

**CITY OF JOONDALUP - REPORT FOR 27 JUNE 2000****MOBILE TELECOMMUNICATION FACILITIES DISCUSSION PAPER  
00415**

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**WARD**

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**SUMMARY**

The purpose of this report is to examine planning issues and the City's approach to telecommunication facilities. The report recommends that a policy be developed to guide Council's decision making in relation to telecommunication facilities.

During the past several months three new Mobile Telecommunication Carriers have approached the City to establish and expand their telecommunication network within the City of Joondalup. The push for additional telecommunication facilities is as a result of the following developments within the mobile telecommunication industry:

- Additional mobile telecommunication licences being issued by the Federal Government;
- Increased customer and community demand for new services;
- Increased competition for market share;
- Increasing demand for improved network coverage.

Pressure is being experienced by the City in its capacity as a planning decision making body and as a landowner or custodian of crown reserves to approve additional telecommunication facilities. Carriers experiencing 'coverage dropouts' in the network will seek to co-locate in the first instance and this usually occurs on existing telecommunication facilities sited on reserved land and buildings. Where Carriers advise there are no opportunities for co-location, applications are made to the City for planning approval to establish new mobile phone towers.

The City's past experience in dealing with telecommunication facilities has shown that the most common community concern relates to health issues from microwave transmissions, loss in amenity due to height and visual aspect of structures, loss of property values and noise. On the other side of the telecommunications debate, there is support for the telecommunication facilities from the broader community and business users.

The Telecommunications Act 1997 (as amended) legally binds carriers to conform with the Local Government Town Planning Scheme. Development applications are required for all 'High Impact' facilities, such as new mobile telephone towers and other facilities as determined by the telecommunication codes. For 'Low Impact' facilities, carriers are able to install these facilities without obtaining approval under TPS1 on private land. However, 'Low Impact' facilities on Council Reserves and buildings require the approval of the City.

The City needs a Telecommunications Policy that is based on a balanced approach that considers stakeholders' concerns within an open and accountable decision making framework.

## BACKGROUND

### Mobile Phone Demand

Use of mobile phones is growing according to Optus at the rate of 15 percent each year. Optus predict that there would be in the order of 7.5 million mobile telephone users in Australia by the year 2001. Residents, general public and business community in the City of Joondalup makes up part of the above demand.

The above demand for better service and coverage has resulted in increased pressure from new carriers for low impact facilities on existing mobile telephone facilities. Many of these existing telecommunication structures are on Council and Crown Reserves. There is also pressure for new sites due to over-capacity of existing sites and other new areas being developed within the City.

### Telecommunication Carriers

The following list includes current telecommunication carriers in Australia:

- Optus
- Telecom
- Vodaphone
- AAPT
- Hutchinson
- One Tel

There are currently approximately 12 mobile telephone towers and base stations in the City of Joondalup (site plans available on request). Most of these facilities are on land zoned Parks & Recreation and water catchment under the Metropolitan Region Scheme, Residential, Service Industrial, Whitfords Town Centre and Joondalup City Centre under TPS1.

### Telecommunications Act 1997 (as amended)

During the major “roll out” of mobile telecommunication facilities in the early 1990’s, carriers were given powers by the Federal Government to construct mobile telecommunication towers and equipment without requiring Local or State Government approval. This immunity provided the carriers with the potential to set up a national mobile telecommunication network within a short time frame.

The Telecommunication Act 1997 was subsequently amended to require that all telecommunication carriers obtain approval to commence development, pursuant to Town Planning Schemes from Local Authorities for “high impact” facilities. Telecommunication facilities are defined according to “high impact and low impact”.

- “High impact” facilities include new mobile telephone towers, antennas and dishes if they were a greater than a prescribed size.
- “Low impact” facilities basically include the installation of additional telecommunication facilities onto an existing phone tower. The size of the additional facility varies according to the appropriateness of the location. For example an antenna or dish may not be greater than 1.2 metres within a residential, commercial, industrial or rural area or 1.8 metres in diameter within an industrial or rural area. Both situations are defined as low impact.

### Planning Approvals

High impact proposals on reserved land under the Metropolitan Region Scheme require determination by the Western Australian Planning Commission (WAPC). The WAPC take into consideration comments from the Local Government Authority and other State Departments. The Town Planning and Development Act 1928 as amended stipulates the process of determining development, rights of appeal and non-compliance procedures.

Under the Telecommunications Act 'low impact' facilities do not require local/state approvals unless the land/building is owned/vested by the Local/State Government. The carriers are currently consulting with the City regarding all low impact facilities. Carriers are not bound by the City's requirements for facilities on private land/buildings but the City determines on reserved land vested under section 20A of the Town Planning & Development Act whether to approve a lease.

### How Mobile Phones Work

Mobile telephones are essentially a sophisticated two-way radio. Telecommunication facilities work by simply sending and receiving radio signals (radio frequency (RF) or electromagnetic energy (EME) signals to and from an antenna attached to a radio transmitter. These are called mobile phone base stations. These base stations link mobile phones to the rest of the telephone network. A base station consists of radio receivers and transmitters which provide coverage to a geographic area known as a cell. As a user travels from one cell to the next a call is transferred from one base station to the next allowing the call to be uninterrupted. "Cells" vary in radius from 100 metres to 35 km. The reason why some carriers are not able to co-locate with other carriers is the different wave bands each carrier has and cell coverage which require alternative and new sites to be built.

Electromagnetic energy (EME) is energy that travels through air. It occurs naturally in the form of invisible light. Some household equipment that emits EME includes television, radio and even microwave ovens. The electromagnetic spectrum covers a large range of frequencies. EME is also known as non-ionizing radiation. This means that it is not capable of breaking chemical bonds in biological structures (humans) or removing electrons according to carriers.

## **DETAILS**

### Current Approach

The current approach taken by the City places an emphasis on co-location of telecommunication facilities and considers the siting of new towers as the last possible option. When telecommunication tower proposals are lodged with the City the assessment criteria include acceptability of location, impact on amenity of the area, proximity to sensitive uses such as houses and schools and whether there are any other alternative sites or co-location of facilities. A planning assessment is conducted on this basis and any new mobile phone tower (high impact facility) is referred to Council for determination following advertising in the local community. A planning determination is then required from the Council pursuant to the City of Joondalup TPS1 taking into consideration the merits of the proposal and any submissions for or against the proposal.

Low impact facilities are currently referred to the City by way of a letter and plan of the proposal with reference back to the Telecommunications Act that the proposal does not require planning approval from the City due to its low impact statutes. In this situation the City has no

legal basis to require an approval under TPS1 and this is acknowledged to the carrier accordingly.

Any 'Low impact' telecommunication proposals on reserved land and building vested in the City are referred to the Council for determination including lease approvals.

### Health

There is a community concern that the long-term health risks associated with mobile phone towers and mobile phone use is not conclusive and that a precautionary approach needs to be undertaken. This means siting towers away from residential areas and other sensitive uses such as schools until there is conclusive scientific evidence to the contrary that there are no health risks.

International and national scientific studies conclude that there is no substantiated evidence to suggest living near a mobile telephone tower causes adverse health effects. Telecommunication carriers follow safety limits regulated by the Australian Communications Authority (ACA). The prescribed limits are based on scientific experience and reviews from bodies such as the International Commission for Non-Ionizing Radiation Protection (ICNIRP). The guidelines for mobile base stations relate to radio frequency (RF) signals or EME. The RF exposure limits regulated by the ACA are some of the most stringent in the western world. These limits are set out in an Australian Standard on Radio Frequency Radiation published in 1998 (AS 2772.1). The standard also acknowledges that given increasing use of EME generating equipment in every day life, all possible efforts should be made to keep exposure as low as reasonably achievable. The Telecommunications Act requires compliance with the Australian Standard and provides for substantial fines in the case of any breach. Typical mobile phone towers emit low levels of EME, in fact less than 1% of the exposure level indicated as acceptable in the Australian Standard. According to the Australian EME Public Health Issues Secretariat, exposure measurements of EME around typical mobile base stations in Australia are hundreds of times less than the limit regulated by the ACA.

Notwithstanding the above comments there is, however, a divergence of scientific opinion from independent studies into health impact associated with mobile telephone towers to suggest the opposite to the above findings. The Commonwealth Government has set aside around \$4.5 million to support research into health issues associated with the mobile phones and mobile telephone towers.

There are two alternative approaches to the siting of new facilities:

- Adopt a precautionary approach to the siting of new mobile telephone towers in view of the need for further evidence regarding health impacts.
- Adopt a pragmatic approach to the siting of new telephone towers based on current scientific knowledge of the health implications based on the current Australian Standards.

In absence of scientific evidence of adverse health effects and the extremely low levels of EME emitted from base stations, it would be difficult to justify a policy that prohibited base stations purely on the grounds of EME exposure. In view of the lack of evidence over the possible health impacts it would be advisable as with the City of Wanneroo approach recently to adopt a precautionary approach to the issue where this is achievable and encourage such high impact facilities outside residential areas. In doing so the visual impact of such high impact facilities could be minimised.

Noise

Noise from mobile telephone towers is not a relevant issue. The only equipment, which emits noise, is an air conditioner similar to a domestic air conditioner from an on-site mobile base station. This air conditioner is required to cool the electronic equipment within the base station.

Amenity and co-location of facilities

The telecommunications Act requires carriers to investigate co-location of facilities. The potential in doing so for new structures is therefore greatly reduced. Co-location is the first preference for carriers due to significant financial and commercial benefits to be gained. With detailed attention at the assessment stage, innovative and compatible designs relating to size, shape and colour could be achieved, thereby reducing the visual impact of such structures. Mobile telephone antennas could be sited on rooftops, existing radio masts, freeway overpasses, industrial sites or other existing structures. Within the City of Joondalup, most of the municipality is characterised by suburban residential development with pocket parks and reserved land for the freeway and other public purposes.

Reduction in size and proliferation for new facilities is important as the community concerns generally view that the bigger the structure, the more impact they have on their quality of life. As such, co-location may not be the best solution if the existing telecommunication facility is already a large structure. This would depend upon the circumstances of the case and the use of adjoining land.

Effects of Telecommunication Towers on Property Values

There is a community concern that property values could be reduced by proximity to mobile telecommunication towers. There is no known published findings to suggest that land/property values are affected by mobile telephone facilities.

Council Controlled Land

The implications for Council controlled land regarding the siting of telecommunication facilities depends on the type of crown reserve created and whether the Council has the vesting authority to control development and its use. A rental income could be derived by the Council where the reserved land was created as part of the initial subdivision under section 20A of the Town Planning & Development Act. There may be situations where reserved land is alternatively created from a Crown Estate. In this later situation the leasing proceeds are passed onto the Department of Land Administration (DOLA).

**COMMENT**

To cope with the demand to install new telecommunication facilities, the City needs to develop a planning framework on how to assess and determine proposals on private land and Crown Reserves and buildings within the municipality. The City's role may fall into 2 areas:

- 1 as a custodian of reserves or public land, upon which applications are made; and
- 2 as a determining authority in the case of 'High Impact' proposals.

Community attitudes and need for infrastructure requires to be 'factored' into the evaluation of proposals.

Some Local Governments in Western Australia have promulgated policies to guide and control the development of mobile telephone facilities. The Policy could consider the following matters:

- Demand for telecommunication facilities
- Health issues
- Visual impact issues
- Co-location of facilities
- Acceptable and unacceptable locations for mobile telephone towers
- Designate desirable buffer distances to sensitive uses such as schools and houses
- Use of Reserved Land
- Approval and advertising procedures under the Metropolitan Region Scheme and Town Planning Scheme relative to the Telecommunications Act 1997
- Other telecommunications facilities eg broad band aerial cabling

Taking into consideration the above issues related to mobile telephone facilities, the City has also to acknowledge the importance to the City, community, residents and business sector for good mobile telecommunication services.

#### Policy

A policy for mobile telecommunication facilities is needed to coordinate the City's approach to telecommunication issues in the community. It must recognise that mobile telephones have become an integral part of Australia's telecommunication infrastructure. Community concerns could be addressed regarding the visual impact of towers and bulky head frames and the health impact of EME exposure. The policy needs to adopt a precautionary approach to the health issue of EME where this is achievable and encourage such "high impact facilities" outside residential areas. In doing so the visual impact of such high impact facilities could also be minimised. The policy obviously needs to work with the telecommunication carriers and the community for it to be successful.

In order to give the policy status it needs to be prepared and adopted as a Planning Policy pursuant to Clause 5.11 of TPS1. The process of adopting a Planning Policy is set out under clause 5.11 of TPS.

A Planning Policy is intended to guide the Council's decision making and is not binding on the Council. A planning Policy does not have the force of statute such as TPS1. The Council is required to have due regard to the provisions of a policy and objectives of the policy in reaching a decision on applications.

It is further recommended that the Council endorse the current approach to "low impact facilities" that are exempt from approval under the City's Town Planning Scheme No 1.

#### Industry Stance

The Western Australian Municipal Association (WAMA) has been involved in the issue for several years, and played a major role in the development of a kit to assist local authorities in the assessment of applications (developed in 1997). With the increasing number of service providers, there may be a need to revisit the kit to examine the appropriate strategy for management of up to six carriers wishing to provide service within each cell area. An approach to WAMA on behalf of Local Government is recommended.