] The New Zealand Parliament (2009) "Bill Digest: The Infrastructure Bill" [online] accessed 07/06/2010 available from: http://www.parliament.nz/en-NZ/PB/Legislation/Bills/BillsDigests/6/c/8/49PLLawBD17051-Infrastructure-Bill-2009-Bills-Digest-No-1705.htm

[19] (NSWSOC) New South Wales Street Opening Conference (2007) "Guide to codes and practices for streets opening" NSWOC: Sydney

[20] (NSWSOC) New South Wales Street Opening Conference (2009) "Guide to code and practices 2009" [online] accessed: 02/06/2010 available from: http://www.ipwea.org.au/AM/Template.cfm?Section=SOC_Guidelines&Template=/CM/HTMLDisplay.cfm&ContentID=9574

Dial Before You Dig

One of the conferences innovations was “Sydney One Call”; this was set up to provide information for developers, excavators, constructors and utilities about the location of underground assets; this local solution then evolved to become national and is known as Dial Before You Dig (DBYD). DYBD is a unique partnership between most of Australia’s communications, gas, water and electricity providers. The DBYD initiative is a free not-for-profit community service available across Australia which aims to help avoid damaging underground pipes and cables. When utilities are planning an excavation DBYD acts as an intermediary between the various utilities gaining access to the location of their assets which it aims to share within two days. While this communication greatly reduces the risk of damage caused through excavation, where a single cable or pipe cut can leave an entire community without essential services such as communications, electricity, gas and water, it is also important from a safety point of view.

Legislation

Each Australian state has its own legislation regarding street works but all will use Australian Standards as a guide, for example: Standard 1742.3 deals with "Traffic Control Devices for Works on Roads”. Similarly to the situation in New Zealand there are many codes and regulations governing road works and this can be disjointed.

In Victoria, however, the Road Management Act 2004 brings together a lot of different legislation with the purpose of establishing a new statutory framework for the management of the road network which facilitates the coordination of the various uses of road reserves for roadways, pathways and infrastructure . Schedule 7 of the Act deals with work in the roads; it includes directions regarding consultation, the use of trenchless technologies, traffic planning and notices for start and finish of works.

Germany

Due to the federal and decentralised nature of Germany, the legislation and regulations vary, not only between the counties but also between the individual boroughs. The EnWG-Federal Act (‘Gesetz über die Elektrizitäts- und Gasversorgung – Energiewirtschaftsgesetz,’ 2005) regulates the relationship between utility companies and the boroughs.[21]

The process is similar with roads under the responsibility of federal and county authorities. Paragraph 46 of the Act makes provision for the boroughs to enter leasing contracts (‘Wegenutzungsvertrag’) with the utility companies making it the responsibility of the boroughs to give utility companies the right to use streets and roads. Sub-section (1) makes provision for boroughs to make ‘indiscriminately

[21] Correspondence with Ulrike Zeh, Librarian at the German Bundestag (Federal Parliament)

available' any road/street or path for the laying and maintenance of lines to the utility company as specified in the contract. Sub-section (2) makes provision for the contract to be valid for a maximum of 20 years.

Further provisions in the leasing contract[22]

The leasing contracts can further make provision in relation to traffic management, costs and specifications for the condition of roads/streets post-street works. Examples of the details of leasing contracts can include:

- That the responsibility for the traffic management lies with the utility company;
- That the utility companies are to leave roads/streets in the condition in which it was prior to commencement of the work and can place a warranty of the condition of the road/street; or
- That the costs should be carried either wholly or partly by the utility company depending on whether the works were initiated by the borough or the utility company.

Technical guidelines

Utility companies will in practice place an order with a construction company to complete the road/street works. These contracted companies must adhere to technical guidelines[23] which are published by the Federal Ministry of Transport and are drawn up in conjunction with the Department for Building and Urban Development, the Institute for Roads and Traffic and the Federal Highway Research Institute. These technical specifications are similarly published in the Netherlands.[24]

Permits

In Aachen, North-Rhine Westfalia[25] utility companies are required to apply for a permit ('Aufbrucherlaubnis') to open up streets/roads within the borough. Once permission has been given, the utility companies will contract a construction company to carry out the work. The construction company is in turn required to apply for a 'traffic-directive' ('Verkehrsanordnung') which places responsibility for traffic management on the contracted construction company, i.e. for the management of road closures, barriers and signs, redirection of traffic etc..

[22] Leasing contract between EWE and Oldenburg (Brandenburg, Germany), 2007.
[23] Most relevant technical guidelines for street/road works are: 1. Zusätzliche Technische Vertragsbedingungen und Richtlinien für Erdarbeiten im Straßenbau ZTVE StB 09, 2009 and 2. Zusätzliche Technische Vertragsbedingungen und Richtlinien für Aufgrabungen in Verkehrsflächen ZTVA StB 97/06, 1997.
[24] Centraal Bureau Bouwtezicht (www.controleplan.nl, Accessed 13/06/2010)
[25] Conversation with Mr Border, Planning and Development Department of the City of Aachen, NRW, Germany.

Requirement to consult

There are no requirements in the City of Aachen for utility companies to consult with residents or frontagers but some utility companies do this voluntarily. The STAWAG (City of Aachen Water Association), for example, informs residents prior to the commencement of the work through the distribution of leaflets ('Buddelbriefe[26]'). In the case that the works are estimated to be major and to cause major inconvenience to the residents (i.e. complete road closures), the City Council Authority will require utility companies to inform residents and frontagers.

Compensation to frontagers

Utility companies are not required by law (i.e. 'Straßenverkehrsordnung') to pay compensation to frontagers. Provision is made that a certain amount of road/street work is to be tolerated. In the case of major road/street works with massive disruptions, utility companies have frequently and voluntarily reached an agreement on compensation with frontagers 'to avoid a public backlash'.

[26] Translated: ‚Digging-letters'