CITY OF LONDON CASE STUDY
UPTAKE OF INFRAGUIDE'S DECISION MAKING AND INVESTMENT PLANNING BEST PRACTICE (DMIP 5): *COORDINATING INFRASTRUCTURE WORKS*

National Guide to Sustainable Municipal Infrastructure (InfraGuide ®)

City of London Case Study
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EXECUTIVE SUMMARY

This case study assesses the value of InfraGuide best practices to municipalities. Examining the Decision Making and Investment Planning best practice: *Coordinating Infrastructure Works* (DMIP 5) in the context of the lessons the City of London has learned from its uptake, accounts for the bulk of the content of this report.

This report compares the best practices highlighted in DMIP 5 against the extent to which they have been incorporated and considered by the City of London. A table summarizes this comparison, and boxes throughout the report highlight practices incorporated by the City of London that have been particularly important for London, with respect to ensuring the most effective co-ordination of its infrastructure works.

Throughout, this report examines how key City of London staff viewed the benefits of implementing the practices detailed in DMIP 5. This includes their perceptions of the risks or possible consequences of implementing the practices. The report ends with an examination of the important lessons learned and the benefits London received through its concerted effort to apply DMIP 5.

- Regardless of which practices have been, or are to be implemented in the immediate future, DMIP 5 focused attention on issues related to more effective means of co-ordinating infrastructure projects that may not have been realized or communicated previously.

- Issues detailed in DMIP 5 gained legitimacy as municipal administrators used the document to validate practices they wished to recommend for consideration by City Council.

- DMIP 5 lent significant credibility to controversy-generating practices based on DMIP 5 that London was attempting to implement. This facilitated, to some degree, co-operation of those external entities, particularly utilities, with the City

- DMIP 5 was an important tool for City Council as it gave them a better understanding of the issues and facilitated implementation of those best practices.

- Finally, and quite significantly, some practices detailed in DMIP 5 were incorporated by London as a direct result of the uptake of DMIP 5. The incorporation of such practices provided the City of London with significant benefit in regards to co-ordinating infrastructure projects.

1. INTRODUCTION

This report[1] begins by summarizing Decision Making and Investment Planning document, *Coordinating Infrastructure Works* (DMIP 5). Background is also provided on the City of London. The report measures those practices in DMIP 5 that the City of London incorporated or considered. This is done under six categories:

- practices detailed in DMIP 5 that the City of London had already incorporated and continues to use;
- Practices or modifications to practices detailed in DMIP 5 that the City of London undertook and has incorporated into its operations as a direct result of DMIP 5;
- Practices or modifications to practices detailed in DMIP 5 that the City of London is going to implement in the near future;
- Practices or modifications to practices detailed in DMIP 5 that the City of London is considering for implementation in the longer term;
- Practices or modifications to practices detailed in DMIP 5 that the City of London chose not to implement, or did not consider to any significant extent; and
- Practices or modifications to practices detailed in DMIP 5 that are not applicable and were consequently not considered by the City of London.

1 The information received for this report was largely attained from interviews conducted by InfraGuide intern Dallas Alderson with City of London officials and practitioners in September 2004.

2. METHODOLOGY

This report is based largely on interviews conducted with administrators from the City of London on September 28 and 29, 2004. While discussions with individuals who have different perspectives are very important, many of the topics are somewhat subjective. In this sense, this report is not meant to draw ultimate conclusions. Rather, it is meant to garner a sense of the value of DMIP 5 from the perspective of municipal practitioners and administrators, rather than provide definitive conclusions.

3. SUMMARY OF DMIP 5: *COORDINATING INFRASTRUCTURE WORKS*

This document outlines best practices for the co-ordination of infrastructure projects, in an effort to minimize disruption and maximize value. How well the co-ordination of infrastructure projects is conducted very much affects the overall effectiveness of infrastructure providers. Public works managers often receive public complaints when poor co-ordination between infrastructure projects becomes apparent which, in turn, reflects on council. Additionally, disruption and social costs of poorly co-ordinated infrastructure projects are significant. As a result, the perception of waste and inefficiency is an unfortunate if inevitable outcome of a lack of effective co-ordination. Given this, it is important that the variety of infrastructure renewal programs a municipality undertakes be co-ordinated to the maximum extent possible.

DMIP 5 identifies and reviews best practices that fall into five different general categories: co-ordination practices, corridor upgrades, restrictive practices, approval processes /communicating needs, and technical considerations. The document also identifies the various benefits associated with improving the co-ordination of infrastructure works: reduced costs, an increased sensitivity of infrastructure managers to considerations in other infrastructure areas, reduced disruptions and social costs, improved co-ordination of long-term infrastructure works with development-related works, improved full-cost accounting, increased council and public awareness and life cycle replacement strategies, and better procedures for funding approvals.

Within the different types of practices detailed in DMIP 5 for the co-ordination of infrastructure projects, the views of both the community and the municipal council are the best indicators of success.

4. KEY FINDINGS AND LESSONS LEARNED

4.1 CITY OF LONDON BACKGROUND

DMIP 5 notes that the issues and best practices it details are influenced by the particular make-up of the community and municipal organization. It is therefore relevant to make note of some specifics related to the City of London.

With a population over 300,000, London, Ontario is a large municipality that has faced significant downloading from the provincial government. Accordingly, this has resulted in greater demands and further strained financial resources for the City. As a result, London was characterized as very competent, if somewhat cautious in its approach to municipal concerns.

The City recently underwent a significant internal reorganization, predominantly in the environmental and engineering related areas. A significant initiative during this reorganization was the creation of the division of Construction Administration to facilitate relevant changes by London. The mandate of this division centres on providing co-ordinated and consistent approaches to the delivery and administration of major capital works projects.

This reorganization was largely initiated in 2002 with the hiring of a new general manager for the Environmental and Engineering Services Department who was already involved with InfraGuide and brought with him new ideas, many of which were informed by his familiarity and involvement with InfraGuide's mandate and expertise. For the most part, this higher-level management know-how directed those organizational changes, which, in turn, facilitated the consideration and implementation of some of the new initiatives and practices from DMIP 5. In this regard, the City of London exemplifies the importance of a "champion" in the inclusion and adoption of new ideas and practices based on InfraGuide. In this sense, individuals and departments within the City of London became much more open and willing to consider and adopt the practices highlighted in DMIP 5.

5. COMPARISON OF CITY OF LONDON PRACTICES WITH THOSE OUTLINED IN DMIP 5

5.1 PRACTICES NOTED IN DMIP 5 ALREADY EMPLOYED BY THE CITY OF LONDON

5.1.1 Formal Committees

DMIP 5 notes that one common method of assuring co-ordination of infrastructure projects is the establishment of formal committees, both internal and external, with representatives from the various service areas. The City of London has had formal internal and external committees for some time.

- The External Utility Coordinating Committee (UCC) employs a rotating chair concept, meaning the Committee switches the chair role among each of the utilities and London every year. Arguably, by sharing the chair function, commitment to the mandate of the External UCC from the utilities is further strengthened as the involvement of the utilities is on equal footing with the City. The use of the rotating chair concept in the External UCC is an important, existing strength for London, and this concept was explicitly noted as a positive measure with respect to formal committees in DMIP 5.

- The Internal Utility Coordinating Committee (UCC) makes five-year plans with respect to infrastructure projects. Twenty-year rough parameter plans are developed in the respective infrastructure service areas. It was, however, noted that the focus regarding co-ordination in the Internal UCC is more concerned with potential conflict, and less about being proactive and projecting future projects or co-ordination needs, which is the ultimate outcome of an effective Internal UCC.

Figure 5–1: Membership on the City of London Internal Utility Coordinating Committee

- **Transportation**
- **Construction Administration**
- **Wastewater**
- **Water**

Figure 5–2: Membership on the City of London External Utility Coordinating Committee

- **Rogers**
- **City of London**
- **Union Gas**
- **Bell Canada**
- **London Hydro**
- **Telus Communications**
- **Hydro One**
- **Allstream**
- **Group Telecom (360 Networks)**
- **Core Energy London**

5.1.2 Multi-Year Plans

The Internal UCC makes five-year plans with respect to infrastructure projects. While relatively standard compared to other practices highlighted in DMIP 5, developing multi-year plans is nonetheless noted in DMIP 5 as being a key criteria in effective co-ordination, and the City of London continues to make such multi-year plans.

5.1.3 Co-ordination of Development Related Works

Some co-ordination with developers has consistently existed, and positive steps have been taken toward improving this kind of co-ordination, although it is generally recognized that more improvement is needed.

5.1.4 Corridor Upgrades

The redevelopment of an entire corridor is a significant strength of London. Complete corridor upgrades occur during major projects that are approved during class environmental assessments for road widening. In addition, corridor upgrades occur through the Internal UCC for smaller projects. Corridor upgrades are funded by each of the functional areas, but when a project is flagged, after budgets are approved and combined, the corridor upgrade is assigned to a particular area for co-ordination. It is felt that significant efficiency savings are achieved as a result of incorporating corridor upgrades as a standard practice, outweighing economic losses due to the potential for early replacement. However, quantifying this is very difficult. These efforts are communicated with the public via notices, although it was felt these notices are not always sent as early as they should be.

A particularly significant means of communicating with the public and ensuring corridor upgrades occur in London is through local improvement charges for curbs and gutters. When sewer and water work is going to be conducted in a neighbourhood, the City of London asks the residents whether, for a fee, they would like improvements to curbs and gutters at the same time. This ensures communication with those residents, but more important encourages the co-ordination of works in residential areas via effective corridor upgrades. Most residents will not pass up this opportunity, as it represents a significant cost savings for them, as they would have to absorb far higher costs if the curb and gutter work was to be conducted in isolation at a later date. The City of London benefits from significant efficiency gains.

Figure 5–3 : Local Improvement Charges

Local improvement charges are used by the City of London to conduct corridor upgrades. Residents enjoy cost savings and the City of London benefits with significant efficiency gains.

5.1.5 Permit Requirements

Basic permit requirements for infrastructure projects to promote co-ordination and minimize disruption to newly completed projects continue to exist in London. However, a review is planned and many new initiatives in this area are ongoing.

5.1.6 Technical Considerations

The City of London continues to use various formal planning tools noted in DMIP 5. This includes a computerized pavement management system, geographical information system (GIS) mapping, closed circuit television inspection for underground infrastructure rehabilitation requirements, and pre-installation of lateral service connections for water and sewer development.

5.1.7 Communication

The importance of effectively communicating upcoming and ongoing infrastructure works with the public is noted in DMIP 5. London sends letters to property owners and publishes notices in the local newspaper.

5.1.8 Trenchless Technologies

The City of London has increased, in the last five to ten years, the use of various types of trenchless technologies, which are noted in DMIP 5 as one means to minimize disruption by avoiding pavement cuts, if possible.

5.2 Practices or Modifications to Practices Undertaken and Incorporated by London as a Direct Result of DMIP 5

5.2.1 Formal Committees

- The External UCC has undergone significant changes recently, mainly in line with practices and ideas highlighted in DMIP 5, to strengthen its effectiveness. The roles, responsibilities, and objectives of the External UCC are more specifically delineated in a recently compiled manual. This manual, along with greater communication, helps ensure the External UCC is more organized and effective. In addition, London made a concerted effort to have greater representation on the External UCC, particularly from those individuals with greater expertise. Specifically, a vice chair position, filled by someone from London, has been added to the External UCC.

- The Internal UCC has also undergone some changes in an effort to ensure greater and more effective co-ordination: transportation has been included on the Committee and street prioritizing is now taking place. The water-engineering program has also been prioritized. In addition, while the Internal UCC has historically only examined projects one year in advance, it is making concerted efforts to look beyond that, planning for two years in advance. This type of planning reduces last-minute cancellations of projects, which used to occur relatively frequently and generally resulted in negative reactions from the public. Having a two-

year window to plan for projects is key, as now the Construction Administration division has an entire year to plan for and align various projects with budgets. In this new scenario, London can better ensure projects are executed as planned, and the public knows to expect the completion of those projects rather than impromptu cancellations. Negative publicity via public complaints due to the cancellation of projects can be largely mitigated, which, of course, is a central aim of better co-ordination through the presence of formal committees, as highlighted in DMIP 5.

5.2.2 Permit Requirements

While permits for infrastructure projects for developers and utilities have historically existed, some recent changes have led to greater control over excavations, a goal identified in DMIP 5. As a one month pilot project, the roads superintendents conducted spot checks on contractors to ensure they had a permit. In addition, while the fine imposed for working without a permit is relatively small, the City is investigating a possible increase, in an effort to encourage compliance with permit requirements.

5.2.3 Restrictive Practices: Pavement Degradation Fees

The City of London recently introduced and incorporated the use of pavement degradation fees (PDFs). Charged by the municipality for excavations, these fees are one example of a restrictive practice meant to encourage fewer unnecessary excavations and promote full cost accounting, as detailed in DMIP 5. The PDFs are charged equally to city departments and to external entities that wish to conduct excavations. While a single rate exists for each area, the current fees were gradually phased in, largely as a means to facilitate the adjustment to these fees by the external utilities. Four categories of entities that can be charged PDFs exist: city operating departments, city capital projects, developers/private actors, and utilities. The collected PDFs go into a separate account dedicated to costs associated with future pavement infrastructure. While external opposition to PDFs from utilities and developers was evident, London involved its legal department to ensure the City had the authority to charge these fees. Currently, the City of London feels its staff is generally comfortable with its ability and authority to charge the PDFs. While concerns over the accurate and timely payment of the fees continue to exist, London is working to resolve this and related issues. It should be noted that, while the implementation of these fees is an important means by which London has further co-ordinated infrastructure projects, the process behind the implementation was relatively weak in that the discussion with external utilities only happened after the fees had been decided upon.

Figure 5–4: Pavement Degradation Fees

The implementation of pavement degradation fees by the City of London was noted as the practice that was the most directly implemented as a result of DMIP 5.

5.2.4 Dedicated Funding

Dedicated funding is an important means of insulating service areas from budget cuts. Dedicated funding entails money set aside for a specific service area where the use of those funds is restricted to that area alone, as opposed to funds being raised via general tax revenue. In London, dedicated funding sources exist for sewer and water utilities, in addition to the anticipated revenue from pavement degradation fees. With the implementation of these dedicated funding sources,

ensuring room in the budget for related infrastructure projects has become easier. It should be noted, however, that funding for roads continues to be taken from general tax revenue, making this area much less insulated. Roads have, as a consequence, been hardest hit by budget cuts, despite the broader, nation-wide agenda related to securing funds from a gas tax for roads.

5.2.5 Corridor Upgrades

While corridor upgrades have historically been effectively used, the City of London recently incorporated some changes to further strengthen their effectiveness. Now, most corridor upgrades go through the new Construction Administration division, which increases the potential for overall co-ordination.

5.2.6 Communication

The City of London has made a concerted effort to improve effective communication with the public regarding planned infrastructure works. The significance of an effective communication strategy is clear and is noted in DMIP 5. Since 2001, London has had a road construction information link on its Web site. It contains both a map and a listing of infrastructure projects in the City. Significant efforts to improve this communication approach are now under way, including more frequent monitoring, since it was not always up to date. In addition, the Web site allows residents to access further details. The popularity of this site is evident, as it has received an increasing number of hits. This strengthens communication with the public regarding ongoing and future projects and reduces the number of phone calls that take up City of London staff time.

5.3 Practices or Modifications to Practices in DMIP 5 that London Is Moving Toward Implementation

5.3.1 Co-ordination of Development Related Works

An important way to co-ordinate projects is to include developers in the process. The City of London is considering potentially placing some type of conditions on development in an effort to encourage co-ordination. A database is also being set up to track the City's experience with contractors and encourage positive working relationships.

5.3.2 Social and Environmental Costs

The City of London is considering implementing lane rental charges, where the entity (whether utility or developer) taking up street lanes must pay a fee. Instituting lane rental charges is an important means to account for the social costs of the congestion caused by development projects. DMIP 5 singled out lane rental charges as a particularly effective and innovative means to account for social and environmental costs. The City of London is attempting to evaluate the potential effectiveness of lane rental charges by means of a modelling system. If this is implemented, it is expected that lane rental fees may not be possible in every case and that such charges may take a number of years to implement. Exemptions may be considered, particularly if there is a benefit to the street (i.e., putting in a street lamp). Exemptions may also be considered for projects of a short duration to encourage developers to pursue their project in a timely manner. Exemptions may also be considered for unavoidable projects.

5.4 PRACTICES OR MODIFICATIONS TO PRACTICES IN DMIP 5 THAT LONDON MAY POTENTIALLY CONSIDER LONG TERM

5.4.1 Technical Considerations: Formal Planning Tools

The City of London has considered some kind of integrated infrastructure management program. If that occurs, administrators may institute a formal asset management branch.

5.4.2 Block Funding

There is some movement toward instituting block-funding mechanisms in London, as one way to initiate early approvals, which, in turn is important for effective co-ordination, as noted in DMIP 5. Efforts to simplify the budget process in 2004 were viewed as unnecessarily complicated, resulting in inefficiencies. The budget process is moving toward a more simplistic approach, which would aid both the public and London City Council. A potential benefit is the increased ability to fund roads adequately, which has been the area hardest hit by budget cuts to date. However, despite the fact that block funding is recognized as an important mechanism for the effective co-ordination of infrastructure projects, the challenges with implementing block funding are significant and largely related to the perception City Council members have of a loss of control. Additionally, London feels there are negative aspects in losing the distinction between water, sewer, and debenture sources of financing, which could occur if block funding was substantively instituted.

5.5 PRACTICES IN DMIP 5 THAT LONDON IS NOT CONSIDERING

5.5.1 Restrictive Practices: No Cut Rules

No-cut rules specifying a moratorium on excavations for a specified number of years do not exist in the City of London. There are no plans to implement such a policy, largely because administrators felt it would be difficult to enforce as cuts can occur for many reasons and could sometimes involve London's own work crews. Negative perceptions could arise if city work crews cut while the same cuts are not allowed by external entities. City administrators felt it would be cumbersome to implement a no cut rule, because historically contractors and developers have had little opposition to conducting pavement cuts. It would not be easy for London to overcome this precedent. To do so would more likely invite some degree of conflict with developers or utilities. Communicating longer-term plans and insisting on trenchless technologies on new roads were considered more amenable in terms of coordinating work while limiting potential conflict or negative perceptions.

5.6 PRACTICES IN DMIP 5 THAT ARE NOT APPLICABLE TO LONDON

5.6.1 Formal Planning Tools

DMIP 5 discusses the restructuring some municipalities have done in developing a formal asset management branch. While the City of London sees the value in having such a branch, its system is not integrated so developing a formal branch of this type is not currently possible. First, an integrated infrastructure management program must be developed before the creation of a formal department becomes applicable.

6. KEY FINDINGS AND LESSONS LEARNED

Being exposed to new ideas with respect to increasing the sustainability of a municipality's infrastructure is always beneficial, regardless of whether those ideas are fully incorporated. The City of London expanded its range of choices in efforts to improve the co-ordination of infrastructure works, because of its exposure to new ideas with the use of DMIP 5.

Issues discussed in DMIP 5 gained legitimacy. In this sense, DMIP 5 served as a vehicle, which allowed municipal administrators to address the issues highlighted in the best practice.

Some practices *were* implemented as a direct result of the uptake of DMIP 5 and provided the City of London with significant benefit toward more effective co-ordination of its infrastructure projects.

Many of the new practices that the City of London undertook, particularly the implementation of PDFs, caused friction with external utilities. Consequently, DMIP 5 was a particularly useful tool when those external utilities challenged the City. As a nation-wide, endorsed reference tool, DMIP 5 brought significant credibility to the practices the City was trying to implement with the external utilities.

DMIP 5 was an important tool for City Council, in the sense that council members were able to gain a base understanding of the issues. When municipal administrators approached City Council with regards to these issues, they gained credence.

Figure 6–1 : Summary of City of London Practices Relative to DMIP 5

EXISTING PRACTICES	INFRAGUIDE'S MEASUREABLE IMPACT			PRACTICES NOT BEING CONSIDERED	PRACTICES NOT APPLICABLE
	Practices incorporated as a direct result of best practice uptake	Practices being implemented in the short term	Practices being considered for the long term		
Formal committees Multi-year plans Corridor upgrades Permit requirements GIS mapping Public notices in newspaper Trenchless technologies Dedicated funding for sewer and water	External Utility Coordinating Committee—vice chair position Improved projections from committees Spot checks for permit requirements Investigation into increase in fine for developers/utilities working without a permit Pavement degradation fees Communication via updated Web site: GIS mapping available to public on the Web	Database of contractors to distinguish those with a good record to encourage compliance. Consideration of conditions on development Lane rental charges	Integrated infrastructure management program Block funding mechanisms	No cut rules	Formal asset management branch