

From: [Gillian Cavanagh](#)
To: ["fyi-request-34177-7e053b79@requests.fyi.org.nz"](mailto:fyi-request-34177-7e053b79@requests.fyi.org.nz)
Subject: Response to official information request - [REDACTED] - Telecommunications Tower at 406 Elles Road
Date: Monday, 13 April 2026 1:50:00 pm
Attachments: [Decision LUC.2011.66.pdf](#)
[HPC.1997.1861.pdf](#)
[Certificate LUC.2011.66.A.pdf](#)
[Certificate LUC.2011.66.pdf](#)

13 April 2026

[REDACTED]
fyi-request-34177-7e053b79@requests.fyi.org.nz

Dear [REDACTED]

DECISION ON OFFICIAL INFORMATION REQUEST

I refer to your official information request dated 20 March 2026 for Telecommunications infrastructure – 428 Elles Road, Invercargill.

The information you have requested is enclosed below.

Any resource consents, certificates of compliance, planning records, or internal assessments relating to this infrastructure, including records for installations that may have been permitted under the National Environmental Standards for Telecommunications Facilities.

Consents have previously been granted for a telecommunications tower, at 406 Elles Road, in 1997 and 2011 (refer to attachments). These consents were granted in accordance with the any regulations and the district plan operative at the time.

Council holds no records relating to a mast being erected at this site in or after 2020.

The Resource Management (National Environmental Standard for Telecommunication Facilities) Regulations 2016, provides national consistency in the rules surrounding the deployment of telecommunications infrastructure across New Zealand, while ensuring the effects on the environment are minimised and managed appropriately.

The Invercargill City Council Operative District Plan 2019, contains rules regarding telecommunications facilities. The Telecommunication and Radiocommunication Facilities rules can be viewed [here](#), pages 14 to 16.

The name(s) of the telecommunications company or companies that own or operate this equipment.

The site at 406 Elles Road is a 2Degrees site.

The names and job titles of council staff who processed, assessed, or approved the infrastructure or documentation.

As noted above consent decisions granted in 1997 and 2001 were in accordance with the any regulations and the district plan operative at the time. Please refer to the attached

documents.

Any documentation describing the intended function, technical specifications, or purpose of the equipment

and whether in fact it's functioning as 6g

If no records exist, please confirm that the council holds no relevant information regarding this site.

Council holds no other records in relation to your query at this site.

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Yours sincerely

Gillian Cavanagh
Manager – Consenting and Applications

Encl Decision LUC.2011.66
 Certificate LUC.2011.66
 Certificate LUC.2011.66.a
 HPC.1997.1861

**RESOURCE CONSENT UNDER PART VI OF THE
RESOURCE MANAGEMENT ACT 1991
CONSENT No. LUC/2011/66**

APPLICANT: 2 Degrees Mobile Limited

LOCATION OF PROPOSED ACTIVITY: 406 Elles Road, Invercargill
Lot 1 DP 367605

DESCRIPTION OF ACTIVITY:

Upgrade an existing monopole. A ringframe will be added to the existing headframe and three 1.9m long panel antennas will be attached to it. Two 600mm diameter dish antennas will also be attached to the monopole at a height of 17m. The new antennas will be positioned over the maximum permitted height for telecommunications facilities within the Domicile Sub-Area.

DECISION:

Granted on 16 May 2011.

The following condition was imposed under section 108 of the Resource Management Act 1991:

1. The proposed activity shall be undertaken in accordance with the plans and supporting information submitted with the application LUC/2011/66 received by the Council on 3 May 2011.

Reasons for conditions:

- The condition was imposed to ensure consistency with the application.

Advice notes:

1. Under section 125 of the Resource Management Act 1991, this resource consent will lapse in five years, unless it is given effect to within that time.
2. It is the applicant's responsibility to comply with all conditions imposed on this resource consent prior to and during (as applicable) the exercising of the resource consent.
3. The Council holds the following information about this property that you may find useful. The property:
 - Is identified on the Invercargill City District Plan maps as being in the low wind zone. The wind zone map produced is based on NZS 3604:1990 (amendment 1) Code of Practice for Light Timber Frame Buildings not requiring specific design. (Note: NZS 3604:1990 has been superseded by NZS 3604:1999 but there are no changes in relation to wind zones.) Further information can be supplied by the Building Consents Division of the Invercargill City Council.

- Is identified on the Invercargill City District Plan maps as being in a very high seismic hazard zone which is susceptible to liquefaction. These maps do not relate to the return time (probability) of an earthquake, but give a general indication of the possible earthquake shaking amplification of land in the Southland region. The land in this zone has water saturated sediments, resulting in a very high ground shaking capability. Land with a high water table is also the most susceptible to liquefaction.
- Has an Airport Airspace Designation – within Inner Horizontal Surface. Invercargill Airport Limited has placed a designation on the Invercargill City District Plan which identifies the airspace surfaces for aircraft operations. The designation identifies minimum heights for aircraft over the urban areas of Invercargill and Otatara. The maximum height of any building on this site is to be less than 46m above mean sea level.

Judith Christie
RESOURCE MANAGEMENT OFFICER

16 May 2011

**RESOURCE CONSENT UNDER PART VI OF THE
RESOURCE MANAGEMENT ACT 1991
CONSENT No. LUC/2011/66/A**

APPLICANT:	2 Degrees Mobile Limited
LOCATION OF PROPOSED ACTIVITY:	406 Elles Road, Invercargill Lot 1 DP 367605
DESCRIPTION OF ACTIVITY: Change of conditions to LUC/2011/66, to allow an additional 600mm diameter dish antenna to be added to a telecommunication facility. There will now be three dish antennas attached to the monopole.	
DECISION: Granted on 16 September 2011. The following condition was imposed under Sections 108 and 220 of the Resource Management Act 1991: 1. The proposed activity shall be undertaken in accordance with the plans and supporting information submitted with applications LUC/2011/66 and LUC/2011/66A, received by Council on 3 May 2011 and 1 September 2011 respectively. The condition was imposed to ensure consistency with the applications. Advice notes: 1. Under Section 125 of the Resource Management Act 1991, this resource consent will lapse in five years, unless it is given effect to within that time. 2. It is the applicant's responsibility to comply with all conditions imposed on this resource consent prior to and during (as applicable) the exercising of the resource consent.	
Judith Christie RESOURCE MANAGEMENT OFFICER	
19 September 2011	

16 May 2011

2 Degrees Mobile Limited
PO Box 4283
Christchurch Mail Centre
CHRISTCHURCH 8140

Attention: Kirsten Deuling

Dear Kirsten

**RESOURCE CONSENT APPLICATION TO UPGRADE AN EXISTING
TELECOMMUNICATIONS FACILITY AT 406 ELLES ROAD, INVERCARGILL - LUC/2011/66**

Your application for resource consent to upgrade an existing telecommunications facility was received on 3 May 2011 and was processed in a non-notified manner in accordance with section 95 of the Resource Management Act 1991. The Director of Environmental and Planning Services, acting under delegated authority, considered the application on 16 May 2011.

I advise that the Council has **granted** consent to the application, subject to a condition. In accordance with this decision the consent must be given effect to within five years from the date of this decision.

Enclosed is the official notice of the decision on your resource consent application and the receipt (No. 3123564) for the \$460.00 fixed initial deposit.

DESCRIPTION OF ACTIVITY

Upgrade an existing telecommunications monopole. A ringframe will be added to the existing headframe on the monopole and three 1.9m long panel antennas will be attached to it. Two 600mm diameter dish antennas will also be attached to the monopole at a height of 17m. The new antennas will be positioned over the maximum permitted height for telecommunications facilities within the Domicile Sub-Area.

REASON FOR APPLICATION

Rule 4.32 (Infrastructure) of the District Plan states that no antennas shall extend more than 3m above the maximum height specified in Rule 4.39 (Height of Structures). The permitted maximum height in the Domicile Sub-Area is 10m². The structure to which the antennas are to be attached is 20m high. The overall height of the facility will not be increased, but the new antennas will be positioned over the maximum permitted height. The proposal is therefore a restricted discretionary activity.

PLANNING ASSESSMENT

Notification Issues

On 16 May 2011 the Director of Environmental and Planning Services, acting under authority delegated by the Council, resolved under section 95 of the Resource Management Act 1991 that the application need not be notified. The reasons for this decision were:

1. The effects of the activity will be no more than minor, for the reasons discussed below under the heading "Consideration of Assessment of Effects".
2. No parties who may be considered to be adversely affected by the granting of the resource consent have been identified.
3. No special circumstances exist in relation to the application that require it to be notified.

Consideration of Assessment of Effects

The following consideration of effects on the environment has been carried out in accordance with section 104(1) of the Resource Management Act 1991.

Effects on Environment

Visual impact

The new 2degrees panel antennas, which will extend above the permitted height of 13m above the ground, will be attached to the monopole by adding a ringframe to the existing headframe at the top of the monopole. Two microwave dish antennas will also be attached to the monopole at a height 17m above the ground.

Both the proposed panel and dish antennas will be viewed within the context of the existing telecommunication facility and will not extend beyond the profile of the existing structure. The antennas will be finished in a recessive colour which matches the mast.

The visual impact will therefore be mitigated to an extent where the antennas will be largely indiscernible when viewed from outside the subject site.

Radiofrequency exposure

The National Environmental Standards (NES) for telecommunications facilities came into force on 9 October 2008. Regulation 4 of the NES provides for radiofrequency emissions as a permitted activity where the facility complies with certain conditions. The applicant has shown in the application that these conditions will be met and that radiofrequency fields will not be located in an area where members of the public could reasonably be exposed.

Noise

The application states that the likely sound level from the cabinets will be in the range of L10 35-40dBA. The rule specified in the District Plan for the Domicile Sub-Area with regard to noise will therefore be met.

Objectives and Policies

In accordance with section 104(1)(b) of the Resource Management Act 1991, the objectives and policies of the Invercargill City District Plan were taken into account in assessing the application.

The application is considered to be in general accordance with the objectives and policies relating to infrastructure and amenity values in the Domicile Sub-Area.

DECISION

On 16 May 2011 the Director of Environmental and Planning Services, acting under authority delegated by the Council, resolved that consent be **granted subject to the condition imposed and detailed on the table attached**.

The decision to grant consent was made under sections 104 and 104C of the Resource Management Act 1991. The reasons for this decision are outlined below. The condition was imposed under section 108 of the Resource Management Act 1991. The matters considered in reaching this decision are detailed under the Planning Assessment section of this letter.

Reasons

In accordance with section 104(1)(a) of the Resource Management Act 1991, the actual and potential adverse effects associated with the proposed activity have been assessed and are outlined above. It is considered that adverse effects of the proposed activity on the environment will be no more than minor.

In accordance with section 104(1)(b) of the Resource Management Act 1991, the proposal is considered to be consistent with the relevant objectives and policies of the Invercargill City District Plan.

RIGHTS OF OBJECTION AND APPEAL

If you are not satisfied you can object to the decision by writing to the Council. Your objection must set out the reasons in accordance with section 357 of the Resource Management Act 1991. It will then be passed on to the Council's Hearings Committee for a decision. If you prefer, you can also appeal the decision to the Environment Court. Any objection or appeal will need to be lodged within fifteen (15) working days of this letter being received. You may wish to consult your solicitor for advice on this matter.

Please contact the undersigned on (03) 211 1777 if you have any questions or concerns.

Yours sincerely

Judith Christie
RESOURCE MANAGEMENT OFFICER

Encl.

Scanning Quality Advice Note

Advice Note from: Exedee Scanning Team

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Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

Please Contact: Gerard Cleary

Ref: T3/3

Property

18 November, 1997

Connell Wagner
PO Box 1061
CHRISTCHURCH

Attn: Gregory Dewe

Dear Sir

re: RESOURCE CONSENT APPLICATION TO ESTABLISH A MOBILE
TELECOMMUNICATIONS CELL SITE AT KEW BOWL, 406 ELLES ROAD,
INVERCARGILL
RESOURCE CONSENT NO:971836

I acknowledge receipt of your resource consent application for the above-mentioned proposal. A resource consent was required as the proposal is a non-complying activity under the Community Use rules of the Invercargill Transitional District Plan. Specifically, the proposed tower exceeded the height limits for radio masts, aerials, towers and similar structures within the Community Use Zone.

Your application was heard by Resource Consent Committee on Wednesday, 22 October 1997. The Committee resolved that Consent be granted under Section 105 (2)(b) of the Resource Management Act 1991, subject to the following conditions pursuant to Section 108 of that Act:

- (1) The proposal shall proceed in accordance with the description of the activity in the application and the set of plans submitted with the application and now labelled RC 971836/1-3.
- (2) That the cell site facility shall at all times be operated in accordance with New Zealand Standard for Radio Frequency levels(NZ 6609:1990) and the level of radio frequency be kept as low as reasonably achievable.
- (3) Pursuant to Section 128 of the Resource management Act 1991, the Council may review condition (2) by servicing notice on the applicant within a period of one month, commencing on any anniversary of the date of the Council's decision for a period of ten years, in order to deal with any adverse effects which may arise from the exercise of this consent. In order to achieve this the Council may monitor radio frequency radiation levels if this is considered necessary.

- (4) Within three months of the date of commissioning of the cell site, and every two years thereafter at its expense, the applicant is required to provide to the Director of Council's Environmental and Planning Services Department Invercargill City Council, a report prepared by an independent competent electromagnetic radiation monitoring authority approved by that Director, based on measurements at the site confirming:
 - (i) the average level of electromagnetic radiofrequency radiation emitted from the cell site; and
 - (ii) the peak level of electromagnetic radiofrequency radiation emitted from the site; and
 - (iii) the fact that the applicant's cell site is therefore operating in compliance with condition 3 herein; and the fact that the applicant's cell site would, if operating at full capacity, continue to comply with Condition (3) herein.
- (5) The Council may, within six months of the receipt of the information referred to in Condition 4 herein, serve notice on the applicant of the Council's intention to review Condition 2 herein (pursuant to Section 128 of the Resource Management Act 1991) in the event that the findings in relation to the total power flux density of radio frequency radiation emissions indicated in that report significantly exceed the estimates provided by the report of the National Radiation Laboratory entitled "Estimated exposures to radiofrequency radiation from a proposed cellular phone base station at 406 Elles Road, Invercargill."
- (6) That any interference with other transmission frequencies directly attributable to the applicants cell site will be rectified by the applicants at their cost.
- (7) If Koiwi (human skeletal remains) are discovered, then work shall stop immediately and Te Ao Marama Inc (Ngai Tahu (Murihuku) Resource Management Consultants) will be advised.

They will arrange a prompt site inspection by the appropriate Tangata Whenua and their advisers, including statutory agencies, who will determine whether the discovery is likely to be extensive and whether a thorough site investigation is required.

Materials discovered will be handled and removed by Iwi responsible for the Tikanga appropriate to their removal and presentation.
- (8) Taonga or artefact material other than Koiwi will be treated in a similar manner so that their importance can be determined and the environment recorded by qualified archaeologists alongside the appropriate Tangata Whenua.
- (9) The tower shall be painted in the colour Resene Jumbo, BS 00 A 07, and the equipment shelter shall be painted in the colour Resene Flax, BS 12 B 21.
- (10) A strip of 1.5 metres width surrounding the security fence, except for the gateway, shall be landscaped.

- (11) The consent is granted for a period of ten years from the date of notifying the applicant of these conditions.

The Resource Management Act 1991 makes provision for you to appeal the Council's decision. Notice of appeal must be lodged within 15 working days of receipt of the letter of Council's decision. This is to be lodged with the Registrar, Environment Court PO Box 5027, Lambton Quay, Wellington. A copy must be served on Council and any person who makes a submission on the application.

The total cost for processing your application is \$2061.85 of which a deposit of \$506.50 has been received. Accordingly, please find enclosed a further invoice for the sum of \$1555.60 being the sum outstanding.

If you have any queries relating to the above please do not hesitate to contact me .

Yours faithfully



G Cleary
RESOURCE MANAGEMENT OFFICER

GC:sjm

Encl



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

Please Contact: Gerard Cleary

Ref: T9/3
Property

11 September, 1997

Connell Wagner
PO Box 1061
CHRISTCHURCH

Attn: Gregory Dewe

Dear Sir

re: RESOURCE CONSENT APPLICATION TO ESTABLISH A MOBILE
TELECOMMUNICATIONS CELL SITE - 406 ELLES ROAD INVERCARGILL

Please find enclosed copies of all submissions made on the above proposal.

Confirmation of a hearing date will be forwarded to you shortly. I note that you have indicated that October 22 1997 will be suitable to your clients.

Also could you please forward the photomontages I requested previously as soon as possible

Yours faithfully

G Cleary
RESOURCE MANAGEMENT OFFICER

GC:sjm

Encl



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

Please Contact: Gerard Cleary

Ref: T3/3

Property

13 August, 1997

Connell Wagner
PO Box 1061
CHRISTCHURCH

Attention: Gregory Dewe

Dear Sir

Re: RESOURCE CONSENT APPLICATION: BELLSOUTH KEW BOWL 406 ELLES ROAD, INVERCARGILL

I acknowledge receipt of your resource consent application for the above-mentioned proposal. The Council is satisfied that the application contains sufficient information for it to be processed.

On Friday 8 August 1997, Council staff meeting under delegated authority resolved that the application is required to be notified, as provided for under Section 93 of the Resource Management Act 1991. I enclose a list of those persons and bodies on whom the notice has been effected, and a notice has been placed on or adjacent to the property. The application was advertised in the Southland Times on Wednesday 13 August 1997 and the closing date for submissions is Tuesday 9 September 1997.

A list of the submissions received by the Council will be sent to you and any proposal to hold a pre-hearing meeting or hearing will be discussed with you after submissions close.

Please find enclosed a receipt for the sum of \$56.25 being the money received so far by Invercargill City Council. Also, please find enclosed an invoice for the sum of \$506.25 being the balance of the processing deposit required for a notified application.

Yours faithfully

G Cleary
RESOURCE MANAGEMENT OFFICER

GC:sjm

Encl

RESOURCE CONSENT COMMITTEE - 22 OCTOBER 1997

COPY

HEARING 3

<i>Applicant:</i>	Connell Wagner on behalf of BellSouth New Zealand
<i>Application:</i>	To establish a Mobile Telecommunications Cell Site
<i>Location:</i>	Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill on land legally described as Part Section 74 Blk I Seaward Bush TN and contained on CT 7A/746
<i>Land Owner/ Occupier</i>	Southland Centre of the New Zealand Amateur Cycling Association. C/o Box 118 INVERCARGILL
<i>Zoning:</i>	The site in question is zoned Community Use Zone under the Invercargill Transitional District Plan
<i>Submissions:</i>	The application was advertised as required under Section 93(2) of the Resource Management Act 1991. Submissions and comments were received from: • 36 members of local community • Te Ao Marama • Southern Public Health Services • Invercargill Licensing Trust
<i>Outline:</i>	This report relates to an application by BellSouth to establish and operate a new mast and antenna to facilitate cellular telephone operations within the Invercargill area. The proposal is a non-complying activity under the Invercargill City Transitional District Plan. This report recommends conditional consent to the application.

1. SITE DESCRIPTION

- 1.1 The site in question is located at Kew Bowl, 406 Elles Road Invercargill. The current owner/occupier is listed as the Southland Centre of the New Zealand Amateur Cycling Association
- 1.1.2 The surrounding environment is predominantly residential in nature. Adjacent to the proposed cell site are a Licensed Premises and a local Bowling Club. Within the immediate area are a number of Recreational Reserves, a local hospital and a local school.

An aerial photograph of the location and accompanying photomontages are included (Refer Appendix A)

2. THE PROPOSAL

- 2.1 The supporting information lodged with the application (*Refer Appendix B*) sets out a description of the proposal. In summary, the applicant proposes to erect a 20 metre high monopole mast with 8 antennae and a lightning rod attached, together with an equipment shelter containing radio equipment, a control computer, emergency batteries and an air conditioning unit to be established adjacent to the mast in a security fenced compound. The supporting plant and equipment compound's dimensions are 4.5 metres long by 2.7 metres wide by 3.9 metres high.
- 2.2 The antennae to be attached to the mast include:
- 6 x Base Transceiver Station(BTS) panel antennae.
 - 1 x 450mm in diameter dish antenna.
 - 1x 900mm in diameter dish antenna.

3. REASONS FOR THE APPLICATION

- 3.1 This application is necessary as, under the Invercargill Transitional District Plan, masts, towers and similar structures that exceed 17m in height above ground level are not classified as permitted activities in the Community Use Zone. A resource consent application for a non-complying activity is therefore required under the rules of the Resource Management Act 1991.

4. STATUTORY CONSIDERATIONS

4.1 Submissions

The application was publicly notified on Wednesday, 13 August 1997 and the closing date for submissions was Tuesday 9 September 1997. A total of 39

submissions were received on the application. The submissions can be summarised as follows:

4.1.1 Submissions in Opposition

Invercargill City Council received a total of 37 submissions in opposition to the application. The main issues arising from these submissions included:

- (i) Possible adverse health effects of radiation emitted from the cell site.
- (ii) Adverse visual impact of the proposal.
- (iii) Adverse effect on property values of the surrounding residential area
- (iv) Possible interference with electrical equipment.

4.1.2 Invercargill City Council received one submission in agreement with the proposal from Te Ao Marama Inc. However, agreement was subject to the inclusion of a number of conditions which should be attached to any resource consent granted. These conditions are included in this report's recommendation.

4.1.3 A comment on the application was received from the Southern Public Health Services of 62 Dee St, Invercargill. Southern Public Health observed that public reaction to cell sites is often very negative in that there is a perception that cell sites are potentially harmful to public health. This 'Psychological fear' is something that Invercargill City Council should consider in determining the current application. Equal consideration should be given to available scientific evidence and the relevant industry standard NZS 6609: 1990 *Radiofrequency Radiation*.

A copy of all submissions are attached to this report. (Refer Appendix C).

4.2 Relevant Sections Of The Resource Management Act 1991

4.2.1 Part 2, Sections 93, 104, 105, 108, 176 and the Fourth Schedule are relevant.

4.2.2 Section 9 of the Resource Management Act 1991 states that no person may use land in a manner that contravenes a rule in a District Plan or proposed District Plan unless the activity is expressly allowed by a Resource Consent granted by the Territorial Authority responsible for the plan.

4.2.3 Section 105(2)(b) of the Resource Management Act further states that in an application for a non-complying activity a consent authority shall not grant a resource consent unless it is satisfied that:

- (i) *The adverse effects on the environment will be minor; or*
- (ii) *Granting the consent will not be contrary to the objectives and policies of the [district] plan.*

4.2.4 Section 105(2)(b) is a threshold test for non-complying activities. If neither of the limbs of Section 105(2)(b) can be satisfied, then the Act requires refusal of

consent to the application. If one can be met then the Consent Authority has the discretion to approve or refuse the application.

4.2.5 Relevant provisions of the Invercargill Transitional District Plan

The subject site is to be located within the Community Use Zone of the Invercargill Transitional District Plan. The establishment of cell sites or similar structures is not specifically mentioned in the Policy and Objectives Section relating to the Community Use Zone. However, the degree of conflict between the proposal and the Objectives and Policies can be said to be minimal. There appears to be no evidence that use by the community of the Kew Bowl facility will be impeded in any way by the proposal and the owners have given their approval to the proposal. Additionally, it is possible to argue that revenue obtained by Southland Amateur Cycling from allowing the proposal to proceed at Kew Bowl will be of assistance in continuing to provide a community facility.

- 4.2.6 The Community Use Zone Rules are contained in Ordinance 6 of the Transitional District Plan. Ordinance 6.2.2 states that the following are Controlled Uses:

" Radio masts, aerials, towers and similar structures up to 17 metres in height"

The proposed mast is approximately 20m in height and therefore does not comply with the height standards for the Community Use Zone. A resource consent for a non-complying activity is therefore required.

- 4.2.7 The location of the equipment shelter does not comply with the minimum yard requirements outlined in the performance standards for buildings within the Community Use Zone. The shelter is located 1.3metres from one boundary whereas the minimum requirement is stipulated as being 6 metres.

5. ASSESSMENT OF EFFECTS

- 5.1 Section 104() 1 of the Resource Management Act 1991 states:

" Subject to Part 11, when considering an application for a resource consent and any submissions received, the consent authority shall have regard to ---

a) Any actual and potential effects on the environment of allowing the activity."

Given the provisions of both sections 104 and 105 the Committee is required to have regard to the actual and potential effects of the proposed cell site. The applicants have included in their application an assessment of effects as required by Section 88 of the Resource Management Act 1991. Many of the issues covered by the applicants in their assessment of effects are identical to the issues which are of significant concern to those parties who have made submissions on the application. The intention of this report is therefore to consider all available evidence relevant to these issues.

5.2 Health And Safety Issues

Of significant concern to submitters in opposition to the proposal is the possibility of adverse health effects from electromagnetic radiation emissions from mobile telecommunications cell sites.

5.2.1 Electromagnetic radiation(EMR) output or power flux density is measured in terms of microwatts per sq cm. The relevant New Zealand Standard NZ 6609 stipulates that the maximum recommended exposure for members of the public to EMR be no greater than 200 *microwatts per sq cm*. It must be noted that Committee is not bound to consider NZ 6609, rather it is a useful guideline in an application of this kind. Indeed NZ 6609 can be used as a basis for setting what Committee consider to be a prudent level of exposure for areas surrounding cell sites in Invercargill. NZ 6609 is based upon the Australian Standard(AS 7772) and has been recognised by, amongst others, the Environment Court as being conservative by world standards. It has however been the subject of much criticism. Of these criticisms, the failure of NZ 6609 to distinguish between Thermal and Non-Thermal radiation is perhaps most relevant. NZ 6609 is concerned with thermal radiation i.e radiation which causes the human tissue to heat up, thus causing adverse health effects. Thermal heating occurs at 50 times the recommended exposure of 200 microwatts per sq cm. It is generally accepted that there is no risk of thermal heating from cell sites. Therefore, this is one aspect that Committee should not consider in assessing possible adverse health effects. However, NZ 6609 does not deal with non-thermal radiation which can be summarised as being long term low level exposure to low level radiation.

5.2.2 There is a sufficient body of literature both medical and otherwise to suggest that non-thermal exposure can have adverse effects on human health. Council's Environmental and Planning Department have in their possession a number of articles summarising the conclusions contained in this literature. There are a number of points in these summaries that are worthy of careful consideration. These include:

- Failure of NZ 6609 and the relevant standards bodies to consider the possible effects of non-thermal radiation. Additionally, NZ 6609 and standards bodies are regarded as biased towards industry interests.
- A considerable amount of data exists to support the existence of chronic, non-thermal radiation. However, further research is necessary to evaluate and understand fully the health implications of low intensity radio-frequency radiation.
- A number of parallels were drawn between the present refusal to fully acknowledge effects of EMR radiation and past experience with X-ray equipment, other forms of radiation exposure, asbestos and, perhaps most insidiously, the refusal to accept the adverse health effects of smoking. In the latter case it was pointed out that, whereas statistical research existed for 50 years pointing to a link between smoking and cancer, it nevertheless took this length of time for scientists to establish unquestionable proof of this link. Further research was therefore required " to find the answers to unexplained observations such as the apparent link between EMF exposure and some forms of cancer."

- Until such time as the full effects of EMR were totally understood there was an understandable reluctance on the behalf of consumer groups to be treated as potential " guinea pigs" in an experiment that could last another 50 years.
- A consensus of opinion seems to exist that the possibility of adverse health effects from EMR could be mitigated by the location of cellphone towers at as practical a distance from residential areas as is possible.
- One report mentioned in the summaries stated that it was most unlikely that retrospective studies would provide any useful information for recently developed technology, such as cellular phones. Further, prospective studies would have negligible chance of showing any effect, if present, in less than 10-20 years. Until then, it was however considered to be "naive" and irresponsible to deny that some biological effects do exist.

5.2.3 For the purposes of this report consideration has been given to the findings of the Environment Court in IM McIntyre and Others; BellSouth v Christchurch City Council A015/96 and the subsequent Telecom New Zealand Limited v Christchurch City Council W195/96. Much of the relevant scientific opinion relating to the possibility of adverse health effects from non-thermal radiation was evaluated in these important cases. Accordingly, the findings of the Court are summarised for the benefit of Committee.

a) IM McIntyre and Others; BellSouth v Christchurch City Council A015/96

Points arising from the above case include:

- A party to resource consent proceedings is entitled to rely on compliance with a relevant New Zealand standard (i.e. 6609) as tending to show that effects on the environment of a proposed activity should be acceptable because emissions would not exceed levels set in that document. However, because New Zealand standards are not given particular status by law, other parties must be free to assert that significant adverse effects on the environment would occur despite compliance with the standard.
- Interestingly, it was acknowledged that NZ6609 itself does not claim to be absolutely reliable. For this reason it recommends that the levels of all electromagnetic fields should be kept as low as is reasonably achievable (the ALARA principle). The Committee therefore is reminded that compliance with NZ6609 is not necessarily the decisive factor in this present application. It should also be noted that in the McIntyre case the predicted level of exposure was 12 microwatts per sq cm, or just over 1/20 of the level recommended by NZ 6609. In the present application the predicted maximum level of exposure to members of the general public is calculated as 0.8% of the above Standard.
- The duty of the Court was to make a decision which was based on current knowledge and facts. The applicant had to prove that, on the balance of probabilities, it was more probable than not that the proposal would have no adverse effects.
- The Court did not accept that the existence of serious scientific hypothesis, or even one that is regarded as deserving priority for testing, is necessarily sufficient by itself to establish a potential effect, even a potential effect of low probability which has a high potential impact.

- Much of the literature relied on in support of the hypothesis that non-thermal radiation had adverse health effects was not considered by the Court to be of sufficient relevance or reliability to be helpful. Specifically, insufficient research seemed to have been undertaken on radiation exposure below that which was emitted in the McIntyre case i.e. the figure of 12 microwatts per sq cm.
- The Court recognised that the question of possible health effects was an important one, in that if EMR emissions do turn out to be harmful, then people who had no choice about being exposed to radiation may suffer ill-effects.
- The Court pointed out that the Resource Management Act 1991 provides legal mechanisms to address any adverse effects on the environment that later become apparent but which are not recognised at the time resource consent is granted.
- The Court concluded that on the basis of the scientific evidence presented to them and in consideration of the actual levels of EMR, there was no evidence of a potential effect on people, not even an effect of low probability of high impact.

b) *Telecom New Zealand v Christchurch City Council W 165/96*

Points to note from this case include:

- Court was of the opinion that, in the absence of fresh evidence, the findings of the Court in the McIntyre case(above) should have been sufficient to allay the concerns of residents about possible health hazards emanating from cell sites .
- A Court cannot set aside the whole weight of a body of evidence and substitute it for an apprehension which cannot be shown to have any factual basis. Neither could the Court ignore this scientific evidence simply because it is not yet possible to demonstrate beyond any doubt that cellphone technology is safe.

5.2.4 Further consideration has been given to a publication of the Parliamentary Commissioner for the Environment entitled "*Public Authority Planning for Cellphone Transmission facilities*". In the preface to this publication it has been stated, albeit inconclusively, that:

"There is no substantive evidence that low-level radiofrequencies can cause ill-health effects ; neither is there substantive evidence that no ill health effects will ever be experienced"

The Parliamentary Commissioner recognises that it may be some considerable time before definitive answers can be given to questions about low level radiation. In the meantime it is further recognised that local governments are faced with the difficult task of balancing the benefits to the community provided by the technology and ensuring any possible risks from low level radiation fields are mitigated.

It is further recognised by the Parliamentary Commissioner that many local authorities would benefit from national environmental guidelines on the

location of cell sites in host communities. To the best of Councils knowledge an inter-agency group has been established, comprising people from central government and local government, to address a number of policy issues relating to radiation from radio transmitters, including cellphone towers. The preparation of a national environmental guideline for the siting of cellphone towers is a priority for the inter-agency group.

- 5.2.5 Council has also received a copy of a report entitled *"Estimated exposures to radiofrequency radiation from a proposed BellSouth cellular phone base station at Kew Bowl, Elles Road, Invercargill"*. This report has been compiled by Martin Gledhill of the National Radiation Laboratory in Christchurch and is dated July 1997. Mr Gledhill starts by stating that he has examined the plans and specification for the proposed BellSouth cellular phone base station at Kew Bowl. A summary of his findings are stated below:

"Based on this information, I estimate that the maximum exposure to radiofrequency(RF) radiation to someone standing on the ground within 25 metres of the mast would be 0.3% of the exposure limit recommended for the public in New Zealand Standard NZ 6609..... maximum exposures in nearby houses would be 0.2% of the limit, but generally lower than this"

A copy of the report is included. (Refer Appendix D).

- 5.2.6 Consideration has been given to the approach adopted by Invercargill City Council in respect of previous applications for cell sites. Although no single resource consent can act as a precedent for a subsequent similar application it is an interesting reference point from which to examine the approach taken towards resolving concerns relating to health issues. It must be remembered that the facts of each individual case are by no means identical. Examples of Council's approach include:

1. Telecom Mobile Communications Limited application at 103-117 Racecourse Road. (Franked 08.02.96) Here the Committee accepted the conclusion that radiation emissions from cellphone sites was not detrimental to human health. This conclusion was based on the McIntyre case mentioned above.
2. Telecom application at 75 Kew Road, Kew Hospital. (Franked 25.01.96) A condition was attached to this consent stipulating that applicant ensure radio frequency emissions comply with the 200 microwatts per sq cm level set by NZ 6609. It should be noted that BellSouth approached Kew Hospital Board with a view to obtaining a lease for a cell site in the Hospital Grounds, but were refused.
3. BellSouth application at 247-251 Racecourse Road. (Franked 15.07.97) This is the most recent cell site application and was given conditional approval by the Invercargill City Council. Conditions were imposed to the effect, that should any adverse health effects relating to radiofrequency emissions be proven beyond scientific doubt, Invercargill City Council reserve the right to review the granting of the Consent.

5.3 Visual Impact

The proposed location of the cellphone tower is an area which is predominantly residential in nature. The nearest residential dwelling is directly opposite on the West side of Elles Road and is calculated as being some 55 metres from the proposal. Located to the immediate South of the proposal is the Southland Tavern, Kew Bowling Club and tennis courts. It is understood that because of the topography of Invercargill generally it is necessary for cell sites to be located adjacent to residential premises. It is inevitable therefore that there will be some element of visual impact in all such instances. It needs therefore to be considered what are the amenity values of the receiving environment. It is the opinion of this report that the buildings adjacent to the proposed site i.e Kew Bowl and the Southland Tavern possess little in the way of aesthetic amenity value and that consequently the proposal will not have an adverse visual impact on amenity. Committee is also reminded of the fact that radio masts, aerials, towers and similar structures up to 17 metres in height are Controlled Uses in the Community Use Zone. Consequently, the adverse visual effect of the extra height of the current proposal is unlikely to be significant.

Refer to Photomontages in Appendix A

5.4 Effect On Property Values

Any potential effect on property values would be directly related to the visual impact the proposal would have on the surrounding residential area. It was considered above that any visual impact would be no more than minor and accordingly, it is felt that there will be no consequential effect on property values. Furthermore, Council have not been supplied with any substantive evidence as to the effect of cell sites on neighbouring property values.

5.5 Effect On Electrical Equipment

The applicant has stated (page 11 of application) that the operation of the cell site will have no effect on the operation of other transmission frequencies including AM/FM radio, CB, VHF, HAM, or any emergency service frequency. As an added safeguard this report recommends that, should any interference arise, BellSouth will undertake to rectify the problem. A condition to this effect should therefore be attached to the resource consent.

RECOMMENDATION

That the application by BellSouth New Zealand seeking consent to establish and operate a mobile telecommunications Cell site at Kew Bowl, 406 Elles Road, Invercargill, legally known as Part Section 74 Blk I, Seaward Bush Town, and contained on CT 7A/746 be granted consent pursuant to sections 104 and 105 of the Resource Management Act 1991.

Pursuant to Section 108 of the Resource Management Act 1991, the following conditions would apply to this consent:-

- (1) The proposal shall proceed in accordance with the description of the activity in the application and the set of plans submitted with the application and now labelled RC 971836/1-3
- (2) That the cell site facility shall at all times be operated in accordance with New Zealand Standard for Radio Frequency levels(NZ 6609:1990) and the level of radio frequency fields be kept as low as reasonably achievable.
- (3) Pursuant to Section 128 of the Resource Management Act 1991, the Council may review condition 2 by serving notice on the applicant within a period of one month, commencing on any anniversary of the date of the Council's decision for a period of ten years, in order to deal with any adverse effects which may arise from the exercise of this consent. In order to achieve this the Council may monitor radio frequency levels if this is considered necessary.
- (4) Within 3 months of the date of commissioning of the cell site, the applicant is required to provide to the Director of Council's Environmental and Planning Services Invercargill City Council a report prepared by an independent competent electromagnetic radiation monitoring authority approved by that Director, based on measurements at the site confirming:
 - (i) the average level of electromagnetic radiofrequency fields emitted from the cell site; and
 - (ii) the peak level of electromagnetic radiofrequency fields emitted from the site; and
 - (iii) the fact that the applicant's cell site is therefore operating in compliance with condition 2 herein ; and the fact that the applicant's cell site would, if operating at full capacity, continue to comply with condition 1 herein.
- (5) The Council may, within six months of the receipt of the information referred to in condition 4 herein, serve notice on the applicant of the Council's intention to review condition 2 herein(pursuant to Section 128 of the Resource Management Act 1991) in the event that the findings in relation to the total power flux density of radio frequency emissions indicated in that report significantly exceed the estimates provided by the report of the National Radiation Laboratory referred to in 5.2.5 above.
- (6) That any interference with other transmission frequencies directly attributable to the applicants cell site will be rectified by the applicants at their cost.
- (7) If koiwi (human skeletal remains) are discovered, then work shall stop immediately and Te Ao Marama Inc (Ngai Tahu(Murihuku) Resource Management Consultants) will be advised.

They will arrange a site inspection by the appropriate Tangata Whenua and their advisers, including statutory agencies, who will determine whether the

discovery is likely to be extensive and whether a thorough site investigation is required

Materials discovered will be handled and removed by Iwi responsible for the Tikanga appropriate to their removal or preservation.

- (8) Taonga or artefact material other than Koiwi will be treated in a similar manner so that their importance can be determined and the environment recorded by qualified archaeologists alongside the appropriate Tangata Whenua.

Report prepared by:

G Cleary
Resource Management Officer

Report endorsed by:

W J Watt
Director - Environmental & Planning Services Officer

(23) 3/3

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) Peter Stuart McLean

ADDRESS: 393 Elles Road, Invercargill

TELEPHONE NUMBER: 2146388

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

P.S. McLean

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 29-8-97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *JOSEPHUS JOHANNES VAN EMPER.*

ADDRESS: *403 ELLES ROAD INVERCARGILL*

TELEPHONE NUMBER: *21 68901*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

Juan Engel

(Signature of person making this submission or person authorised to sign on their behalf)

Date: *31-8-97*

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) DANIEL THOMAS WHANAI A

ADDRESS: 389 ELLES ROAD

TELEPHONE NUMBER: NONE

FAX NUMBER: -

DETAILS OF APPLICATION: To establish a cellular telephone telecommunications facility.

LOCATION OF APPLICATION: Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).



(Signature of person making this submission or person authorised to sign on their behalf)

Date: 8/8/97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) JUDITH KAY STEVENS.

ADDRESS: 417 ELLES RD.

TELEPHONE NUMBER: 03 214 1065.

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

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My submission would be met by the Invercargill City Council making the follow decision:

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

J.K. Stevens
(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25/8/97.

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Kaylene Sandra Carter*
Bernard Morlon Carter
ADDRESS: *405 Elles Road.*

TELEPHONE NUMBER: *2181221.*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

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Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

KSCarter

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25.8.97.

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Gracme Noel Gordon Road*

ADDRESS: *415, ELLES Road*

TELEPHONE NUMBER:

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

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Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

Sheel
(Signature of person making this submission or person authorised to sign on their behalf)

Date: *25/8/97*

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name)

Ngairi Beryl Henderson

ADDRESS:

413 Elles Road
21,87465

TELEPHONE NUMBER:

FAX NUMBER:

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

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Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

^{Not} I ~~do~~ wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

A B Henderson

(Signature of person making this submission or person authorised to sign on their behalf)

Date: *A B Henderson 25-8-97*

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Annie Catherine Henderson*

ADDRESS: *427 Elles Rd South*

TELEPHONE NUMBER: *21-86775*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

A. G. Henderson.

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25-8-97.

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) Miss Marietta Webb

ADDRESS: 423 Elles Road, Invercargill

TELEPHONE NUMBER: Nil

FAX NUMBER: Nil

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

all/lllc66
(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25 August 1997

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) MALCOLM WICKENDEN
ADDRESS: 378 ELLES ROAD INVERCARGILL
TELEPHONE NUMBER: 2163188.

FAX NUMBER: AS ABOVE

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

***Health Hazard** - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.*

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

MB Wark

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25th Aug 97

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Ms. Lindsay Jane Milroy*

ADDRESS: *384 Elles Rd Invercargill*

TELEPHONE NUMBER: *2163609*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

***Health Hazard** - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.*

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

L. J. Mulroy

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25-8-97

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

36

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Shelley Anne Lowe & Craig Allan McDonald*

ADDRESS: *376 Elles Road*

TELEPHONE NUMBER: *2162115*

FAX NUMBER: *—*

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

***Health Hazard** - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.*

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

Howe

(Signature of person making this submission or person authorised to sign on their behalf)

Date: *25/8/97*

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *MARTIN THOMAS PETERS -*

ADDRESS: *397 ELLES ROAD.*

TELEPHONE NUMBER: *03 21 49044*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

M.T. Peters

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25-8-97

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

36

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

DATE:	21 AUG 1997		
REF:	9700 3462		
COMM		PARKS	
EPS		POOLS	
FINANCE		PROM	
HALLS		PWM	
HRM		SEC	
LIBRARY		WORKS	

NAME: (state full name) GORDON IRVING BALLIE AND MARGARET BARCLAY BALLIE

ADDRESS: 19 MCQUARRIE STREET, INVERCARGILL

TELEPHONE NUMBER: (03) 2168219

FAX NUMBER: NONE

DETAILS OF APPLICATION: TO ESTABLISH A CELLULAR TELEPHONE
TELECOMMUNICATIONS FACILITY

LOCATION OF APPLICATION: CYCLING SOUTHLAND, KEW BOWL
406 ELLES ROAD, INVERCARGILL

I ~~support~~/oppose the application

My submission is (continue on separate sheet if required):

WE OPPOSE THE APPLICATION ON THE GROUNDS OF :-

1. HEALTH RISK
2. DEVALUATION OF OUR PROPERTY
3. INTERFERENCE WITH OUR TRANSMISSION FREQUENCIES
4. ENVIRONMENTAL EFFECTS

T3/3

The reasons for my submission are (continue on separate sheet if required):

- HEALTH RISK - WE DO NOT ACCEPT CONNELL WAGNER'S REPORT AS ANY RISK ABOVE ZERO IS UNACCEPTABLE. THE REPORT IS ONLY AN ESTIMATE AND NOT BACKED UP BY FACT. THERE ARE MANY BUILDINGS IN THE AREA WHICH COULD CAUSE REFLECTIONS.
- DEVALUATION - OUR PROPERTY MAY LOSE VALUE WITH MORE EYESORES ON THE HORIZON.
- INTERFERENCE - NO GUARANTEES HAVE BEEN GIVEN THAT INTERFERENCE WILL NOT OCCUR.
- ENVIRONMENT - BELL SOUTH HAVE ALREADY REJECTED TWO SITES ON COUNCIL RESERVE I.E. (BETWEEN VERNON STREET AND BALL STREET) AND (CORNER OF ELLES ROAD AND BALL STREET) FOR ENVIRONMENTAL REASONS. WE FEEL KEW BOWL SHOULD BE REJECTED FOR THE SAME REASON.
- GENERAL - WE ARE OF THE OPINION THAT SUCH A FACILITY WOULD BE BETTER PLACED WELL AWAY FROM ANY RESIDENTIAL AREA I.E. OUTSIDE THE CITY BOUNDARIES. CONNELL WAGNER HAVE CLASSED THE SOUTHLAND TAVERN, KEW BOWLING CLUB AND TENNIS CLUB AS NON-RESIDENTIAL, WE WOULD CLASS ALL AS VERY RESIDENTIAL WHEN IN USE.

My submission would be met by the Invercargill City Council making the following decision (include any conditions sought):

TOTAL REJECTION OF THE APPLICATION.

I do/do not wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

INVERCARGILL CITY COUNCIL

PRIVATE BAG 90104

INVERCARGILL

(Address for Service)

J.D. Ballie

M.B. Ballie

(Signature of person making this submission or person authorised to sign on their behalf)

18-8-97

(Date)

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

97091

Consents Manger
Invercargill City Council
Private Bag
INVERCARGILL

T3/3

 **SOUTHERN**
PUBLIC HEALTH SERVICES

P.O. Box 1364, 62 Dee Street
Invercargill, New Zealand
Phone 0-3-214 2375 Fax 0-3-214 2410

P.O. Box 108, Arrowtown, Berkshire Street
Arrowtown, New Zealand
Phone 0-3-442 0444 Fax 0-3-442 0446

8 SEP 1997

I.C.C.
INCOMING MAIL
Date:
Ref: 970913743

SUBMISSION FORM FOR RESOURCE CONSENT APPLICATIONS

Dear Sir

Southern Public Health Services, 62 Dee Street, and Invercargill Phone: (03) 214-2375 wish to provide comment on the following resource consent application:

Name of Applicant: Bell South New Zealand

Consent Applied for: Establishment of as telecommunications Facility

Location: Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill

My Submission is:

Southern Public Health Services has the statutory role to improve, protect and promote the public health, pursuant to the Health and Disability Services Act 1993.

Reason(s) for Submission:

There is considerable evidence that suggests that there are no significant health effects associated with the exposure to radio frequency radiation at the level that will be emitted by this cellphone site.

It has been the experience of this office, and the Ministry of Health, that the risk perception of the public in relation to these sites can, in some cases, be very negative.

The "outrage factor" associated with this type of activity should not be disregarded by the consenting authority, because in many cases a perceived health risk may actually physically manifest itself in some individuals.

The New Zealand Standard *NZS6609: 1990 Radiofrequency Radiation*, which specifies standards for the maximum permissible levels in a variety of situations. These are aligned with the International Radiation Protection Association Guidelines. These standards should be viewed in conjunction with other relevant scientific and epidemiological evidence

How do you see your concerns being resolved?:

By the consenting authority ensuring the following:

- That the requirements of *NZS6609: 1990 Radiofrequency Radiation* and other relevant epidemiological and scientific evidence are taken into consideration in the setting of consent conditions
- That the risk perception of the community is taken into consideration in the decision to grant or decline the consent application

I wish my concerns to be resolved by non-adversarial means if possible.

I wish to be heard in support of my submission at a hearing

☐ I have served a copy of my submission on the Applicant

Signed: _____

Date: _____

Address for Service:

Southern Public Health Services

P O Box 1364

INVERCARGILL

Attention Simon Church

TE AO MARAMA INC

(NGAI TAHU (MURIHIKU) RESOURCE MANAGEMENT CONSULTANTS)

PO BOX 990

INVERCARGILL

190 FORTH STREET

WAIHOPAI



TELEPHONE : 03-2141573

FACSIMILE: 03-2141505

APPENDIX ONE

- 1) If Kōiwi (human skeletal remains) are discovered, then work shall stop immediately and Te Ao Marama Inc (Ngai Tahu (Murihiku) Resource Management Consultants) will be advised

They will arrange a site inspection by the appropriate Tangata whenua and their advisers, including statutory agencies, who will determine whether the discovery is likely to be extensive and whether a thorough site investigation is required.

Materials discovered will be handled and removed by Iwi responsible for the tikanga appropriate to their removal or preservation.

- 2) Taonga or artefact material other than Kōiwi will be treated in a similar manner so that their importance can be determined and the environment recorded by qualified archaeologists alongside the appropriate Tangata whenua.

NEWSPAPER CLIPPINGS

Paper: *Southland Times*

Date: 27-08-97
Wednesday

Opposition to planned tower

GORE — East Gore residents are being urged to oppose a proposal to erect a cellphone tower.

Telcom has filed a resource consent with the Gore District Council to site a 29m-high cellphone base station in Talbot Street.

East Gore resident Shona Ramsay, concerned about the health problems caused by long-term exposure to low frequency radiation, has started a petition opposing the site.

During the weekend she gathered 83 signatures, with only five people refusing to sign.

Mrs Ramsay said a lot of residents were concerned about the tower, particularly the elderly. But she is critical of the council's notification procedures, saying many residents were unaware of it being sited in the area.

About 400 notifications were sent based on the rating roll and to those who could see the cell site, Mrs Ramsay said. But people not being able to see it did not mean they would not be affected.

The council also should have included submission forms with the notification, she said.

But Gore District Council environment and planning manager Peter York said that was not usual practice and the council was only required to make them available.

People did not need the forms to make submissions and could write letters following the format outlined in the notification, he said.

Submissions close on August 8, but Mrs Ramsay said she will be requesting "a stay of execution" to allow time for a public meeting.

She has been offered financial assistance to get Neil Cherry, a member of the Lincoln University department of natural resources engineering, to Gore to address the meeting.

Mrs Ramsay and another East Gore resident, who declined to be named, were critical of a recent decision by the East Gore School board of trustees not to oppose the tower.

The woman believed the dangers of radiation from the tower were great and that children of East Gore would be the next medical statistics.

F A X

TE AO MARAMA INC
PO BOX 990
INVERCARGILL

9 SEP 1997

To: W J WATT, ICC
Company:
Fax number: +64 (03) 214 3670
Business phone:

From: Te Ao Marama Inc
Fax number: +64 (03) 2141 505
Business phone: 03-214 1573
Home phone:

Date & Time: 8/09/97 21:26:00
Pages: 3
Re: BELL SOUTH, ELLES ROAD

KIA ORA

ATTACHED PLEASE FIND COPY OF OUR SUBMISSION

HARD COPY WILL FOLLOW

PLEASE CONTACT THE WRITER IF THERE ARE ANY QUERIES

NOHO ORA MAI

EVELYN A COOK-THOMSON
RESOURCE CONSENTS

38



TE AO MARAMA INC

(NGAI TAHU (MURIHIKU) RESOURCE MANAGEMENT CONSULTANTS)

PO BOX 990

190 FORTH STREET

INVERCARGILL

WAIHOPAI

TELEPHONE : 03-2141573

FACSIMILE: 03-2141505

8 September 1997

Invercargill City Council
Private Bag 90104
INVERCARGILL

ATTENTION: W J Watt

REFERENCE: Land Use application, Bell South, 406 Elles Road

Tènà koe

We have examined the resource consent application for the above project and advise that there are no known wāhi tapu sites in the area.

Our principal concern is that kōiwi tangata or taonga may be uncovered during excavation on the site. We therefore attach our Appendix one and ask that it be part of the consent conditions if consent is granted.

We AGREE to the proposal subject to the inclusion of the condition.

We would only wish to be heard if the applicant did not accept our condition.

We would only wish to be heard at a hearing if our condition was contested.

We will submit a copy to the applicant.

Noho ora mai
Nāku noa
Nā

Evelyn A Cook-Thomson
RESOURCE CONSENTS

23 SEP 1997

I.C.C.

INCOMING MAIL

Date:

Ref: 97003970

TE AO MARAMA INC

(NGAI TAHU (MURIHIKU) RESOURCE MANAGEMENT CONSULTANTS)

PO BOX 990

190 FORTH STREET

INVERCARGILL

WAIHOPAI

TELEPHONE : 03-2141573

FACSIMILE: 03-2141505

8 September 1997

Invercargill City Council

Private Bag 90104

INVERCARGILL

ATTENTION: W J Watt

REFERENCE: Land Use application, Bell South, 406 Elles Road

Tènà koe

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We AGREE to the proposal subject to the inclusion of the condition.

We would only wish to be heard if the applicant did not accept our condition.

We would only wish to be heard at a hearing if our condition was contested.

We will submit a copy to the applicant.

Noho ora mai

Nāku noa

Nā

Evelyn A Cook-Thomson
RESOURCE CONSENTS

TAIT WARD ADAMS & MURDOCH

BARRISTERS AND SOLICITORS

Partners

Christopher W. Ward, L.L.B.
Paul R. Adams L.L.B.
Cleland J. Murdoch, L.L.B.

AMI Building
65 Don Street, Invercargill
And at Riverton
and Tuatapere

Telephone (03) 218-2833
P.O. Box 32
Invercargill, New Zealand
Fax (03) 214-4671
DX YA 90015

Consultant

William D. Ward, L.L.B.

Kindly arrange an appointment if calling

Please refer to: Miss H A White

9 September 1997

The Director
Environmental and Planning Services
Invercargill City Council
101 Esk street
INVERCARGILL

Attention: W J Watt

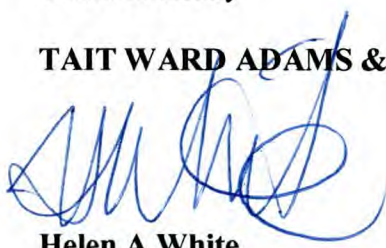
Dear Director

**BELL SOUTH RESOURCE CONSENT APPLICATION
- 406 ELLES ROAD, INVERCARGILL**

We enclose a submission from the Invercargill Licensing Trust on the above application.

Yours faithfully

TAIT WARD ADAMS & MURDOCH


**Helen A White
Staff Solicitor**

HAW:ST



39

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) INVERCARGILL LICENSING TRUST

ADDRESS: C/ TAIT WARD ADAMS & MURDOCH 65 Don Street, Invercargill
Attn: C W Ward / H.A. White

TELEPHONE NUMBER: (03) 218 2883

FAX NUMBER: (03) 2144671

DETAILS OF APPLICATION: To establish a cellular telephone telecommunications
facility

LOCATION OF APPLICATION: Cycling Southland, Kew Bowl, 406 Elles Road.
Invercargill

I ~~support~~/oppose the application

My submission is (continue on separate sheet if required):

There is a very real concern that there will be a negative effects on the
environment of the local residents

The reasons for my submission are (continue on separate sheet if required):

There are very real concerns for the safety of local residents and users of local amenities. Media attention to conflicting scientific evidence regarding cell phone towers is the reason for this. With such a scientific conflict, there is no way of predicting what impact a Tower will have on the local community. In particular, public perception of an unsafe Tower may cause land values and the public usage of the local amenities to decrease. This can only have a negative effect on the local community.

My submission would be met by the Invercargill City Council making the following decision (include any conditions sought):

Delay grant of consent until further conclusive evidence can be adduced to the satisfaction of local residents.

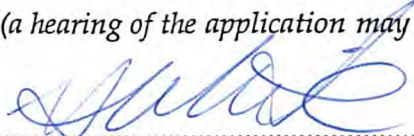
reserve the right
I ~~do not wish~~ to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

TAIT WARD ADAMS & MURDOCH

65 Don Street

P.O. Box 32 INVERCARGILL

(Address for Service)


H.A. WHITE Solicitor for the Invercargill Licensing
(Signature of person making this submission or person authorised to sign on their behalf) Trust

9 September 1997

(Date)

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

Please Contact: Gerard Cleary

Ref: T3/3

Property

13 August, 1997

Connell Wagner
PO Box 1061
CHRISTCHURCH

Attention: Gregory Dewe

Dear Sir

Re: RESOURCE CONSENT APPLICATION: BELLSOUTH KEW BOWL 406 ELLES ROAD, INVERCARGILL

I acknowledge receipt of your resource consent application for the above-mentioned proposal. The Council is satisfied that the application contains sufficient information for it to be processed.

On Friday 8 August 1997, Council staff meeting under delegated authority resolved that the application is required to be notified, as provided for under Section 93 of the Resource Management Act 1991. I enclose a list of those persons and bodies on whom the notice has been effected, and a notice has been placed on or adjacent to the property. The application was advertised in the Southland Times on Wednesday 13 August 1997 and the closing date for submissions is Tuesday 9 September 1997.

A list of the submissions received by the Council will be sent to you and any proposal to hold a pre-hearing meeting or hearing will be discussed with you after submissions close.

Please find enclosed a receipt for the sum of \$56.25 being the money received so far by Invercargill City Council. Also, please find enclosed an invoice for the sum of \$506.25 being the balance of the processing deposit required for a notified application.

Yours faithfully

G Cleary
RESOURCE MANAGEMENT OFFICER

GC:sjm

Encl

Facsimile



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • Ph (03) 218 1959 • Fax (03) 214 3670

To: Connell Wagner

Date: Thursday, 14 August 1997

Attention: Gregory Dewe

Time: 2.45pm

Fax Number: 03-379-6955

Pages: 1

From: Gerard Cleary
Resource Management Officer

☐ Urgent

☐ Please Comment

☒ For Review

☐ Please Reply

Message:

Gregory,

RE: BELLSOUTH APPLICATION AT KEW BOWL 406 ELLES ROAD INVERCARGILL.

Due to an administrative oversight, I neglected to include a number of owners/occupiers on the list of persons to be notified which I have forwarded to you previously. Can you please add the following names to this list.

1. The Occupier
393 Elles Road
Invercargill

2. The Occupier
415 Elles Road
Invercargill

3. The Occupier
419 Elles Road
Invercargill

4. The Occupier
421 Elles Road
Invercargill

5. The Occupier
423 Elles Road
Invercargill

6. William Kempenaar
456 Elles Road
Invercargill

All of the above were supplied with a copy of the report from the National Radiation Laboratory as well as a copy of the photomontage included with the application. I apologise if this has caused any inconvenience.

Should you have any queries relating to the above please do not hesitate to contact me.

Gerard Cleary
RESOURCE MANAGEMENT OFFICER

MCCALLUM THOMAS
1 MCQUARRIE ST

SOUTH INVERCARGILL
DOMAIN
C/- INVERCARGILL
CITY COUNCIL
PRIVATE BAG 90104

MCDOWELL IRIS
21 MCQUARRIE ST

KENNEDY G&S
19 SEDDON PL
INVERCARGILL

HANSEN EVELYN
7 MCQUARRIE ST
INVERCARGILL

WEYLING ADRIAN
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17 SEDDON PL

CHARLTON ANTHONY
CHARLTON BARBARA
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SOUTH INVERCARGILL
DOMAIN BD
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ODONNELL TIMOTHY
375 ELLES RD

ANDREW HOUSING
LTD
PO BOX 960
INVERCARGILL

LOWE SHELLEY
76 ELLES RD
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HARRIS EDNA
36 MCQUARRIE ST
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MCNAUGHTON
ATHOLE
6 SEDDON PL
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SCOTT JOHN
SCOTT LENA
12 SEDDON PL
INVERCARGILL

ALLEN NORMAN
ALLEN CATHERINE
5 SEDDON PL
INVERCARGILL

ROBERTSON GRAHAM
ROBERTSON JANICE
C/- PO BOX 106
INVERCARGILL

NICOL KATHERINE
15A SEDDON PL
INVERCARGILL

THOMPSON DOUGLAS
THOMPSON EILEEN
8 SEDDON PL
INVERCARGILL

INVERCARGILL CITY
COUNCIL
PRIVATE BAG 90104
INVERCARGILL
Re: 11 SEDDON PL

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16 SEDDON PL
INVERCARGILL

ODONNELL TIMOTHY
375 ELLES RD
INVERCARGILL

MILROY LINDSEY
384 ELLES RD
INVERCARGILL

PETERS MARTIN
SKEGGS JACQUELINE
397 ELLES RD
INVERCARGILL

CARTER BERNARD
CARTER KAYLENE
405 ELLES RD
INVERCARGILL

MCADAM MICHELLE
411 ELLES RD
INVERCARGILL

STEVENS JUDITH
417 ELLES RD
INVERCARGILL

SULLIVAN ROBIN
SULLIVAN SANDRA
P O BOX 7004
INVERCARGILL

PADDON DENISE
15 SEDDON PL
FL 2 INVERCARGILL

WEYLING ADRIAN
WEYLING ROBYN
17 SEDDON PL
INVERCARGILL

MCDONALD CRAIG
LOWE SHELLEY
376 ELLES RD
INVERCARGILL

MANAIA LINDA
389 ELLES RD
INVERCARGILL

NICHOLLS EVELYN
401 ELLES RD
SOUTH INVERCARGILL

STHLD AMATEUR
CYCLING ASSN
P O BOX 939
INVERCARGILL

HENDERSON NGAIRE
413 ELLES RD
INVERCARGILL

LONSDALE GARY
LONSDALE ANN
160 CHELMSFORD ST
INVERCARGILL
0419 ELLES RD

SYKES JAMES
SYKES FIONA
506 QUEENS DR
INVERCARGILL

INVERCARGILL
LICENSING TRUST
P O BOX 208
INVERCARGILL

FLAVELL WILLIAM
FLAVELL KAREN
378 ELLES RD
INVERCARGILL

MURDOCH RUSSELL
MURDOCH DIANNE
25 BANKS ST
INVERCARGILL

VAN EMPEL JOSEPHUS
403 ELLES RD
INVERCARGILL

READING PETER
READING GLADYS
409 ELLES RD
INVERCARGILL

READ GRAEME
21 OHARA ST
INVERCARGILL

HAZLE RICHARD
419A ELLES RD
INVERCARGILL

MICHELS JEFFREY
QUINN JOSEPHINE
425 ELLES RD
INVERCARGILL

MELGREN JOHN
429 ELLES RD
INVERCARGILL

COATS GRAEME
C/O 43 ISLINGTON ST
INVERCARGILL

MEIKLE LINDA
450 ELLES RD
INVERCARGILL

HENDERSON ANNIE
427 ELLES RD
INVERCARGILL

THE OCCUPIER
441 ELLES RD

RICHARD MUIR
153 ELIZABETH ST

MARSHALL VANESSA
22 ELIZABETH STREET
BLUFF

JEET RICHARD
458 ELLES RD
INVERCARGILL

ANNE CRAWFORD
165 ELZABETH ST
INVERCARGILL

THE OCCUPIER
445 ELLES RD
INVERCARGILL

PETER AND NICOLA
O'CONNOR
156 ELIZABETH ST

THE OCCUPIER
408A NESS ST
INVERCARGILL

MCLENNAN GORDON
452 ELLES RD
INVERCARGILL

ANTHONY THOMPSON
161 ELZABETH ST
INVERCARGILL

THE OCCUPIER
412 NESS ST
INVERCARGILL

AILEEN MCGIMPSEY
155 ELIZABETH ST
INVERCAARGILL

THE OCCUPIER
408 NESS ST
INVERCARGILL

THE OCCUPIER
422 NESS ST
INVERCARGILL

MARGARET SHEEHAN
416 NESS ST
INVERCARGILL

THE OCCUPIER
410A NESS ST
INVERCARGILL

SOUTHERN PUBLIC
HEALTH SERVICES
PO BOX 1364
INVERCARGILL

THE OCCUPIER
410 NESS ST
INVERCARGILL

THE OCCUPIER
414 NESS ST
INVERCARGILL

HOUSING NEW
ZEALAND
5 TAY ST

THE OCCUPIER
414 NESS ST
INVERCARGILL

TE AO MARAMA
PO BOX 990
INVERCARGILL

WILLIAM KEMPENAAR
456 ELLES ROAD
INVERCARGILL

THE OCCUPIER
393 ELLES ROAD
INVERCARGILL

THE OCCUPIER
415 ELLES ROAD
INVERCARGILL

THE OCCUPIER
419 ELLES ROAD
INVERCARGILL

THE OCCUPIER
421 ELLES ROAD
INVERCARGILL

THE OCCUPIER
423 ELLES ROAD
NVERCARGILL



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

NOTIFICATION OF AN APPLICATION FOR A RESOURCE CONSENT UNDER SECTION 93(2) OF THE RESOURCE MANAGEMENT ACT 1991

To:

The Invercargill City Council has received an application for a resource consent from BellSouth New Zealand.

A description of the activity to which the application relates is:

To establish a cellular telephone telecommunications facility.

The location in respect of which this application relates is situated at Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.

Legal Description: Part Section 74, Block 1 and contained on CT 7A/746.

If you wish to make a submission on this application, you may do so by sending a written submission to the consent authority no later than Tuesday, 9 September 1997. The submission must be dated, signed by you and include the following information:

- (a) Your name, postal address, telephone number and fax number (if applicable).
- (b) Details of the application in respect of which you are making the submission, including location.
- (c) Whether you support or oppose the application.
- (d) Your submission, with reasons.
- (e) The decision you wish the consent authority to make.
- (f) Whether you wish to be heard in support of your submission.

The application can be viewed, and submission forms obtained at the Planning Office, First Floor, Civic Administration Building, 101 Esk Street, Invercargill.

A copy of your submission must be served as soon as reasonably practicable on the applicant whose address for service is C/- Connell Wagner, PO Box 1061, Christchurch.

Address for service of Consent Authority:

Invercargill City Council
Private Bag 90104
INVERCARGILL

13 August, 1997

Telephone Number: (03) 218 1959
Fax Number: (03) 214 3670

W J Watt
Director of Environmental & Planning Services

NEWSPAPER CLIPPINGS

Paper: Southland Times

Date: 13-08-97
Wednesday



Invercargill City Council

THE RESOURCE MANAGEMENT ACT 1991

Invercargill City Council District Plan
Public Notification of an Application
for a Resource Consent
Under Section 93(2)

NOTIFICATION OF AN APPLICATION FOR A RESOURCE CONSENT UNDER SECTION 93(2) OF THE RESOURCE MANAGEMENT ACT 1991

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13 August, 1997

Telephone Number: (03) 218-1959
Fax Number: (03) 214-3670
DX Number: YA90023

W J WATT
DIRECTOR OF
ENVIRONMENTAL
& PLANNING SERVICES

19040

"(ICC Crest - I109)

THE RESOURCE MANAGEMENT ACT 1991
Invercargill City Council District Plan
Public Notification of an Application for a Resource Consent
Under Section 93(2)

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13 August, 1997

Telephone Number: (03) 218 1959
Fax Number: (03) 214 3670
DX Number: YA90023

W J Watt
Director of Environmental & Planning Services

Connell Wagner

Connell Wagner Limited
Engineers • Surveyors • Planners • Managers
Telephone (03) 366-0821
Facsimile (03) 379 6955

Torrens House
195 Hereford Street
P O Box 1061
Christchurch, New Zealand

Offices
Auckland Australia
Tauranga Hong Kong
Paraparaumu Indonesia
Wellington Singapore
Christchurch Thailand
Rangiora United Kingdom

REF: P15218P
GJD/VJG

4 August 1997

Invercargill City Council
Private Bag 90104
INVERCARGILL



DATE: 5 AUG 1997	
REF: 97003223	
COMM	PARKS
EPS	POOLS
FINANCE	PROM
HALLS	PWM
HRM	SEC
LIBRARY	WORKS

Attention : Gerard Cleary

Dear Sir

RE - BELLSOUTH KEW BOWL

Please find enclosed a report from the National Radiation Laboratory and a Photomontage of the site from Giles Road. This is the most significant view of the proposal and now believe that you have enough information for the purpose of notifying the application. Accordingly we ask that the application be notified as soon as possible.

I have prepared a letter to go out to those people within 200m of the site describing what BellSouth are doing. A copy of the National Radiation Laboratory's report will also be sent to these people.

In response to your fax of today the security fence surrounding the facility is 3m high and will have 3 strands of bare wire above this. There will also be a sign on the mast warning people to keep away.

Yours faithfully
Connell Wagner Limited

Gregory Dewe
Planner

CLM ①



1. View of Proposed Cell Site from Elles Road

PROJ. DIR	ACTIONED	DATE
GSD	G-D	4/8
→ Council		

Estimated exposures to radiofrequency radiation from a proposed BellSouth cellular phone base station at Kew Bowl, Elles Road, Invercargill

**NATIONAL
RADIATION
LABORATORY**

108 Victoria Street
P.O. Box 25099
Christchurch
New Zealand
Phone (03) 366 5059
Fax (03) 366 1156

Ref. No. _____

Introduction and summary

I have examined the plans and specifications for the proposed BellSouth cellular phone base station (cellsite) at Kew Bowl, Elles Road, Invercargill.

Based on this information, I estimate that the maximum exposure to radiofrequency (RF) radiation to someone standing on the ground within 25 metres of the mast would be 0.3% of the exposure limit recommended for the public in New Zealand Standard 6609:1990 Part 1 *Radiofrequency Radiation - Maximum exposure levels 100 kHz - 300 GHz*. Maximum exposures in nearby houses would be 0.2% of the limit, but generally lower than this.

Exposure Standards

In 1990, New Zealand adopted an Australian Standard *Radiofrequency Radiation - Maximum exposure levels 100 kHz - 300 GHz* as New Zealand Standard 6609:1990 Part 1. This Standard sets out limits for exposure to the RF radiation produced by all types of radio transmitters, for people exposed occupationally and for the general public. The limits are based on a careful review of the research into the health effects of exposure to RF radiation, and include wide margins for safety. Limits for the general public are stricter than for occupational exposures, and are set at levels more than 50 times lower than those which may cause ill health.

The principles on which NZS 6609 is based are similar to those followed by other National and International Standards bodies. These principles have been developed over several decades, and there are no recorded cases of ill health caused by exposures which comply with exposure limits derived from those basic principles. The National Radiation Laboratory believes that NZS 6609 provides an appropriate basis from which to assess the possibility of adverse health effects arising from exposures to RF radiation.

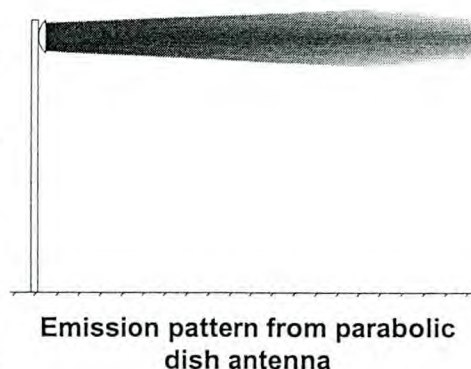
Estimate of expected exposures

NZS 6609:1990 Part 2 includes methods to calculate the likely exposure levels around proposed transmitter installations. These procedures produce conservative estimates, and have been validated by measurements made on other transmitters.

Two types of transmitting antennas are proposed for the cellsite: two parabolic dish antennas and three panel (BTS) antennas. Three further panel antennas act as passive receivers.

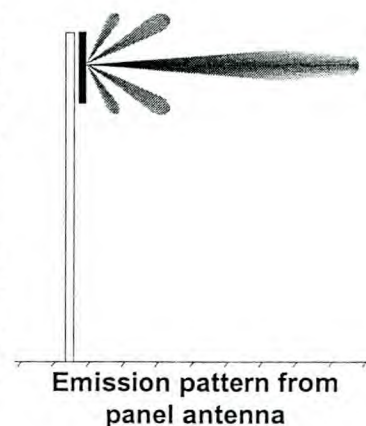
The power emitted by the parabolic dish antennas is very low. The emissions are concentrated in fairly tight beams (see diagram), aimed above the ground and away from obstructions.

Only very small fractions of the power are emitted outside the main beams. Exposures at any point on the ground underneath the beams would be at most 0.1% of the public exposure limit in the New Zealand Standard, but generally would be much lower than this.



Most of the power from the panel antennas is directed just below the horizontal, with only small fractions of the power transmitted at steep angles towards the ground (see diagram). Therefore, exposures at ground level are much lower than in the main beam.

Incident levels of RF radiation two metres above the ground (head high for a tall person) around the site would reach a maximum of 0.3% of the public limit in NZS 6609, over small areas about 25 metres from the mast, but would generally be less than this.



Exposures in particular areas of interest are tabulated below:

Location	Estimated exposure
Ground level on the site	Maximum 0.3% of limit in isolated spots, generally less than 0.1%
In the grandstand	Maximum 0.8% of the limit at the top of the grandstand
Tavern Car Park	Maximum 0.3% of the limit in isolated spots, generally less than 0.1%
Bowling club	Maximum 0.13% of the limit, generally less than this
Tennis courts	Less than 0.1% of the limit
Houses on Elles Road	Maximum 0.13% of the limit, generally less than this
Houses on McQuarrie Street	Less than 0.1% of the limit

In some areas there may be increases over these values due to reflections of the incident RF radiation off the ground or nearby fences, walls etc. Such spots generally extend over limited distances, typically less than one metre, and are accompanied by spots of decreased exposure.

The results of calculations of this type have been confirmed by measurements around existing operational sites using similar equipment.

In conclusion, exposures would be very low compared with the limits prescribed in NZS 6609. The proposed cellphone base station would not pose a health hazard to people who live nearby or who work or pass by the site.

A handwritten signature in cursive script, reading "Martin Gledhill". The signature is written in dark ink and is positioned above the printed name.

Martin Gledhill
National Radiation Laboratory
July 1997



1. View of Proposed Cell Site from Elles Road



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

Please Contact: Gerard Cleary

Ref: T3/3
Property

5 August, 1997

Connell Wagner
PO Box 1061
CHRISTCHURCH

Attention: Gregory Dewe

Dear Sir

re: BELLSOUTH APPLICATION: KEW BOWL 406 ELLES ROAD, INVERCARGILL

I acknowledge receipt of the application for the above-mentioned proposal.

Before Invercargill City Council can proceed with the application, it will be necessary for you to provide Council with the following additional information.

1. In respect of the security compound, could you please advise the Council what measures, if any will be taken to ensure that the facility will secure against any possible trespass. Are any anti-climb materials being used?
2. Measurements of the expected levels of Radio Frequency(RF) radiation emission levels at those residential and non-residential buildings nearest to the proposal.
3. Photomontages of the proposal taken from the nearest point to the following locations.
 - (i) From Elles Road, directly opposite the proposal
 - (ii) From the corner of Elles Road and Kew Road
 - (iii) From the corner of Elles Road and Elizabeth Street
 - (iv) From McQuarrie Street facing north.
 - (v) From Scott Street facing south.

If you need any assistance with the above, please do not hesitate to contact me.

Yours faithfully

G Cleary
RESOURCE MANAGEMENT OFFICER

GC:sjm



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

Please Contact: Gerard Cleary

Ref: T3/3
Property

5 August, 1997

Connell Wagner
PO Box 1061
CHRISTCHURCH

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Yours faithfully

G Cleary
RESOURCE MANAGEMENT OFFICER

GC:sjm

Facsimile



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • Ph (03) 218 1959 • Fax (03) 214 3670

To: Connell Wagner

Date: Monday, 4 August 1997

Attention: Gregory Dewe

Time: 14.45

Fax Number: 03-379-6955

Pages: 2

From: Gerard Cleary
Resource Management Officer

☐ Urgent

☐ Please Comment

☒ For Review

☐ Please Reply

Message:

Gregory,

re: BELLSOUTH APPLICATION: KEW BOWL 406 ELLES ROAD, INVERCARGILL

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(v) From Scott Street facing south.

If you need any assistance with the above, please do not hesitate to contact me.

A hard copy of this facsimile will be forwarded to you in today's mail.

Gerard Cleary
RESOURCE MANAGEMENT OFFICER

Facsimile



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • Ph (03) 218 1959 • Fax (03) 214 3670

To: Connell Wagner

Date: Tuesday, 29 July 1997

Attention: Gregory Dewe

Time: 13.45

Fax Number: 03-379-6955

Pages: 5

From: Gerard Cleary
Resource Management Officer

☐ Urgent

☐ Please Comment

☒ For Review

☐ Please Reply

Message:

Gregory,

Please find enclosed a rather extensive list of the owners/ occupiers of all those properties adjacent to the Kew Bowl complex. As with previous applications, the basis behind the list was that all the above parties are owners/occupiers within a 200m radius of the proposal.

Apologies for any delay in compiling this list. I trust it has not caused you any undue inconvenience. Please expect further communication relating to the above proposal in the next day or so.

If there are any queries please do not hesitate to contact me directly.

Gerard Cleary

MCCALLUM THOMAS
1 MCQUARRIE ST

CHARLTON ANTHONY
& BARBARA
12 LOUISA ST

HANSEN EVELYN
7 MCQUARRIE ST

FISHER CHARLES
9 MCQUARRIE ST

BOIVIN STANLEY
11 MCQUARRIE ST

BOLGER JOY
15 MCQUARRIE ST

BALLIE GORDON &
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MCNAUGHTON
ATHOLE
6 SEDDON PL
INVERCARGILL

TRESSLER LISA
7 SEDDON PL
INVERCARGILL

THOMPSON DOUGLAS
THOMPSON EILEEN
8 SEDDON PL
INVERCARGILL

ROBERTSON GRAHAM
ROBERTSON JANICE
C/- PO BOX 106
INVERCARGILL

ANDREW HOUSING
LTD
PO BOX 960
INVERCARGILL

PETERS WARREN
PETERS PAMELA
10 SEDDON PL
INVERCARGILL

INVERCARGILL CITY
COUNCIL
PRIVATE BAG 90104
INVERCARGILL
Re: 11 SEDDON PL

SCOTT JOHN
SCOTT LENA
12 SEDDON PL
INVERCARGILL

SUTHERLAND
KATHRYN
14 SEDDON PL
INVERCARGILL

PADDON DENISE
15 SEDDON PL
FL 2 INVERCARGILL

NICOL KATHERINE
15A SEDDON PL
INVERCARGILL

WESTRUPP EMERE
16 SEDDON PL
INVERCARGILL

WEYLING ADRIAN
WEYLING ROBYN
17 SEDDON PL
INVERCARGILL

KENNEDY GRAHAM
KENNEDY SHIRLEY
19 SEDDON PL
INVERCARGILL

ODONNELL TIMOTHY
375 ELLES RD
INVERCARGILL

MCDONALD CRAIG
LOWE SHELLEY
376 ELLES RD
INVERCARGILL

FLAVELL WILLIAM
FLAVELL KAREN
378 ELLES RD
INVERCARGILL

MILROY LINDSEY
384 ELLES RD
INVERCARGILL

MANAIA LINDA
389 ELLES RD
INVERCARGILL

MURDOCH RUSSELL
MURDOCH DIANNE
25 BANKS ST
INVERCARGILL

PETERS MARTIN
SKEGGS JACQUELINE
397 ELLES RD
INVERCARGILL

NICHOLLS EVELYN
401 ELLES RD
SOUTH INVERCARGILL

VAN EMPEL JOSEPHUS
403 ELLES RD
INVERCARGILL

CARTER BERNARD
CARTER KAYLENE
405 ELLES RD
INVERCARGILL

STHLD AMATEUR
CYCLING ASSN
P O BOX 939
INVERCARGILL

READING PETER
READING GLADYS
409 ELLES RD
INVERCARGILL

MCADAM MICHELLE
411 ELLES RD
INVERCARGILL

HENDERSON NGAIRE
413 ELLES RD
INVERCARGILL

READ GRAEME
21 OHARA ST
INVERCARGILL

STEVENS JUDITH
417 ELLES RD
INVERCARGILL

LONSDALE GARY
LONSDALE ANN
160 CHELMSFORD ST
INVERCARGILL
0419 ELLES RD

HAZLE RICHARD
419A ELLES RD
INVERCARGILL

SULLIVAN ROBIN
SULLIVAN SANDRA
P O BOX 7004
INVERCARGILL

SYKES JAMES
SYKES FIONA
506 QUEENS DR
INVERCARGILL

MICHELS JEFFREY
QUINN JOSEPHINE
425 ELLES RD
INVERCARGILL

HENDERSON ANNIE
427 ELLES RD
INVERCARGILL

INVERCARGILL
LICENSING TRUST
P O BOX 208
INVERCARGILL

MELGREN JOHN
429 ELLES RD
INVERCARGILL

MARSHALL VANESSA
22 ELIZABETH STREET
BLUFF

THE OCCUPIER
441 ELLES RD

COATS GRAEME
C/O 43 ISLINGTON ST
INVERCARGILL

THE OCCUPIER
445 ELLES RD

JEET RICHARD
458 ELLES RD

MEIKLE LINDA
450 ELLES RD

MCLENNAN GORDON
452 ELLES RD

PETER AND NICOLA
O'CONNOR
156 ELIZABETH ST

RICHARD MUIR
153 ELIZABETH ST

AILEEN MCGIMPSEY
155 ELIZABETH ST

ANTHONY THOMPSON
161 ELZABETH ST

ANNE CRAWFORD
165 ELZABETH ST

MARGARET SHEEHAN
416 NESS ST

THE OCCUPIER
408 NESS ST

THE OCCUPIER
408A NESS ST

THE OCCUPIER
410 NESS ST

THE OCCUPIER
410A NESS ST

THE OCCUPIER
412 NESS ST

THE OCCUPIER
414 NESS ST

THE OCCUPIER
414 NESS ST

THE OCCUPIER
422 NESS ST

HOUSING NEW
ZEALAND
5 TAY ST

TE AO MARAMA
PO BOX 990
INVERCARGILL

SOUTHERN PUBLIC
HEALTH SERVICES
PO BOX 1364
INVERCARGILL

Connell Wagner

Connell Wagner Limited
Engineers • Surveyors • Planners • Managers
Telephone (03) 366-0821
Facsimile (03) 379 6955

Torrens House
195 Hereford Street
P O Box 1061
Christchurch, New Zealand

Offices	
Auckland	Australia
Tauranga	Hong Kong
Paraparaumu	Indonesia
Wellington	Singapore
Christchurch	Thailand
Rangiora	United Kingdom

21 July 1997

Ref:5218/15

The City Manager
Invercargill City Council
P O Box 90104
INVERCARGILL



Attention: Mrs P Gare
Senior Resource Management Officer

Dear Madam

**RESOURCE MANAGEMENT ACT 1991 - RESOURCE CONSENT
APPLICATION
BELLSOUTH NEW ZEALAND
CYCLING SOUTHLAND - KEW BOWL, ELLES ROAD, INVERCARGILL**

Enclosed for your further action is a copy of the above application which seeks consent for a telecommunications facility at the abovementioned address.

The documentation in support of the application is as follows:

1. A description of the activity for which the consent is sought;
2. an analysis of the provisions of the Transitional District Plan which are relevant to this application;
3. plans and elevations;
4. an assessment of environmental effects in accordance with the Fourth Schedule of the Act;
5. Certificate of title; and
6. Owners approval.

Please find enclosed the appropriate fee of \$56.25. I look forward to hearing from you in respect of this matter.

Yours Faithfully
Connell Wagner Limited

Gregory Dewe
Planner

**APPLICATION FOR RESOURCE CONSENT
SECTION 88 OF THE RESOURCE MANAGEMENT ACT 1991**

TO: The City Manager
Invercargill City Council
P O Box 90104
INVERCARGILL

WE: BellSouth New Zealand
Level 6
Regional House
21 Pitt Street
Private Bag 92161
AUCKLAND

hereby apply for a land use consent to establish a cellular telephone telecommunication facility.

AT: Cycling Southland, Kew Bowl, Elles Road, Invercargill on land legally described as Part Section 74 Blk I and contained on CT 7A/746.

LAND OWNER AND OCCUPIER:

Southland Centre of the New Zealand Amateur Cycling Association
c/- Box 108
Invercargill

Contact: Trevor Smart

The proposed facility comprises a 20 metre high monopole mast with 8 antennas attached together with an equipment shelter containing radio equipment, a control computer, emergency batteries and an air conditioning unit to be established adjacent to the mast in a security fenced compound.

This application is necessary because the proposed development is a non-complying activity under the Invercargill City Transitional District Plan.

Attached is a report detailing the information required to accompany the application pursuant to Section 88 of the Resource Management Act 1991.

There are no additional resource consents required in relation to this proposal.

ADDRESS FOR SERVICE

Connell Wagner Limited

P O Box 1061

CHRISTCHURCH

Telephone: (03) 366 0821

Facsimile: (03) 379 6955

Attention: G J Dewe

-----

(Signature of applicant or person authorised to sign on behalf of applicant).

Dated at Christchurch this 21st day of July 1997.

RESOURCE MANAGEMENT REPORT

PROPOSED CELLULAR TELEPHONE CELL SITE

AT CYCLING SOUTHLAND

KEW BOWL, ELLES ROAD

INVERCARGILL

CONTENTS

1.0	INTRODUCTION	1
2.0	THE BELLSOUTH CELLULAR TELEPHONE NETWORK	2
3.0	SITE SELECTION	3
4.0	THE PROPOSAL	5
5.0	THE SITE AND LOCALITY	6
6.0	DISTRICT PLAN PROVISIONS	7
7.0	ASSESSMENT OF EFFECTS	9
8.0	CONSULTATION	12
9.0	CONCLUSION	13

1.0 INTRODUCTION

- 1.1 This report has been prepared to accompany the application by BellSouth New Zealand to establish a telecommunications facility at Kew Bowl, Elles Road, Invercargill, on that parcel of land legally known as Part Section 74 Blk I Seaward Bush and contained on CT 7A/746 (Copy attached at Appendix A).
- 1.2 This report is prepared in accordance with the requirements of Section 88 and the Fourth Schedule of the Resource Management Act 1991. It is intended to provide the information necessary for a full understanding of the proposal and any actual or potential effects the proposed activity may have on the environment.
- 1.3 This report contains the following information:
- i An outline of the BellSouth cellular telephone network;
 - ii. A description of the proposed activity;
 - iii The site selection process;
 - iv. A description of the site subject of the application and the surrounding locality and
 - v. An analysis of the provisions of the Transitional District Plan which are relevant to the application.

2.0 THE BELLSOUTH CELLULAR TELEPHONE NETWORK

- 2.1 BellSouth New Zealand has the rights to the GSM (or TACS) "C" radio frequency band throughout New Zealand and is establishing a cellular telephone service using frequencies in the ranges 907.5 MHz to 915.0 MHz and 952.5 MHz to 960.0 MHz.
- 2.2 The BellSouth network will offer uniform coverage to all compatible hand-held units. This necessitates the establishment of a telecommunications network consisting of a central mobile telephone "exchange" (a mobile-switching centre - MSC) and a complementary network of small radio stations called "cell sites". The MSC links each cell site with the conventional hardwired telephone network. Each cell site contains transmitting and receiving equipment to communicate with the MSC and with the cell phones which are operating within its "cell".
- 2.3 The linking of the physical network as described above is by way of small "parabolic dish" antennas. These provide the necessary communication between the Mobile Switching Centre and the cell sites.
- 2.4 Each cell site serves a small geographic area or "cell" and communication between the cell sites and the cellular telephones operating within the particular cell is carried out by way of small radio transmitters called Base Transceiver Stations (BTS) which have separate transmit and receive aerials.
- 2.5 A cell site typically includes dish and BTS antennas and supporting plant and equipment including a mains power supply, emergency batteries, a control computer, radio equipment and air conditioning equipment. The antennas are either attached to an existing building (where they are tall enough to provide the desired coverage) or located on a free standing mast. The supporting plant and equipment occupies a floor space of around 20 square metres, including working space. The necessary equipment room may be located within an existing building or within a stand alone shelter.

3.0 SITE SELECTION

- 3.1 One of the critical parameters for the proper operation of the network is the location and positioning of antennas.
- 3.2 The BTS antennas are required to be located so that they are able to communicate with all of the cellular telephones operating within the "cell" they serve and at the same time not cause or receive interference from telephones operating within an adjacent cell. This is achieved by closely controlling the power output from the BTS transmitters, orienting antennas correctly and by positioning the antennas at the right height.
- 3.3 Height is critical for location of BTS antennas in order to achieve effective service to telephones operating in the cell. If antennas are sited too high transmissions will "spill outside" the site's desirable coverage and result in interference with the operation of adjacent cell sites. On the other hand BTS antennas must be high enough to prevent interference from large objects such as buildings and trees in the immediate vicinity. The BTS antennas must also be sited so that coverage "shadows" are not created by nearby topography.
- 3.4 Four potential sites were identified in the area which would have provided the desired coverage, these being:

Kew Hospital

This was BellSouth's preferred location as a site on this property would have provided the desired coverage as well as being amongst other larger buildings and near a Telecom facility of a greater size. However, the Hospital Board were not willing to grant BellSouth a lease for a site on the Hospital grounds.

Council Reserve (Between Vernon Street and Ball Street)

This site was rejected for environmental reasons as it was considered that a site in this location would be highly visible from a number of public viewpoints. The reserve is an open area void of buildings and a site in this location would have altered the character of the area.

Council Reserve (Corner of Elles Road and Ball Street)

As with the previous option this site was rejected for environmental reasons as it was considered that a site in this location would be out of character with the receiving environment.

Kew Bowl (Elles Road)

The site at Kew Bowl was chosen because of its location on a property which has other larger buildings in the vicinity as well as a number of other lighting poles. The site is also adjoined by other non-residential activities these being a local tavern, a bowling club, and tennis courts. While there are residential properties across Elles Road the site will be separated from other residential properties to the north, east and south by other non-residential buildings, and the remainder of the site itself.

- 3.5 Potential sites further towards Bluff were discounted from the outset as the large grouping of well established trees on the Hospital land behind the Telecom cell site would have adversely affected coverage requirements. These trees would have prevented BellSouth achieving in-building coverage over much of the desired coverage area. As such, options to meet coverage requirements in this part of Invercargill have been somewhat limited.

4.0 THE PROPOSAL

- 4.1 The proposed cell site contains the equipment needed to communicate between the cellular telephones operating within its area (or "cell") and to also link the proposed facility with other existing facilities located in Invercargill and Bluff. The component parts of the proposal and its location are illustrated in the accompanying plans attached at Appendix B. These comprise a mast, antennas and an adjacent equipment shelter. Plan number **5218/05/03** illustrates the proposed mast, antennas and shelter. These have the following dimensions:

Mast:

This is a "monopole" type structure constructed of steel and measuring approximately 1250mm in diameter at its base and tapering to 560mm at its top. It will have an overall height from ground level of 20 metres with a lightning rod on top. The lightning rod will be approximately 3.35m in height and is only 28mm in diameter.

Antennas:

Eight antennas will be attached to the mast as follows:

- i. Six Base Transmitter Station (BTS) antennas will be attached to brackets on the mast as illustrated in plan **5218/05/03**. These antennas are arranged vertically and have a total length of approximately 2.36 metres, and are 387mm wide and 100mm deep. BTS antennas are used for communicating with cellphone users operating within the "cell" served by the cell site.
- ii. Two dish antennas will also be attached to the mast. Both are to be attached at a height of 15m with one being solid and 450mm in diameter and the other being a grid par and 900mm in diameter. These antennas will provide communication with other "cells" in the BellSouth network and with the conventional "hardwired" telephone system.

Equipment Shelter:

This is a small building 4.5 metres long by 2.7 metres wide by 3.9 metres high which contains the radio equipment, a control computer, emergency batteries and a small air conditioning unit.

- 4.2 The mast and shelter will be enclosed by a security fence.

5.0 THE SITE AND LOCALITY

- 5.1 The topography of the site is predominantly flat although the cycle race track itself has significant raised embankments at each end of the oval. These embankments are in the order of 4m high at their maximum. Corrugated iron fences above the embankments raise the height around the perimeter of the track a further two metres on the Elles Road side of the track.
- 5.2 The tallest existing building in the area is the grandstand on site which measures approximately 9.5 metres in height. On the subject site, as well as the bowling club, and the tavern car park are a number of light-supporting poles measuring from 4m to 8m in height.
- 5.3 The proposed site is to the south of the grandstand near the fence between the subject property and the car park for the adjacent tavern. A site in this location is separated from the residential areas to the north, east and south by the adjoining non-residential activities to the south and the remainder of the site itself to the north and east. The closest dwellings to the site are approximately 55m to the west across the opposite side of Elles Road.
- 5.4 An existing 25 metre Telecom mast is approximately 300 metres further along Elles Road at Kew Hospital.

6.0 DISTRICT PLAN PROVISIONS

- 6.1 The site subject of this application is within the Community Use Zone in the Invercargill City Transitional District Plan. There are no protected trees or historic buildings or objects identified on the site.
- 6.2 The activity proposed is not provided for in the Plan and is therefore a non-complying activity. The subject site was chosen because it offered a location which was not completely residential and provided the desired coverage.
- 6.3 Section 105(2)(b)(i) of the Resource Management Act 1991 requires that the adverse effect on the environment of a non-complying activity be minor. This is addressed in Section 7 of this report. Section 105(2)(b)(ii) of the Act requires that the Council shall not grant a resource consent for a non-complying activity unless the Council is satisfied that the proposal is not contrary to the objectives and policies of the District Plan.
- 6.4 The objectives and policies for the Community Use Zone are contained in Section 8-1 of the Transitional District Plan. The only policy believed to be relevant to this proposal is:

"Policy 8.7.2 - Recreation Uses - Compatibility With Adjacent land Uses

To accommodate a variety of activities on open space reserves in a manner which is compatible with each other, and also compatible with adjacent land uses."

- 6.5 The telecommunications facility will not hinder the use of the land for recreational purposes. Only a small portion of land is required for the mast and equipment shelter, while EMR emissions from the antennas will not hinder the use of the land. Likewise, the telecommunications facility will not adversely affect adjacent land uses.
- 6.6 The performance standards for the Community Use Zone are contained in Ordinance 6-1 of the Transitional District Plan. Ordinance 6.2.2(b) states that the following is a controlled activity:

"Radio masts, aerials, towers and similar structures up to 17 metres in height. "

The proposed mast is approximately 20 metres in height and therefore does not comply with the height standard for such a facility in this zone.

- 6.7 Ordinance 6.3.3.1 states that the minimum yard requirements is 6 metres from all boundaries. The mast complies with this requirement, however, the shelter is only 1.3m from the nearest side boundary. The shelter has been positioned in this location so as to reduce the amount of car parking being lost and also in recognition that the adjacent land is used for car parking with the building on the site being some distance away. Further, the building is relatively small, being only 12.15m² in area and less than 4m high.
- 6.8 The issues of parking, access and noise are discussed in Section 7 of this report.
- 6.9 It is considered that the proposed facility is not contrary to the objectives and policies for the Community Use Zone and, therefore, that the threshold test of section 105(2)(b) RMA is met. The facility will not affect the existing use of the site and this view would seem to be shared by Cycling Southland who have given their approval to BellSouth to apply for a resource consent on this site (Copy attached at Appendix C).

7.0 ASSESSMENT OF EFFECTS

7.1 The effects of the proposal on the environment have been evaluated as required by Section 88 of the Resource Management Act 1991. The following matters have been identified as being relevant to an evaluation of this proposal:

- i. Health and safety issues.
- ii. Visual effects.
- iii. Effect on Other Transmission Frequencies.
- iv. Traffic and access.
- v. Noise and other emissions.

7.2 Health and Safety Issues

7.2.1 Radio and cellular telephone antennas communicate by transmitting low levels of non-ionising electromagnetic energy. The effects of electromagnetic energy on human health have been the subject of extensive scientific study and a number of countries throughout the world have set minimum recommended standards for exposure to electromagnetic energy.

7.2.2 The New Zealand Standards Association has established a recommended standard for exposure to radio frequency emissions which is set out in the New Zealand Standard NZS 6609. This is based upon the Australian Standard (AS 2772) and by comparison with standards set elsewhere in the world is particularly rigorous.

7.2.3 The applicants will operate the facility in accordance with the standards set out in the New Zealand Standard NZS 6609. The radio frequency energy emissions from the antennas will be significantly below the maximum recommended in the New Zealand Standard NZS 6609 at any point where any member of the public may approach the antennas. The EMR emissions are shown on plan **5218/05/04** attached at Appendix B and calculation sheets are provided at Appendix D. Furthermore, a report from the National Radiation Laboratory, being a division of the Ministry of Health, will be forwarded as soon as it comes to hand detailing that EMR levels at the nearest residential properties. This report will show that the levels at a number of locations both on and off the site are insignificant in terms of the New Zealand Standard.

7.3 Visual Effects

7.3.1 The proposed mast, antennas, and equipment shelter will be finished in such a manner as to blend in as much as possible with the surrounding environment and as a result help minimise the visual effects of the facility. The mast will be painted "jumbo grey" (BS 00A07) and the equipment shelter will be painted "flax" (BS 12B21).

- 7.3.2 It is considered that the predominant visual effect of the facility will result from the 20 metre mast. In this regard the existing visual amenity of the receiving environment is important so the relative effect of the proposed mast can be assessed. A description of the site and the surrounding area is provided in Section 5 in which the presence of lighting poles on and adjacent to the site is detailed and also the presence of large buildings within the site boundary and to the south.
- 7.3.3 It is recognised that there are residential area in close proximity to Kew Bowl and it is anticipated that some of these people may not like the look of the proposed facility. However, this does not necessarily mean that it will have a significant visual impact. This point was recognised by the Environment Court in *Telecom New Zealand Limited v Christchurch City Council (W165/96)* where at pages 35-36 it is stated:

"It is important to recognise that in deciding whether some particular activity has an adverse effect on the environment, it does not become so, merely because some part of the community does not like the look, size or scale, of a proposed development. It is the definition of environment in its totality which must be taken into account and it cannot, in our view, be said that this technology utilising as it does physical resources and contributing significantly to the social and economic wellbeing of a large group of the community could be said to be adverse to the environment merely because by its very nature it has an appearance in scale which some people find distasteful".

- 7.3.4 The above quote comes from an Environment Court decision which was given on an application by Telecom to establish a 20m cell site in the suburb of Beckenham in Christchurch. The site in that case is not all that dissimilar to the site subject of this application in that there were residential properties in close proximity to the site. In fact in the Telecom case the site was adjacent to residential land to the north, east and south. To the west of the site was a local business zone which 100m beyond was further residential properties.
- 7.3.5 In some instances it is necessary to locate cell sites within close proximity to residential properties and this is one such case. However, within the search area a site has been identified which is adjoined on one side by non-residential activities and which is separated by the remainder of the site in the other directions. The nearest residential properties are across Elles Road some 55m from the site. From this direction the tower will be viewed in conjunction with the buildings on the site and the tavern adjacent as well as the lighting poles for the cycle track and the tavern car park. While the proposed facility will be taller than these existing structures, their presence does mean that the receiving environment is not altogether void of tall structures.

7.4 Effect on Other Transmission Frequencies

- 7.4.1** The proposed cell site antennas operate within frequency bands allocated by the New Zealand Government. In addition, the facility operates at a low power output. Consequently the operation of the cell site will have no effect on the operation or reception of other transmission frequencies including AM/FM radio, television, CB, VHF, HAM or any emergency service frequency.

7.5 Traffic and Access

- 7.5.1** The proposal will not generate significant levels of traffic movement. The facility will require monthly servicing and this requirement will create no disruption to the normal use of the property or site or cause traffic manoeuvring difficulties to through traffic. Furthermore, there is ample parking available on site.

7.6 Noise and Other Emissions

- 7.6.1** There will be little or no discernable noise associated with the operation of the proposed cell site. Whilst the air conditioning unit to be attached to the equipment shelter may emit a slight hum, this will not be heard beyond the immediate vicinity of the shelter itself.
- 7.6.2** The operation of the cell site would not cause any odour emissions, generation of solid waste nor discharge of any liquid waste.

8.0 CONSULTATION

- 8.1 BellSouth have looked at a number of alternative sites in this area to meet the desired coverage requirements. It is believed that the Kew Bowl site is the most viable alternative available. However, going on past experience we anticipate that this application will be notified. Given that all people Council consider to be potentially affected by this proposal will be forwarded details of the application BellSouth intend to supply these same people with documentation of the proposal in conjunction with the Council.
- 8.2 The material to be supplied will include a copy of the planning drawings, a report from the National Radiation Laboratory on the EMR levels and an explanation of these, as well as some detail on what BellSouth is trying to achieve. Once the submission period has closed BellSouth will assess those received, if any, and see if it can accommodate any of the concerns raised. At that stage it may be that a pre-hearing meeting would be beneficial, or necessary for BellSouth to distribute more information.

9.0 CONCLUSION

- 9.1 Based on the above analysis we consider that the proposal satisfies the matters set out in Section 104 of the Resource Management Act 1991 which are relevant to the granting of consent to the application. Gaining a resource consent for this site will allow BellSouth to extend and improve their national cellular telephone service. More particularly the site will provide good in-building coverage to South Invercargill, Appleby, Strathern and Kew. The site will also extend and improve outdoor coverage in the surrounding areas.
- 9.2 We believe that this proposal meets the criteria set down in Section 105 of the Act for the granting of a resource consent to a non-complying activity and that the proposed cellular telephone cell site will be unlikely to result in any effects greater than a minor nature.

APPENDIX A

Certificate of Title

SEARCHED
25 JUN 1987
COPY

References
Prior C/T 5A/1458
Transfer No.
N/C. Order No. 107775.3

REGISTER

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

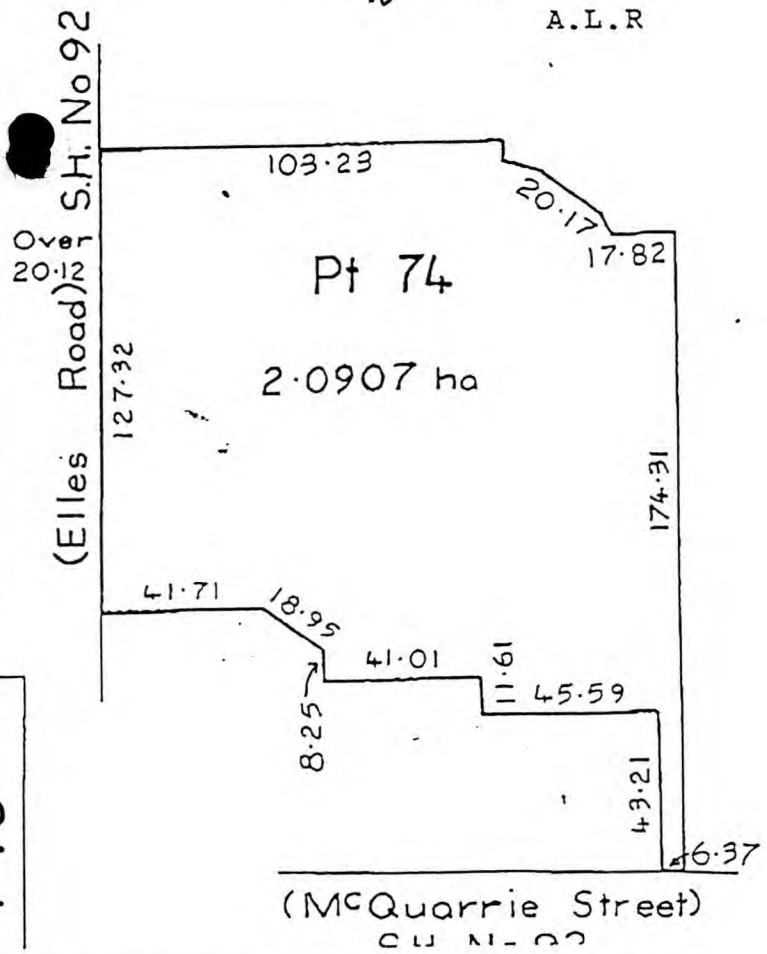
This Certificate dated the 28th day of June one thousand nine hundred and eighty-four under the seal of the District Land Registrar of the Land Registration District of S O U T H L A N D

WITNESSETH that SOUTHLAND CENTRE OF THE NEW ZEALAND AMATEUR CYCLING ASSOCIATION INCORPORATED a Society duly incorporated under the Incorporated Societies Act 1908 having its registered office at Invercargill

is seized of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 2.0907 hectares or less being part Section 74 Block I TOWN OF SEAWARD BUSH

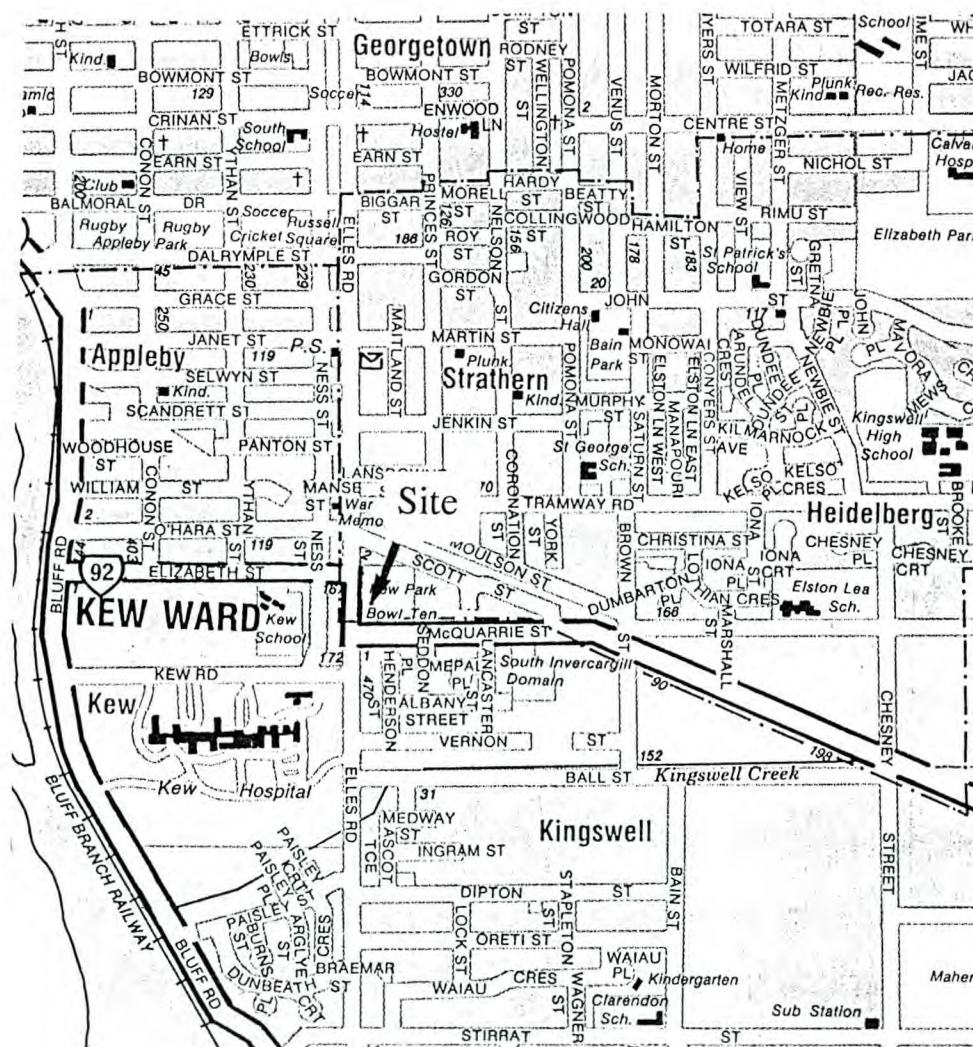
220654-1
DISCHARGED
078667.3 Mortgage to Southland Building and Investment Society 26.1.1982 at 9.35 a.m.
A.L.R.
John Ballman
D.L.R.

220654-2
DISCHARGED
135899.1 Mortgage to Southland Building and Investment Society 28.11.1986 at 11.04 a.m.
A.L.R.
W. M. M.
A.L.R.

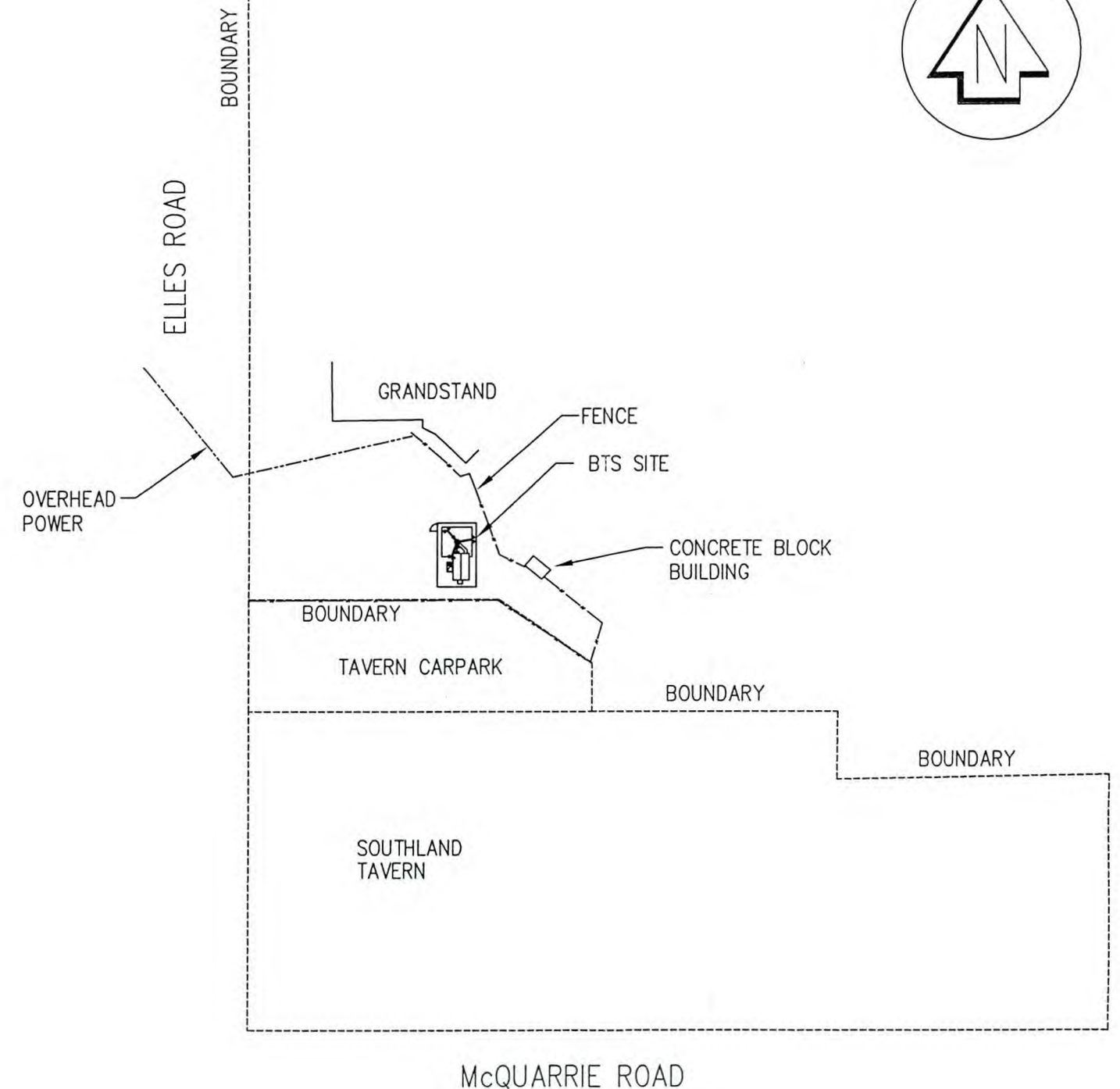


APPENDIX B

Plans and Elevations



LOCALITY PLAN
N.T.S.



SITE PLAN
1:1000

SITE LEGAL DESCRIPTION:
PART SECTION 74 BLOCK 1
TOWN OF SEAWARD BUSH -
2.0907Ha

Plotted: 22.07.97 Time: 16:37

Issue	Comment	By	Date
B	FOR CONSENT, SHELTER MOVED	NB	22.07.97
A	CONSENT	GMW	16.7.97

BellSouth
BTS CELL SITE

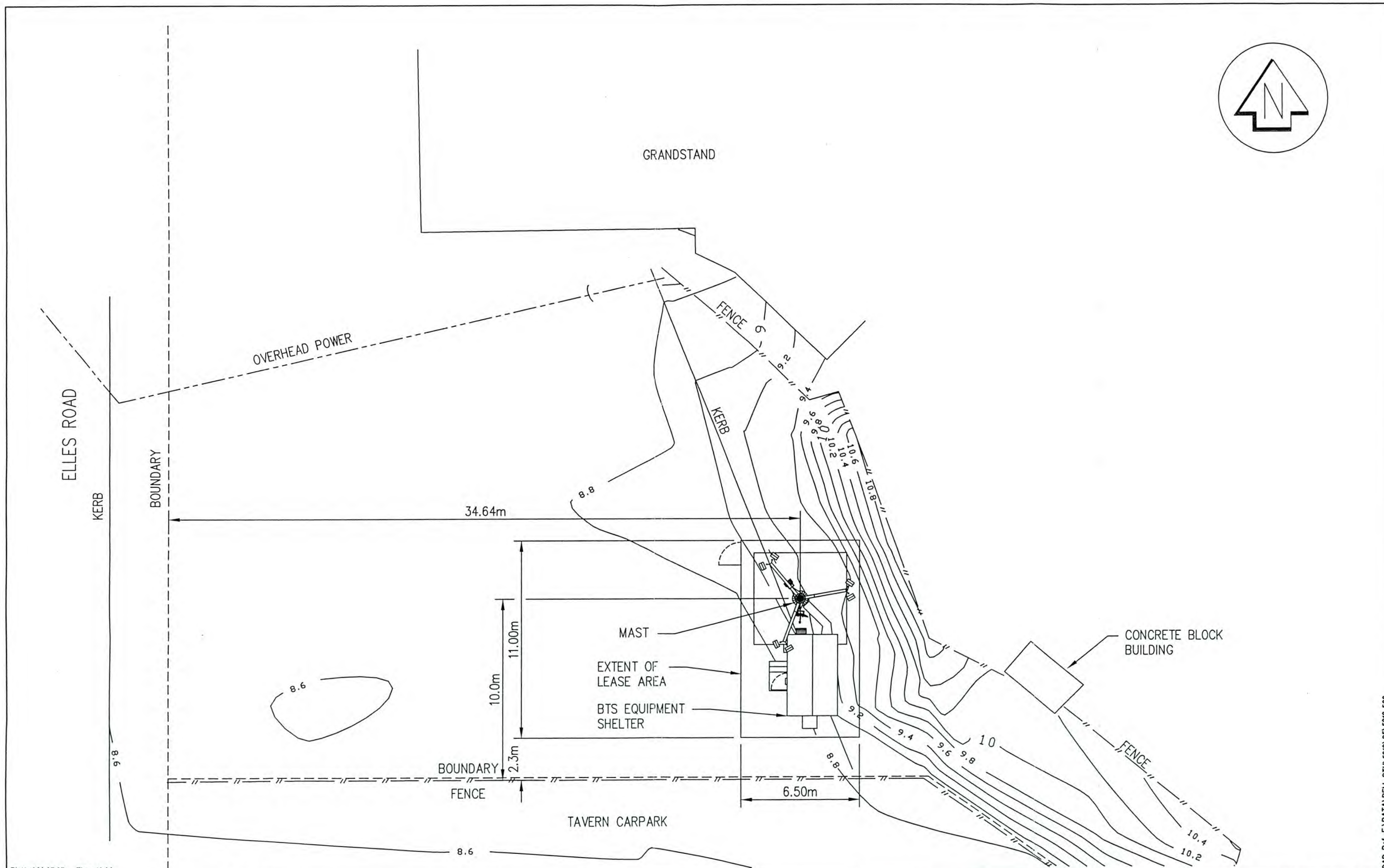
INVERCARGILL SOUTH
KEW BOWL
ELLES ROAD, INVERCARGILL
Locality & Site Plan

Connell Wagner
Connell Wagner Limited
Engineers • Managers • Surveyors • Planners

4th Floor Torrens House
195 Hereford Street
PO Box 1061
CHRISTCHURCH
NEW ZEALAND
Telephone: 03 366 0821
Facsimile: 03 379 6955

Surveyed		Scale	AS SHOWN	A3
Designed		Start Date	JULY 1997	ACENZ
Drawn	GMW	Issue		B
Checked	GMW			
Approved	GMW			
Drawing No.	5218/05/01			

CAD Ref: F:\DATA\BELL-STH\5218\05\5218-501



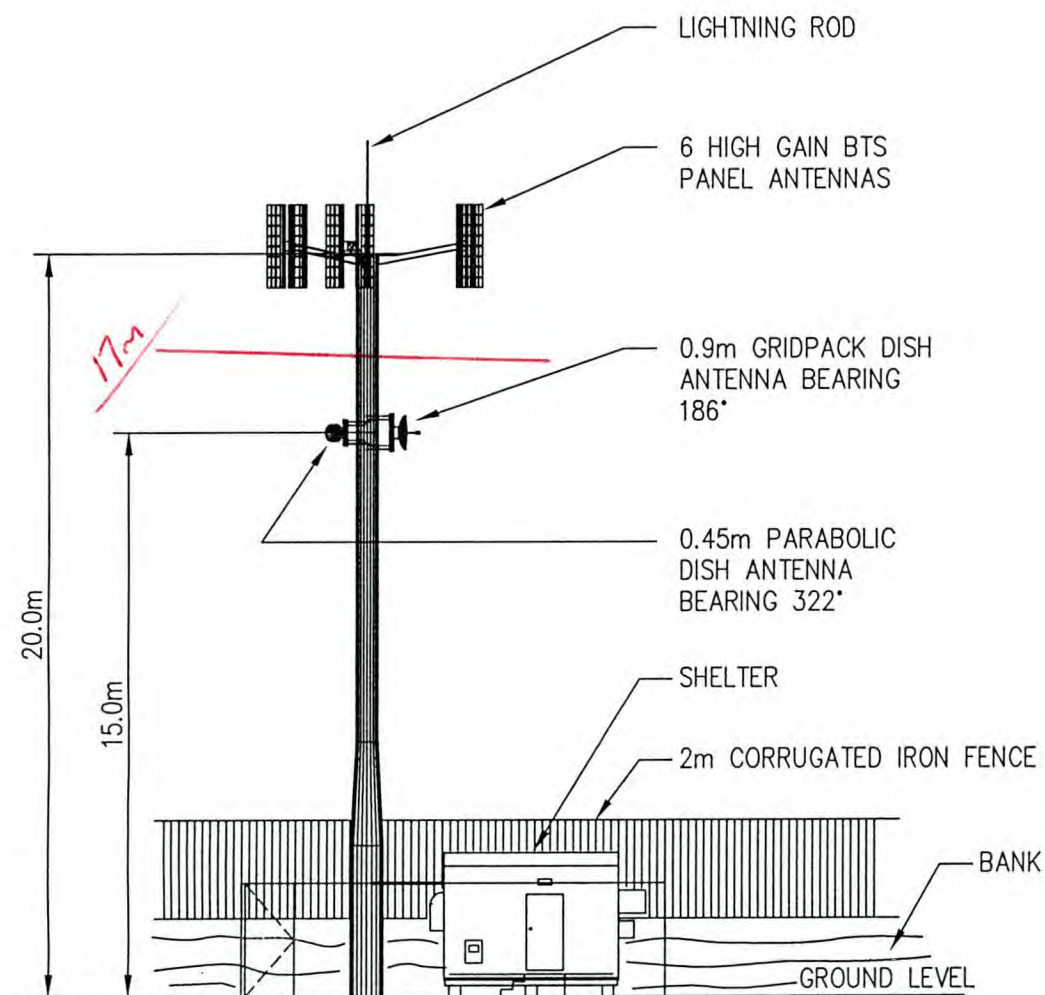
Plotter: 22.07.97		Time: 16:36	
C	FOR CONSENT, SHELTER MOVED	NB	22.07.97
B	CONSENT	GMW	17.7.97
A	CONSENT	GMW	16.7.97
Issue	Comment	By	Date

INVERCARGILL SOUTH
KEW BOWL
ELLES ROAD, INVERCARGILL
Site Plan

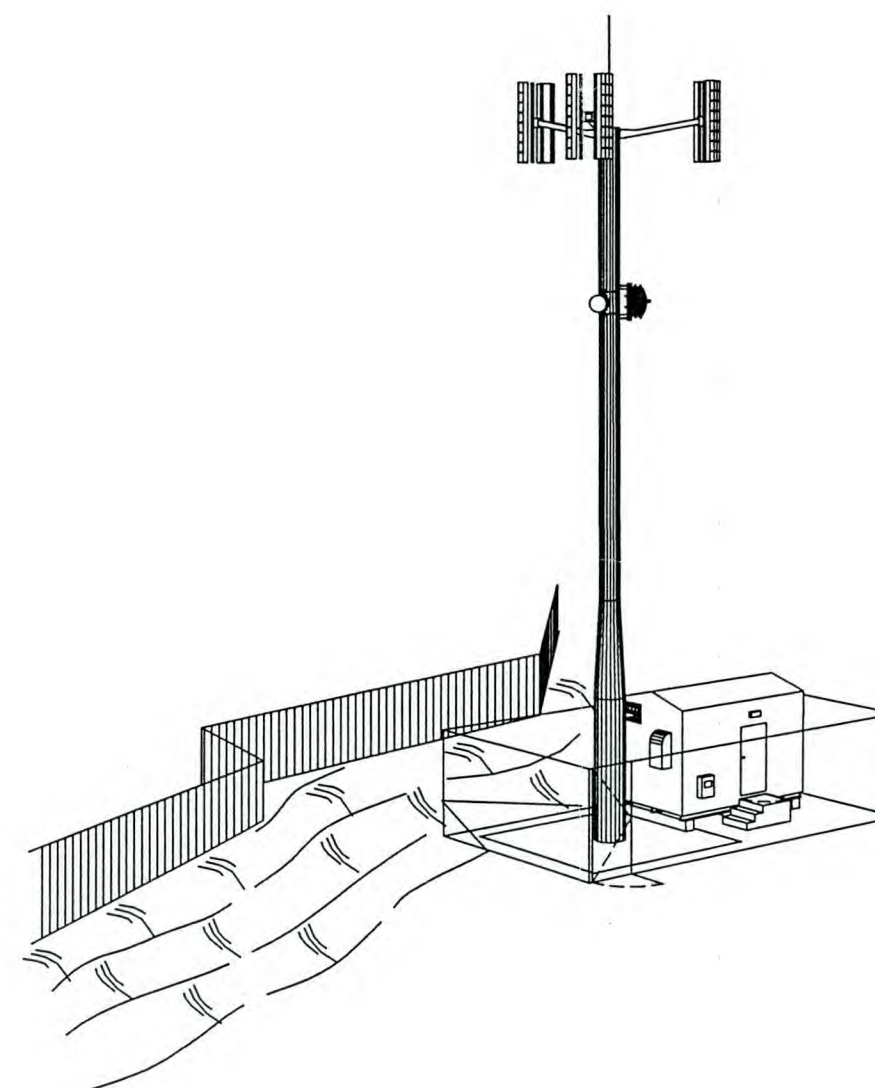
Connell Wagner Limited
Engineers • Managers • Surveyors • Planners

58	Surveyed		Scale 1:200	A3 size
	Designed			
	Drawn	GMW	Start Date JULY 1997	 ACEN
	Checked	<i>9/2</i>		
	Approved	<i>[Signature]</i>		
21 55	Drawing No. 5218/05/02			Issue C

C:\DATA\BENI CTIN 5040\CE\5040 503



WEST ELEVATION
1:200



PICTORIAL VIEW
N.T.S.

Plotted: 22.07.97 Time: 17:16

Issue	Comment	By	Date
B	FOR CONSENT, SHELTER MOVED	NB	22.07.97
A	CONSENT	GMW	16.7.97

BellSouth
BTS CELL SITE

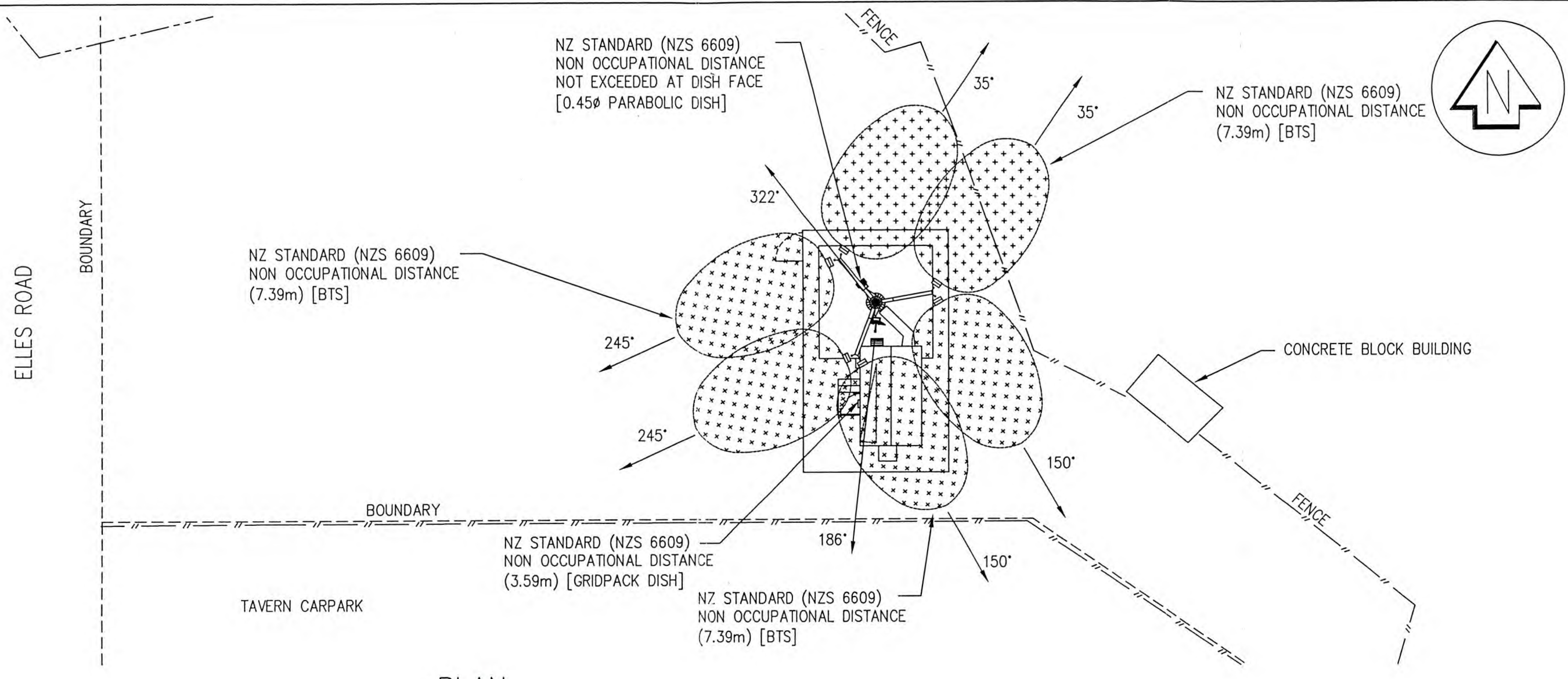
INVERCARGILL SOUTH
KEW BOWL
ELLES ROAD, INVERCARGILL
Elevation & Pictorial View

Connell Wagner

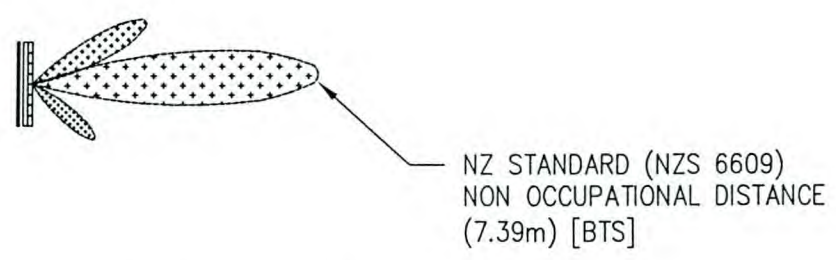
Connell Wagner Limited
Engineers • Managers • Surveyors • Planners

4th Floor Torrens House
195 Hereford Street
PO Box 1061
CHRISTCHURCH
NEW ZEALAND
Telephone: 03 366 0821
Facsimile: 03 379 6955

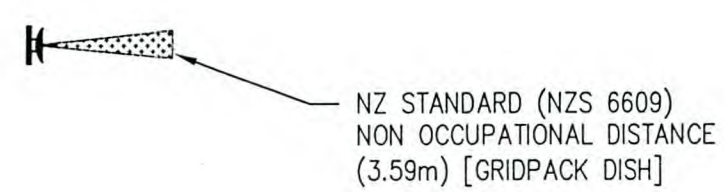
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Designed		Start Date	JULY 1997	
Drawn	GMW	Approved		ACENZ
Checked	GMW	Drawing No.	5218/05/03	Issue
Approved				B



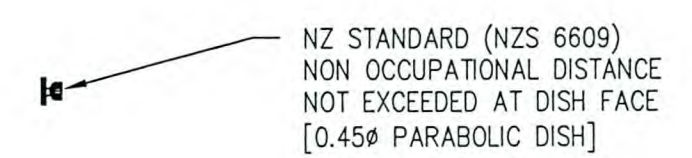
PLAN
1:200



ELEVATION - BTS
1:200



ELEVATION - 0.90Ø DISH
1:200



ELEVATION - 0.45Ø DISH
1:200

Plotted: 22.07.97 Time: 16:31

Issue	Comment	By	Date
C	FOR CONSENT, SHELTER MOVED	NB	22.07.97
B	CONSENT	GMW	17.7.97
A	CONSENT	GMW	16.7.97

BellSouth
BTS CELL SITE

INVERCARGILL SOUTH
KEW BOWL
ELLES ROAD, INVERCARGILL
EMR Plan & Elevations

Connell Wagner
Connell Wagner Limited
Engineers • Managers • Surveyors • Planners

4th Floor Torrens House
195 Hereford Street
PO Box 1061
CHRISTCHURCH
NEW ZEALAND
Telephone: 03 366 0821
Facsimile: 03 379 6955

Surveyed		Scale	1:200	A3 size ACENZ Issue C
Designed		Start Date	JULY 1997	
Drawn	GMW			
Checked	GMW			
Approved	GMW	Drawing No.	5218/05/04	

CAD Ref: F:\DATA\BELL-STH\5218\05\5218-504

APPENDIX C

Owners Consent

I, CYCLING SOUTHLAND, advise as follows:
(Full Name)

- 1). That I am the owner (and) Occupier of the property at:

KEN BOWL CYCLING ELLES ROAD legally described as:
(Address)

Lot _____, DP _____, PART SECTION 74
CT 7A/746 BLOCK 1
TOWN OF SEAWARD BUSH.

- 2). That I grant BellSouth New Zealand my approval to apply for a Resource Consent to establish a telecommunications facility at:

KEN BOWL, ELLES ROAD, INVERCARGILL.
(Address)

- 3). I do not consider that I will be adversely affected by this facility should it be established.
- 4). That I grant consent to the Council to allow employees of Connell Wagner to examine and copy any plans to that property held in Council files.
- 5). Should it be necessary, I also grant consent to Connell Wagner to carry out subsoil investigation by drilling on this site a 100mm borehole using drill rig equipment.

I understand that I will be advised of the date for drilling, prior to the commencement.


(Signature)

T. J. SMART. CHAIRMAN
(Name)

30-6-97.
(Date)

APPENDIX D

EMR Calculations



Candidate Proposed Antenna Specs

Issue Number: 1

BSNZ No.

Candidate No.

Preference :

Status:

Site Name:

Address

Minimum Safe Distance Calculation:

Max Allowable Power (W/m2): 2

Antenna type MTPA890-8-RG7

Antenna Gain (dBi): 18.1

Cable Loss (dB) 1.5

Combiner Loss (dB) 3

Numerical Gain (G) 22.9

No. of Channels (N) 2

Power Level (W) 30

Total Transmit Power (P = N x W) 60

Minimum Safe Distance:

$$\text{MSD} = \sqrt{\frac{PG}{s4\pi i}} \quad 7.39 \quad \text{metres}$$

Antenna Change History:

--

Diagram/Notes

--

Microwave antenna analysis for EMR

June 19, 1997

Site Name: Invercargill South (to Invercargill)

	Units	Comments
Dish diameter	0.46 meters	
Frequency	23.00 GHz	
Dish gain =	37.70 dBi	[<---- Index from dish reference]
Power	17.00 dBm	
Power =	50.12 mW	
Average power flux density =	30.16 μ Watts / cm ²	[power in μ watts / dish dia.]
Peak flux density at antenna face =	120.63	[average flux density *4]
Allowable Power Flux Density at far field	200 μ Watts / cm ²	NZS 6609

The power flux density at the antenna face is less than the specified non occupational levels

Microwave antenna analysis for EMR

June 5, 1997

Site Name: Invercargill South (to Bluff)

	Units	Comments
Dish diameter	0.90 meters	
Frequency	1.50 GHz	
Dish gain =	21.70 dBi	[<---- Index from dish reference]
Power	33.00 dBm	
Power =	1995.26 mW	
Average power flux density =	313.64 μ Watts / cm ²	[power in μ watts / dish dia.]
Peak flux density at antenna face =	1254.54	[average flux density * 4]
Allowable Power Flux Density at far field	200 μ Watts / cm ²	

As the peak flux density at the face of the antenna exceeds the specified power flux density, additional calculations are required to locate the point at which the power flux density fall to the standard level.

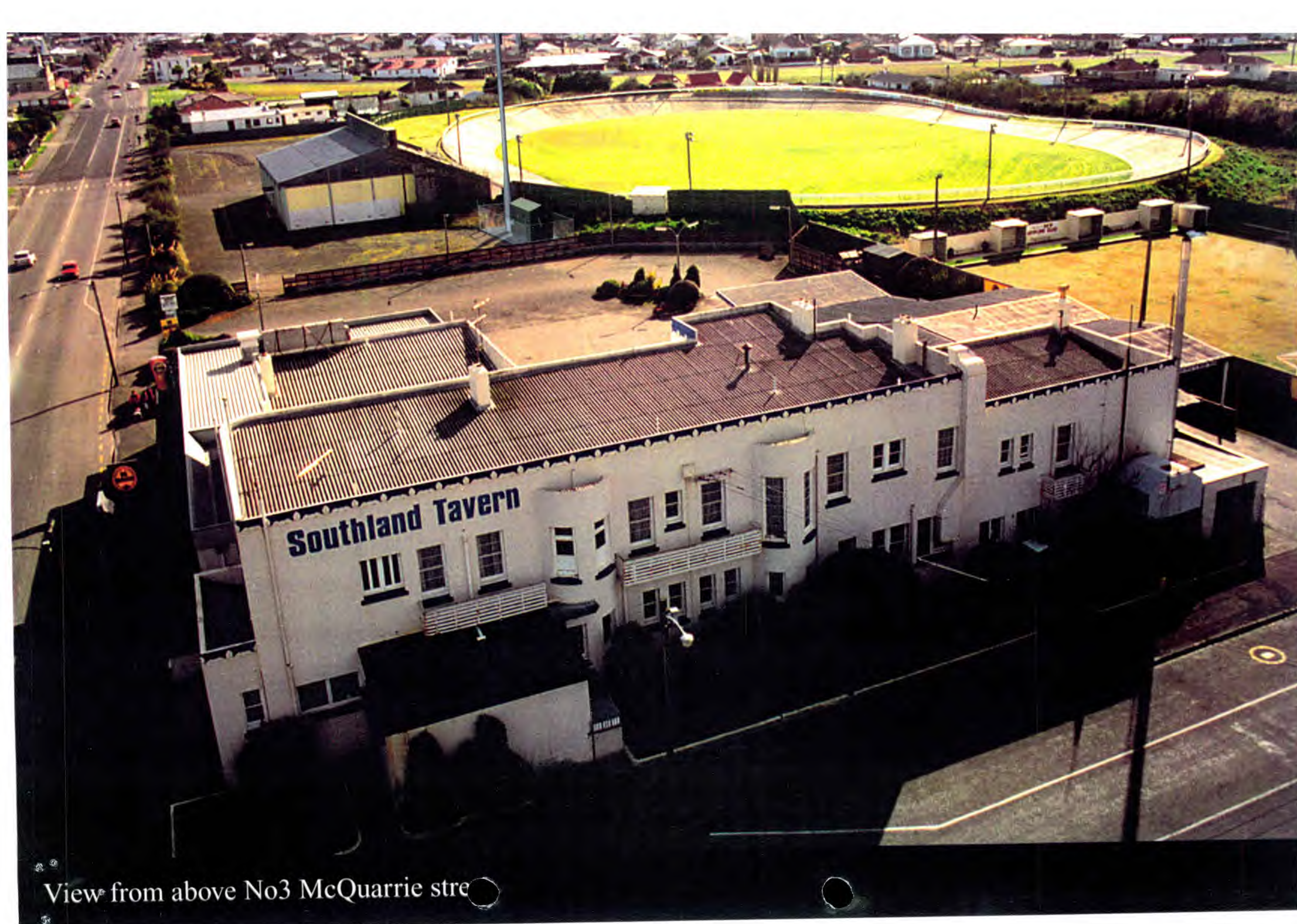
Far field distance =	8.10	[2*(dish diameter)^2/wavelength]
Power flux density at far field point =	0.36 Watts / m ²	
Power density gain correction factor =	5.59	
Normalised distance ratio from fig B6 NZS6609 =	0.44	[<--from reference table]
Distance to NZS non occupational point =	3.59 metres	
Approximate beamwidth =	11.68 °	



View Sth from Cnr Elles Rd & Elizabeth St



View Nth from No.9 McQuarrie St



Southland Tavern

View from above No3 McQuarrie stre



View North from N0.3 McQuarrie St Invercargill



View opposite site on Elles Rd



View Nth from Cnr Kew & Elles Rd



View Sth from Scott St (2)

LIST OF SUBMITTERS TO RESOURCE CONSENT – 406 ELLES ROAD

<u>NO</u>	<u>NAME</u>	<u>ADDRESS</u>	<u>POSITION</u>	<u>HEARD?</u>	<u>ISSUES</u>
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3	OM & AM Scully	35 McQuarrie St	Oppose	No	1. Visual Impact 2. Health issues
4	Joy Bolger	15 McQuarrie St	Oppose	No	As Above
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33	Lindsay Milroy	384 Elles Road	Oppose	Yes	As Above
34	SA Lowe & C. McDonald	376 Elles Road	Oppose	Yes	As Above
35	Martin Peters	397 Elles Road	Oppose	Yes	As Above
36	GI & MB Ballie	19 McQuarrie St	Oppose	No	As Above
37	Southern Public Health <i>Attn: Simon Church</i>	62 Don Street	N/A	Yes	1. Council to consider psychological effect 2. NZ6009
38	TE AO MARAMA <i>Attn: Evelyn Cook - Thompson</i>	PO BOX 990	Agree	No	1. Certain conditions are to be imposed.
39	Invercargill Licensing Trust	C/o Tait Ward Adams & Murdoch PO Box 32 Invercargill	Oppose	Did not say. ✓	1. Negative effects on the local environment.



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

Please Contact: Mr Cleary

Our Reference: T3/3

1 October 1997

«Title»
«Address»
«Address1»

Dear Sir/Madam

re: NOTICE OF HEARING OF RESOURCE CONSENTS

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HEARING TIMES

Hearing 2
5.30 pm

Application

To establish a Mobile Telecommunications Facility

Applicant

BellSouth New Zealand
C/- Connell Wagner

Site

Kew Bowl, 406 Elles Road, Invercargill

Submissions

- (1) 36 Local Residents
- (2) Southern Public Health Services
- (3) Te Ao Marama
- (4) Invercargill Licensing Trust

Yours faithfully

G Campbell
RESOURCE MANAGEMENT OFFICER

GC:kmm

Title	Address	Address1
Margaret McCallum	1 McQuarrie Street	INVERCARGILL
Emere Westrup	16 Seddon Place	INVERCARGILL
AM & RM Wayling	17 Seddon Place	INVERCARGILL
Michelle McAdam	411 Elles Road	INVERCARGILL
Maree Crawford	165 Elizabeth Street	INVERCARGILL
Evelyn Hansen	7 McQuarrie Street	INVERCARGILL
Raymond Parker	32 McQuarrie Street	INVERCARGILL
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Graeme Read	415 Elles Road	INVERCARGILL
Annie Henderson	427 Elles Road	INVERCARGILL
Marietta Webb	423 Elles Road	INVERCARGILL
Malcolm Wickenden	378 Elles Road	INVERCARGILL
Lindsay Milroy	384 Elles Road	INVERCARGILL
S A Lowe & C McDonald	376 Elles Road	INVERCARGILL
Martin Peters	397 Elles Road	INVERCARGILL
G I & M B Ballie	19 McQuarrie Street	INVERCARGILL
Southern Public Health	62 Don Street	INVERCARGILL
Invercargill Licensing	C/o Tait Ward	INVERCARGILL
Trust	Adams & Murdoch	
	PO Box 32	
	Invercargill	



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

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Our Reference: T3/3

1 October 1997

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«Address»
«Address1»

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HEARING TIMES

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To establish a Mobile Telecommunications Facility

Applicant

BellSouth New Zealand
C/- Connell Wagner

Site

Kew Bowl, 406 Elles Road, Invercargill

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- (2) Southern Public Health Services
- (3) Te Ao Marama
- (4) Invercargill Licensing Trust

Yours faithfully

G Campbell
RESOURCE MANAGEMENT OFFICER

GC:kmm

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Invercargill Licensing	C/o Tait Ward	INVERCARGILL
Trust	Adams & Murdoch	
	PO Box 32	
	Invercargill	

LIST OF SUBMITTERS TO RESOURCE CONSENT – 406 ELLES ROAD

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Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

Please Contact:

Geordie Cleary

Our Reference:

T3/S
[Signature]

~~28 August~~ 1997

Dear Sir/Madam

re: NOTICE OF HEARING OF RESOURCE CONSENTS

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HEARING TIMES

Hearing **2** **5:30pm**

Application **To Establish a Mobile Telecommunications Facility**

Applicant **BellSouth New Zealand Co Limited**

Site **Kew Bank, 406 Elles Road**

Submissions

- ① 36 Local Residents
- ② Southern Public Health Services
- ③ Te Ao Marama
- (4) Invercargill Licensing Trust

Yours faithfully

[Signature]
RMO



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

Please Contact: Gerard Cleary

Ref: T3/3
Property

11 September, 1997

Connell Wagner
PO Box 1061
CHRISTCHURCH

Attn: Gregory Dewe

Dear Sir

re: RESOURCE CONSENT APPLICATION TO ESTABLISH A MOBILE
TELECOMMUNICATIONS CELL SITE - 406 ELLES ROAD INVERCARGILL

Please find enclosed copies of all submissions made on the above proposal.

Confirmation of a hearing date will be forwarded to you shortly. I note that you have indicated that October 22 1997 will be suitable to your clients.

Also could you please forward the photomontages I requested previously as soon as possible

Yours faithfully

G Cleary
RESOURCE MANAGEMENT OFFICER

GC:sjm

Encl

Connell Wagner

Connell Wagner Limited
Level 4 Torrens House
195 Hereford Street
(PO Box 1061)
Christchurch
New Zealand

Telephone: +64 3 366 0821
Facsimile: +64 3 379 6955

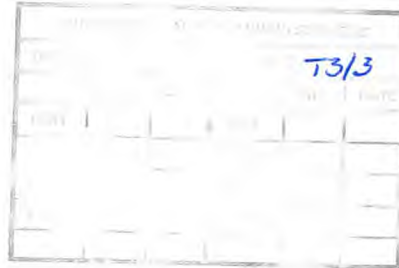
REF:P15218P
GJD:JC

29 SEP 1997

I.C.C.
INCOMING MAIL
Date:
Ref: 97004060

26 September 1997

Invercargill City Council
Private Bag
INVERCARGILL 90104



Attention: Gerard Cleary

Dear Sir

BELLSOUTH - KEW BOWL

Please find enclosed a series of photomontages of the proposed cell site. Can you please confirm a hearing date for this matter.

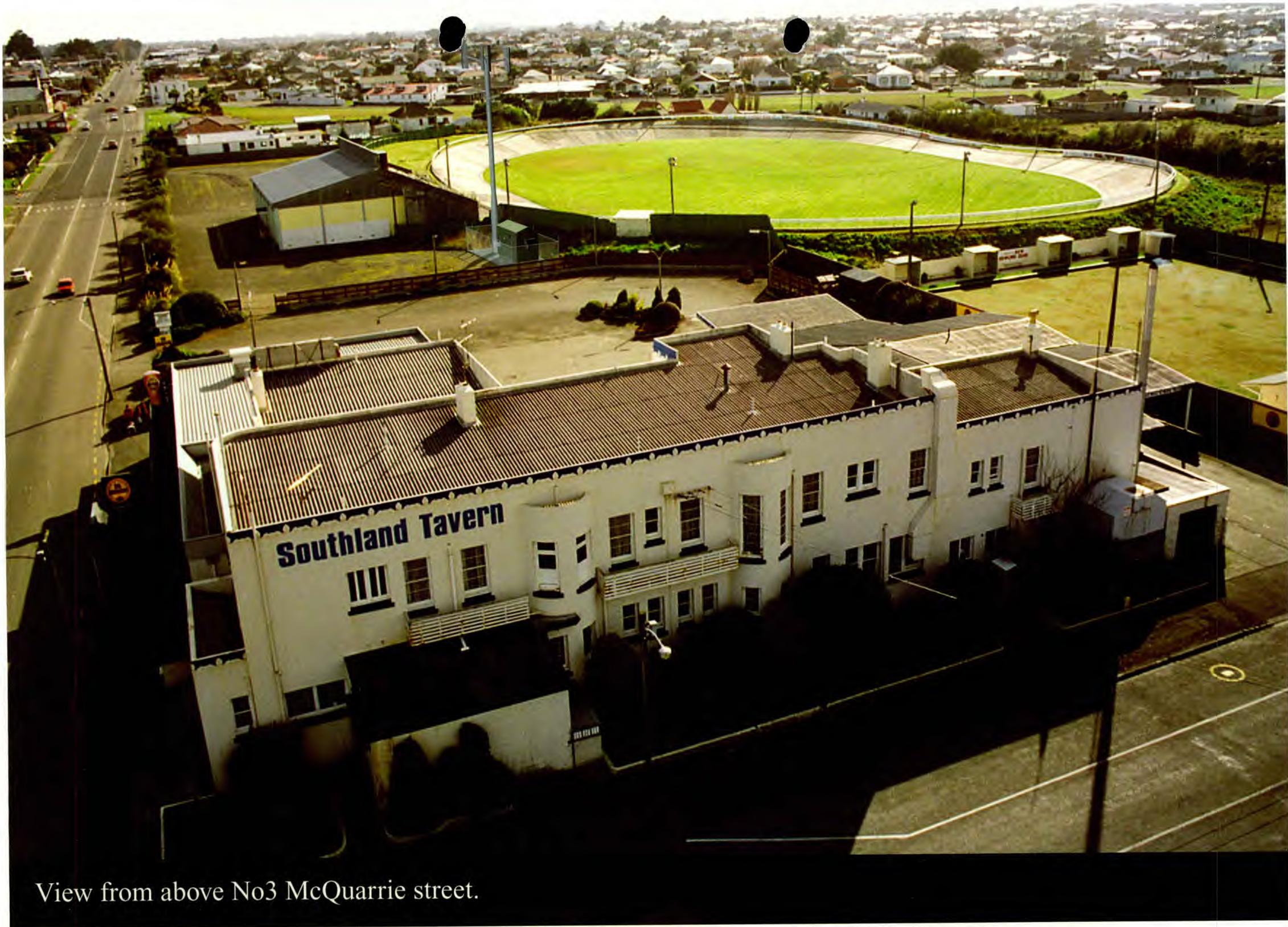
Yours faithfully
Connell Wagner Limited

Gregory Dewe
Senior Planner

Encl:



View Nth from No.9 McQuarrie St



View from above No3 McQuarrie street.

FUJIFILM
PCTRD 100

FUJIFILM
PCTRD 100

FUJIFILM
PCTRD 100

FUJIFILM
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PCTRD 100



View Sth from Cnr Elles Rd & Elizabeth St



View opposite site on Elles Rd





View Sth from Scott St (2)



View Nth from Cnr Kew & Elles Rds



View North from N0.3 McQuarrie St. Invercargill



View Sth from Scott St (1)

Glenys Kataina-Marii

Kew Bowling Club

Mcquarrie St.

Invercargill

R D Faithful Kew Bowling Club

S M Faithful " " "

353 Canon St Invercargill C/-

Moules 120 Elizabeth St / K B/C
C/- Kew B/C

Gloria Ellis F/2 16 Elizabeth St

Lindsay Ellis C/- Kew B/C

Carol Tuffley " "

Neville Tuffley " "

Tess Ackroyd " "

Allan " " "

Lakwell " "

✓ MCCALLUM THOMAS
1 MCQUARRIE ST

SOUTH INVERCARGILL
DOMAIN
C/- INVERCARGILL
CITY COUNCIL
PRIVATE BAG 90104

✓ MCDOWELL IRIS
21 MCQUARRIE ST

KENNEDY G&S
19 SEDDON PL ✓
INVERCARGILL

HANSEN EVELYN
7 MCQUARRIE ST ✓
INVERCARGILL

WEYLING ADRIAN
WEYLING ROBYN ✓
17 SEDDON PL

CHARLTON ANTHONY
CHARLTON BARBARA
12 LOUISA ST
INVERCARGILL

BOLGER JOY
✓ 15 MCQUARRIE ST
INVERCARGILL

SCULLY OWEN
SCULLY ANN
35 MCQUARRIE ST
INVERCARGILL

Nophone
BOIVIN STANLEY
11 MCQUARRIE ST
INVERCARGILL

✓ MCDOWELL IRIS
21 MCQUARRIE ST
INVERCARGILL

✓ MCDOWELL MURRAY
✓ MCDOWELL PAMELA
4 SEDDON PL
INVERCARGILL

SOUTH INVERCARGILL
DOMAIN BD
C/O INVERCARGILL
CITY COUNCIL
PRIVATE BAG 90104
INVERCARGILL

✓ PARKER RAYMOND
✓ PARKER LYNNE
32 MCQUARRIE ST
INVERCARGILL ✓

✓ TRESSLER LISA
7 SEDDON PL
INVERCARGILL

✓ WEYLING ADRIAAN
✓ LLOYD GARY BRIAN
29 MCQUARRIE ST
INVERCARGILL

ODONNELL TIMOTHY
375 ELLES RD

ANDREW HOUSING
LTD
PO BOX 960
INVERCARGILL

LOWE SHELLEY
76 ELLES RD
INVERCARGILL

✓ HARRIS EDNA
✓ 36 MCQUARRIE ST
INVERCARGILL

✓ MCNAUGHTON
✓ ATHOLE
6 SEDDON PL
INVERCARGILL

SCOTT JOHN
SCOTT LENA
12 SEDDON PL
INVERCARGILL

✓ ALLEN NORMAN
✓ ALLEN CATHERINE
5 SEDDON PL
INVERCARGILL

ROBERTSON GRAHAM
ROBERTSON JANICE
C/- PO BOX 106
INVERCARGILL

NICOL KATHERINE
15A SEDDON PL ✓
INVERCARGILL

THOMPSON DOUGLAS
THOMPSON EILEEN
8 SEDDON PL
INVERCARGILL

INVERCARGILL CITY
COUNCIL
PRIVATE BAG 90104
INVERCARGILL
Re: 11 SEDDON PL

KENNEDY GRAHAM
KENNEDY SHIRLEY ✓
19 SEDDON PL
INVERCARGILL

work sign

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Margaret McCallum*

ADDRESS: *1 McQuarrie St.*

TELEPHONE NUMBER: *2168786*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

In McCallum

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25th

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

DATE: 18 AUG 1997

LIBRARY	WORKS
HRM	SEC
HALLS	BWM
SE	PODS
REF	WORKS

m (2)

A C + Wat Mayling
29 Mc Quarrie St Inghill ph 2166136
15-7-97

Consent Authority

Re resource consent Bell South
New Zealand New Bowl 406 Eller Rd
Inghill We oppose application for
Health reasons for people in
housing Eller Rd + Mc Quarrie st,
Southland hotel, New Bowl, Cycling
Southland stadium. Devalue
of properties, falling huis prices.
The consent authority must
oppose application
We do not wish to be heard in
support of this submission

15-7-97

Mr *Alun*
Mrs *W A W*

Cellular telephone telecommunications
facility Logal Development
Part section 74 block 1 and contained on
CT 7A/746

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) OWEN MICHAEL & ANN MIRIAM SCULLY

ADDRESS: 35 MCQUARRIE STREET INVERCARGILL

TELEPHONE NUMBER: (03) 2166 213

FAX NUMBER:

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} ~~do~~ wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

(Signature of person making this submission or person authorised to sign on their behalf)

A.M. Scully

Date: 28 - 8 - 97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

(4)

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Joseph M. C. Bolger*

ADDRESS: *15 McQuarrie Street, Invercargill*

TELEPHONE NUMBER: *2168349*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.* *X*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

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The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

J. Bolger
(Signature of person making this submission or person authorised to sign on their behalf)

Date: 28/8/97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Murray John McDowell*

ADDRESS: *4 Seddon Place*

TELEPHONE NUMBER: *(03) 2165952*

FAX NUMBER: *As above*

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).



(Signature of person making this submission or person authorised to sign on their behalf)

Date: 30-8-97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *N.J. & C.R. Cullen.*

ADDRESS: *5 Seablon Place Invercargill.*

TELEPHONE NUMBER: *21649114.*

FAX NUMBER:

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} ~~do~~ wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

B R. Allen

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 30.8.97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

7

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Athole DAVIDA McNAUGHTON*
ADDRESS: *SIX SEDDON PLACE INVERCARGILL*
TELEPHONE NUMBER: *2168930*
FAX NUMBER: *-*

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

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My submission would be met by the Invercargill City Council making the follow decision:

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

ashale McNaughten

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 30 - 8 - 97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name), LISA ANN TRESSLER

ADDRESS: 7 SEDDON PLACE Invercargill

TELEPHONE NUMBER: 2161667

FAX NUMBER: —

DETAILS OF APPLICATION: To establish a cellular telephone telecommunications facility.

LOCATION OF APPLICATION: Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

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My submission would be met by the Invercargill City Council making the follow decision:

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

 7 Seddon Place
Invercargill

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 30/8/97.

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Denise Anne Robb*

ADDRESS: *15 Seaborn Place*

TELEPHONE NUMBER: *03-2161-274*

FAX NUMBER: *—*

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ~~do~~^{NOT} wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).



(Signature of person making this submission or person authorised to sign on their behalf)

Date: 29/08/97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) KATHERINE MARIE NICOL

ADDRESS: 15 A SEDDON PL.

TELEPHONE NUMBER: 21 62 66 0

FAX NUMBER: -

DETAILS OF APPLICATION: To establish a cellular telephone telecommunications facility.

LOCATION OF APPLICATION: Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

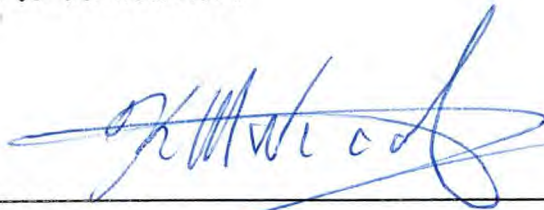
Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).



(Signature of person making this submission or person authorised to sign on their behalf)

Date: 28-8-97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

(11)

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) ~~Alister~~ EMERE MONTY WESTRUPP

ADDRESS: 16 SEDDON PLACE

TELEPHONE NUMBER: 2164555

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

***Health Hazard** - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.*

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).



(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25. 8. 1997

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) Adrian Matthew & Robyne Maree Weyling

ADDRESS: 17 Seddon Place, Invercargill

TELEPHONE NUMBER: 2167437

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

My submission would be met by the Invercargill City Council making the follow decision:

The Council should refuse consent to this project unconditionally. A site devoid of houses and schools etc. should be sought and if that fails, the project should be abandoned.

We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

RM. Weyling *A Weyling*
(Signature of person making this submission or person authorised to sign on their behalf)

Date: *25.8.97.*

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) Shirley Elaine Kennedy
ADDRESS: 19 Seddon Place INVERCARGILL
TELEPHONE NUMBER: 21 69-211.
FAX NUMBER: -

DETAILS OF APPLICATION: To establish a cellular telephone telecommunications facility.

LOCATION OF APPLICATION: Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

Shirley Kennedy

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 28.8.97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

14

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Michelle Marie McAdam*

ADDRESS: *411 Elles Road Invercargill*

TELEPHONE NUMBER: *(03) 2141079*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

Michelle L. A. Dorn.

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25 8 97.

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *manee anne Crawford*

ADDRESS: *165 Elizabeth Street*

TELEPHONE NUMBER: *214 08 02*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

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I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

Manee - anne - Crawford.

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25 / 8 / 97

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name)

Iris J McDaniel

ADDRESS:

21 McQuarrie St. Invercargill

TELEPHONE NUMBER:

21-67793

FAX NUMBER:

-

DETAILS OF APPLICATION:

To establish a cellular telephone telecommunications facility.

LOCATION OF APPLICATION:

Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ~~do~~^{NOT} wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

Iris I M Dawell

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 30-8-97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Evelyn Margaret Joan Hansen*

ADDRESS: *7 McQUARRIE Street Invercargill*

TELEPHONE NUMBER: *(03) 2169459*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

Health Hazard - *In spite of reassurances stated in the report emanating from Bell South, we are not convinced of its safety to residents in close proximity. This report, while quoting low radiation figures, produces no evidence with regard to long term exposure. A number of sites apparently have been selected and rejected, among these the grounds of Kew Hospital. No reasons for this rejection were given, but one could reasonably say there were two objections - safety of patients and interference with equipment. Any one of these reasons shows it would be highly undesirable to site such an apparatus in close proximity to private residences, many of which contain children. The site is also close to Kew School, McQuarrie Park and the Southland Tavern.*

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I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

E. M. J. Hansen

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 25-8-97

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name)

Raymond Bruce PARKER

ADDRESS:

32 McQuarrie St Invercargill

TELEPHONE NUMBER:

2165716

FAX NUMBER:

DETAILS OF APPLICATION:

To establish a cellular telephone telecommunications facility.

LOCATION OF APPLICATION:

Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).



(Signature of person making this submission or person authorised to sign on their behalf)

Date. 28/8/97

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *HARRIS EDNA*

ADDRESS: *36 Mc QUARRIE ST*

TELEPHONE NUMBER: *2163721*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

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I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

E P Harris

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 28/8/97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Margaret Joyce & John Alexander*

ADDRESS: *248 Scott St, Invercargill*

TELEPHONE NUMBER: *216 7667*

FAX NUMBER: -

DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*

LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

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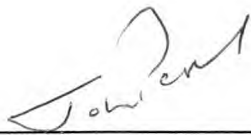
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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I ^{NOT} do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

M J Perkins 

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 31-8-97

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) *Peter Reading*
ADDRESS: *409 Elles Road, Invercargill*
TELEPHONE NUMBER: *21 43 145*
FAX NUMBER: -
DETAILS OF APPLICATION: *To establish a cellular telephone telecommunications facility.*
LOCATION OF APPLICATION: *Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.*

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

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We feel the Council has an obligation to its ratepayers, however few in numbers they may be.

I do wish to be heard in support of my submission (a hearing of the application may not occur if all affected parties state they do not wish to be heard).

P Reading

(Signature of person making this submission or person authorised to sign on their behalf)

Date: 31. 8. 97

NOTE: *A copy of your submission must be served on the applicant as well as the Invercargill City Council.*

Another reason for opposing the proposal is the consequent reduction in house values in the area. In spite of all the so-called "scientific" assurances, the public perception of these facilities is that they are dangerous. In consequence, it is felt that a property in close proximity to one such installation, would be very difficult to sell. This, combined with the risk to health and the electrical interference which is said to result from such a tower is giving all residents concern.

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(Signature of person making this submission or person authorised to sign on their behalf)

Date: 28/6/77

NOTE: A copy of your submission must be served on the applicant as well as the Invercargill City Council.

RESOURCE MANAGEMENT ACT 1991

SUBMISSION ON AN APPLICATION

To: Invercargill City Council
Private Bag
INVERCARGILL

ATTENTION: Principal Officer - Resource Management

NAME: (state full name) S.M. Clareburt Paul Steven Clareburt.

ADDRESS: 452 Elles Rd

TELEPHONE NUMBER:

FAX NUMBER:

DETAILS OF APPLICATION: To establish a cellular telephone telecommunications facility.

LOCATION OF APPLICATION: Cycling Southland, Kew Bowl, 406 Elles Road, Invercargill.

I oppose the application

My submission is:

The environmental intrusion of the visual aspect will be unacceptable not only by the tower itself but by the security fences etc., which would be necessary to surround it. We would feel such a construction an unsightly invasion of our view.

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- Legend**
- Highlighted Feature
 - Property Boundaries
 - Legal Boundaries:
 - Legal Boundary
 - ~ Transpower Overhead Lines (110Kv or above)
 - ▲ Transpower Structures
 - Parks and Reserves
 - Unformed Roads
 - ICC Base Map:
 - Road
 - Railway
 - Legal Waterway

Aerial Images (March 2001)
© Invercargill City Council

Information shown is the currently assumed knowledge as at date printed. If information is vital, confirm with the authoritative owner. E & O.E.

Cadastral information derived from Land Information New Zealand. Current to October 2003. CROWN COPYRIGHT RESERVED

Date Printed: 22/12/2003

406 Elles Road

Courtesy of Invercargill City Council, Working with the community

113



200301861

Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • DX YA90023 • Ph (03) 218-1959 • Fax (03) 214-3670

Please Contact: Gerard Cleary

Ref: T3/3
Property

18 November, 1997

Connell Wagner
PO Box 1061
CHRISTCHURCH

Attn: Gregory Dewe

Dear Sir

re: RESOURCE CONSENT APPLICATION TO ESTABLISH A MOBILE
TELECOMMUNICATIONS CELL SITE AT KEW BOWL, 406 ELLES ROAD,
INVERCARGILL
RESOURCE CONSENT NO:971836

I acknowledge receipt of your resource consent application for the above-mentioned proposal. A resource consent was required as the proposal is a non-complying activity under the Community Use rules of the Invercargill Transitional District Plan. Specifically, the proposed tower exceeded the height limits for radio masts, aerials, towers and similar structures within the Community Use Zone.

Your application was heard by Resource Consent Committee on Wednesday, 22 October 1997. The Committee resolved that Consent be granted under Section 105 (2)(b) of the Resource Management Act 1991, subject to the following conditions pursuant to Section 108 of that Act:

- (1) The proposal shall proceed in accordance with the description of the activity in the application and the set of plans submitted with the application and now labelled RC 971836/1-3.
- (2) That the cell site facility shall at all times be operated in accordance with New Zealand Standard for Radio Frequency levels(NZ 6609:1990) and the level if radio frequency be kept as low as reasonably achievable.
- (3) Pursuant to Section 128 of the Resource management Act 1991, the Council may review condition (2) by servicing notice on the applicant within a period of one month, commencing on any anniversary of the date of the Council's decision for a period of ten years, in order to deal with any adverse effects which may arise from the exercise of this consent. In order to achieve this the Council may monitor radio frequency radiation levels if this is considered necessary.

- (4) Within three months of the date of commissioning of the cell site, and every two years thereafter at its expense, the applicant is required to provide to the Director of Council's Environmental and Planning Services Department Invercargill City Council, a report prepared by an independent competent electromagnetic radiation monitoring authority approved by that Director, based on measurements at the site confirming:
- (i) the average level of electromagnetic radiofrequency radiation emitted from the cell site; and
 - (ii) the peak level of electromagnetic radiofrequency radiation emitted from the site; and
 - (iii) the fact that the applicant's cell site is therefore operating in compliance with condition 3 herein; and the fact that the applicant's cell site would, if operating at full capacity, continue to comply with Condition (3) herein.

- (5) The Council may, within six months of the receipt of the information referred to in Condition 4 herein, serve notice on the applicant of the Council's intention to review Condition 2 herein (pursuant to Section 128 of the Resource Management Act 1991) in the event that the findings in relation to the total power flux density of radio frequency radiation emissions indicated in that report significantly exceed the estimates provided by the report of the National Radiation Laboratory entitled "Estimated exposures to radiofrequency radiation from a proposed cellular phone base station at 406 Elles Road, Invercargill."

- (6) That any interference with other transmission frequencies directly attributable to the applicants cell site will be rectified by the applicants at their cost.

- (7) If Koiwi (human skeletal remains) are discovered, then work shall stop immediately and Te Ao Marama Inc (Ngai Tahu (Murihuku) Resource Management Consultants) will be advised.

They will arrange a prompt site inspection by the appropriate Tangata Whenua and their advisers, including statutory agencies, who will determine whether the discovery is likely to be extensive and whether a thorough site investigation is required.

Materials discovered will be handled and removed by Iwi responsible for the Tikanga appropriate to their removal and presentation.

- (8) Taonga or artefact material other than Koiwi will be treated in a similar manner so that their importance can be determined and the environment recorded by qualified archaeologists alongside the appropriate Tangata Whenua.
- (9) The tower shall be painted in the colour Resene Jumbo, BS 00 A 07, and the equipment shelter shall be painted in the colour Resene Flax, BS 12 B 21.
- (10) A strip of 1.5 metres width surrounding the security fence, except for the gateway, shall be landscaped.

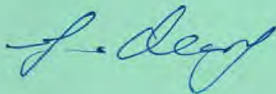
- (11) The consent is granted for a period of ten years from the date of notifying the applicant of these conditions.

The Resource Management Act 1991 makes provision for you to appeal the Council's decision. Notice of appeal must be lodged within 15 working days of receipt of the letter of Council's decision. This is to be lodged with the Registrar, Environment Court PO Box 5027, Lambton Quay, Wellington. A copy must be served on Council and any person who makes a submission on the application.

The total cost for processing your application is \$2061.85 of which a deposit of \$506.50 has been received. Accordingly, please find enclosed a further invoice for the sum of \$1555.60 being the sum outstanding.

If you have any queries relating to the above please do not hesitate to contact me .

Yours faithfully



G Cleary
RESOURCE MANAGEMENT OFFICER

GC:sjm

Encl

Facsimile



Invercargill City Council

Environmental & Planning Services

101 Esk St • Private Bag 90104 Invercargill • Ph (03) 218 1959 • Fax (03) 214 3670

To: Connell Wagner

Date: Wednesday, 12 November 1997

Attention: Gregory Dewe

Time: 11.50

Fax Number: 03-379-6955

Pages: 3

From: Gerard Cleary
Resource Management Officer

☐ Urgent

☐ Please Comment

☒ For Review

☐ Please Reply

Message:

Gregory,

As promised I am forwarding you official confirmation of the granting of resource consent. A hard copy, together with invoice will be forwarded shortly.

re: RESOURCE CONSENT APPLICATION TO ESTABLISH A MOBILE
TELECOMMUNICATIONS CELL SITE AT KEW BOWL, 406 ELLES ROAD,
INVERCARGILL.

RESOURCE CONSENT NO:971836

I acknowledge receipt of your resource consent application for the above-mentioned proposal. A resource consent was required as the proposal is a non-complying activity under the Community Use rules of the Invercargill Transitional District Plan. Specifically, the proposed tower exceeded the height limits for radio masts, aerials, towers and similar structures within the Community Use Zone.

Your application was heard by Resource Consent Committee on Wednesday, 22 October 1997. The Committee **RESOLVED** that Consent be granted under Section 105 (2)(b) of the Resource Management Act 1991, subject to the following conditions pursuant to Section 108 of that Act:

- (1) The proposal shall proceed in accordance with the description of the activity in the application and the set of plans submitted with the application and now labelled RC 971836/1-3.
- (2) That the cell site facility shall at all times be operated in accordance with New Zealand Standard for Radio Frequency levels(NZ 6609:1990) and the level if radio frequency be kept as low as reasonably achievable.

- (3) Pursuant to Section 128 of the Resource management Act 1991, the Council may review condition (2) by servicing notice on the applicant within a period of one month, commencing on any anniversary of the date of the Council's decision for a period of ten years, in order to deal with any adverse effects which may arise from the exercise of this consent. In order to achieve this the Council may monitor radio frequency radiation levels if this is considered necessary.
- (4) Within three months of the date of commissioning of the cell site, and every two years thereafter at its expense, the applicant is required to provide to the Director of Council's Environmental and Planning Services Department Invercargill City Council, a report prepared by an independent competent electromagnetic radiation monitoring authority approved by that Director, based on measurements at the site confirming:
- (i) the average level of electromagnetic radiofrequency radiation emitted from the cell site; and
 - (ii) the peak level of electromagnetic radiofrequency radiation emitted from the site; and
 - (iii) the fact that the applicant's cell site is therefore operating in compliance with condition 3 herein; and the fact that the applicant's cell site would, if operating at full capacity, continue to comply with Condition (3) herein.
- (5) The Council may, within six months of the receipt of the information referred to in Condition 4 herein, serve notice on the applicant of the Council's intention to review Condition 2 herein (pursuant to Section 128 of the Resource Management Act 1991) in the event that the findings in relation to the total power flux density of radio frequency radiation emissions indicated in that report significantly exceed the estimates provided by the report of the National Radiation Laboratory entitled "Estimated exposures to radiofrequency radiation from a proposed cellular phone base station at 406 Elles Road, Invercargill."
- (6) That any interference with other transmission frequencies directly attributable to the applicants cell site will be rectified by the applicants at their cost.
- (7) If Koiwi (human skeletal remains) are discovered, then work shall stop immediately and Te Ao Marama Inc (Ngai Tahu (Murihuku) Resource Management Consultants) will be advised.

They will arrange a prompt site inspection by the appropriate Tangata Whenua and their advisers, including statutory agencies, who will determine whether the discovery is likely to be extensive and whether a thorough site investigation is required.

Materials discovered will be handled and removed by Iwi responsible for the Tikanga appropriate to their removal and presentation.

- (8) Taonga or artefact material other than Koiwi will be treated in a similar manner so that their importance can be determined and the environment recorded by qualified archaeologists alongside the appropriate Tangata Whenua.
- (9) The tower shall be painted in the colour Resene Jumbo, BS 00 A 07, and the equipment shelter shall be painted in the colour Resene Flax, BS 12 B 21.
- (10) A strip of 1.5 metres width surrounding the security fence, except for the gateway, shall be landscaped.

(11) The consent is granted for a period of ten years from the date of notifying the applicant of these conditions.

If you have any queries relating to the above conditions please do not hesitate to contact me.

Regards

Gerard

MINUTES OF A MEETING OF THE RESOURCE CONSENT COMMITTEE
HELD IN THE COUNCIL CHAMBER, TOWN HALL, TAY STREET,
INVERCARGILL ON WEDNESDAY 22 OCTOBER 1997 AT 4.30 PM

PRESENT:

Cr N D Boniface (Chairperson)
Crs B W Pagan, M J Cvigr, T E King, D A Carter, L A Dow
Mr J O'Connor (Otatara Community Board Chairman) (for
Hearings 1 and 2)

IN ATTENDANCE:

Cr G T Piercy
Mrs P Gare (Senior Resource Management Officer)
Mr T Greenwood (Roading Manager) (for Hearing 1)
Mr G Cleary (Resource Management Officer)
Mr D Campbell (Resource Management Officer)
Mr M Cockeram, Committee Clerk

APOLOGY:

His Worship the Mayor Mr D F E Harrington

Moved Cr Pagan, seconded Cr Cvigr and RESOLVED
that the apology be received.

APPLICATION BY BELLSOUTH NEW ZEALAND LIMITED, REPRESENTED BY
CONNELL WAGNER, TO ESTABLISH A MOBILE TELECOMMUNICATIONS
CELL SITE AT KEW BOWL, 406 ELLES ROAD, INVERCARGILL, BEING ON
PART SECTION 74, BLOCK I, TOWN OF SEAWARD BUSH, BEING ZONED
COMMUNITY USE IN THE INVERCARGILL SECTION OF THE
INVERCARGILL CITY TRANSITIONAL DISTRICT PLAN.

The applicants were represented by their Legal Counsel, Ms L A McGregor of Rudd Watts & Stone, who was accompanied by Ms J M Mundy, Team Leader Radio Frequency Engineering BellSouth, Mr P Rough, Landscape Architect and Mr G J Dewe, Planner Connell Wagner.

Note: The submissions and statements of evidence made on behalf of the applicant were substantial and made wide use of diagrams, coloured charts and coloured photographs. For that reason the summary of the submission and statements in these minutes is essentially brief. Full copies of the documents are on file with the Environmental and Planning Services Directorate, Invercargill City Council.

Ms McGregor tabled and read her submission on behalf of the applicant and also tabled a Statement of Evidence by Mr M D Gledhill, Scientist at the National Radiation Laboratory of the Ministry of Health, which she referred to in the submission and in discussion.

Ms McGregor's remarks included:

- The proposed Kew Bowl site is important to provide good in-building coverage in South Invercargill.
- A description of the proposed antennas.
- Radio masts etc are permitted in the transitional District Plan. This consent application is because the proposed mast etc are non-complying due to height and diameter.
- The current stance of the Environment Court on the perceived health issues.
- BellSouth emission levels, compared to NZS 6609, being 650 times below the level the standard allows.
- The very cautious levels of NZS 6609, as stated in Mr Gledhill's evidence.
- Environment Court decisions stating, in effect, that unless new scientific evidence is forthcoming, that residents' concerns about possible health hazards should have been allayed and that [social angst] cannot be a material consideration.
- Relevant sections of the Resource Management Act and the answers that will be provided by others.
- The positive effects that will result from the proposal, especially for South Invercargill residents.
- There will be no effect on other radio transmission and reception.

Ms McGregor advised that the applicant found the proposed conditions for the consent to be acceptable. She asked that:

- The word "their" in condition 6 be changed to "its" as a correction of the grammar.
- The word "prompt" be inserted between "...arrange a" and "site inspection..." in condition 7.
- The Committee note that the tower and associated building can be painted any colour that the Council requires, but there are suggestions in Mr Rough's evidence.

In response to questions on the Environment Court's stance on the health hazard issue Ms McGregor quoted Court decisions *MacIntyre and others; BellSouth v Christchurch City Council* and *Telecom New Zealand v Christchurch City Council* as demonstrating the Court's point that a Court cannot set aside the whole weight of a body of evidence and substitute it for an apprehension which cannot be shown to have any factual basis. She added that no scientist will ever guarantee anything.

Ms J Mundy's statement of evidence included the following points:

- The time and energy that BellSouth invests in site selection, from both the technical efficiency and environmental perspective
- Details of the present coverage of the area. Coloured charts were used.
- The greatly enhanced coverage from implementing the present proposal. Coloured charts were used.
- Alternative sites considered and the reasons for their rejection.
- The improvements in coverage for south Invercargill, the Bluff Road and Otatara.
- The advantages of the Kew Bowl site.

Mr P Rough's statement of evidence included the following points:

- This evidence describes the site, the environs of the proposed facility and its visibility. It uses photographs and comments to convey the anticipated visual impact of the proposed facility. Mitigative measures are also discussed.
- The size of the mast, the equipment shelter and the security fenced compound of 11.0 metres by 6.5 metres.
- Present screening features, ie the Southland Tavern, the Kew Bowl Grandstand etc.
- Many existing tall power poles and lamp posts are a feature of the area.

- Elles Road environs.
- Features breaking the skyline from the west of Elles Road and from McQuarrie Street, the cycle race track and from Moulson street (using coloured photographs.)
- Aspects of visual impacts of the proposed facility (using coloured photographs with the proposed facility added.)
- Mitigation of the visual impact by painting the mast and antennae mid-grey, ie Resene "Jumbo" (BS 00 A 07) and by painting the equipment shelter Resene "Flax" (BS 12 B 21).
- Mitigation of visual impact by the planting of native shrubs in appropriate adjacent locations, especially Olearia.

Mr Dewe's statement of evidence included the following points:

- Many of the details and dimensions of the proposed facility had been included in previous statements so he chose not to repeat them.
- The Environment Court's current attitude to the health impact issue.
- Zero effect on other radio-frequency transmission and reception and BellSouth's commitment to rectify the situation should any interference ever be found.
- There will be no impact on the traffic in the area.
- There will be little or no discernible noise.
- The Court's definition of "minor" -less than major and more then simply minute or slight.

Mr Dewe also tabled site plans and field strength(lobes) plots.

In answer to questions the BellSouth representatives stated:

- That, whilst no copy of BellSouth's lease of the land to be occupied had been tabled a lease did exist and a written approval from Cycling Southland had been included with the application papers.
- That, even though there are moves to have the power and telephone lines undergrounded by year 2005, there would still be street lighting poles breaking the skyline.
- A similar installation of 20 years ago would have been larger and painted in orange and white stripes.

- On the matter of the facility not being needed in the future and eventual site restoration, it was a fact that there is a high investment in cell phones and associated facilities and that there will never be a sudden change in technology, rather a migration.
- One reason for the height of the mast was the presence of the massive trees by the hospital.
- There is already a BellSouth cell site in the Invercargill central area and it does not cover the south.
- The exposure limit in NZS 6609:1990 is at a field strength of 200 microwatts per square centimetre ($\mu\text{W}.\text{cm}^{-2}$) and the maximum exposure from the BellSouth antennae would be at the top of the grandstand and never more than 0.8% of the standard, ie $1.6 \mu\text{W}.\text{cm}^{-2}$
- If a condition is imposed to the effect that there should be annual monitoring then BellSouth will agree and will get the National Radiation Laboratory of the Ministry of Health to do it. The Laboratory has previously advised that it is a waste of time and money to monitor so frequently however.
- Power from the site, and nearly all BellSouth sites, runs at the maximum so cannot be increased. Some sites are reduced in power where there is a risk of inter-site interference, eg in central Auckland. There are no similar frequency challenges in Invercargill.
- After the original painting BellSouth will have a maintenance contract with BCL for upkeep etc at regular intervals.

Mr J Muir presented a submission in opposition to the granting of the consent.

Mr Muir advised that he was representing a group of South Invercargill residents who were to have been represented by Mr Peter Reading until Mr Reading's recent coronary incident.

Mr Muir tabled and read the submission from Mr Reading.(see attachment 5)
Points made included:

- Residents disagree with the Connell Wagner stance that, because there are already unsightly poles etc in the area, one more won't matter.
- The reports claim that the level of radiation is low and is harmless to health. We see that as being like cigarette smoking in that the effects of just one cigarette are not likely to be harmful, but continual exposure is dangerous. Similarly there may be sufficient danger in the long term for these towers to be sited away from residential areas.

- The real value of property in the area is lowered by traffic, by the Southland Tavern and by perceived Council neglect. It will be further eroded were this tower to be erected.

Mr Muir added his own points which included:

- Why site the tower at Kew Bowl when it could be at the tip?
- Asbestos was used for a long period, but is now known to be dangerous. Could the effects of this tower be the same?
- There will be a devaluation of property in the area as families with children will not buy houses here due to the possible risk for their children.
- Not enough research has been done and new evidence is coming out every day.

Mr Muir tabled a copy of a cutting from the Star-Times of 12 October 1997 (see attachment 6), quoting Professor Ivan Beale quoting research from the University of Washington on health risks, short and long term. Mr Muir suggested that this could make the Environment Court stance out of date.

On being asked if he had any evidence from a registered valuer on the effect of cell sites on property values Mr Muir advised that he did not, just comments.

Mrs N Henderson presented a submission in opposition to the granting of the consent.

Mrs Henderson advised that the points she wanted to make had been covered by Mr Muir, however she did wish to add her concerns about the effects on the amenity values of the area, the school around the corner, the tennis courts and the cycling area as all being areas where people could be affected.

Mrs S Church, Health Protection Officer, Southern Public Health Services presented a submission.

Mr Church tabled and read his submission(see attachment 7). He advised that Southern Public Health Services neither supported nor objected to the application for consent, but did wish to ensure that Council arrived at a decision which is based on fact and objectivity. He made comments which he believed might assist the Council in this regard.

The comments included:

- In terms of radiated field strength cell sites are minor contributors compared to radio and television towers.
- Radio frequency radiation is quite different from ionizing radiation.
- The epidemiological evidence currently available is not well developed.

- The public perception of risk should be taken into account.
- The public perception of risk can be quite different to the scientific perception and can maintain a high aversion to technological risks, in contrast to real risks such as smoking or drink driving.
- Negative public perception in relation to an activity may translate itself into health effects, particularly those related to stress.
- Southern Public Health Services advocates a policy of prudent avoidance, ie not permitting cell sites in what the public see as sensitive areas.
- The NZS 6609 is more than sufficient to protect public health.
- Southern Public Health Services recommends that:
 - a) No less than the requirements of NZS 6609 be adopted as consent conditions.
 - b) Outrage factor, in terms of public risk perception, be taken into account.
 - c) The principal of prudent avoidance be adopted.

In responding to questions Mr Church stated:

- In his opinion the area for this proposed facility was not sensitive compared to some others.
- The outrage factor referred to risk management rather than psychiatric factors.
- Outrage was only a Resource Management Act matter in as far as it affected the environment.
- He did not know if a similar submission had been made in the MacIntyre Christchurch case, but it was probable that risk management had been mentioned before the Court by the Ministry of Health.

Right of Reply

Ms McGregor included the following points in the applicants right of reply:

- Valuation New Zealand has, for three years, surveyed property before and after Telecom and BellSouth cell sites being installed, involving over 100 properties, and has found no resulting devaluation. This may not even be a Resource Management Act matter.
- The thermal/nonthermal effects of radio frequency radiation were one of the main points in the MacIntyre case, which took three weeks of the Court's time. They were not accepted as any health risk.

- Thermal effects need to be put in perspective, ie it would be necessary to be adjacent to and in front of a cell site antenna for 48 hours, with no heat loss to the surroundings, for 1°C rise in temperature.
- Dr - he is not a professor - Beale did not turn up at the hearing and won't be examined. He is a psychologist with qualifications unrelated to this matter. The Court now won't hear him.
- The lease agreement situation is not relevant to the application for consent.
- The Ministry of Health (National Radiation Laboratory report paragraphs 5.11 and 5.12) makes it clear that the suggested parallels with asbestos and smoking do not apply.
- The public perception factor is why Councils notify applications. Information was sent to 80 households inviting them to telephone the National Radiation Laboratory, who give consistent information regardless of who asks.
- Outrage is like the LPG situation, where none blew up so it's now not an issue.
- BellSouth transmissions comply with the NZS 6609 many times over.
- Nothing has been heard from objectors which would justify turning down the application for the consent.

Moved Cr Carter, seconded Cr King and RESOLVED that the public be excluded from the following parts of the proceedings of this meeting; namely

Discussion on Hearings

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under Section 48(1)(d) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under Section 48(1)(d) for the passing of this resolution
Resource consents	That the exclusion of the public from the whole or the relevant part of the proceedings of the meeting is necessary to enable the local authority to deliberate in private on its decision or recommendation	A right of appeal lies to a Court against the final decision of the local authority in these proceedings

On the readmission of the public the Committee noted that it believed that:

- The visual impact of the proposed cell site would be minor.
- No evidence had been submitted to support the health effects concerns.
- There was no evidence presented to suggest that property values would decline as a result of the consent being granted.
- The effect on electrical equipment would be minimal, if any.
- It was relevant to take into consideration previous Environment Court decisions.
- A time limit should be imposed to allow for changes in technology and environmental concerns.

Moved Cr Dow, seconded Cr Pagan and **RESOLVED** that consent be granted pursuant to sections 104 and 105 of the Resource Management Act 1991 and that, pursuant to section 108 of the Resource Management Act 1991, the following conditions apply:

- (1) The proposal shall proceed in accordance with the description of the activity in the application and the set of plans submitted with the application and now labelled RC 971836/1-3.
- (2) That the cell site facility shall at all times be operated in accordance with New Zealand Standard for Radio Frequency levels(NZ 6609:1990) and the level of radio frequency fields be kept as low as reasonably achievable.
- (3) Pursuant to Section 128 of the Resource Management Act 1991, the Council may review condition 2 by serving notice on the applicant within a period of one month, commencing on any anniversary of the date of the Council's decision for a period of ten years, in order to deal with any adverse effects which may arise from the exercise of this consent. In order to achieve this the Council may monitor radio frequency levels if this is considered necessary.
- (4) Within 3 months of the date of commissioning of the cell site, and every two years there after at its expense, the applicant is required to provide to the Director of Council's Environmental and Planning Services Invercargill City Council a report prepared by an independent competent electromagnetic radiation monitoring authority approved by that Director, based on measurements at the site confirming:
 - (i) the average level of electromagnetic radiofrequency fields emitted from the cell site; and
 - (ii) the peak level of electromagnetic radiofrequency fields emitted from the site; and

(iii) the fact that the applicant's cell site is therefore operating in compliance with condition 2 herein ; and the fact that the applicant's cell site would, if operating at full capacity, continue to comply with condition 1 herein.

- (5) The Council may, within six months of the receipt of the information referred to in condition 4 herein, serve notice on the applicant of the Council's intention to review condition 2 herein(pursuant to Section 128 of the Resource Management Act 1991) in the event that the findings in relation to the total power flux density of radio frequency emissions indicated in that report significantly exceed the estimates provided by the report of the National Radiation Laboratory referred to in 5.2.5 above.
- (6) That any interference with other transmission frequencies directly attributable to the applicants cell site will be rectified by the applicant at its cost.
- (7) If koiwi (human skeletal remains) are discovered, then work shall stop immediately and Te Ao Marama Inc (Ngai Tahu(Murihuku) Resource Management Consultants) will be advised.

They will arrange a prompt site inspection by the appropriate Tangata Whenua and their advisers, including statutory agencies, who will determine whether the discovery is likely to be extensive and whether a thorough site investigation is required

Materials discovered will be handled and removed by Iwi responsible for the Tikanga appropriate to their removal or preservation.

- (8) Taonga or artefact material other than Koiwi will be treated in a similar manner so that their importance can be determined and the environment recorded by qualified archaeologists alongside the appropriate Tangata Whenua.
- (9) The tower shall be painted in the colour Resene Jumbo, BS 00 A 07, and the equipment shelter shall be painted in the colour Resene Flax, BS 12 B 21.
- (10) A strip of 1.5 metres width surrounding the security fence, except for the gateway, shall be landscaped to the satisfaction of the Director of Environmental and Planning Services.
- (11) The consent is granted for a period of ten years from the date of notifying the applicant of these conditions.

There being no further business the meeting closed at 8.20 pm.

★★★★★★★★★

APPLICATION BY BELLSOUTH NEW ZEALAND LIMITED, REPRESENTED BY CONNELL WAGNER, TO ESTABLISH A MOBILE TELECOMMUNICATIONS CELL SITE AT KEW BOWL, 406 ELLES ROAD, INVERCARGILL, BEING ON PART SECTION 74, BLOCK I, TOWN OF SEAWARD BUSH, BEING ZONED COMMUNITY USE IN THE INVERCARGILL SECTION OF THE INVERCARGILL CITY TRANSITIONAL DISTRICT PLAN.

There was extensive discussion on monitoring requirements, with general agreement that it should be more frequent than at first suggested.

Options debated included:

- Every 2 years
- Every 3 years
- At years 5 and 10
- At years 3, 7 and 10

There was an eventual consensus on every 2 years to allay public concerns.

It was noted that this was to be at the applicant's expense and that Council could monitor at any time at its own expense, as provided for in the Resource Management Act.

It was agreed that there could be no conclusive evidence on the devaluation matter as so many other factors affected the government valuation of property.

Some concern was expressed that there should be some way of ensuring that the power output was not increased from that given consent to and it was noted that, if ever there was evidence of departure from the consent Council could take action under the Resource Management Act.

It was suggested that landscaping need to be a condition and this idea was generally supported.

There was some speculation on BellSouth being of the opinion that the health situation was not an issue, but environmental matters were, and that was the reason for them making a major effort on the visual aspects.

It was suggested that some note should be taken of the psychological issue raised by Southern Public Health Services, but the Committee was advised that the Environmental Court has said that it will disregard this effect if there is scientific evidence of no health hazard.

There was a general agreement that the consent should have a time period attached to it for environmental re-evaluation if the situation changed.

Moved Cr Cvigr, seconded Cr Carter and RESOLVED that the public be readmitted to the meeting.

NEWSPAPER CLIPPINGS

Paper: *Southland Times*

Date: 28-10-97
Tuesday

Residents lose battle over towers

HAMILTON — Patricia Stokes' worst nightmare looks likely to come true.

Soon, every time she looks out her lounge window or walks out of her Hamilton East home, she will see two 19m-high cellphone towers.

The Cook Street resident appears to have lost her two-week battle with Telecom. Workers arrived on Friday morning to prepare the tower foundations.

Miss Stokes thought she had bought some time by telling Telecom she was getting a petition together. She had 200 signatures from residents and businesses who backed her claim the towers might be dangerous to health. Sacred Heart College and Marian School boards of trustees were to discuss the issue.

But Telecom got in first. Hamilton City Council staff approved the application without referring to the council or residents because the towers were in a commercial zone.

Telecom spokesman Peter Brittenden said the towers would go up in two to three weeks. "We're going ahead because we don't believe it's a health issue."

Hamilton East business association chairman Grant Collins felt sorry for nearby residents because their house values would probably drop.

"If I went to look at a property and there were two towers outside the front door, I wouldn't want to buy it," Mr Collins said.

The issue is being mirrored in the Auckland suburb of Remuera, where residents liv-

ing near the Rawhiti Bowling Club have discovered Telecom has resource consent to replace two flagpoles on the club property with two new ones bearing cellphone transmission antennas. Neighbours said neither the club nor Telecom told them.

Meanwhile, Matiere School, north-west of Taumarunui, has given Telecom permission to erect a temporary cellphone tower on its grounds during the Targa Rally next week.

The rally is a tarmac race through the central North Island. Drivers will use cellphones to keep in touch with organisers.

School principal Chris Lord said he gave permission for the tower to be erected. "I don't think anyone's going to get cancer or some lurgy from one day." — NZPA

Paper: Southland Times

Date: 23-10-97
Thursday

Strong opposition to cellphone tower

A CLUSTER of South Invercargill residents are up in arms about a proposal to put a cellphone tower at Kew Bowl.

Bell South was last night granted resource consent to erect the 20m mast and eight antennae at the cycling stadium, in Elles Road.

The telecommunications company told the city council the radiation emissions were well within safety standards, but neighbouring householders said there was no evidence of the effects of long-term exposure.

The consent was issued for 10 years and subject to monitoring of radiation levels.

Thirty-seven objections were lodged against the proposal, most from residents in nearby McQuarrie and Scott Streets, Seddon Place and Elles Road.

In a standardised submission, residents said they were not convinced of the

health safety surrounding the tower, and had other concerns about the potential effect on the landscape and property values.

They asked for the application to be turned down, and for Bell South to find a site away from houses and schools.

But Bell South said the Kew Bowl site was separated from the residential areas to the north, east and south, with the nearest houses being 55m away, on the opposite side of Elles Road.

The company considered three alternative sites in the vicinity, including its preferred site in the grounds of Southland Hospital and near the existing Telecom cellphone tower. But Southern Health would not agree to a lease.

Two independent submissions last night cast doubt on the perceived health concerns.

Southern Public Health Services described the public reac-

tion to cell sites as "psychological fear," and National Radiation Laboratory scientist Martin Gledhill said the tower proposed for Kew Bowl would "not pose a health hazard to people who live nearby or who work or pass by the site."

Maximum radio frequency radiation levels in nearby houses would be 0.2 percent of the limit set in the accepted New Zealand standard, he said.

The South Invercargill cell tower proposal is the third this year to be hotly opposed by Southland communities.

Residents in the Racecourse Road area are going to the Environment Court about the Invercargill City Council's approval of a Bell South cell tower in the PowerNet yard.

Talbot Street residents in Gore are opposing a similar proposal from Telecom to build a 29m high mast in their neighbourhood.

Connell Wagner Limited

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Level 4 Torrens House

195 Hereford Street

P O Box 1061

Christchurch

NEW ZEALAND

Connell Wagner

TO: Invercargill City Council

ATTENTION: Gerard Cleary

FAX NO: 03 214 3670

COPIES:

SUBJECT: BellSouth Kew Bowl

FROM: Greg Peave

DATE: 20-10-97

TIME: -

JOB NO: 5218

PAGES: 1 (Including this page)

IMPORTANT MESSAGE

The information contained in this document is CONFIDENTIAL and may also be LEGALLY PRIVILEGED, intended only for the addressee. If you are not the addressee, you are hereby notified that any use or dissemination of the information and any copying of the document is strictly prohibited. If you are not the addressee, please immediately notify us by telephone and we will arrange for the return of this document to us.

MESSAGE:

Gerard,

As you are aware BellSouth will be represented at the hearing to be held on

Wednesday evening. I understand that the following will be appearing:

Leigh McGregor Legal Counsel

Peter Rough Landscape Architect

Senni Mundy Radio Frequency Engineer

Myself Planner

A statement of evidence from Martin Gledhill of the National Radiation Laboratory will also be taken.

I got your report last Thursday, thanks for that. Regards Greg Peave

**Application by BellSouth to construct a cellsite at
Kew Bowl, Elles Road, Invercargill**

STATEMENT OF EVIDENCE BY M D GLEDHILL
Scientist, National Radiation Laboratory.

1 Qualifications

- 1.1 My name is Martin David Gledhill. I have a Master of Arts degree in Natural Sciences (Physics) from Cambridge University and a Master of Science degree in Medical Physics from the University of Otago. I am a member of the Australasian Radiation Protection Society.
- 1.2 I am a scientist at the National Radiation Laboratory of the Ministry of Health, and am authorised to give this evidence on behalf of the Laboratory.
- 1.3 The National Radiation Laboratory's function is to administer radiation protection legislation and provide independent radiation protection advice. It is the agent of Government providing independent expert advice on hazards associated with the use of non-ionizing radiations; that is ultraviolet, lasers, microwaves, and radiofrequency radiations low frequency electric and magnetic fields, and ultrasound.
- 1.4 I work in the non-ionizing radiation section of the Laboratory, and in the course of my work provide advice on health effects of exposures to non-ionizing radiation to members of the public and industry and keep up to date with research in this area. I have personally surveyed a number of radio transmitters, including cellular telephone base stations (cellsites), and other radiofrequency emitters, and calculated exposure levels from proposed antenna installations.

2 Scope of Evidence

- 2.1 The purpose of this evidence is to:
 - 1) provide information to the Council on the likely levels of exposure to electromagnetic radiation from the antennas;
 - 2) comment on the health effects of exposures to RF radiation, and exposure Standards

- 3) compare the likely exposure levels with the limits recommended in exposure Standards

The type of information which follows may be obtained from the National Radiation Laboratory by any person on request.

3 Nature of emissions from proposed antennas

- 3.1 According to information received from BellSouth, two types of antenna will be installed at the site: Base Transmitter Station (BTS) panel antennas and dish antennas.

Panel antennas

- 3.2 Three panel antennas will be mounted at the top of a twenty metre mast, and will emit radiofrequency (RF) waves at frequencies in the region of 900 megahertz (MHz) to communicate with cell phones in the area. Three other panel antennas will act as passive receivers.
- 3.3 The transmitting antennas will emit broad, fan-shaped beams. In the horizontal plane, emissions are directed into a sector extending about 60 degrees on either side of the main beam axis. In the vertical plane, the emissions are mostly directed slightly down from the horizontal, with relatively low powers being directed at steep angles towards the ground. These patterns are illustrated in the figure 1.

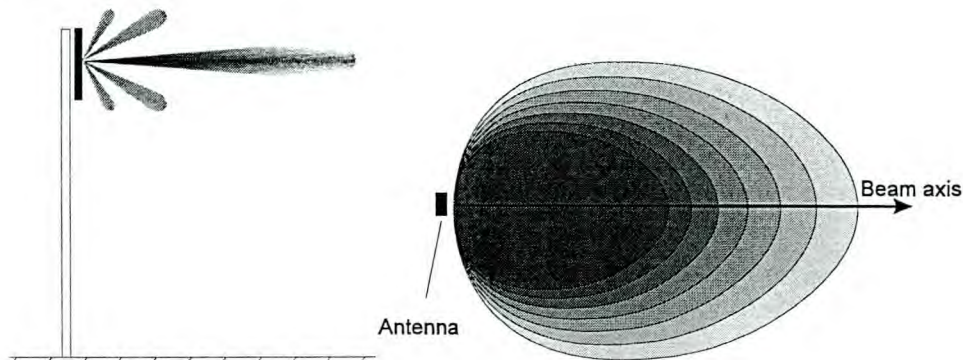


Figure 1. Vertical (left) and horizontal (right) emission patterns from BTS panel antenna to show the relative amounts of RF power transmitted in different directions.

- 3.4 Power transmitted by each antenna will vary between 11 and 22 watts, depending on the number of calls being handled and the distance of the callers from the site.

Dish antennas

- 3.5 Two dish antennas mounted 15 metres up the mast will communicate with other parts of the cellphone network, transmitting and receiving microwaves at frequencies of several gigahertz (GHz)[#]. The antennas communicates with

[#] 1 GHz = 1000 MHz

similar dish antennas at other sites. Any objects between the two antennas would block the microwaves, so for communication to take place, there must be a clear line of sight between the two. The beam from this type of antenna is directional, diverging only slowly in the horizontal and vertical planes. Only negligible amounts of power are directed out of the main beam. (See figure 2.)

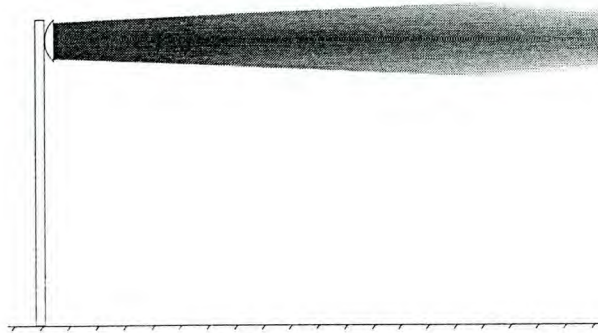


Figure 2. Emission pattern from dish antenna.

- 3.6 For convenience, the transmissions from the antennas will be referred to as "RF radiation".
- 3.7 The transmitters proposed for this site are compared with other sources of RF radiation in Figure 3.

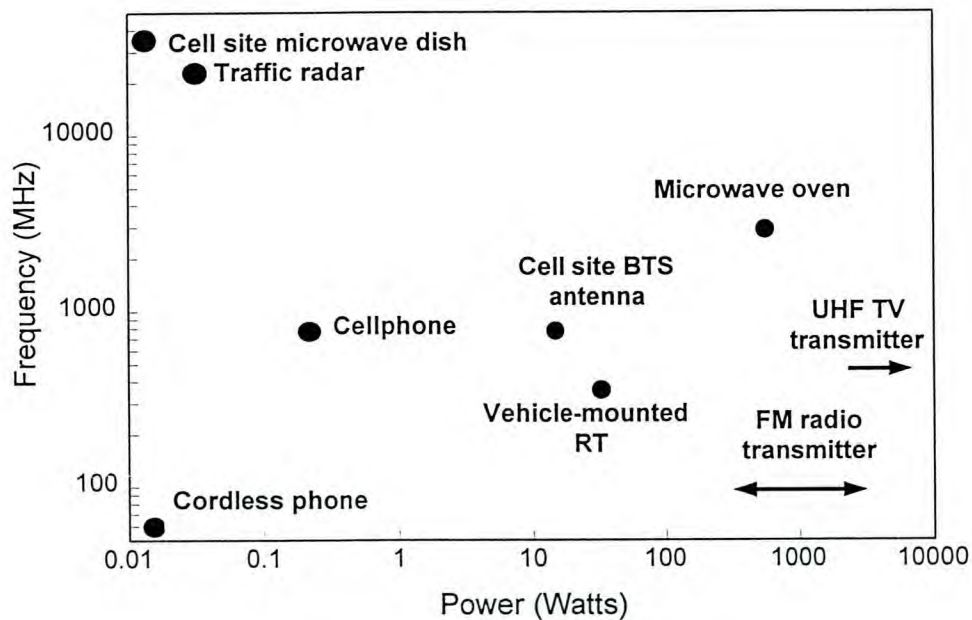


Figure 3. Power and frequency of various RF sources

- 3.8 The natures and physical effects of RF radiation should not be confused with those of ionizing radiations such as x- and gamma rays, or of other non-ionizing radiations in the electromagnetic spectrum such as visible light or ultraviolet. Radio waves are physically unable to interact with body tissues in the same way as these radiations.

3.9 Similarly, RF radiation does not resemble, either in its nature or physical effects, the extremely low frequency electric and magnetic fields present near power lines and electrical appliances.

3.10 RF radiation cannot contaminate the ground or water.

4 Health effects of exposure to RF radiation

4.1 There is a large body of research data on the biological and health effects of exposure to RF radiation. This includes studies on long and short term exposures of humans and other primates, other mammals such as rats and mice, and isolated cell cultures. There are also well-developed theoretical models of how RF radiation is absorbed in the body, which have been validated by measurement. These models are important in comparing RF energy absorption (measured as the specific absorption rate (SAR) in units of watts/kilogram (W/kg) of body tissue) between different animal species under particular exposure conditions.

4.2 Specific studies have been carried out to see whether exposures to RF radiation have any effects on the blood-forming organs of the body, on its immunological defence mechanisms against disease, on the endocrine (hormone) system, on the cardiovascular system, and on behaviour. Other work has investigated the possibility that exposures may be associated with increased risks of cancer, miscarriages or birth defects.

4.3 Epidemiological studies were reviewed for the Ministry of Health in 1996 by Professor Alistair Woodward of the Wellington School of Medicine¹. The report notes (p iv) that:

“... research into the effects of radiofrequency radiation is not well developed, with only a few limited and exploratory studies.

- Many studies that have reported on radiofrequency radiation have been, explicitly, hypothesis generating exercises which have no specific research question, but rather screen a large number of outcomes in relation to a particular exposure. These studies run the danger of “significant” positive results due solely to multiple comparisons.

- Such studies may provide important clues as to the origins of disease, but on their own are unable to provide strong evidence of cause and effect.

- Few of the epidemiological studies carried out so far have included precise information on personal exposures to radiofrequency radiation.”

4.4 In March 1997 the Ministry of Health asked Professor Woodward to provide further comment, especially on studies (such as one in Sydney, and a very extensive study in the UK) published since he prepared his 1996 report and whether they suggested a causal link with cancer. Professor Woodward stated:

“The associations that are reported in the new evidence are relatively weak, refer to a wide range of disease endpoints, lack widely accepted biological mechanisms, and do not have a consistent dose-response pattern. None of these deficits rule out a causal effect of RF, but they do make non-causal explanations more likely. I doubt many epidemiologists would accept [the] argument that sufficient is known to designate RF radiation as ‘a highly probable human carcinogen’, nor is the evidence on cancer risk ‘unequivocal’”.

- 4.5 The research data has been reviewed extensively by several different national and international bodies in recent years, including the National Council on Radiation Protection and Measurements² (NCRP), the British National Radiological Protection Board^{3,4,5} (NRPB), the World Health Organisation in conjunction with the International Radiation Protection Association⁶ (IRPA), the International Commission on Non-Ionizing Radiation Protection⁷ (ICNIRP) and the Institute of Electrical and Electronics Engineers⁸ (IEEE). Important factors considered in these reviews were whether or not the research findings were (unambiguously) positive, reproducible, and supplemented with information on exposure quantities.
- 4.6 Conclusions from these reviews have been that all of the biological systems examined respond to stresses on the body and appear to respond to exposures of RF field levels sufficient to cause slight or significant heating, but not at lower levels. In other words, these body systems demonstrate a normal heat stress response when exposures are sufficiently high to cause heating. Most responses have been reported at SARs above about 1-2 W/kg. At frequencies below 10 MHz, non-thermal effects such as nerve stimulation, induced currents and contact burns occur.

5 Exposure standards

- 5.1 Organisations which have developed or proposed standards for limiting exposure to radiofrequency radiation in the last decade include:
- The IRPA⁹
 - The NRPB¹⁰
 - The Standards Association of Australia¹¹ (adopted, with minor amendments, by Standards New Zealand¹²)
 - The IEEE⁶ (subsequently adopted by the American National Standards Institute (ANSI))
 - The National Council on Radiation Protection and Measurements² (NCRP)

In 1996, after consultation with the Environmental Protection Agency, the Food and Drug Administration, other federal health and safety bodies and a large number of comments submitted as part of their rule-making process, the US Federal Communications Commission (FCC) adopted limits based on the NCRP and ANSI recommendations¹³.

- 5.2 These standards recognise that the most sensitive indicator of RF exposure effects in primates has a mean SAR threshold of around 4 W/kg. This forms a fundamental basis on which the exposure limits are based. However, at lower frequencies, limits on current flows in the body must also be considered.
- 5.3 From this basis, safety factors are applied to derive exposure limits for people exposed occupationally and for the public. A safety factor of ten is applied for occupational exposures, resulting in a fundamental limit on SAR of 0.4 W/kg, and generally a further factor of five is applied for the public, giving a limit of 0.08 W/kg.
- 5.4 Although SAR is a useful concept in dosimetric studies, and for setting fundamental exposure limits, in practice it is difficult to measure. Practical limits are expressed in terms of the incident power flux density, that is, the amount of RF power incident per unit area. This is measured in units of Watts per square metre (W/m^2), or in the equivalent unit of microwatts per square centimetre ($\mu\text{W/cm}^2$). In most cases, power flux density can be readily calculated or derived through measurement.
- 5.5 The relationship between SAR and power flux density depends on the frequency and polarisation of the RF radiation and the size of the person exposed. Figure 4 shows how SAR (for conditions giving the maximum absorption) varies with frequency for people of different sizes, at a power flux density of 1 W/m^2 . At the frequencies used by cellphones, there is little difference between the three sizes, whereas at lower frequencies there is an approximately five-fold increase. Derived exposure limits in terms of power flux density always assume worst case conditions of polarisation and body size, with the result that safety factors exceed those stated in the exposure standards.

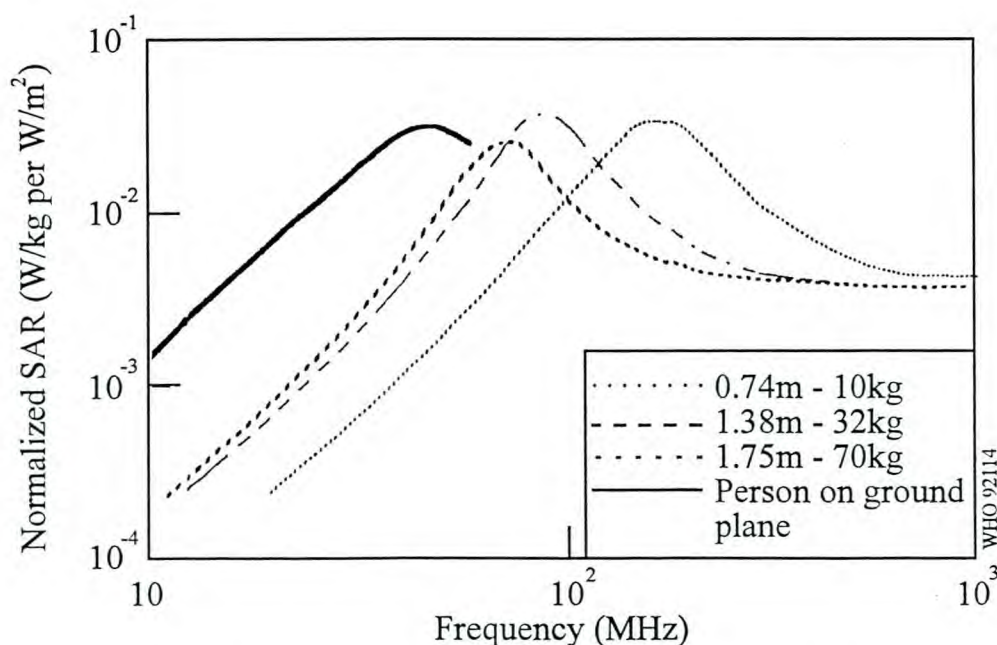


Figure 4. Specific Absorption Rate versus Frequency for Humans (from reference 6)

- 5.6 Values recommended for maximum power flux density for continuous general public exposure at the 900 MHz frequency used by cellphones are shown in the following table.

Organisation	limit at 900 MHz ($\mu\text{W}/\text{cm}^2$)
Britain (NRPB, 1993)	3300
USA (IEEE/ANSI, 1992)	600
USA (NCRP, 1986)	600
USA (FCC, 1996)	600
International (IRPA, 1988)	450
New Zealand (NZS, 1990)	200

- 5.7 The table indicates that NZS 6609 is particularly conservative (more restrictive) at these frequencies compared with other standards. The reason for this is that, unlike the other Standards, the current New Zealand Standard does not relax the limits above 300 MHz to take account of the reduced energy absorption at high frequencies (as shown in figure 4).

- 5.8 A joint New Zealand and Australian Standards committee, is currently reviewing NZS 6609. The committee includes representatives from: government agencies (including the Scientific Director of the National Radiation Laboratory), telecommunications industry operators, trade unions, and health researchers. The most recent draft proposes that limits remain unchanged at the frequencies used by cellsites.

- 5.9 The Standard is sometimes described as a "thermally-based" standard, but this does not mean that the possibility of effects occurring at levels too low to cause heating have been ignored. The reviews discussed in section 4 of this evidence include many references to reports of apparently athermal effects, and some of the review committees (such as the IEEE and WHO/IRPA) included researchers who had published such reports. Evidently the effects, which have only been observed in isolated cell cultures (and have often not been independently replicated) were considered as not affecting health. Concerning apparent athermal effects in animals, a recent review¹⁴ commented that

"An investigator may think he is observing a low-level or nonthermal effect in one animal because the incident power is low, while in actuality the animal may be exposed to as much absorbed power in a specific region of the body ... as another larger animal is with much higher incident power at certain frequencies."

- 5.10 It is not possible to prove that exposures which comply with NZS 6609 are safe. Replicable, well conducted experiments can prove whether there are harmful effects, and at what levels these effects occur. If no effects are found, this does not prove safety, as there is an unlimited number of exposure conditions and effects which could be tested. However, the absence of a wide

range of potentially harmful effects under a variety of exposure conditions gives good grounds for believing that any other effects are extremely unlikely.

- 5.11 It is often suggested that in the past, scientists believed that asbestos and smoking were safe, only to be proved wrong by subsequent experience. Parallels are drawn with the current state of knowledge of RF radiation, with the implication that it would be best to limit or eliminate exposures to RF radiation to prevent a similar situation arising in the future.
- 5.12 In fact, the carcinogenic risks of both asbestos and smoking showed very clearly in the initial studies which investigated them, and were confirmed by subsequent studies. Similar studies on exposures to RF radiation at levels below those permitted by exposure Standards have shown no clear, consistent, unambiguous results.
- 5.13 In summary, the New Zealand exposure Standard and similar overseas Standards are based on careful reviews of the research into the health effects of exposure to RF radiation. This research has resulted in several thousand publications, and has been carried out for more than fifty years. Exposure limits have been set well below levels at which adverse health effects have been observed, and a comment in the ANSI Standard published in 1992 notes that:

"No verified reports exist of injury to human beings or of adverse effects on health of human beings who have been exposed to electromagnetic fields within the limits ... specified by previous ANSI guides, including ANSI 1982."

As mentioned in paragraph 5.6, the exposure limits recommended in NZS 6609 are lower than those specified in the 1992 ANSI Standard, and are more than ten times lower than the limits in the 1982 ANSI Standard.

- 5.14 The National Radiation Laboratory is satisfied that the present New Zealand Standard provides an appropriate basis against which the potential for RF emitters to produce health effects can be assessed.

6 Application of New Zealand Standard to proposed antennas

- 6.1 NZS 6609 sets out exposure limits in terms of the power flux density of the incident RF radiation (or the equivalent electric or magnetic field strengths), that is, the RF power incident on unit area in the beam. Compliance with the Standard can be tested by measurement when a facility is commissioned.
- 6.2 Section 7.2 of Part 2 of NZS 6609 states that material contained in Appendix B of Part 2 can be used to estimate likely exposure levels. The calculations outlined in section 7.2 and Appendix B tend to overestimate likely exposures.
- 6.3 Calculations do not prove compliance with the Standard. However, they are a means to assess whether exposures from a proposed transmitter installation are likely to comply. They also give guidance on whether confirmatory measurements should be made once the installation is operating.

- 6.4 I have been provided with information on the site plans and antenna characteristics, and from this I have calculated likely exposures from the transmitting antennas. I have also visited the site.

Dish antennas

- 6.5 As mentioned in paragraph 3.5, dish antennas operate at low power and the beams are tightly focused. The maximum exposure to someone on the ground beneath the main beams would be less than 0.1% of the limit. In other areas around the site, the dish antennas would make a negligible contribution to overall exposures to RF radiation.

Panel antennas

- 6.6 For the panel antennas, the region where the power flux density exceeds the recommended exposure limit extends about 7.4 metres directly in front of the antenna (ie, more than 20 metres above the ground).
- 6.7 Exposures to someone on the ground would be lower than this. Exposures 2 metres above the ground (head high for a tall person) would reach a maximum of 0.3% of the limit in NZS 6609 over small areas about 25 metres from the base of the mast, and would decrease fairly rapidly with increasing distance. This has been calculated from the antenna specifications, and assumes flat ground around the site.
- 6.8 At the top of the nearby grandstand, exposures may reach up to 0.8% of the limit in places, but would be lower elsewhere.
- 6.9 Exposures in these and other areas near the site are summarised in the table below:

Location	Estimated exposure
Ground level on the site	Maximum 0.3% of limit in isolated spots, generally less than 0.1%
In the grandstand	Maximum 0.8% of the limit at the top of the grandstand
Tavern Car Park	Maximum 0.3% of the limit in isolated spots, generally less than 0.1%
Upper floor of Tavern	Maximum 0.2% of the limit, generally less than this
Bowling club	Maximum 0.13% of the limit, generally less than this
Tennis courts	Less than 0.1% of the limit
Houses on Elles Road	Maximum 0.13% of the limit, generally less than this
Houses on McQuarrie Street	Less than 0.1% of the limit

- 6.10 The calculations assume direct ray paths to positions of interest, without correction for shadows by obstructions or reinforcement for reflections.

Measurements around existing RF transmitters have shown that reflections and shadows can have a marked effect on measurement readings. Actual levels vary within over less than one metre from 2-3 times greater than those predicted to much less. Any localised enhancements produced by reflections are accompanied by nearby decreases in the signal level, and an average value taken over an area of, say a 30 cm square, should give a result close to that predicted.

7 Conclusions

- 7.1 Independent reviews of all the research data on the health and biological effects of exposure to RF radiation have been carried out by several national and International bodies. These have concluded that effects in primates occur above an SAR threshold of 4 W/kg. Exposure guidelines and limits have been promulgated to ensure that the SAR in exposed individuals is considerably below this threshold. Amongst these is NZS 6609, which at the frequencies used by cellsite equipment sets an exposure limit for the general public of $200 \mu\text{W}/\text{cm}^2$. This is at least 50 times lower than the level at which effects might occur.
- 7.2 The National Radiation Laboratory is satisfied that the present New Zealand Standard provides an appropriate basis against which the potential for RF emitters to produce health effects can be assessed.
- 7.3 Calculations show that exposures to RF emissions 2 metres above ground level around the proposed cellsite would not exceed about 0.3% of the public limit in NZS 6609. Exposures might reach up to 0.8% of the limit at the top of the nearby grandstand. Both these levels are at least 5,000 times lower than the level at which health effects might occur. Generally, exposures would be much lower than these values.
- 7.4 In view of these very low exposures, the proposed cellsite would not pose a health hazard to people who pass close by to the site.



Martin Gledhill
National Radiation Laboratory
October 1997

¹ Woodward A, Bates M, Hutt M. Literature review of the health effects of radiofrequency radiation. NZ Ministry of Health, August 1996.

² NCRP, 1986. Biological effects and exposure criteria for radiofrequency electromagnetic fields. National Council on Radiation Protection and Measurements Report No. 86. NCRP, Bethesda, MD.

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- ³ Saunders R D, Kowalczyk C I, and Sienkiewicz Z J, 1991. Biological effects of exposure to non-ionizing electromagnetic fields and radiation : 111. Radiofrequency and microwave radiation, NRPB-R240. National Radiological Protection Board, Chilton.
- ⁴ Cridland, N A. Electromagnetic fields and cancer. A review of relevant cellular studies. NRPB report R256. National Radiological Protection Board, Chilton, UK. March 1993.
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- ⁶ WHO, 1993. Electromagnetic fields (300 Hz to 300 GHz). Environmental Health Criteria 137. World Health Organisation, Geneva.
- ⁷ ICNIRP. Health issues related to the use of hand-held radiotelephones and base transmitters. Health Physics, 70 (4), 587 - 593, 1996.
- ⁸ IEEE, 1992. IEEE Standard for safety levels with respect to human exposure to radio frequency electromagnetic fields, 3 kHz to 300 GHz, IEEE C95.1-1991. Institute of Electrical and Electronic Engineers, New York.
- ⁹ IRPA, 1988. Guidelines on limits of exposure to radiofrequency electromagnetic fields in the frequency range from 100 kHz to 300 GHz. Health Phys. 54(1) 115-123.
- ¹⁰ NRPB, 1993. Board Statement on restrictions on human exposure to static and time varying electromagnetic fields and radiation. Documents of the NRPB, 4(5). National Radiological Protection Board, Chilton.
- ¹¹ Standards Association of Australia, 1985. Maximum exposure levels – radiofrequency radiation – 300 kHz to 300 GHz, Publication AS2772-1985, Standards Association of Australia, North Sydney.
- ¹² NZS 6609.1-1990. Part 1: Maximum exposure levels 100 kHz to 300 GHz. Standards Association of New Zealand, Wellington.
- ¹³ Federal Communications Commission. Evaluating compliance with FCC guidelines for human exposure to radiofrequency electromagnetic fields. OET Bulletin 65, Edition 97-01, August 1997.
- ¹⁴ Michaelson S M, Elson E C. Interaction of nonmodulated and pulse modulated radiofrequency fields with living matter: experimental results. In: CRC Handbook of biological effects of electromagnetic fields (2nd edition); ed. Polk C, Postow E; CRC Press, Boca Raton, 1995.

RESOURCE MANAGEMENT ACT 1991: APPLICATION FOR THE ESTABLISHMENT OF A TELECOMMUNICATIONS FACILITY

Preamble

Southern Public Health Services (SPHS) neither supports nor objects to the proposal by BellSouth Ltd to establish the Telecommunications facility at 406 Elles Rd.

However SPHS wishes to ensure that the Council arrive at a decision which is based on fact and objectivity. The following comments may assist the Council in this regard.

Background

The principal public concern with regard to the telecommunications facility, commonly referred to as cell sites, is exposure to radio frequency radiation (RFR). RFR is a non-ionizing radiation usually classified as between 100 kHz and 300 GHz. The relationship between the different types of radiation is shown in Figure one. A large number of everyday applications use RFR examples include the following:

Application	Typical Frequency
Cellphone microwave links	15-23 GHz
Microwave ovens	2.45 GHz
Cellphones	800-955 MHz
FM radio	100 MHz
AM radio	1 MHz
TV1	50-60 MHz

In terms of radiated field strength cellsites are minor contributors when compared with radio and television towers. The strength of RFR rapidly decreases with distance.

RFR is quite different in its makeup and biological effects from ionizing radiation.

Biological Effect and Epidemiological Evidence

The biological effects that have been attributed to exposure to RFR are broadly classified into two groups: thermal and athermal effects.

Thermal health effects refer to localized heating of tissues within the body. Athermal effects primarily relate to the association between exposure and where an alteration in bodily function or structure is thought to occur. Examples may include cancer and sleep disturbance.

The key scientific technique used to identify adverse health effects in a population is epidemiology. Epidemiology studies the occurrence and distribution of disease within a defined population. It is very difficult, particularly ethically, to study rates of disease in populations in any other form. There are a number of shortcomings with epidemiological studies in the identification and measurement of one variable. This can prove particularly hard when a large number of other factors may be partially responsible for the observed or measured effects.

For this reason there are a number of scientific criteria which are applied to epidemiological studies to assess their validity. These variables examined include: strength of the association, and biological plausibility.

The epidemiological evidence currently available is not well developed. The few specific studies, which have been carried out, are exploratory in nature and as a result are limited with respect of identifying or quantifying causal relationships. There are a number of criticisms surrounding the design of most of these epidemiological studies in terms of potentially confounding variables.

While it is accepted that there is little evidence of health effects as a result of exposure to low levels of RFR, the public perception of risk should be taken into account. The public perception of risk has been described by the following relationship:

$$\text{Risk} = \text{Hazard} + \text{Outrage}$$

In many situations the public perception of a risk can be quite different from the scientific appraisal of the risk. In certain situations this can lead to very marked resistance and concern in relation to an activity, popularly coined the "outrage factor". Often the outrage component of risk is in vivid contrast to activities that have a very real public health risk, such as smoking or drink driving, but people may maintain a high aversion towards technological risks, such as cell sites. A good example of this has occurred in a Christchurch primary school where there has been significant, and very public, opposition to a cell site being set up in the school grounds. This is despite considerable scientific advice/evidence demonstrating no risk adverse health effects.

It is an important and demonstrable reality that a negative public perception in relation to an activity may translate itself into health effects, particularly those related to stress. It is for this reason that SPHS advocates a policy of prudent avoidance in sensitive areas. Prudent avoidance would entail not permitting cell sites in sensitive areas. A sensitive area may be classified as a school or community meeting place or even a residential area- the definition of this is entirely related to the public's perception.

Current Standards

The current standard that controls this area is NZS 6609: Radiofrequency radiation. This is a joint standard between both New Zealand and Australia and is closely aligned to other international standards in the area. Based on all scientific information, which has been

appropriately validated, the standards are more than sufficient to protect public health. This standard contains a wide margin of safety.

The expected levels generated by this BTS site are less one- percent of the maximum permissible levels specified in NZS 6609.

Recommendations

- That no less than the requirements of NZS 6609 are adopted as consent conditions.
- That adequate cognisance of any "outrage factor" in terms of the public's risk perception be taken into consideration in the council's decision to grant or decline this resource consent.
- That the council adopts the principles of prudent avoidance with respect to the siting of this type of facilities in high visibility and/or contentious areas.



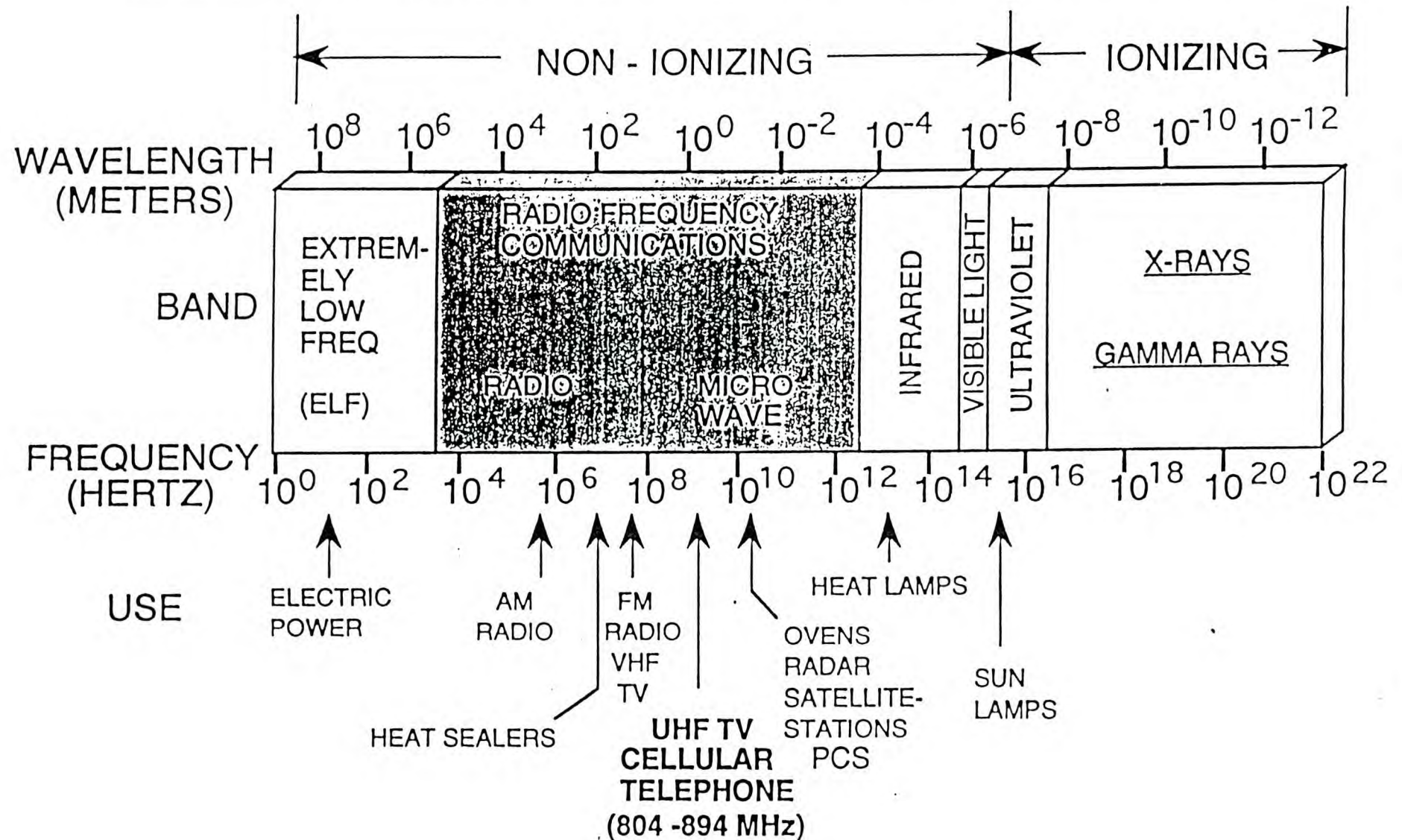
Simon Church

HEALTH PROTECTION OFFICER

22 October 1997

FIGURE 1

ELECTROMAGNETIC SPECTRUM





RUDD WATTS & STONE
BARRISTERS & SOLICITORS

**APPLICATION FOR LAND USE RESOURCE CONSENT TO
ESTABLISH A CELLULAR TELEPHONE CELLSITE**

**SUBMISSIONS ON BEHALF OF
BELLSOUTH NEW ZEALAND**

**KEW BOWL, 406 ELLES ROAD
INVERCARGILL**

IN THE MATTER of the Resource Management
Act 1991

AND

IN THE MATTER of an application under the
Act by **BellSouth**
New Zealand to the
Invercargill City Council for
consent to establish and use a
cellular telecommunications
facility at Kew Bowl, Elles
Road, Invercargill.

SUBMISSIONS ON BEHALF OF THE APPLICANT

1. INTRODUCTION

- 1.1 This hearing is to consider an application made on behalf of BellSouth New Zealand ("BellSouth") for resource consent to erect and use a cellular telecommunications facility at Cycling Southland, Kew Bowl, Invercargill (the subject land being more particularly described in Certificate of Title 7A/746).
- 1.2 BellSouth is a partnership comprised of BellSouth Asia/Pacific Enterprises Inc, BellSouth New Zealand Limited, BellSouth New Zealand Holdings Limited and Singapore Technologies Cellular (NZ) Pty Limited. It has been appointed by Order of Council as a network utility operator under the Telecommunications Act and the partnership is a requiring authority under the Resource Management Act. BellSouth

has acquired the rights to one of only four frequencies available for mobile telecommunications in New Zealand. Two others have been sold to Telecom and the fourth to Telstra, which is Australia's Telecom.

- 1.3 BellSouth provides an extensive digital cellular telephone service throughout New Zealand with an intensive network in the Auckland, Wellington and Christchurch metropolitan areas. This network allows for the placing and receiving of telecommunication messages with no restrictions on physical location, and has fax and data transfer capability. BellSouth offers uniform coverage to all compatible hand held telephone units.
- 1.4 The New Zealand system is part of the world wide system of cellular telecommunications. This worldwide system is expected to grow from the 6.5 million users in 1990 to approximately 1 billion users in 2010. In New Zealand a similar growth rate is evident. Evidence suggests that current growth rates are in the order of 3% per month, which is expected to continue. There is therefore a high demand for cellular telecommunications facilities and services to supply the needs of consumers throughout the country. It is important for New Zealand that we develop systems to remain a part of, and linked to, global communications systems such as the telecommunications system provided by BellSouth, and that such systems are available nationally.
- 1.5 The proposed cellsite at Kew Bowl is important to BellSouth's cellular network. The aim of this site is to provide good in-building coverage to South Invercargill, Appleby, Strathern and Kew. It will also extend and improve coverage in the surrounding areas.
- 1.6 The selection process for any particular cellsite is explained in detail in the application documents and will be elaborated in the evidence to be given by the Head of Radio Frequency Engineering at BellSouth, Jeni Mundy. Ms Mundy will give

detailed evidence of the lengths to which BellSouth goes to identify the most appropriate cellsite both from technological and environmental perspectives. Her evidence will also cover the reasons for the size and configuration of this facility.

- 1.7 The proposal involves the placement of eight antennas on a 20 metre monopole mast. Six panel, or BTS, antennas will be attached to brackets on the mast and two dish antennas will be attached to the mast at a height of 15 metres. A small equipment shelter which contains the radio equipment, control computer, batteries and a small air conditioning unit, will be located on the ground close to the mast.
- 1.8 The site on which the mast is to be located has a number of tall vertical structures on its perimeter, as does the adjacent tavern. The visual effects of the proposal are addressed in the evidence of Mr Peter Rough, landscape architect.

2. **RELEVANT CONSIDERATIONS**

2.1 **Status of the Application**

Invercargill City Transitional District Plan

- 2.1.1 The proposed cellsite is in the Community Use zone. Telecommunications installations are provided for as permitted and controlled activities by way of radio masts, aerials, towers and similar structures being included in the transitional district plan. The proposed cellsite is to be assessed as a non-complying activity only because the mast exceeds the height and diameter standards for masts.
- 2.1.2 The relevant planning provisions of the Invercargill City transitional District Plan are set out in the application and the objectives and policies of the Plan will be addressed in the evidence of planning consultant, Gregory Dewe.

3. RADIOFREQUENCY EMISSIONS AND THEIR EFFECTS IN THIS CASE

- 3.1 Antennas such as the ones on this facility communicate by transmitting low levels of non-ionising electromagnetic energy. Contrary to popular mythology which has been whipped up by the media from time to time, the minor emissions made by cellular telephone sites are neither "radioactive" nor are they unusual. They do not cause cancer or the other alleged effects which lay people sometimes claim. Indeed, the public anxiety which is sometimes claimed in the media has been described by one highly-qualified, and genuine, expert in this area as having been "unnecessarily and unfairly created by individuals and groups who lack a proper rigorous scientific approach". This statement has been endorsed by the Environment Court.
- 3.2 The minor emissions from these facilities involve non-ionizing radiations (NIR) which are those radiations and fields that are too weak to break molecules in tissue to produce ions (positive and negatively charged molecules) as do the ionizing radiations (such as X-rays).
- 3.3 Any emissions made are horizontal from the position of the transmit antennas, and also are focused in the narrow beam of the transmission. They are not scattered around the mast and on the ground. There are of course no emissions made by receive antennas.
- 3.4 The emission levels generated by BellSouth facilities are vastly below the New Zealand Standard (NZS 6609) for radiofrequency exposure which allows the general public to be exposed continuously (24 hours a day) to levels up to $200\mu\text{W}/\text{cm}^2$. And, they rarely transmit at full power in any event. RF levels at this site will be more than 650 times below the exposure limits permitted by the Standard, and the Standard itself increased general public exposure levels by a factor of 10, in other words the levels here will be at least 6000 times below those at which any effects might appear. The New Zealand Standard has been set at very cautious levels

and is much more stringent than standards set by other countries. These can be seen at paragraph 5.6 of the Ministry of Health's report. The Standards for telecommunications have what the Environment Court has called "an enormous safety margin" (see *Telecom New Zealand v Christchurch City*, Decision W165/96). New Zealand resource management caselaw has noted that while New Zealand Standards are not necessarily binding, they are commonly used both by the Environment Court and by local authorities and are accorded respect.

- 3.5 BellSouth's facilities easily comply with the New Zealand Standard. This issue has been the subject of considerable exploration and review by the Environment Court. In *McIntyre & others v Christchurch City Council* [1996] NZRMA 289 the allegation of potential health effects from cellsites such as this one was the subject of exhaustive international expert evidence and debate. The Court concluded, having reviewed all this expert evidence, that there is no basis for finding that exposure to radiofrequency emissions at the intensity of these cellsites would have a potential effect on people.
- 3.6 Similarly, in *Telecom New Zealand v Christchurch City Council* (Environment Court Decision No. W165/96, Judge Willy) it was conceded in a formal Memorandum to the Court at the outset that actual or potential health effects - or alleged or perceived effects - were not issues in the hearing. An objector nevertheless chose to pursue the point, prompting the Court to state in its decision:

"We question the value of inviting this Court to continue to entertain and make findings in respect of detailed technical and medical evidence in order to decide in each case whether or not a health hazard exists in relation to these facilities. We would have thought that by now the findings in cases such as McIntyre and Others v Christchurch City Council Decision 15/96 dated 5/3/96 would have been sufficient, in the absence of any fresh evidence to allay the concerns of residents about possible health hazards emanating

from cell sites such as that proposed in this case. The cost to the community involved in the need to deal repeatedly with these issues is becoming a matter for concern.

It may be that in future cases objectors might reflect on the wisdom of raising the health question where there is no new evidence to support these concerns . . .

. . . In our view [social angst] cannot be a material consideration. The Court must decide that the methodology leading to the conclusion expressed by the scientists is sufficiently reliable and probative to be admitted to the overall exercise of the discretion. It must be considered in terms of s.104 whether there are any adverse actual or potential effects on the environment of allowing the activity. If it decides there are not then the fact that persons living in the vicinity of it may remain fearful and unpersuaded by the weight of scientific evidence cannot in our view be a relevant matter for the Court to take into account in the overall exercise of its discretion. To do so would in effect be to set aside the whole weight of the body of scientific evidence and to substitute for it an apprehension which cannot be shown to have any factual basis. That in our view would be to take into account a wholly irrelevant consideration and therefore an invalid exercise of the discretion conferred upon the Court. . .

. . . what is certain is that the technology is now international, the research into it is taking place in a number of countries and the agencies charged with protecting the public have seen fit to impose rigorous standards of control - and none more so than New Zealand. Against that background the RF emissions in this case represent a minuscule fraction of the level of emissions which the scientists and Standards Institutes worldwide consider to be safe, given the current level of understandings of these matters."

- 3.7 As the Ministry of Health has stated in its report being tabled for this hearing, RF fields are part of the non-ionizing electromagnetic spectrum and have frequencies from 300 Hz to 300 GHz. The immensity (or power density) of RF fields is measured in microwatts per square centimetre ($\mu\text{W}/\text{cm}^2$). $1\mu\text{W}$ is one *millionth* of a watt. Such emissions are virtually unrecordable and should be compared with those of more familiar sources such as sunlight, microwave ovens, automatic garage or shop door openers, TV sets and so forth. The so-called danger that some people have been misled to believe exists with these facilities must be put into its proper perspective. (How do these people think their radios and televisions work?)
- 3.8 In fact, this type of facility has been in existence for some 50 years and no adverse health effects have been shown to be associated with them. Radiofrequency technology is 100 years old. If there were such effects one would expect them to be manifest by now, and they are not (refer for instance to paragraph 4.3 of the Ministry of Health report). Those with the relevant qualifications and expertise in the international scientific community agree without hesitation that there is no such effect from these sites, the emission levels are simply too low for the issue to arise.
- 3.9 It is submitted that the caselaw just referred to, and the evidence tabled on behalf of the Ministry of Health as to this specific site satisfies any concerns regarding public health and safety issues relating to this cellsite. There are no adverse health effects from cellsites such as this one, and this has been demonstrated and proven at the highest level.

4. RESOURCE MANAGEMENT ACT

4.1 Section 105

4.1.1 As this application is to be assessed as a non-complying activity this hearing must consider the provisions of section 105(2)(b) and be satisfied that either the adverse effects on the environment in allowing this activity will be minor or that the granting of the consent will not be contrary to the objectives and policies of the plan.

4.1.2 The evidence on behalf of BellSouth and in particular the evidence of Mr Dewe (planner) and Mr Rough (landscape architect) clearly shows that any adverse physical effects in relation to this proposal will be, or can be made, minor. The main issue here is visual amenity value, and the evidence of these two experts is that any adverse effects will be localised and can be successfully mitigated by conditions in relation to the colour of the structures.

4.1.3 Because of their operational requirements, cellsites must be erected on an elevated site. If such a site is not available, a mast must be used. BellSouth would prefer to locate its antennas on buildings, in the first place it is cheaper to do so. But what is convenient or expedient may not achieve the technical coverage required. In the *Telecom* case (cited above), the Environment Court said:

"It is important to recognise that in deciding whether some particular activity has an adverse effect on the environment, it does not become so merely because some part of the community does not like the look, size or scale of a proposed development. It is the definition of environment in its totality which must be taken into account and it cannot . . . be said that this technology utilising as it does physical resources and contributing significantly to the social and economic wellbeing of a large group of the community could be

said to be adverse to the environment merely because by its very nature it has an appearance in scale which some people find distasteful”.

- 4.1.4 It should be noted that there are a number of existing light standards in the immediate area, and a tall chimney on the adjacent tavern. The proposed mast is a similar size and will have little additional impact on the general area than those existing masts.

4.2 **Section 104**

- 4.2.1 Section 104 of the Act sets out those matters to be considered by this hearing when considering an application for resource consent. The relevant considerations for this application are as follows:-

- (a) Part II considerations;
- (b) Any actual and potential effects on the environment in allowing the activity;
- (c) Any relevant objectives, policies, rules or other provisions in the district plan or proposed district plan;
- (d) Any other matters.

- 4.2.2 As Mr Dewe will explain, the granting of consent will not offend the objectives and policies of the transitional plan. Whilst the plan makes no provisions at all for telecommunications structures, it has retained a degree of flexibility through its radio facilities provisions to cater for activities such as this one.

4.3 **Part II considerations**

- 4.3.1 The purpose of the Resource Management Act is set out in section 5. That section refers to the need to promote the sustainable management of resources. Sustainable management is of course defined in the Act and in particular refers to the management of the use, development and protection of natural and physical resources

in a way or at a rate enabling people to provide for their social, economic and cultural well being. Section 5 also refers to the need to avoid remedy or mitigate any adverse effects of activities on the environment.

4.3.2 It is submitted that this application is in accordance with the principles set out in Part II of the Act. In particular the principles of sustainable management recognise that resources are available to be used and indeed may be used in a sustainable way. Nothing in this proposal will deplete any resource. Further, this proposal is an appropriate use of resources in that it furthers the aim of the Act to enable people to provide for their social and economic well being, and it does so in a way which avoids any significant adverse effects on the environment. The evidence on behalf of BellSouth is to the effect that any adverse effects are minor and conditions relating to the colour of the structure will mitigate any such effects.

4.3.3 In the context of Part II, this is an appropriate development and one which will be of benefit to the people of the region and nationally.

4.4 **Actual and potential effects**

4.4.1 The actual and potential effects of the proposed activity are addressed in the evidence to be given on behalf of BellSouth. In summary, with appropriate conditions there will be no significant adverse effects arising from the proposal.

4.4.2 It should be noted that significant positive effects will result from this proposal. The public will have a choice of network and an improved quality of coverage in the cellsite area. As a result, competition in the industry in the area will be increased. Economic effects such as these have been recognised as positive effects in terms of the Resource Management Act in cases such as *Cash v Queenstown Lakes District Council (1993)2 NZRMA, 347, 351*.

4.4.3 Mobile and cellular phones allow a flexibility and mobility to industry and commerce. They are used by health, safety and enforcement authorities. Many businesses rely on cellphones, and not just big businesses - they are an essential tool for smaller enterprises such as builders, electricians, plumbers, couriers, midwives, doctors, and for police, public utilities, newscasters, security firms and so forth. They are therefore a valuable, often vital, aid to the community. The use of mobile telephones is now so common that people expect coverage wherever they take their phones. They want their phones to be usable 100%, 24 hours a day. This application assists that public expectation.

4.4.4 Submitters in opposition to the application have raised concerns which are common in applications of this type, none however are such that the application should be declined. The issues which the submitters raise will be dealt with in the evidence to be given on behalf of the applicant.

5. **EFFECT ON OTHER TRANSMISSION FREQUENCIES**

5.1 Technical advice clearly establishes that the operation of the cellsite will have no effect on the operation or reception of any other transmission frequencies including AM/FM radio, television or emergency service frequencies.

6. **ALTERNATIVE SITES AND CONFIGURATIONS**

6.1 Responsible consideration has been given by BellSouth to alternative sites for the proposed facility. This is discussed in detail in the application. Ms Mundy will describe the very thorough process of site selection BellSouth uses, and the fact that four possible sites were identified, however on further investigation it became clear that the site at Kew Bowl was the only option available.

- 6.2 The evidence will explain how the alternative sites were considered and assessed both from a technical coverage perspective and also from an environmental perspective. It will show that this application has been made by a responsible applicant who is well aware of the legitimate concerns of objectors. The evidence will show also that not only is the applicant restricted in its choice of sites by issues of site coverage but also the need to obtain landowners approval to such proposals.

7. **CONCLUSION**

- 7.1 BellSouth is confident that this proposal does not cause any significant adverse effects. The proposal will lead to significant social and economic benefits. In the above circumstances it is appropriate that consent be granted to the application it has made.

Dated this 22nd day of October 1997



L A McGregor
Counsel for BellSouth New Zealand

IN THE MATTER of the Resource
Management
Act 1991

AND

IN THE MATTER of an application by BellSouth
New Zealand for consent to
establish a cell site facility at
Kew Bowl, Elles Road, Invercargill

STATEMENT OF EVIDENCE
ON BEHALF OF BELL SOUTH NEW ZEALAND

Invercargill City Council

22 October 1997

1.0 PERSONAL PROFILE

1.1 My name is Jeni Mundy and I am the Radio Frequency specialist managing the Radio Frequency Engineering department for BellSouth New Zealand. My qualifications include an honours degree in Mathematics from the University of East Anglia and a Masters degree in Electronic Engineering (majoring in communications) from the University of Wales. I have completed indepth studies on GSM (Global System for Mobile communications) that BellSouth is installing here in New Zealand.

1.2 As a Radio Frequency specialist with BellSouth I have the following responsibilities;

- Site determination: It is my responsibility to chose and approve the locations of cell-sites to meet our coverage objectives.
- Site configuration: I also specify and approve site operating configurations to maximise coverage potential.
- Coverage assessment: I am responsible for the collection and comparison of radio coverage data from a newly operational site.
- Optimisation: An ongoing responsibility is to 'fine-tune' each cell-site once operational to deliver its best possible performance and thus improve overall network performance. This requires an in-depth understanding of GSM (Global System for Mobile communications), the digital technology in which BellSouth has substantially invested to provide a superior quality National cellular network.

2.0 SITE SELECTION

2.1 BellSouth invest a great deal of time and effort in site selection. We employ the latest technology and approach the issue of site selection from both a technical efficiency perspective and an environmental perspective. New Zealand has a rich variety of terrain that BellSouth takes advantage of when planning the cellular radio coverage. There are two main factors a Radio Frequency specialist must consider during site selection:

- Interference to and from other sites in our network. A fundamental concept of cellular networks is the re-use of frequency. This is not an area of concern for this region and places no restrictions on our location choices.

- Providing adequate signal strength in the required coverage area to allow mobile phones to operate. The nature of the terrain, local clutter (ie. trees, small hills) and the distance from the site dictate the level of coverage a user may expect at any given location. At cellular frequencies the radiowave must have at least a near line-of-sight path from the cell-site to the customers phone to ensure adequate signal strength for proper operation. The effects of large obstructions on the radio signal results in areas of marginal or no coverage. If the phone is to work in an indoor location signal levels outside the building must be sufficient to sustain penetration losses through the building walls. An in-building coverage requirement restricts the location of a cell-site to an area within a few kilometres of the buildings.

2.2 The combination of satisfying both of these factors constrains the choice of possible site locations from a technical efficiency point of view.

2.3 Initial site selection is performed with 'a state of the art' computer and software package that bases its calculations on a DOSLI terrain database having a 50m square resolution over all New Zealand. The terrain database also includes all roads, major buildings and large woodland areas. Using this information we are able to predict how a radio signal from a proposed cell-site would propagate over the required coverage area. The software package takes into account the cell-site transmit power and the height and type of antennas to be used.

2.4 Planning constraint maps are then requested, firstly for the selected areas, and secondly (and more generally) for surrounding areas. When a site is designed considerable thought must be given to the design of interconnecting sites. Planning constraint maps can capture the constraints of these sites that can impact on the optimum location of the site currently under design.

The combination of these planning constraints and site preferences are then issued to BellSouth's real estate department in the form of specific site locations. The process of identifying potential buildings or land begins, and site candidates can prove difficult to secure in the required locations. Obviously we can only proceed with a particular site if the owner allows us to occupy the required site location.

3.0 SITE SELECTION FOR THE INVERCARGILL SOUTH AREA

3.1 Current Coverage Limits

Appendix 1 to this evidence shows a plot of the present coverage offered by the BellSouth cell-sites in the Invercargill South area. The colours represent different levels of coverage and are described below;

- ORANGE areas represent the strongest signal levels. Customers can typically use their phones inside homes and workplaces. This level of coverage is often termed 'in-building coverage'.
- YELLOW areas represent secondary signal levels. Customers can typically use their phones in their car, from a car-kit or outside. Poor in-building coverage exists in these areas and customers will experience difficulty maintaining a call inside buildings. This level of coverage is called 'in-car coverage'.
- WHITE areas represent marginal signal levels, where there is little to no in-building coverage and customers will experience difficulties using their phones in their cars. Typically phones can only be used outside or from a car-kit with an external aerial. This level of coverage is called 'marginal coverage'.

As explained in section 2.1, the distance from the cell-site, 'clutter' and the nature of the terrain will determine the level of coverage at any location. The combining effects of these factors can clearly be seen in Appendix 1, in the form of degraded or inadequate coverage levels.

Much of southern Invercargill has no in-building coverage.

3.2 Coverage Objective

BellSouth's national roll-out plan aims to cover all the important business, travel and recreational areas in New Zealand. BellSouth recognises that business in the Invercargill area requires effective mobile communications. As the BellSouth network supports data capable mobile phones, it is possible to remotely access files and documents with a portable laptop PC. It is important for BellSouth to incorporate as much in-building coverage into the network thus providing mobile and local businesses (many of whom deal with national and international markets) full access to the benefits of digital transmission and other GSM services.

The main coverage objective is to:

- Maximise in-building coverage to homes and businesses in the southern area of Invercargill. This includes the suburbs of Appleby, Strathern, Kew, Kingswell, and Clifton.
- Reinforce in-building coverage levels along SHWAY 1, Bluff Road, particularly in the Woodend area.
- Reinforce coverage levels in Otatara.

Although the operational sites nearby perform their desired function of providing in-building coverage in their respective areas, it is clear that to meet the coverage objective at least one additional site is required around the Kew area.

3.3 Alternative site locations

The following areas were identified by Radio Frequency engineering as potential site locations. Appendix 2 to this evidence shows the alternative site locations.

1. - Kew Hospital

The coverage obtainable from a 20 metre mast located within the grounds meets all of the coverage objectives as can be seen in Appendix 3. However, the Hospital Board were not willing to grant BellSouth a lease for a site.

2. 3. & 4. - Kingswell Creek Reserve

Three separate locations were considered on the Reserve and tests were conducted from location 2. The results of the test were favourable and indicated that most coverage objectives would be met with the exception of any real improvements in the Otatara area. The predicted coverage from this location can be seen in Appendix 4.

However, this site was rejected for environmental reasons explained by Greg Dewe in his evidence.

5. - Kingswell Dam, Cnr Wixon Rd and Rochdale Rd.

Coverage levels from a site located here would not provide the level of in-building coverage required in the suburbs of Strathern, Appleby and Kew. In addition no improvements would be seen in the Otatara area. As detailed in Section 2.1 to provide adequate in-building coverage levels a site must be located in close proximity to the area where coverage is required. This location is too distant from the prescribed area.

Coverage from this site falls short of the objectives outlined in 3.2, and was rejected for this reason.

6. -Otatarā Settling Ponds, Nr Bushy Point.

Inbuilding coverage levels within the Strathern and Kingswell areas will not be realised from a site located here, again this location is too distant from the prescribed coverage area.

Coverage from this site falls short of the objectives and was rejected for this reason.

4.0 CHOSEN SITE LOCATION

KEW BOWL, KEW, INVERCARGILL

4.1 Site Coverage

The configuration of each installation is dictated by the local terrain and by the coverage requirements. Any reduction in the optimum design results in a degradation of coverage. Kew Bowl is located in the optimum position to maximise BellSouth's coverage objectives. A site at this location will satisfy in-building coverage requirements to homes and businesses Appleby, Strathern, Kew, Kingswell, and Clifton. It will also reinforce in-building coverage levels along SHWAY 1, Bluff Road, particularly in the Woodend area and improve coverage levels in Otatarā.

Kew Bowl is central to the coverage area. It has good line of site into the surrounding suburbs identified as the key coverage goals. It provides good supplementary coverage to the existing coverage footprint from the Invercargill site and also has been planned taking into consideration the expected coverage from the Waihopai site.

The resultant of these existing and planned sites will be comprehensive coverage for the Invercargill area providing excellent service levels to existing and future BellSouth customers.

The expected coverage from a site at Kew Bowl is shown in Appendix 5. Appendix 6 combines this with current coverage to show how the proposed site significantly improves in-building coverage and maximises all coverage objectives.

5.0 CONCLUSION

BellSouth has a substantial investment in GSM technology and aims to provide a competitive quality cellular network, on a national basis, for many more years. The professional manner in which the site selection process is managed shows that BellSouth is sensitive to environmental concerns. The rigorous site selection process also ensures the deployment of a minimum number of sites to meet the coverage objectives.

The establishment of a dynamic communications network that offers a complete range of services for today's industry will impact beneficially in Invercargill. A site located at Kew Bowl will satisfy all of BellSouth's coverage objectives and will provide the best cellular service from a single site in the area.

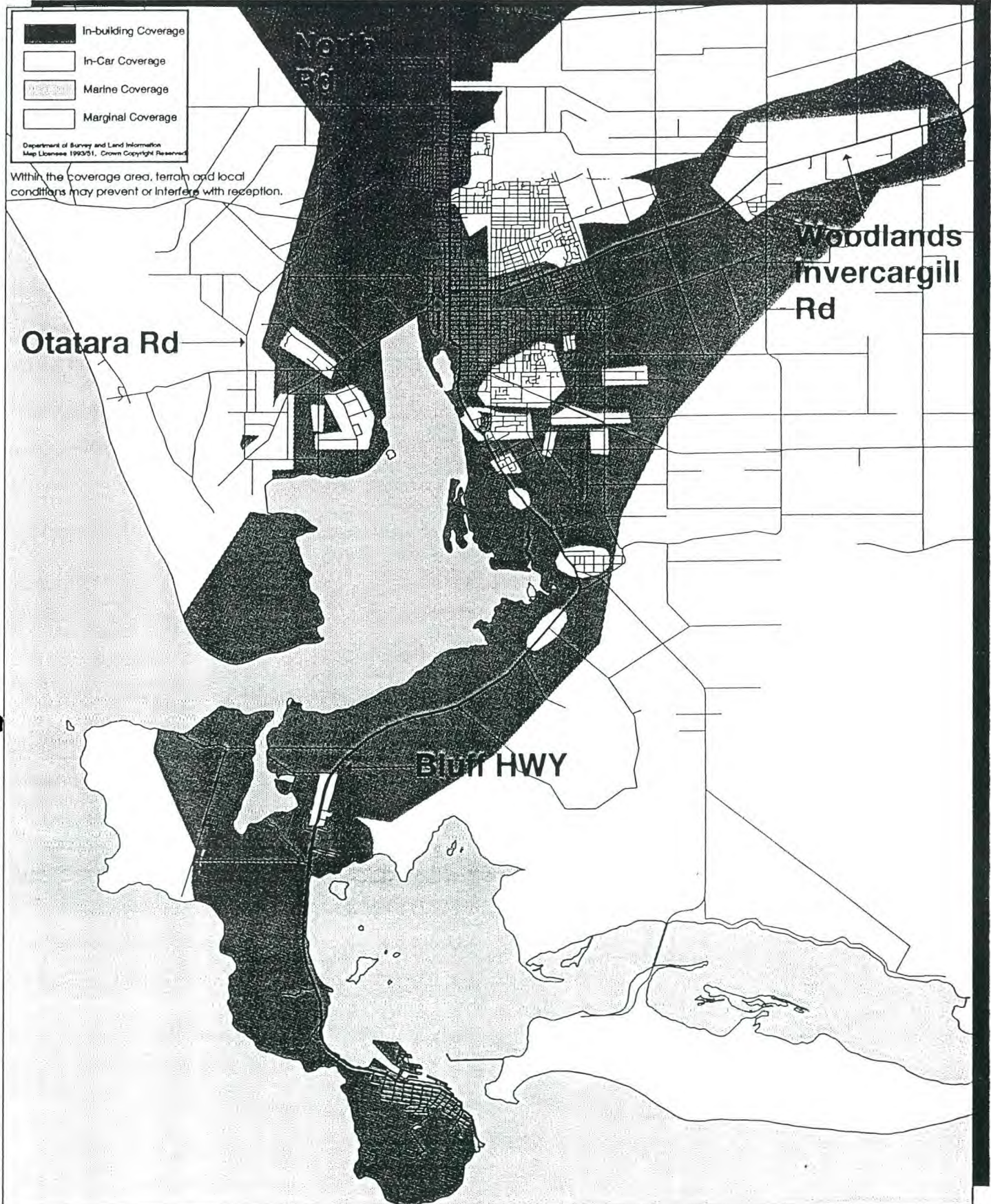
J M Mundy, BSc(Hons), MSc
Team Leader Radio Frequency Engineering
BellSouth

APPENDIX 1

Current Coverage in Invercargill South

Prepared for: Invercargill Hearing on 22/10/97

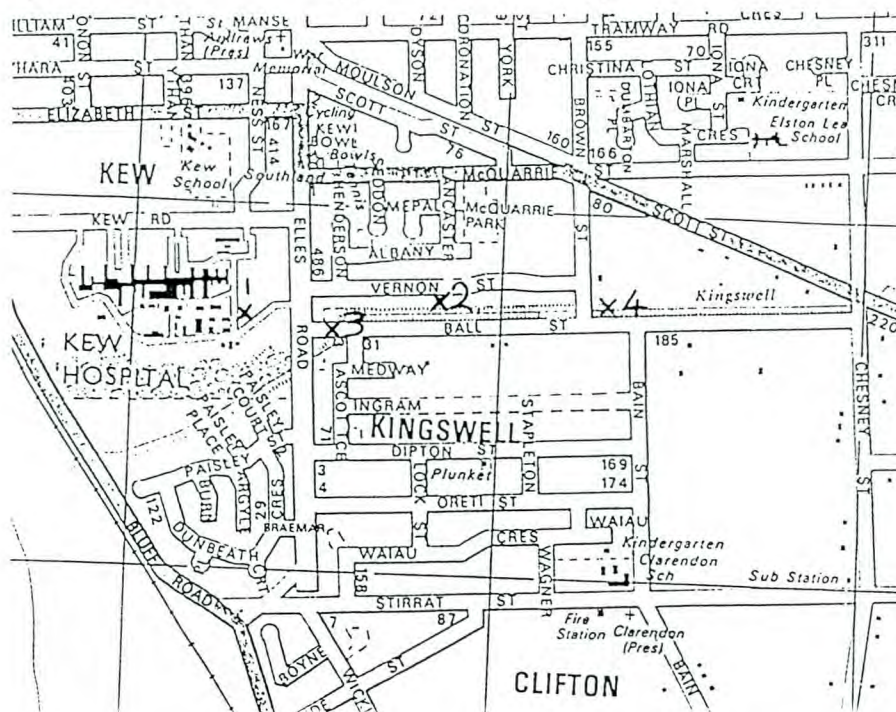
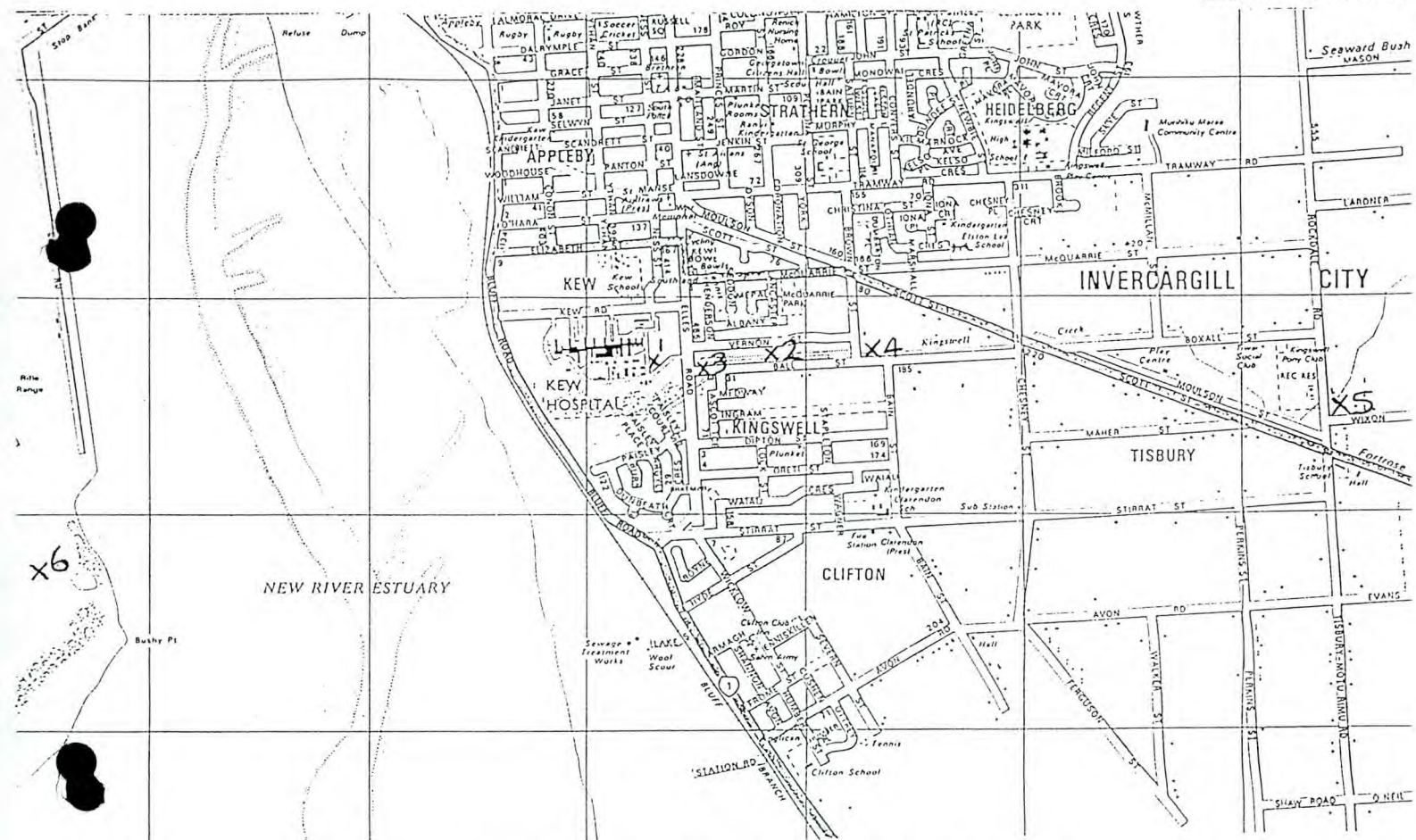
BELLSOUTH CONFIDENTIAL



APPENDIX 2 Alternative Site Locations

Prepared for: Invercargill Hearing on 22/10/97

BELLSOUTH CONFIDENTIAL





APPENDIX 3

Predicted coverage from Kew Hospital

Prepared for: Invercargill Hearing on 22/10/97



In-building Coverage



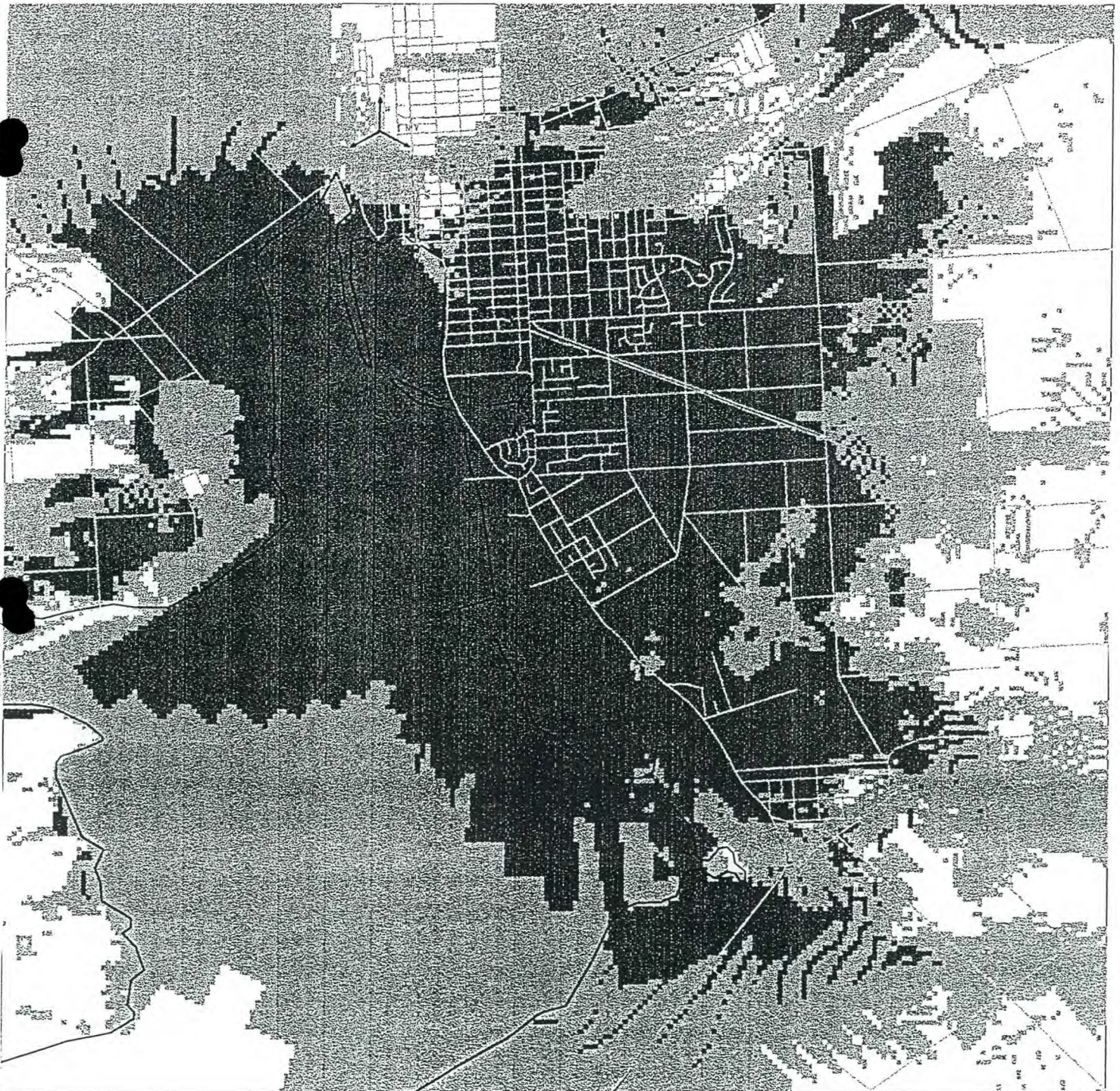
In-Car Coverage



Marginal Coverage

Within the coverage area, terrain and local conditions may prevent or interfere with reception.

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APPENDIX 4

Predicted Coverage from Kingswell Creek Reserve - Location 2

Prepared for: Invercargill Hearing on 22/10/97



In-building Coverage



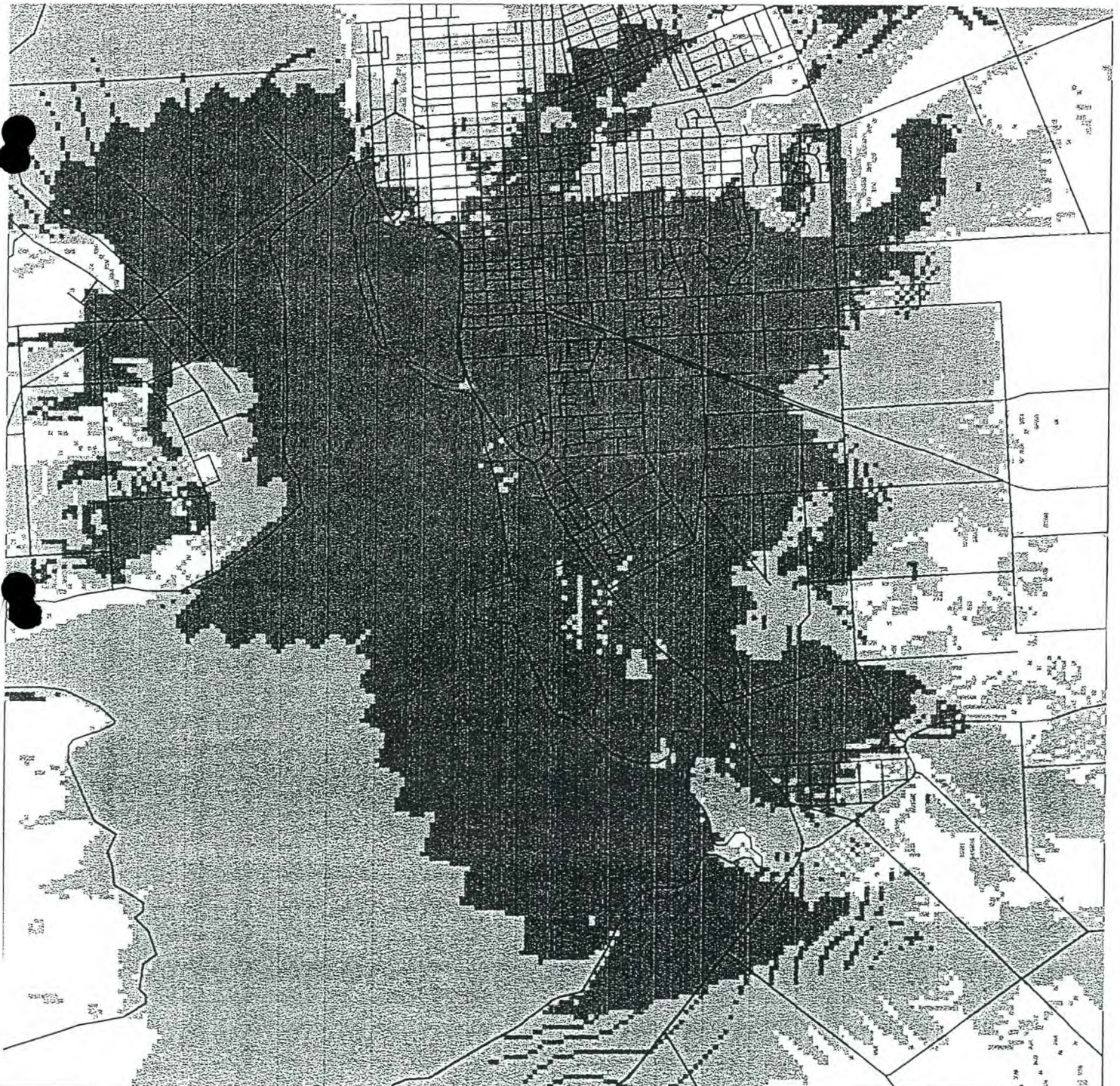
In-Car Coverage



Marginal Coverage

Within the coverage area, terrain and local conditions may prevent or interfere with reception.

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APPENDIX 5

Predicted Coverage from Kew Bowl

Prepared for: Invercargill Hearing on 22/10/97



In-building Coverage



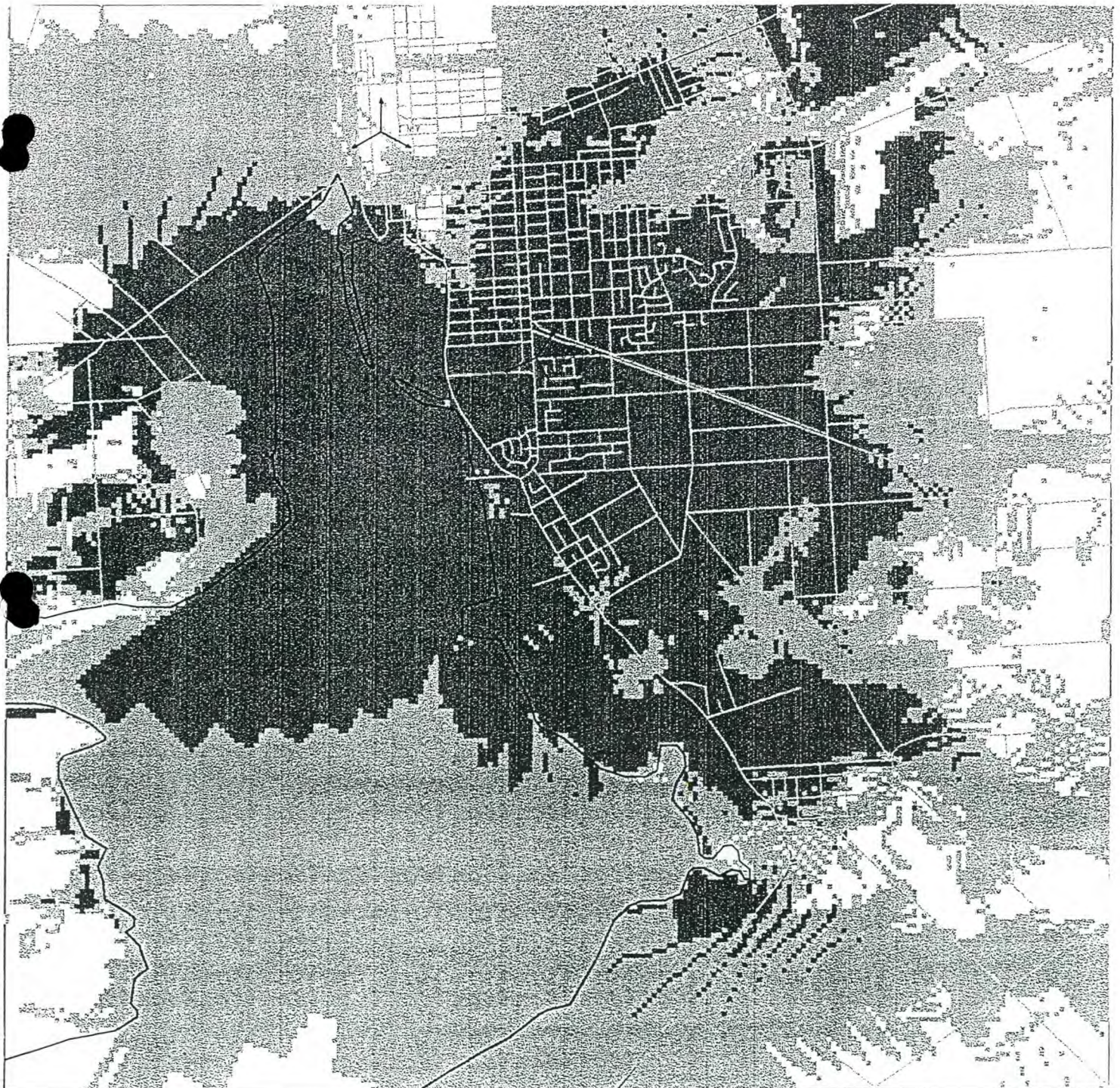
In-Car Coverage



Marginal Coverage

Within the coverage area, terrain and local conditions may prevent or interfere with reception.

~ BELL SOUTH CONFIDENTIAL





APPENDIX 6

Combined Invercargill Coverage with Kew Bowl Site Operational

Prepared for: Invercargill Hearing on 22/10/97



In-building Coverage



In-Car Coverage



Marginal Coverage

Within the coverage area, terrain and local conditions may prevent or interfere with reception.

BELLSOUTH CONFIDENTIAL



RESOURCE MANAGEMENT ACT 1991: APPLICATION FOR THE ESTABLISHMENT OF A TELECOMMUNICATIONS FACILITY

Preamble

Southern Public Health Services (SPHS) neither supports nor objects to the proposal by BellSouth Ltd to establish the Telecommunications facility at 406 Elles Rd.

However SPHS wishes to ensure that the Council arrive at a decision which is based on fact and objectivity. The following comments may assist the Council in this regard.

Background

The principal public concern with regard to the telecommunications facility, commonly referred to as cell sites, is exposure to radio frequency radiation (RFR). RFR is a non-ionizing radiation usually classified as between 100 kHz and 300 GHz. The relationship between the different types of radiation is shown in Figure one. A large number of everyday applications use RFR examples include the following:

Application	Typical Frequency
Cellphone microwave links	15-23 GHz
Microwave ovens	2.45 GHz
Cellphones	800-955 MHz
FM radio	100 MHz
AM radio	1 MHz
TV1	50-60 MHz

In terms of radiated field strength cellsites are minor contributors when compared with radio and television towers. The strength of RFR rapidly decreases with distance.

RFR is quite different in its makeup and biological effects from ionizing radiation.

Biological Effect and Epidemiological Evidence

The biological effects that have been attributed to exposure to RFR are broadly classified into two groups: thermal and athermal effects.

Thermal health effects refer to localized heating of tissues within the body. Athermal effects primarily relate to the association between exposure and where an alteration in bodily function or structure is thought to occur. Examples may include cancer and sleep disturbance.

The key scientific technique used to identify adverse health effects in a population is epidemiology. Epidemiology studies the occurrence and distribution of disease within a defined population. It is very difficult, particularly ethically, to study rates of disease in populations in any other form. There are a number of shortcomings with epidemiological studies in the identification and measurement of one variable. This can prove particularly hard when a large number of other factors may be partially responsible for the observed or measured effects.

For this reason there are a number of scientific criteria which are applied to epidemiological studies to assess their validity. These variables examined include: strength of the association, and biological plausibility.

The epidemiological evidence currently available is not well developed. The few specific studies, which have been carried out, are exploratory in nature and as a result are limited with respect of identifying or quantifying causal relationships. There are a number of criticisms surrounding the design of most of these epidemiological studies in terms of potentially confounding variables.

While it is accepted that there is little evidence of health effects as a result of exposure to low levels of RFR, the public perception of risk should be taken into account. The public perception of risk has been described by the following relationship:

$$\textbf{Risk} = \textbf{Hazard} + \textbf{Outrage}$$

In many situations the public perception of a risk can be quite different from the scientific appraisal of the risk. In certain situations this can lead to very marked resistance and concern in relation to an activity, popularly coined the "outrage factor". Often the outrage component of risk is in vivid contrast to activities that have a very real public health risk, such as smoking or drink driving, but people may maintain a high aversion towards technological risks, such as cell sites. A good example of this has occurred in a Christchurch primary school where there has been significant, and very public, opposition to a cell site being set up in the school grounds. This is despite considerable scientific advice/evidence demonstrating no risk adverse health effects.

It is an important and demonstrable reality that a negative public perception in relation to an activity may translate itself into health effects, particularly those related to stress. It is for this reason that SPHS advocates a policy of prudent avoidance in sensitive areas. Prudent avoidance would entail not permitting cell sites in sensitive areas. A sensitive area may be classified as a school or community meeting place or even a residential area- the definition of this is entirely related to the public's perception.

Current Standards

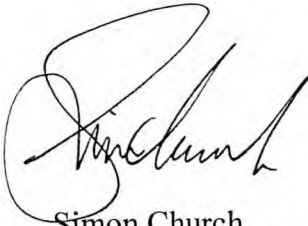
The current standard that controls this area is NZS 6609: Radiofrequency radiation. This is a joint standard between both New Zealand and Australia and is closely aligned to other international standards in the area. Based on all scientific information, which has been

appropriately validated, the standards are more than sufficient to protect public health. This standard contains a wide margin of safety.

The expected levels generated by this BTS site are less one- percent of the maximum permissible levels specified in NZS 6609.

Recommendations

- That no less than the requirements of NZS 6609 are adopted as consent conditions.
- That adequate cognisance of any "outrage factor" in terms of the public's risk perception be taken into consideration in the council's decision to grant or decline this resource consent.
- That the council adopts the principles of prudent avoidance with respect to the siting of this type of facilities in high visibility and/or contentious areas.

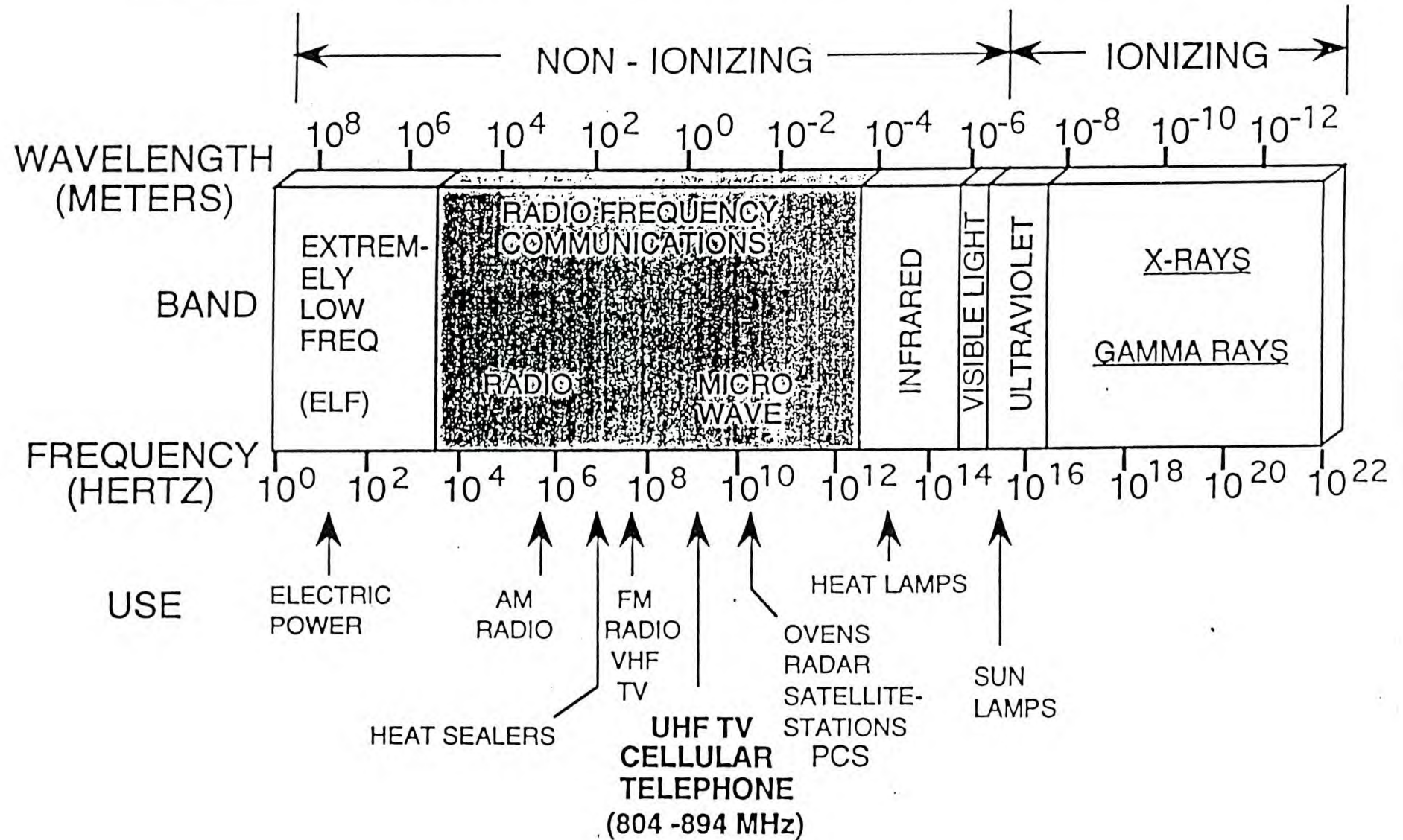


Simon Church
HEALTH PROTECTION OFFICER

22 October 1997

FIGURE 1

ELECTROMAGNETIC SPECTRUM



New proof of phone tower brain risk

By LAWRENCE WATT

A LEADING brain researcher says new American research points to a strong link between cellphone towers and major damage to brain tissue.

Ivan Beale, a consultant on the effects of electromagnetic radiation, Professor of Neuro-Psychology at Auckland University and a member of the New Zealand committee on radiation standards, said the research concluded brain tissue could be seriously harmed by microwaves at frequencies similar to those from cellphone towers and cellphones.

The research, from the Biomagnetics Laboratory at the University of Washington, adds ammunition to protesters at schools such as west Auckland's Green Bay Primary, whose board has threatened to close it if Telecom erects a tower nearby.

"If I had a child at the school, I'd be opposed to a cell site there," Professor Beale said.

The research, by US professors Henry Lye and Norendra Singh, showed breaks in DNA in rats' brain cells after exposure to the kind of microwaves emitted by cellphone towers. Breaks could lead to cancer, cell death and neuro-degenerative diseases like Alzheimer's disease.

Professor Beale said the studies had been replicated both at Washington and, within the past two months, at California's Loma Linda Electromagnetics Laboratory.

the latest study, but Telecom had rejected other research the board had raised. He said Telecom's attitude had been "this is not bullet-proof".

He expected proof to the level Telecom wanted would come in 20 years. "But meanwhile, do our children have to be guinea pigs?"

Professor Beale said children at schools near cellphone towers were exposed for years — and some research showed long-term exposure was potentially harmful.

"The problem is, people take (other) risks on a voluntary basis. When someone else is doing it to you — and particularly your children — you tend to take a very different attitude," he said. At sites such as Green Bay, "the community takes the risk while Telecom takes the profit".

The New Zealand standard for cellphone towers was more permissive than standards in eastern Europe and some Asian countries. Professor Beale wants the maximum permissible radiation exposure level lowered from 200 microwatts per square centimetre to four.

"Telecom and BellSouth like to say these levels are low. The question is, low compared to what? They're certainly a million times higher than the natural intensities at those particular frequencies," he said.

Telecom's external relations manager Clive Litt was not aware the Washington research had been reproduced, but said New Zealand

member of the New Zealand committee on radiation standards, said the research concluded brain tissue could be seriously harmed by microwaves at frequencies similar to those from cellphone towers and cellphones.

The research, from the Biomagnetics Laboratory at the University of Washington, adds ammunition to protesters at schools such as west Auckland's Green Bay Primary, whose board has threatened to close it if Telecom erects a tower nearby.

"If I had a child at the school, I'd be opposed to a cell site there," Professor Beale said.

The research, by US professors Henry Aye and Norendra Singh, showed breaks in DNA in rats' brain cells after exposure to the kind of microwaves emitted by cellphone towers. Breaks could lead to cancer, cell death and neuro-degenerative diseases like Alzheimer's disease.

Professor Beale said the studies had been replicated both at Washington and, within the past two months, at California's Loma Linda Electromagnetics Laboratory.

Although such risks probably were small, "it's a new risk from a new technology, which is poorly understood and the effects are likely to be delayed", he said.

Professor Beale likened current knowledge about the risk of cellphone microwaves to previous beliefs about asbestos and tobacco. The public was told for years the substances were safe and it was decades before studies proved a causal link with disease.

Toby Easton, the chairman of Green Bay Primary's board of trustees, said he was not aware of

search showed long-term exposure was potentially harmful.

"The problem is, people take (other) risks on a voluntary basis. When someone else is doing it to you — and particularly your children — you tend to take a very different attitude," he said. At sites such as Green Bay, "the community takes the risk while Telecom takes the profit".

The New Zealand standard for cellphone towers was more permissive than standards in eastern Europe and some Asian countries. Professor Beale wants the maximum permissible radiation exposure level lowered from 200 microwatts per square centimetre to four.

Telecom and BellSouth like to say these levels are low. The question is, low compared to what? They're certainly a million times higher than the natural intensities at those particular frequencies," he said.

Telecom's external relations manager Clive Litt was not aware the Washington research had been reproduced, but said New Zealand standards were tighter than those in the US and were based on World Health Organisation recommendations.

He said Telecom had looked at a Titirangi golf course as an alternative to the Koala Motors site near Green Bay Primary — but the golf club rejected it because it meant cutting down trees for the tower to work properly.

Green Bay Primary reopens tomorrow after the holidays and pupils will attend until Telecom begins building the tower at an unknown date.

SUBMISSION TO INVERCARGILL CITY COUNCIL

RE: ARIAL TOWER - ELLES ROAD

1. *ENVIRONMENT OBJECTIVES*

The report (Gonnell Wagner) states rather arrogantly that the proposed site in Elles Road south is suitable from an environmental point of view because the area already has overhead wires, poles etc. It implies that the addition of one more unsightly edifice would not matter.

We disagree. For some reason the area referred to has these unsightly poles, wires etc because the road seems to end at Elizabeth Street. Before that street, Elles Road is devoid of such impediments. Road works, footpath repairs all seem to end at Elizabeth Street.

The only things which do not end there are rate demands. This would argue that low Elles Road is in fact part of the city, therefore it's rate payers have a right to expect a certain amount of consideration by the City Council. We would therefore appeal to the Council that if we indeed have to put up with poorly maintained footpaths, unsightly poles and overhead wires that we are not subjected to the erection of a further unsightly and potentially hazardous tower.

2. *HEALTH HAZARD*

Though it has been said an objection on these grounds would be pointless owing to the fact that such a hazard could not be proved to exist, surely the onus of proof should be on the applicants that as long-term hazards does not exist.

All the report claims is that the level of radiation, while it exists, is of a relatively low level which is harmless to health. We would argue that this claim can be compared to the debate on the dangers of cigarette smoking.

It would be correct from a medical point of view to state that the harmful substances contained in one cigarette is so minimal as to be harmless to the human body. However true that may be, the consensus would agree that is not the issue. The danger lies in the long term effects of continued smoking.

We submit this argument applies equally to this application. While there may not be any immediate danger, there is sufficient evidence that there may be sufficient danger in the long term to warrant these towers be sited away from residential areas.

The argument which says the human body is already subjected to radiation from household appliances is surely an argument against any further exposure. We would submit that the greater danger is to young children in the area: the proximity to Kew School is emphasised especially with regard to the new site of the Elles Road pedestrian crossing, which is proposed to be sited almost directly opposite to the proposed Tower.

The danger comes not only from radiation, but from attempts at climbing fences etc which children from time to time tend to do. Added to that, the close proximity of the tower to the Southland Tavern increases the security risk.

3. *DEVALUATION OF PROPERTY*

It is generally accepted that house owners regard their property not only as somewhere to live, but as an investment. The real value of properties in the immediate area is already lowered by the density of traffic along Elles Road, by the Southland Tavern and by the neglect which is perceived to exist on the part of the City Council which is mentioned previously. We submit that this value would be further eroded were this tower to be erected.

Notwithstanding the submission contained in the reports, the public perception of these structures is that they are dangerous. To our knowledge there has been no attempt on the part of the applicants to diffuse such a perception. While such a fall in values would affect only a comparatively few, as rates are levied on values, would this necessarily mean a reduction in rates? Realistically, we think not.

Therefore as rate payers who have seen their rates rise dramatically over the past few years, we strongly oppose the application and urge the Council to require the applicants to investigate the possibility of acquiring a site in a non-residence area.

Peter Reading
ELLES ROAD RESIDENT

**IN THE MATTER OF the Resource
Management Act 1991**

AND

**IN THE MATTER OF an application by
BellSouth New Zealand to locate a cellular
telephone communication facility at Cycling
Southland, Kew Bowl, Elles Road, Invercargill.**

**STATEMENT OF EVIDENCE OF
Peter Rough, Dip Hort, Dip LA, FNZILA**

22 October 1997

1.0 INTRODUCTION

- 1.1 My name is Peter Rough and I am a consultant landscape architect of Christchurch. I have Diplomas in Horticulture and Landscape Architecture from Lincoln College. I am a Fellow of the New Zealand Institute of Landscape Architects and I have 21 years experience as a landscape architect in New Zealand.
- 1.2 I was requested by planning consultants to the applicant to present evidence at this hearing. This evidence describes the site and the environs of the proposed telecommunication facility. This evidence also describes the visibility of the proposed facility and conveys, with photographs and comment, its anticipated visual impact. Mitigative measures, to reduce undesirable visual effects, are also discussed.

- 1.3 I have worked closely with the planning consultants on the matter of this and similar applications. On 13 October 1997 I visited the site of the proposed communication facility and photographed the site and its environs.

2.0 THE PROPOSAL

- 2.1 It is my understanding that the proposed facility will comprise a 20 metre high monopole steel mast with a lightning rod on top and with six rectangular antennas attached to brackets at the top of the mast and two circular parabolic dish antennas attached to the mast at a height of 15m.
- 2.2 An equipment shelter building 4.5m x 2.7m x 3.9m high is proposed to be located immediately adjacent to the mast and the equipment shelter building and mast will be enclosed within a security-fenced compound measuring 11.0m x 6.5m. Power cables to the equipment shelter would be located underground.

3.0 THE SITE

- 3.1 The site of the proposed telecommunication facility is at the southern end of the Kew Bowl carpark close to the cycle race track embankment and between the Kew Bowl grandstand and the Southland Tavern carpark. The compound fence would be set 31.5m back from the Elles Road boundary of Kew Bowl and the mast would be set back a distance of 34.64m from the boundary. Photograph 1 in Appendix A is a view of the site from the western side of Elles Road.
- 3.2 The grandstand building on the northern side of the site is approximately 9.5m high. On the southern side of the site is a boundary fence which separates the Kew Bowl carpark from the Southland Tavern carpark and the white and blue two storey tavern building. On the eastern side of the site is a 2.0m high embankment covered in rank grasses with a 2.0m high corrugated iron fence on top. The western side of site and the Kew Bowl carpark are generally screened from Elles Road and opposite the side of the road by shrubs, flaxes and pampas grass 1.5-3.5m high growing in a garden plot along the Kew Bowl road frontage boundary. The specific site of the proposed telecommunication facility is however opposite a Kew Bowl carpark entry/exit on Elles Road.

- 3.3 Tall poles supporting power wires are a feature on the western side of the site and tall lamp-lamp posts are features over the eastern boundary of the site in the cycle race track area, over the southern boundary of the site in the Southland Tavern carpark, to the south-east around a bowling club adjacent to the Tavern and along Elles Road.

4.0 ENVIRONS OF THE SITE

4.1 Elles Road

- 4.1.1 As one of several major streets within Invercargill Elles Road, and its continuation in Queens Drive, has rows of dwellings along its length. Breaking the continuity of the dwellings are features such as Kew Hospital, corner dairies, small clusters of shops, parks and reserves, taverns, churches, etc. The block between McQuarrie and Scott Streets containing Kew Park, the Southland Tavern and their carparks constitutes a break in the continuity of housing flanking one side of Elles Road.

- 4.1.2 Photograph 2 in Appendix A shows a view looking ^{south} north along Elles Road to the Southland Tavern from the entrance to Kew Hospital. Power poles break the skyline and the proposed telecommunication mast will appear rising slightly above the roof of the tavern.

- 4.1.3 Photograph 3 in Appendix A is a view looking ^{north} south along Elles Road from near the Elizabeth Street corner. The proposed mast will rise above the grandstand building but will not appear as high in the sky from this viewpoint as the street lamp in the left of the picture.

4.2 West of Elles Road

- 4.2.1 Photograph 4 in Appendix A is a view towards the telecommunication site from the corner of Elizabeth and Ness Streets and represents a typical street scene within the residential area west of Elles Road near the site. Lamp posts, power poles, television aerials and a few trees break the skyline dominated by roofs. The proposed mast will also break the skyline to the right of the grandstand but from many of the properties in this vicinity neighbouring dwellings will obscure views of the mast.

4.3 McQuarrie Street

- 4.3.1 At the western end of McQuarrie Street the Southland Tavern dominates the street scene and will obscure views of the proposed mast. Photograph 5 in Appendix B shows the view north

from No. 3 McQuarrie Street.

- 4.3.2 Photograph 6 in Appendix B is a view from No. 9 McQuarrie Street and shows the drive-in bottle store area of the tavern and the adjacent Kew Bowling Club building. Chimneys of the tavern and power and light poles associated with the bowling club are dominant features appearing above the buildings. The proposed telecommunication mast will rise above the roof of the bottle store and appear lower than the hotel chimneys. From further east along McQuarrie Street the mast will be visible over the Kew Park tennis courts and will be seen as another vertical element in a skyline dominated by power and light poles associated with the bowling club and cycle race track.

4.4 Kew Park Cycle Race Track

- 4.4.1 Photograph 7 in Appendix B is a view towards the grandstand and Southland Tavern from the east side of the race track. The site of the proposed mast is behind the small white building between the grandstand and the tavern and although the view is not one commonly available to the public it shows another aspect of the site's environs and how chimneys, power and light poles are significant skyline features in the vicinity of the site.

4.5 Moulson Street

- 4.5.1 Photograph 8 in Appendix B is a view from Moulson Street looking south-west towards Scott Street. The grandstand and Southland Tavern are visible above house rooftops. Although the proposed telecommunication mast would be discernible between the grandstand and the tavern in this view the power poles along Scott Street would appear higher in the sky than the mast.

- 4.6 The location of the photograph viewpoints mentioned above are shown on a map in Appendix C of this evidence.

5.0 VISUAL IMPACT OF THE PROPOSED TELECOMMUNICATION MAST

- 5.1 The photographs in Appendices A and B and referred to in the previous section of this evidence show that with the exception of the Kew Bowl grandstand and the Southland Tavern most buildings in the general vicinity of the proposed mast site are low rise structures. The grandstand and the tavern, between which the mast is proposed to be located, are the

tallest buildings in the locality however tall chimneys, power poles and lamp posts appear in all photographs as higher than the grandstand and the tavern. In the vicinity of these two buildings tall chimneys, power poles and lamp posts appear in relatively high concentration as is illustrated in the view from opposite the site on the west side of Elles Road (Photograph 1, Appendix A).

5.2 In order to show what the visual impact of the proposed telecommunication facility will be photomontages have been prepared from seven photographs taken in five locations. The locations are those requested by G Cleary, Resource Management Office, Invercargill City Council in a letter to Connell Wagner, Christchurch dated 5 August 1997. The locations requested were as follows:

- (i) From the corner of Elles Road and Elizabeth Street.
- (ii) From the corner of Elles Road and Kew Road.
- (iii) From Elles Road, directly opposite the proposal.
- (iv) From McQuarrie Street facing north.
- (v) From Scott Street facing south.

5.3 From my inspection of the site the proposed mast and its environs I hold the opinion that the photograph location points requested by the Council are the most relevant ones in order to show the visibility and visual impact of the proposed telecommunication mast by way of photomontages. The photograph location points are generally close to the proposed mast site and therefore from these points the mast could be expected to have its most significant visual impact. The seven photomontages, which are presented on the following pages, were prepared by Virtual Dynamics Limited of Christchurch whose staff members are specialists in computer photomontage work. For each photomontage I make comment with regard to the visibility and visual impact of the proposed mast and its antennas. The location of the photomontage viewpoints are shown on the map comprising Appendix C.



Viewpoint : A

Location : North-west corner of the junction of Elles Road and Elizabeth Street.

View Distance : 180 metres.

Comment : In this view the mast can be seen rising above the southern end of the Kew Bowl grandstand. For motorists travelling south along Elles Road towards the Southland Tavern the equipment shelter could only be seen momentarily, in a carpark entrance gap in the Kew Bowl frontage planting if travellers were looking at right angles to Elles Road. Power poles and lamp posts are a dominant feature in the view and the lamp post at the left appears higher in the sky than the proposed mast and its antennas. The protruding antennas at the top of the mast are a distinctive feature of cellular telephone masts throughout New Zealand and as such identify them for their specific purpose.



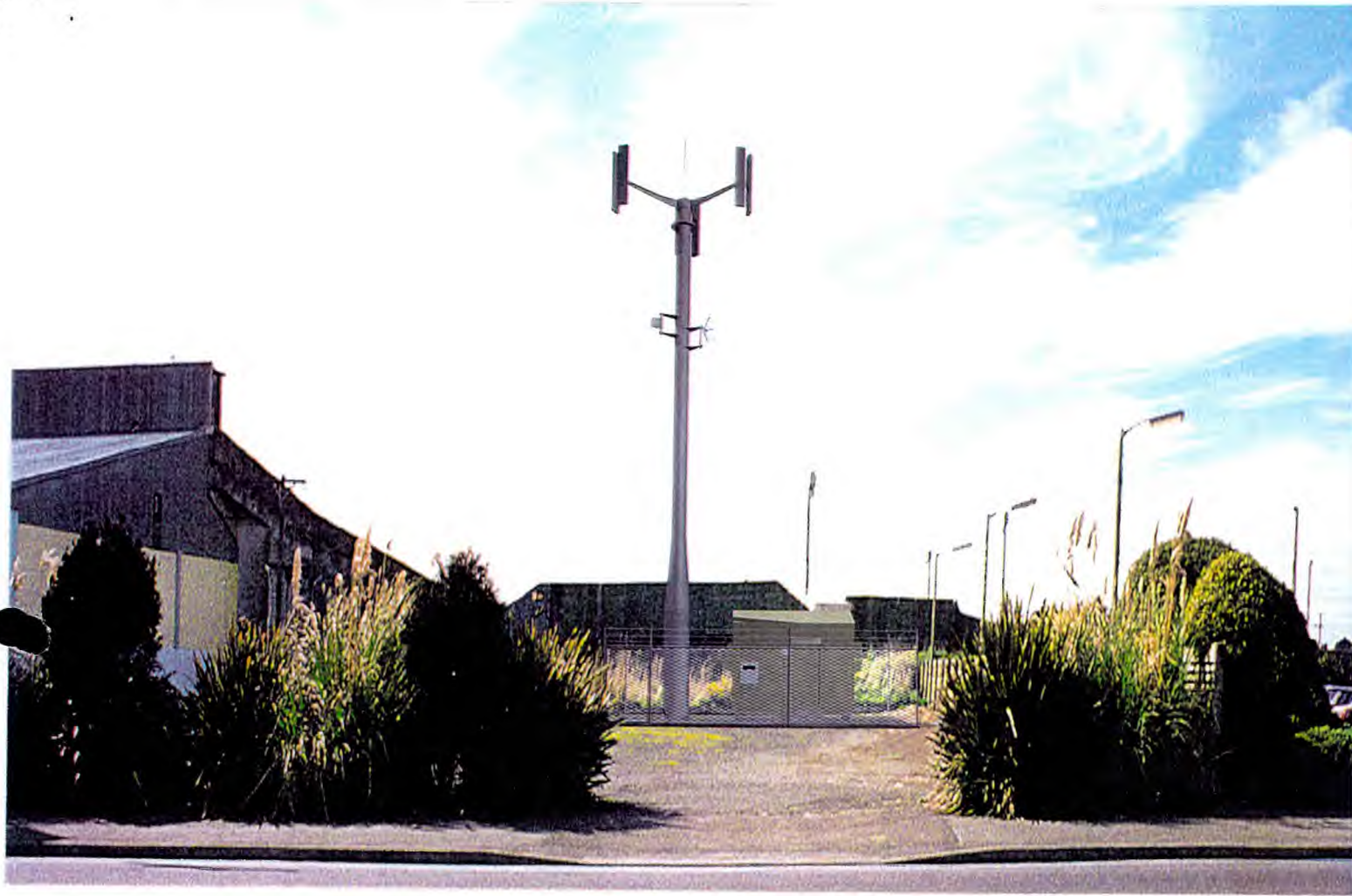
Viewpoint : B

Location : Corner of Elles and Kew Roads.

View Distance : 280 metres.

Comment : In this view the top few metres of the mast and its antennas are visible above the Southland Tavern. Chimneys, television aerials and street lamps also appear above the building's roof and power poles along Elles Road appear higher in the sky and are more visually dominant than the telecommunication mast.

From further south along Elles Road more of the mast will be visible but any adverse visual impact will be negated by an increasing view distance and the presence in the view of more power poles and street lamps. Closer to the street less of the mast will be visible due to the screening effect of the tavern until the tavern building is passed.



Viewpoint : C

Location : West side of Elles Road, directly oppose the site.

View Distance : 50 metres.

Comment : Apart from within the southern end of the Kew Bowl carpark this is the only view that can be obtained where the whole of the mast and its antennas and the equipment shelter building will be completely visible. In other views from close, by the base of the mast and most of the equipment shelter are obscured by shrubs along the Kew Bowl and Southland Tavern road frontage and/or the fence separating the Kew Bowl and the tavern carparks. A narrow strip of land, surrounding the proposed security fence and the western boundary of the area of land to be leased by BellSouth for the telecommunication facility, could however be planted with tall shrubs which would screen the security fence (except the gate) and all but say the top half metre of the equipment shelter building. Despite screen planting of the base of the facility it is in this view that the proposed mast will have its most significant visual impact and in this regard it will appear as an addition to a scene already dominated by power poles and lamp posts and (out of the picture to the right) a tall chimney and some power poles nearby on Elles Road, but not shown in this picture, will appear higher in the sky than the mast. Structures such as masts, aerials, towers, etc in the zone within which the mast site lies are Controlled Uses if they do not exceed 17m in height. Although the mast may appear dominant in this narrow-focus view it is only 3.0m higher than permitted activities mentioned above and it is my opinion that in the context of the wider setting of the mast site the additional 3.0m will have a minimal effect on increasing the mast's visual impact.



Viewpoint : D

Location : Facing north from No. 3 McQuarrie Street

View Distance : 100 metres.

Comment : In this view the mast and its antennas are obscured by the Southland Tavern. The tavern's chimneys, television aerials and flag pole and a street lamp break the skyline above the building.



Viewpoint : E

Location : Above No. 3 McQuarrie Street.

View Distance : 100 metres.

Comment : Although this is not a photomontage requested by the City Council Virtual Dynamics Limited prepared this image as a general view to show the proposed telecommunication facility in the context of its surroundings. Although there are dwellings opposite the mast on Elles Road (out of the picture to the left) this image shows the mast in relation to the Southland Tavern and its carpark, the Kew Bowl cycle race track, grandstand and carpark, the Kew Bowling Club (in right of the picture), vacant land to the east of Kew Bowl and dwellings to the north-east on Scott Street and on and beyond Moulson Street.



Viewpoint : F

Location : Facing north from No. 9 McQuarrie Street.

View Distance : 100 metres.

Comment : A few houses in the vicinity of No. 9 McQuarrie Street will view the mast above the Southland Tavern drive-in bottle store between the tavern building and the adjacent bowling club (to the right and out of the picture). Although the mast and its antennas will be a new feature on the skyline, as the photomontage shows it will appear lower in the sky than the tavern's chimneys and a power pole on McQuarrie Street outside the bowling club. This power pole is visible in Photograph 6, Appendix B. Several other poles -supporting lamps - on bowling club land are existing features breaking the skyline. The telecommunication mast will appear equal in height to one of these lamp posts and slightly higher than two others.



Viewpoint : G

Location : Facing south from Scott Street.

View Distance : 160 metres.

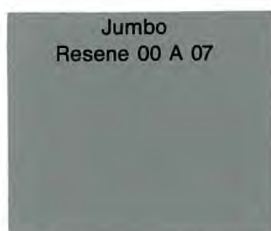
Comment : Although this view is from near the western end of Scott Street it is a typical one from the street looking towards the site of the proposed telecommunication mast in that dwellings will obscure views of the mast.

As Photograph 8 in Appendix B shows, from across the grass reserve in Moulson Street and further to the east, the Kew Bowl grandstand and the Southland Tavern appear above dwellings on Scott Street. The proposed mast being higher than these two buildings will thus also be visible but it will not appear as high in the sky as the numerous power poles breaking the skyline along Scott Street.

6.0 MITIGATION

6.1 Mast and antenna colour

By painting the mast and the antennas a mid-grey colour, namely Resene colour “Jumbo” (BS 00 A 07) the facility’s visual impact when seen against the sky will be somewhat mitigated with the metal structure’s reflectivity being reduced and by the colour which will most generally match the structure with the colour of the sky. The mid-grey colour has been used on similar masts in similar situations with successful results.



6.2 Screen planting of equipment shelter

To screen the 3.9m high equipment shelter building from view from Elles Road (especially from the property directly opposite the proposed facility site), and from within the Kew Bowl and Southland Tavern carparks shrubs could be planted outside the proposed 3.0m high security fence on the north, south and west sides of the telecommunication facility compound. A 2.0m wide strip of land on the west side of the compound (facing Elles Road) and 1.5m wide strips at the north and south ends of the compound, although outside the security fence, would be on land proposed to be leased by BellSouth New Zealand from Cycling Southland.

My recommendation would be to plant a selection of a few native plant shrub species but especially *Olearia dartonii* var. *lineata* which is a fast growing, fine textured, shrub already established in the Kew Bowl frontage planting on Elles Road. *Olearia* would attain a height of about 3.0m and thus screen the bulk of the equipment shelter building, the base of the mast and the mesh security fence (except the access gate) almost completely from public view.

BellSouth New Zealand propose to paint the equipment shelter building Resene colour “Flax” (BS 12 B 21). It is my opinion that this is an ideal colour for a structure to be painted if its visual impact is also to be mitigated with plantings of native shrubs.

onsite presently
olearia 4m high

Flax
Resene 12 B 21

7.0 CONCLUSIONS

- 7.1 The proposed telecommunication mast will, because of its attached antennas, appear as a different structure from the many power poles and lamp posts in the vicinity of its site. In this regard it is similar to many other cellular telephone facilities established throughout New Zealand and its design identifies it for its specific purpose. At 20m high it will be only 3.0m higher than masts, towers and similar structures which are Controlled Uses in the Community Use Zone (within which the site of the proposed facility lies) of the Invercargill Transitional District Plan.
- 7.2 The actual site of the proposed facility, within the Kew Bowl carpark and adjacent to the Southland Tavern carpark has, in my opinion, little aesthetic merit but there is a sense of open space about the site which seems appropriate to the proposed 20m high mast set back almost 35m from the Elles Road boundary of Kew Bowl.
- 7.3 The Kew Bowl grandstand and the Southland Tavern between which the telecommunication facility is proposed to be sited are, in the context of the immediate environs, reasonably substantial buildings and will assist in reducing the apparent scale of the mast. The adjacent tavern carpark, the bowling and tennis clubs and the cycle race track are areas of open space which collectively afford a generous open space setting for the proposed facility.
- 7.4 In several locations in close proximity to the facility site the grandstand and tavern buildings will obscure views of the mast - if not completely then the lower half of the mast and the equipment shelter. In more distant views the mast will be seen rising above the grandstand or the tavern or dwelling rooftops but in most views power poles and lamp posts in the foreground will appear higher in the sky than the telecommunication mast. In all views power poles and lamp posts are numerous features breaking the skyline above building rooftops.

- 7.5 The visual impact of the proposed mast has been conveyed in part in the photomontages presented in this evidence. In all photomontages in which the mast is in fact visible other structures such as chimneys, power poles and lamp posts appear much higher in the sky than the proposed mast. An exception is the photomontage from Viewpoint A (opposite the site across Elles Road) but nearby power poles and lamp posts beyond the confines of the picture will appear either a similar height or higher in the sky than the mast. (See Photograph 1, Appendix A).
- 7.6 The visual impact of the mast could be somewhat mitigated by painting it a mid-grey colour and the visibility of the equipment shelter building could be reduced by painting the building a mid-green colour and establishing a screen of native shrubs around the perimeter of the security fence surrounding the building.
- 7.7 Tall chimneys, power poles and lamp posts are numerous in the vicinity of the proposed facility site and they are a common feature in views to the mast site breaking the skyline above buildings and in this context it is my opinion that the mast proposed by BellSouth New Zealand as an additional feature in the Kew Bowl vicinity will not have an undue adverse visual impact on the environs of Kew Bowl and the surrounding residential areas.



1. THE SITE FROM THE WEST SIDE OF ELLES ROAD.



2. SOUTH-EAST FROM CORNER OF ELLES RD.
ELIZABETH ST.



3. LOOKING NORTH ALONG ELLES RD TOWARDS
SOUTHLAND TAVERN FROM KEY HOSPITAL
ENTRANCE.



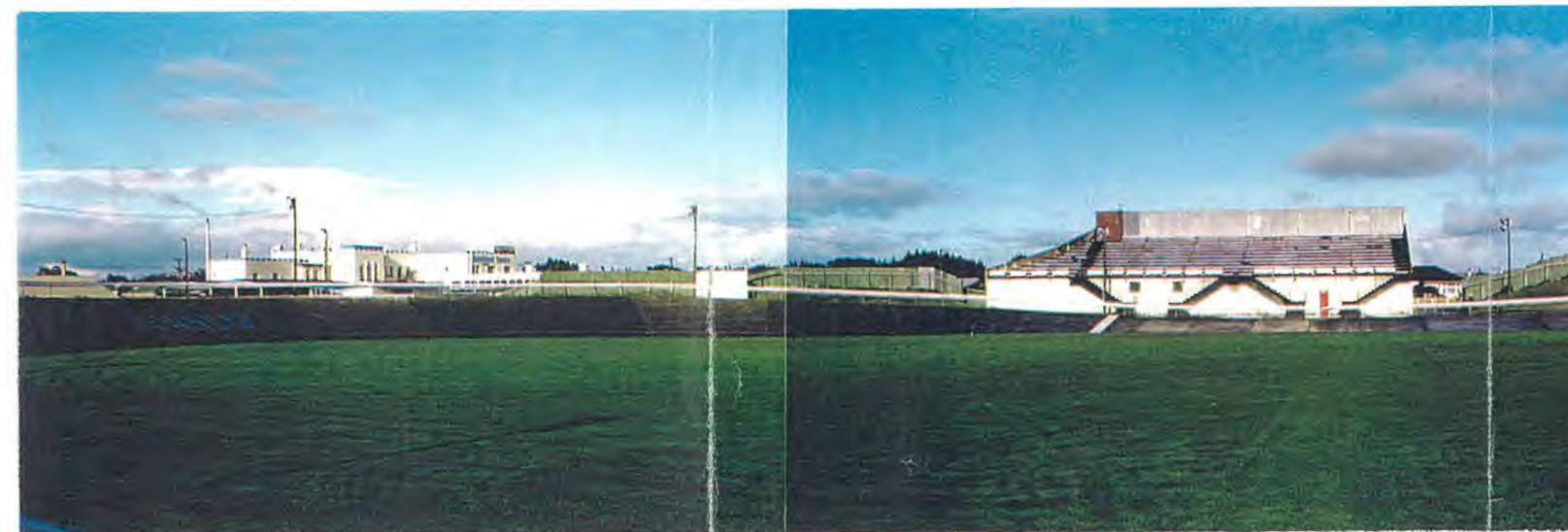
4. VIEW TOWARDS THE KEY BOWL GRANDSTAND FROM THE NORTH-WEST CORNER OF
ELIZABETH # NESS STREETS.



5. VIEW NORTH FROM NO.3 McQUARRIE ST.



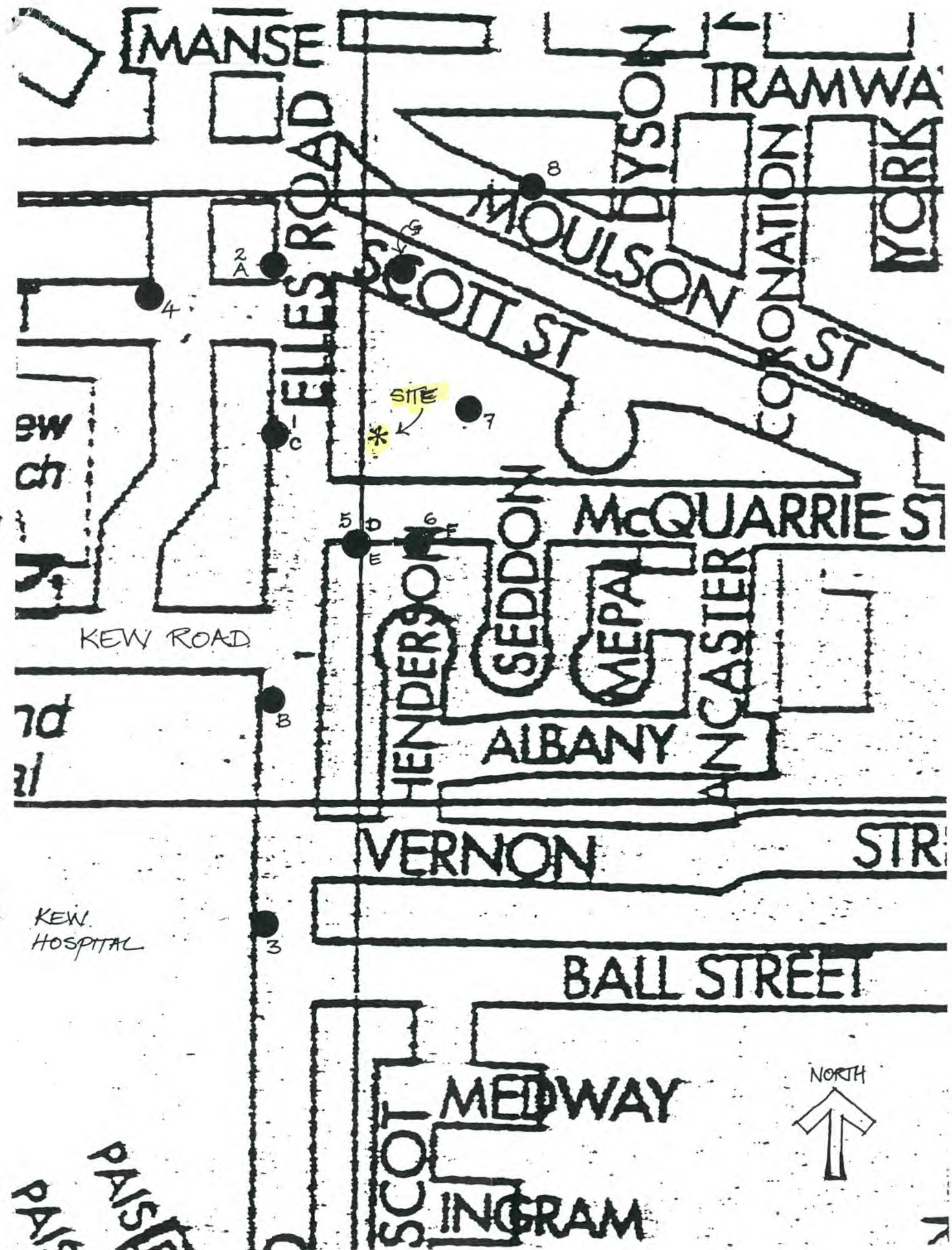
6. VIEW NORTH FROM NO.9 McQUARRIE ST.



7. LOOKING WEST FROM THE EAST SIDE OF THE KEW BOWL CYCLE RACE TRACK.



8. VIEW SOUTH-WEST TOWARDS SCOTT ST., SOUTHLAND TAVERN & KEW BOWL GRANDSTAND



- 2 • PHOTOGRAPH VIEWPOINT LOCATIONS.
- C • PHOTOMONTAGE VIEWPOINT LOCATIONS.