



**Moreland** City Council

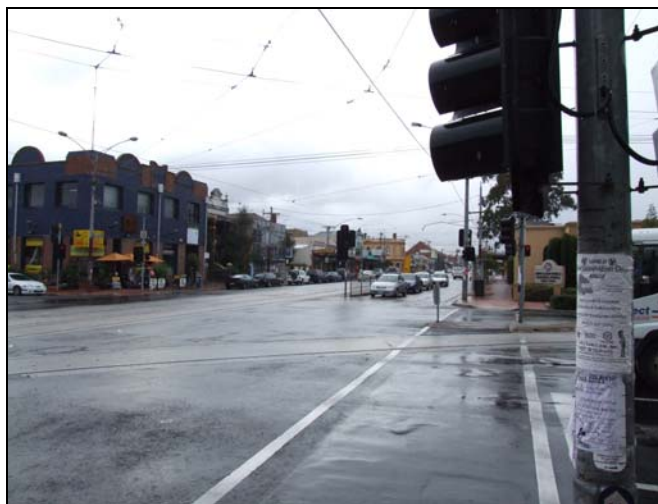
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**BRUNSWICK MAJOR ACTIVITY CENTRE**

**MUNICIPAL AND SERVICE INFRASTRUCTURE**

**BACKGROUND AND ISSUES PAPER**

May 2007



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## Municipal and service infrastructure

### Introduction

The orderly design, construction and maintenance of infrastructure is critical to the creation and maintenance of a high quality, high amenity urban environment. Poorly coordinated infrastructure can result in visual clutter, disruption to the coherence of building and landscape design and, at worst, impediments to movement, amenity and economic activity.

The responsibility of managing infrastructure such as water and power supply and telecommunications is dispersed between a range of authorities and providers, often in a market context.

As Brunswick changes, the increase in population and the physical changes to the suburb will place increased demand on the existing infrastructure, as well as placing an increased onus on all those responsible for the infrastructure to plan for, and manage it in a coordinated, integrated and environmentally responsible way.

### Power infrastructure

Electricity is generally reticulated to Brunswick via medium- and low-voltage overhead powerlines. These lines are at their most visually intrusive in Sydney Road and along the Merri Creek valley. In the case of Sydney Road the combination of overhead tram and powerlines creates a visual jumble which seriously compromises the character of the streetscape. In response to community concern over this situation Moreland City Council adopted a Relocation of Overhead Cable Strategy Policy in 2000, and subsequently commissioned a Feasibility study into the possible relocation of overhead power cables in Sydney Road, and implemented a cable relocation pilot project on Sydney Road between Blyth and Hope Streets, Brunswick. See Appendix 1 for details.

A number of regional and local electricity substations currently exist throughout Brunswick, located on private and public land, including in some instances on Council land and within Council buildings. The trend to the provision of such sub-stations is to locate them in the basement or ground floor of new development, or as freestanding 'kiosks.'

An example of a poorly placed local electricity substation is located on the DeCarle Street frontage of Warr Park. **Photo??**

### Drainage infrastructure

Stormwater collected in Brunswick currently drains by a combination of road channels and underground drains to the Merri Creek in the East, and the Moonee Ponds Creek in the west. This system of drains represents the conversion of the former creek network into an engineered system, with the associated loss of landscape and habitat qualities. In some locations the development of the suburb with subdivisions, buildings, parks, roads, lanes and drainage infrastructure has resulted in flooding problems, represented in the Moreland Planning Scheme by the Special Buildings Overlay (see Planning Issues Map P-4). Opportunities should be sought to manage stormwater in ways that:

- Reduce flooding.

- collects and stores water for use in watering Council and other parks and sports fields.
- Implement water sensitive urban design (WSUD)
- intercept rubbish and pollutants
- retrieve the lost landscape and habitat qualities of the local creek network.

Council is currently undertaking flood mitigation works at McAllister Street in East Brunswick.

Melbourne Water is currently implementing flood mitigation development on the Melville Main Drain in West Brunswick.

### **Water Supply infrastructure**

Mains water is currently distributed throughout Brunswick by an underground pipe system largely developed in the 19<sup>th</sup> Century. As this infrastructure ages, its replacement within the established area can be problematic. For example, the current project being undertaken by Yarra Valley Water to replace the water main in Sydney Road is being achieved by duplicating the main in parallel streets to avoid the cost of manoeuvring around the traffic and other underground in Sydney Road.

### **Transport infrastructure**

In the urban environment, infrastructure provided for transport management includes traffic signal control boxes, traffic lights, bus shelters and signage. An example of very poorly located infrastructure is the VicRoads signal control box in ????.

### **Telecommunications infrastructure**

Sydney Road serves as a corridor for major telecommunications infrastructure, such as underground fibre-optic cables. The location of this infrastructure has significant implications for the management of the streetscape, particularly in regard to the location of trees and the selection of paving materials.

In recent years towers supporting mobile phone and other digital telecommunications equipment have become a common feature of the cityscape. The location of these features must be managed to minimise their intrusion into important vistas, particularly in areas with significant heritage values.

During community consultation the speed of Broadband internet access in Brunswick has been raised. Given the potential for Brunswick to develop as a location for small scale business/offices, slow internet connections could be a deterrence.

### **Municipal infrastructure**

Infrastructure which is managed by Council includes roads, footpaths, kerb and channel and local stormwater drainage. The coordination of these features with the design and development of streets, lanes and other public places is critically important to the success of the activity centre.

## Further Work

- Discussions with service infrastructure providers.
- Mapping of all significant infrastructure.
- Investigate issue of Broadband Internet infrastructure and service quality.
- Identification of future significant infrastructure development initiatives.
- Listing of specific projects to resolve problems with existing infrastructure, or projects which may offer opportunities to incorporate improvements to infrastructure.

## Appendix 1: Overhead Cable Relocation

### Relocation of Overhead Cable Strategy Policy, 2000

The proliferation of above ground electricity and telecommunications supply during the twentieth century has left an inheritance of overhead services which interlace some of the countries most attractive urban settings. The infrastructure associated with electricity supply and the telecommunications industry are the subject of community concern around issues such as urban amenity, environmental quality, urban planning and health and safety. Technical developments now mean that placing this infrastructure in more appropriate locations is a viable option for most new developments and existing sites which are compromised by the above ground infrastructure. In situations where undergrounding is not feasible there are now alternative methods for reducing the visual and electromagnetic field impacts of this infrastructure.

While recognising that electricity and telecommunications infrastructure are essential elements which enhance social interaction, promote community safety and create comfortable living environments, the policy sets out Council's commitment to the phasing out of overhead cables and minimising the health, safety and amenity implications of such infrastructure. Council believes that the environmental, amenity, health and urban design benefits related to the relocation of cables make it imperative that a comprehensive relocation program is facilitated through all levels of government in cooperation with the private sector.

The existence of above ground infrastructure represents a significant constraint on realising opportunities for urban improvement, and its relocation will reduce aerial clutter and increase opportunities for a range of both public and private realm improvements.

The policy identifies that the most significant cost of relocating overhead infrastructure is the capital costs associated with the physical works. At the time of writing (2000) costs equated to \$6000 per property, although costs were reducing with developments in relocation practices and processes. The total cost of cabling relocation will be further reduced by incorporation of alternative methods of infrastructure relocation including an appropriate mix of underground; line removal; aerial bundling and relocation of cables; relocation of aerial cables; and appropriate combination of these methods.

Due to the limited funds available for undergrounding projects the policy acknowledges the importance of establishing a selection criteria and process to determine how the funds can be expended most effectively and efficiently. The policy provides a selection framework intended to maximise the benefits gained, which is to be used to prioritise Council's support of relocation projects and be the basis of application for partnership funding from government agencies and utilities. The principles for assessing and prioritising specific projects include:

- Improve urban amenity and design
- Optimise project funding resource effectiveness
- Reduction of exposures to high electromagnetic fields
- Ecologically sustainable construction processes
- Social equity
- Community consultation

The policy includes a range of strategies to increase relocation of above ground infrastructure in Moreland. These include:

- Increasing the total pool of resources available, while ensuring equity of contributions and provision of efficient contributor financing options
- Select and undertake projects which contribute the greatest range of benefits
- Provide an improved level of community understanding about cable relocation issues
- Increase the amount of new development in Moreland which underground services and relocate adjacent infrastructure
- Capture available synergies by co-ordinating capital works with relocation projects to reduce overall costs and disruptions
- Promote and develop a broad acceptance and support for the benefits of undergrounding projects
- Support the development of relocation techniques that decrease costs and increase the ease of undergrounding
- Support undergrounding projects sponsored by other organisations.

The policy recommends the establishment of a Council steering group to oversee the implementation of this policy, which should include members from a broad range of Council activity areas. This group would complete an action plan for the completion of the tasks in the policy.

The policy concludes that it is imperative to achieve commitment to a national strategy that includes workable funding agreements involving all levels of government, electricity distribution companies, telecommunication companies and the community. Both national and local relocation programs and strategies should be based upon a cost-sharing which equitably distributes the cost of undergrounding between the stakeholders, while ensure that the adverse equity and distortion effects are minimised through the careful assessment of the social, environmental and economic implications of the proposed cost-sharing.

In the interim Moreland has undertaken to begin a local undergrounding program which focuses on increasing the funds available and applying them to areas of highest priority and returns.

#### Undergrounding Cables Feasibility Study – Sydney Road

Council conducted a feasibility study in 2000 to assess the costs and benefits of undergrounding and/or relocating cables, and the prioritisation of areas where would be feasible to carry out undergrounding to improve streetscapes and reduce the visual clutter of cables and poles. The study covered the full length of Sydney Road/Hume Highway between Park Street, Brunswick and the Western Ring Road, Fawkner but focused on key sections such as the Brunswick and Coburg shopping areas.

The report identified that there are three alternative ways to reduce the impact of overhead cables: undergrounding; aerial bundling of cables attached to existing poles; and façade mounted bundled cables attached to existing buildings above verandah level. The costs and feasibility of each of these varies significantly depending on the location and existing services. The study recommended a pilot project be undertaken to

try to demonstrate how each option would be applied in Sydney Road, with the preferred location for the pilot project being the Brunswick Hill section of Sydney Road.

The conclusion of the study was that cable relocation is a desirable if highly expensive means to improve urban amenity and develop more environmentally acceptable infrastructure, and that a demonstration project in Sydney Road would help develop local understanding of what is achievable and the need for other parties to participate and contribute financially.

### Sydney Road Cable Relocation Pilot Project

Following the endorsement of the Moreland City Council Underground Cable Feasibility Study by Council in April 2000, a pilot project was implemented in line with the recommendations of the feasibility study. The project involved the relocation of overhead power cables in Sydney Road between Blyth and Hope Streets, Brunswick, with some cables relocated underground and others relocated in less obtrusive bundles on building facades depending on the other infrastructure in the location.

The implementation project entailed negotiating a close working relationship and agreement with Citipower and Council, developing support from traders and property owners and an extended public tender process for the design and construction of the project. Success of the project was considered critical for securing funds from the Powerlines Relocation Committee and Citipower for future cable relocation projects.

The project was completed in 2003/4?, however to date no review of its success has been undertaken.