



## NOTICE OF MEETING

# TENDERS SUBCOMMITTEE

I hereby give notice that an Ordinary Meeting will be held on:-

**DATE:**        **Friday**                    **1 February 2002**                    **TIME:**        **9.00 am**

**VENUE:**        **Civic Centre, 6 Waipareira Avenue, Lincoln, Waitakere City**

to consider the business as set out herein and to take any necessary action connected therewith.

31 January 2002

Sharon Simiona  
**COMMITTEE SECRETARY**

Telephone (09) 836 8000 extn 8820

### **MEMBERSHIP:**

Councillors    JM    Clews, QSO, JP (Chairperson)  
                  GB    Presland (Deputy Chairperson)

Chief Executive

Director: City Services

Director: Corporate & Civic Services

Director: Strategic Projects

Director: Strategic Group

Director: Finance

Director: City Enterprises

Maori Issues Manager

Mayor, Bob Harvey, QSO, JP (ex officio)

Deputy Mayor, CA Stone (ex officio)

(Quorum 4 members)

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(The reports and recommendations contained in all agendas are reports and recommendations only and are not to be construed, in any way, as Council policy until adopted.)

**AGENDA FOR AN ORDINARY MEETING OF THE TENDERS SUBCOMMITTEE  
TO BE HELD IN THE CIVIC CENTRE, 6 WAIPAREIRA AVENUE, LINCOLN,  
WAITAKERE CITY, ON FRIDAY, 1 FEBRUARY 2002,  
COMMENCING AT 9.00 AM.**

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**1 APOLOGIES**



**2 URGENT BUSINESS**

Section 46A(7) and (7A) of the Local Government Official Information Act and Meetings Act 1987 provides that where an item of business is not on the agenda, it may only be dealt with at the meeting if:

- (i) the item is a minor matter; and
- (ii) the Chairperson has explained at the beginning of the meeting (when open to the public) that the item will be raised for discussion, why the item is not on the agenda, and why it cannot be delayed until a subsequent meeting; and
- (iii) the Committee resolves to deal with the item.

No resolution, decision, or recommendation may be made in respect of the item except to refer the item to a subsequent meeting for further discussion.

**NOTE:** Urgent Business need not be dealt with now and may be delayed until later in the meeting.



**3 CONFIRMATION OF MINUTES**

Ordinary - 18 January 2002

**RECOMMENDATION**

That the minutes of the Ordinary Meeting of the Tenders Subcommittee held on Friday, 18 January 2002, as circulated, be taken as read and now be confirmed.



#### 4 CONTRACT NO. 01EWC094 - KINGDALE ROAD STORMWATER UPGRADE

##### PURPOSE

The purpose of this report is to seek approval to award Contract No. 01EWC094 - Kingdale Road Stormwater Upgrade.

##### BACKGROUND

The existing stormwater line from the manhole in the rear yard of No. 75 Kingdale Road to the outfall in the watercourse behind No. 50 Kingdale Road has insufficient capacity to cater for even low return period rainfall events. There is no defined overland flowpath through the catchment, and at present overland flows occur regularly through several residential properties. Ponding occurs on the road carriageway outside No. 48 Kingdale Road.

##### SCOPE OF WORK

The Contract involves the construction of approximately 230 metres of new 750 mm diameter RCRRJ pipe with associated manholes, high inlet capacity catchpits, and private drainage connections. The new stormwater line has been designed with sufficient capacity to cater for the 1% AEP (1 in 100 year) event, thus precluding the need for an overland flowpath.

Although most properties will be reconnected to the new line, for practical reasons, some properties will have to remain on the old line. Since the existing line is in poor condition and is in danger of collapse at several locations, a perforated polyethylene pipe will be inserted into it to ensure a conduit is maintained along the old alignment.

##### TENDERS RECEIVED

Tenders were publicly advertised with 11 sets of documents being uplifted. Five tenders were received by the closing date of 4 December 2001. They are summarized below in Table 1.

TENDERER	ADDRESS	TENDER SUM (Excl. GST)
Entire Drainage Ltd	P O Box 417, Kumeu	\$250,516.50
Hughes Civil Ltd	222 Old Titirangi Road, Titirangi	\$282,730.00
H & H Contractors Ltd	P O Box 15 084, New Lynn	\$313,137.00
Civil Construction Group Ltd	PO Box 46-009, Herne Bay	\$314,807.00
Coast Digger Services Ltd	33 Anvil Road, Silverdale	\$454,282.99
<b>Pre-tender Estimate</b>		<b>\$320,000.00</b>

Table 1 - Summary of Tender Prices

##### TENDER EVALUATION

Tenders were evaluated generally in accordance with the "Weighted Attributes Method" contained in the Transfund NZ "Competitive Pricing Procedures Manual".

The "Two Envelope process" as described in Section 2.7 of the above manual was followed. Under this method, only the first tender envelope is opened and the non-price attributes evaluated for all tenders before the second envelope containing the tender price is opened, and the tender prices duly included in the evaluation.

The summary of the evaluation results is shown in Table 2.

Tender Evaluation	Attributes	Exper.	Track	Tech.	Resour.	Manag.	Method.	Price	Contract Number
			Record	Skill		Skill			01EWC094
Weights		5	5	5	5	5	5	70	Total Weights
Tenderer	Tender Sum	Grades							INDEX
Entire Drainage Ltd	\$250,516.50	70	50	60	40	30	0**	70	Disqualified
Hughes Civil Ltd *	\$285,230.00	75	70	70	70	70	75	59	63
H & H Contractors	\$313,137.00	75	50	70	60	60	80	50	55
Civil Construction Group	\$314,807.00	70	60	60	60	60	60	49	53
CDS Contractors	\$454,282.99	70	65	70	70	70	50	5	23
<b>Median Tender Price</b>	\$313,137.00								

**Table 2 - Summary of Tender Evaluation**

\*\$2,500 added to price to allow for tags.

\*\* No methodology submitted.

The scores given to all the tenderers for their non-price attributes were based on the information submitted with their tenders, together with Council's previous direct experience with the tenderers as contractors and/or checking with the references provided.

Entire Drainage Limited have successfully carried out small/low value contracts for Council in the past, but did not perform well in their most recent substantial contract for Council. For this reason, they have scored only 30 for the non-price attribute of Management Skills. Also, they did not submit a methodology with their tender, and so have been scored 0 for this attribute. In accordance with the tender evaluation methodology, these "fail" scores result in the disqualification of the tenderer, whose tender is excluded from the second stage of the evaluation when prices are included.

The determination of the scores for the non-price attributes of Hughes Civil Limited included Council's direct experience in working with them on recent drainage projects.

### **TAGS, ERRORS AND OMISSIONS**

Hughes Civil Limited tagged items Nos. 4.7 and 4.8 of the tender Schedule of Prices with their assumed length of pipe required to make cesspit connections (and on which their tender price is based). However, the actual quantity of pipe required is greater than their assumption, and so the estimated cost difference of \$2,500 has been added to the tender price of Hughes Civil Limited for evaluation purposes.

The tender of Entire Drainage Limited contained one tag, while the tender of H & H Contractors Limited contained numerous tags. Since the resolution of these tags would not affect the tender evaluation or change the outcome, the tenderers were not contacted over them.

There were no other tags, errors or omissions in these or any of the other two tenders.

### **CREDIT CHECK**

A credit check dated 7 January 2002 on Hughes Civil Limited revealed no adverse information.

## SUMMARY

The weighted attribute tender evaluation resulted in Hughes Civil Limited obtaining the highest overall index of 63 and their tender of \$282,730.00 is the lowest among the conforming tenders received.

It is considered that Hughes Civil Limited has the resources and expertise to successfully complete the contract.

## JOB COSTS

Tender Sum - Hughes Civil Limited	\$282,730.00
Contingency	\$ 30,000.00
Engineering and Supervision	\$ 17,840.00
Other	\$ 12,000.00
Total job cost	\$342,570.00

Costs included in the "Other" category are:

- \$2,500.00 to cover the estimated cost of the tenderer's tags mentioned earlier in the report;
- An estimate of \$9,500.00 for a branch line servicing Nos. 48 and 50 Kingdale Road. This work was removed from the contract prior to tendering due to property consent issues. However, as these issues have now been satisfactorily resolved, the construction of this pipeline is now able to proceed.

Variation orders will need to be issued to the contractor for these two items after contract award.

## SOURCE OF FUNDING:

Budget description (from Annual Plan line item)	Codes	Budget	Committed to other projects	Allocation to this project	Unallocated balance
Stormwater Capital	85-9815-60000	\$4,522,000	\$161,630.65	\$342,570.00	\$4,017,799.35

## RECOMMENDATIONS

1. That the information be received.
2. That the tender from Hughes Civil Limited for Contract No. 01EWC094 - Kingdale Road Stormwater Upgrade in the sum of \$282,730.00 plus \$35,341.25 GST, totalling \$318,071.25 be accepted.
3. That the contract be awarded to other than the lowest priced tender, because the lowest priced tender has failed to achieve a grade greater than 35 for one or more of the attributes and was awarded a "fail" under those attributes and is therefore excluded from further consideration.
4. That the Acting EcoWater Solutions Business Unit Manager be delegated the authority to enter into this contract on behalf of the Council.

Report prepared by: Parkin Low, Contracts Manager, EcoWater Solutions.



**5 CONTRACT NO. 01EWC054 - TITIRANGI BEACH ROAD WASTEWATER UPGRADE**

**PURPOSE OF THE REPORT**

The purpose of this report is to seek approval to award Contract No. 01EWC054 - Titirangi Beach Road Wastewater Upgrade.

**BACKGROUND**

The existing public wastewater reticulation network in Waitakere City is being progressively upgraded at various localities as a part of the Council's infrastructure upgrade and maintenance programme. Within this context, the drain within Atkinson Park, Titirangi Beach Road has been identified as requiring immediate upgrading due to its poor condition and insufficient capacity.

These works are a part of the Council's Wastewater Renewal Programme in the 2001/2002 Annual Budget.

**SCOPE OF WORK**

The work to be carried out under this contract includes the wastewater drainage works comprising the installation of 502 m of 160 mm diameter PE80 SDR17 polyethylene pipe through bush reserve and roadway, and the reinstatement of Parks Reserve and road carriageway and road reserve areas affected by the works.

In order to minimise any adverse effects on mature native vegetation in Atkinson Park, 17 metres of this drain from within the park to Titirangi Beach Road is required to be installed by trenchless techniques only. However, the tenderer is given the choice to construct the balance of the drain by either open trenching or trenchless techniques. In order to accommodate this choice, two pricing schedules were provided in the tender, namely an Option A for construction using fully trenchless techniques, and an Option B for construction mainly by open trenching.

**TENDERS RECEIVED**

The tender was publicly advertised on 3 December 2001, with eight sets of the tender documents being uplifted. Five tenders were received by the closing date of 18 December 2001. They are summarised below in Tables 1A and 1B.

<b>TENDERER</b>	<b>REG OFFICE</b>	<b>TENDER PRICE (excl. GST)</b>
Techscape Limited	PO Box 320909, North Harbour, North Shore City	\$153,893.91
Horizontal Earth Drilling Ltd	PO Box 65-133, Mairangi Bay, Auckland	\$185,365.00
<b>Pre-tender Estimate</b>		<b>\$214,015.00</b>

**Table 1A - Summary of Tender Prices for Option A**

TENDERER	REG OFFICE	TENDER PRICE (excl. GST)
Civil Construction Group Ltd	PO Box 46009, Herne Bay Auckland	\$176,730.00
H & H Contractors Ltd	PO Box 15084, New Lynn Auckland	\$192,180.00
Te Aratika Drilling Ltd	PO Box 25819, St Heliers Auckland	\$261,500.00
Pre-tender Estimate		\$179,975.00

**Table 1B - Summary of Tender Prices for Option B**

Since tenderers were free to choose which methodology option they would tender for, each tenderer submitted a tender for only one option (presumably their lowest priced) as was expected. The tenders for both options may be evaluated together because both options produce the same desired end result.

Prior to tendering, it was expected that the construction by mainly open cut methods (Option B) would be the lower cost option. However, the tender price from Techscope Limited for using totally trenchless construction methods (Option A) came in even under the estimated cost of Option B. This price difference is due mainly to Techscope's rate for the trenchless installation of 160 mm diameter PE80 pipe over 502 metres of \$116.20/m compared to the Council's estimate of \$250.00/m.

### TENDER EVALUATION

Tenders were evaluated generally in accordance with the "Weighted Attributes Method" contained in Transfund New Zealand's "Manual of Competitive Pricing Procedures" and in accordance with the conditions of tendering.

These procedures require that where the tender includes Provisional Sums (work valued by the Principal and placed within the Schedule of Prices) they are deducted from the Tender Sum prior to evaluating each tender.

In this contract the value of these Provisional Sums was \$500.00 for each of the options.

Furthermore, the Schedule of Prices for Option A contained an item to price for an alternative to trenchless construction (as an emergency measure, to be used in situations where the trenchless method is unsuccessful) which has the effect of doubling up the cost of a part of the construction. In order to fairly compare the tenders for Option A with those of Option B, schedule item 3020 was deducted from the tenders of Techscope Limited and Horizontal Earth Drilling Limited. The amount deducted from each of these tenders for evaluation purposes is as follows:

- Techscope Limited \$6,996.00
- Horizontal Earth Drilling Limited \$15,600.00

There was a significant arithmetic error in the extension of two items in the schedule of rates in the tender of Civil Construction Group Limited, with the effect that their tendered sum was approximately \$51,000 less than intended. This error was drawn to the tenderer's attention and an invitation made for them to keep the tender open at the tendered price. However, Civil Construction Group Limited advised in writing that their tender was withdrawn. Consequently, only four tenders remained to be evaluated.

A summary of the evaluation results is shown in Table 2:

Tender Evaluation	Attributes	Exper.	Track	Tech.	Resour.	Manag.	Method.	Price	Contract No. 01EWC054
			Record	Skill		Skill			Total Weights
	Weights	10	10	7	10	6	7	50	100
Tenderer	Tender Sum	Grades							INDEX
Techscape Limited	\$146,397.91	80	75	75	80	80	75	69	73
Horizontal Earth Drilling Ltd	\$169,265.00	70	70	75	75	65	70	56	64
H & H Contractors Ltd	\$191,680.00	75	70	75	75	70	70	44	58
Te Aratika Drilling Ltd	\$261,000.00	65	65	65	70	65	65	5	36
<b>Median Tender Price</b>	\$180,472.50								

**Table 2 - Summary of Tender Evaluation**

The non-price attribute scores given to the tenderers are based on information provided in the tenders and on commonly accepted industry reputation.

All of the tenderers have previous or current experience on infrastructural works for Waitakere City Council with the exception of Te Aratika Drilling Limited whose experience is primarily in trenchless work for utility companies. Te Aratika Drilling Limited is proposing to work with another company, HB Contractors Limited, for the contract. Both Techscape Limited and H & H Contractors Limited were able to demonstrate recent trenchless works involving wastewater networks and the polyethylene material specified.

All tenderers for the construction except for Te Aratika Drilling Limited, which provided only a generic methodology, provided specific and generic methodologies.

### TAGS, ERRORS & OMISSIONS

The tender from Techscape Limited contained no tags, although Techscape Limited did not acknowledge receiving the Notice to Tenderers No. 2. This Notice conveyed to tenderers an amended "Consent for Works in the Park Reserve" issued by the Council. However, when this omission was advised to Techscape Limited, they confirmed their receipt of the notice and that this did not affect their tender price.

The tender from Horizontal Earth Drilling Limited contained no tags, although they also failed to acknowledge receiving Notice to Tenderers No. 2. This matter was communicated to Horizontal Earth Drilling Limited which confirmed its receiving the notice and that this had no effect on their tender price.

H & H Contractors Limited acknowledged both Notices to Tenderers and had seventeen tags in their tender. However, since their tender price is the second highest of those received, the resolution of these tags would not affect the tender evaluation or alter the outcome. Therefore, the tenderer was not contacted in relation to these tags.

Te Aratika Drilling Limited included no tags in their tender, but did not acknowledge receiving the Notices to Tenderers, which resulted in a significant omission in their price schedule estimated at a value of \$26,650.00. The tender also contained extension errors that added \$29,900.00 to their total price. The net effect of these two errors is a minimal effect on the tender price, which remains the highest. The errors were communicated to the tenderer who were then asked to confirm whether their tender was still open at the submitted price. Te Aratika Drilling Limited confirmed that their tender was still open. However, no further action was made to resolve the price schedule errors, as this tender is not in contention due to the high price.

All tenderers were requested to submit details of their methodology and vegetation clearing requirements in Atkinson Park (to facilitate work needed of a Council approved arborist to be engaged separately). No tenderer provided these details, but it is considered that these may be requested after contract award from the successful tenderer.

### CREDIT CHECK

A credit check on Techscape Limited dated 14 January 2002 revealed no adverse information.

### SUMMARY

The results of the tender evaluation as summarised in Table 2 show that the tender submitted by Techscape Limited achieved the highest overall index of 73. This tender is also the lowest priced tender.

Techscape Limited is considered to have the necessary experience, capability and resources to carry out the contract satisfactorily.

### JOB COSTS

	<b><u>Excl. GST</u></b>
Tender sum - Techscape Limited	\$153,893.91
Contingency (10%)	\$ 15,389.39
Engineering & Supervision	\$ 11,250.00
Other	\$ 1,000.00
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<b>Total Job Cost</b>	<b>\$181,533.30</b>

### SOURCE OF FUNDING

Budget description (from Ann Plan line item)	Codes	Budget	Committed to other projects	Allocation to this project	Unallocated balance
Wastewater Renewals	85-9835-60000	\$1,400,000	\$573,185	\$181,533.30	\$645,281.70

### RECOMMENDATIONS

1. That the information be received.
2. That the tender from Techscape Limited for Contract No. 01EWC054 - Titirangi Beach Road Wastewater Upgrade in the sum of \$153,893.91 plus \$19,236.74 GST, totalling \$173,130.65 be accepted.
3. That the Acting EcoWater Solutions Business Unit Manager be delegated the authority to enter into this contract on behalf of the Council.

Report prepared by: Parkin Low, Contracts Manager, EcoWater Solutions.



## 6 CONTRACT IM0102 - VIRTUAL PRIVATE NETWORK

The Tenders Subcommittee at its meeting held on Friday, 18 January 2002 considered the tender report for Contract IM0102 - Virtual Private Network. The Subcommittee resolved:

*“That this item be deferred and brought back to the Tenders Subcommittee once additional information has been sourced.”*

3/2002

A1-A5 The additional information sourced is an addendum to this agenda, refer attachments A1 to A5. The original report is set out below.

### **PURPOSE OF THE REPORT**

This report seeks approval to award the contract for the supply and installation of infrastructure to deploy a ‘Virtual Private Network’ enabling secure remote access to Council’s Information Systems via the public Internet.

### **BACKGROUND**

The Information Management Operations department maintains an environment to support remote access to Council’s Information Systems, via dial up over the public switched telephone network, into a dedicated Remote Access Server. This system is configured to support 12 concurrent connections at a maximum of 56kbps, which in terms of both speed and numbers of users is proving insufficient to accommodate the growing needs of council officers and elected members.

In order to best meet these emerging needs, a ‘Request for Proposal’ was issued inviting selected systems integrators to propose a solution to meet both the business and technical requirements as identified.

### **RESPONSES RECEIVED**

<b>Reseller</b>	<b>Office</b>
ATL Systems NZ Limited	128 Khyber Pass Road, Newmarket
Datacom Systems Limited	106 Vincent Street, Auckland
DMZ Global Limited	Level 4, KPMG Building, 7-9 Princes Street, Auckland
Kaon Technologies Limited	Unit 6, 7 Torrens Road, East Tamaki
Telecom NZ Limited	8 Hereford Street, Auckland

**Table 1 - Summary of Responses**

### **PROPOSAL EVALUATION**

Proposals were evaluated generally in accordance with the "Weighted Attributes Price Method" contained in Transfund New Zealand's "Manual of Competitive Pricing Procedures".

Due to the nature of this work and the IT industry generally, the proposals received were in a variety of forms and pricing configuration. These included two outsource options. In order to allow for valid comparisons of cost to Council, a range of assumptions have been made:

- the system will have a three year life;
- cost comparisons have been done on the basis of three year total cost of ownership;
- capital purchases will be fully depreciated over this three year period;
- an allowance has been made for an annual internal labour cost for system maintenance for the non-outsource options;
- end user telecommunications costs have been excluded from all comparisons.

Thus the **project costs** table below does not reflect the proposal sum, but rather the estimated total cost of ownership of the system for three years. It is noted that the **job costs** differ from the project costs, as the latter figure reflects the costs in getting the VPN established as opposed to the 3 year total cost of ownership.

### PROJECT COSTS

VPN Based on 150 Users	Attributes	Relevant Experience & Track Record	Technical Skills & Appropriate Resources	Approach to Implementation	Support & Maint.	Match to Require.	Price	Contract Number IM0102
	Weights	10	5	5	5	35	40	100
	3 year TCO	Grade						INDEX
Kaon Technologies Ltd	\$346,000	80	83	72	70	74	76	76
Datacom Systems Ltd	\$312,099	60	63	41	47	60	84	68
ATL Systems NZ Ltd	\$594,521	59	72	34	50	59	24	44
DMZ Global Ltd *	\$897,768	48	10	10	37	35	-41	3
Telecom NZ Ltd *	-	46	10	25	18	18	Fail	Fail

\* Vendor proposed outsourced solution.

### TAGS, ERRORS OR OMISSIONS

Telecom NZ Limited failed to provide sufficiently detailed pricing information to allow for an accurate project cost comparison, and failed to comply on non price attributes, so its proposal is deemed to be non-compliant; its non-price scores are included above for information only.

### SUMMARY

Kaon Technologies Limited comes out slightly ahead of Datacom Systems Limited in the weighted attributes evaluation. Both are existing suppliers to Council, with the former being our existing Internet Service Provider, and the latter having the management and maintenance contract for our wide area data network, as well as being incumbent suppliers of PC hardware, and Facilities Managing Waitakere Public Libraries IT Systems.

Kaon has scored more highly on non price attributes, as is does have more specialist knowledge in the VPN area, and its response to the request for proposal demonstrates a clear understanding of our business requirements and existing systems, proposes a quality solution using equipment from reputable manufacturers, and will integrate tightly into our environment, with a reasonable minimum of additional internal support required.

Accordingly, it is proposed that Kaon Technologies Limited be awarded the contract to supply and install the VPN.

### **JOB COSTS**

The job costs as tabled below represent those costs involved in establishing the VPN platform, and for the first year's maintenance costs for the associated hardware and software. Excluded are telecommunications costs, and ongoing internal labour costs both of which will be covered by existing operational budgets.

	<u>Ex GST</u>
Hardware and Software	\$ 86,300
Installation and Training	\$ 6,400
Internal labour cost	\$ 3,200
Annual maintenance (year 1)	\$ 12,100
<b>Total</b>	<b><u>\$108,000</u></b>

### **SOURCE OF FINANCE**

This project will be funded from the 2001/02 Information Management Infrastructure capital budget.

### **RECOMMENDATIONS**

1. That the information be received.
2. That in the 2001/2002 Financial Year a contract be awarded to Kaon Technologies Limited for the supply and installation of a Virtual Private Network (Contract IM0102) in the sum of \$104,800 plus \$13,100 GST, totalling \$117,900.
3. That the Director: Corporate & Civic Services be empowered to enter into the contract on behalf of Council.

Report prepared by: Simon Leigh, IT Operations Manager.



## VIRTUAL PRIVATE NETWORK BUSINESS CASE

### PROPOSAL

To implement a Virtual Private Network (VPN) to meet Council's need to securely exchange electronically stored information, with parties located remotely from Council's own Information Systems environment.

### OBJECTIVES

The Information Management Operations department maintains an environment to support remote access to Council's Information Systems, via dial up over the public switched telephone network, into a dedicated Remote Access Server. This system is configured to support 12 concurrent connections at a maximum of 56kbps, which in terms of both speed and numbers of users is proving insufficient to accommodate the growing needs of Council.

A number of requirements have arisen, both business driven and operational in nature, which have defined a number of objectives best met by replacing the existing remote access environment with a Virtual Private Network:

- A recent security audit highlighted some shortcomings with the current remote access infrastructure, which leave us vulnerable to outside attack. A key limitation is the poor network security across the remote access environment. The systems in place do not reflect current best practice in terms of providing adequate levels of control and management visibility in the following areas:
  - Authentication – currently using an extension of the NT domain security, which is not viewed as adequate for controlling access through the corporate firewall.
  - Alerting of events such as failed access attempts, port scans or other attempted 'hacking' activities.
  - Auditing – the current system does not provide an adequately detailed audit trail of usage. This type of information may be required to validate usage in a dispute situation, but is also invaluable for ongoing management and capacity planning reasons.

Following the audit, S.P.Bates & Associates were commissioned to undertake a risk assessment of Council's external IT Security risks. In terms of the existing dial-up infrastructure, the risk exposure was estimated as being between \$128,000 and \$288,000 per annum, based on the likelihood of a security breach and the resulting lost productivity and restoration costs.

Costs of reducing this risk by 80% were estimated at \$115,000, and would have been expended in 'hardening' the existing dial up infrastructure, by implementing essentially the same security model as is currently proposed for the VPN.

- Broadband access  
Council does not have the broadband access infrastructure to allow remote access to its systems and this could impact on the growth of small organizations doing contract work for the Council. Broadband can also be viewed as an 'enabling' technology, which will allow us the potential to better address the needs of remote sites, as detailed below.

- Remote Council Units  
Remote units such as the New Lynn Service Centre, Solid Waste, Animal Welfare and Civil defence have very slow access to the Council's centralised systems and require separate file and print servers. Others, such as the Aquatic Centre and Waikumete Cemetery are not big enough to justify the use of separate servers, and thus suffer from slow access, reduced functionality, and are more vulnerable to data loss, due to not being part of our managed backup environment.
- Printing  
One of the key limitations with the current environment is speed of remote printing, which with dial-up, is so slow as to be useless in practical terms, despite the data compression employed by the existing remote access server. In order for remote users to be able to practically print documents at a reasonable speed, high speed remote access pretty much becomes mandatory - hence the need to be able to support technologies such as ADSL, which we can only deliver using VPN technology.

The analysis of staff is that due to moves to this technology by other parties the Council deals with, security concerns and general industry progression, a move to broadband technology would be necessary within 6 to 12 months.

#### **CURRENT USAGE OF THE DIAL UP LINES**

Currently 132 users are set up with dial up access. These users are broken down by class as follows:

<b>User Classification</b>	<b>Number</b>
Contractors (e.g. RFS)	19
Officers remotely located (e.g. Aquatic Centre)	10
Elected Members	1
Officers working from home (typically after hours)	102

During the last 6 months of 2001, usage was as follows:

<b>Month</b>	<b>Unique logins</b>	<b>Unique users</b>	<b>Average logins per user</b>
July	927	84	11
August	1091	82	13
September	1104	76	15
October	1360	78	17
November	1171	75	16
December	942	74	13
Averages	1099	78	14

Some individuals use the system to a much greater extent than others. Summary statistics are as follows:

No. of unique logins per user (Jul – Dec)	Unique logins	% by unique user	Average logins by unique user
0-20	2352	79	6
21-50	2410	16	32
51+	1753	5	70

### **POTENTIAL NUMBERS OF USERS OF THE VPN**

The potential number the proposed solution will cater for is 150 users. This number is arbitrary, and is based on numbers of current users plus known additional demand. It could be further extended as required by purchase of additional VPN client licenses, and by increasing the size of our corporate internet connection.

Potentially every officer and elected member, as well as existing and future contractors and other business partners could use the VPN.

### **WHO WILL HAVE ACCESS AND TO WHAT INFORMATION**

The following groups will have access to Council's operational systems, which are not available across the Internet.

- Elected Members
- Contractors (e.g. RFS)
- Officers remotely located (e.g. Aquatic Centre)
- Officers working from home (typically after hours)

These groups of users will be able to access any data or applications their network login allows them access to irrespective of whether are logged onto the network locally, or accessing it remotely. Depending on individual user access rights, this can encompass applications such as e-mail, MS Office productivity tools, GEMS, GIS and other corporate database applications, as well as access to personal and shared corporate data (H: & I: drive).

Data in the public domain, such as Council meeting minutes, is currently available via the Internet, but may not be made publicly available in a timely fashion. In addition, users of the VPN would be able to access secure and confidential information where it is appropriate for them to do so. Internet access does not allow this.

## **VPN SECURITY AND ACCESS**

The VPN provides greater access, security and speed than current arrangements. It operates as follows:

- It uses the Public Internet as a transport (securely - see below). This means users aren't geographically constrained in terms of where they get access from; reliable connections to the internet are available as a local call from most parts of the world, whereas experience shows that trying to get remote dial up access from offshore by getting a decent international dial up connection is, in practical terms, a marginal proposition.
- It is much more secure, as the VPN solution sets up a highly secure 'tunnel' from the client PC to the VPN access router. To date, the 'triple DES' encryption standard we intend using remains unbroken. Breaking into a telephone line, and decoding a modem signal is a trivial matter in comparison.
- A number of client access methods are supported, and these remain independent of our 'back end' server infrastructure. Access methods we intend providing support for are:
  - Dial up (albeit to the ISP of your choice, anywhere in the world, rather than direct to WCC as at present)
  - ADSL (Telecom JetStream - high speed internet access)
  - Ihug's 'Ultra' High speed satellite based internet access (for those users wanting high speed access, but living outside areas where ADSL is available)

## **ENABLING OTHER INITIATIVES**

Having a VPN platform in place acts as an enabler for other potential projects. One particular area offering interesting potential is that of remote wireless access from cellphones or Wireless enabled PDAs. These devices have the potential to be used by mobile workers such as Animal Welfare officers, Building Inspectors, and Infringements Officers to link directly with database systems. Individual business cases will need to be made for these on the basis of improved efficiency or services, but having a VPN in place and being utilised for other purposes makes these more viable, as the high cost of entry has already been borne at a corporate level.

Council currently supports teleworking, as evidenced above by the number of officers already with remote access from home. Council's Human Resources unit is developing a policy on teleworking, and it is expected to be a more formally supported way of working in the future, which will place greater demands on the remote access infrastructure. Once again, having the VPN in place gives a scalable platform to build upon to deliver these services to meet the needs of the organization. The potential cost savings in terms of reduced congestion on the roads and less pressure on office space have not been quantified at this point, but are expected to be significant.

With the emergence of 'E-Govt' strategies at a national level, and local initiatives such as the 'Waitakere Online / Eco-Tech City' strategy being formulated, it is expected that Council will need to position its Infrastructure to be able to take an active role in these bodies. Once again, broadband connectivity is a given, and the need for private 'business to business' transactional capabilities implies the need for the privacy offered by a VPN solution in addition to using the public Internet as a delivery channel.

#### **SUMMARY**

The key advantages in moving to a VPN are:

- Improved security in communications and access to Council systems
- Greater speed and efficiency in communications
- Improved and more flexible access to Council's systems
- Enabling Council to lead and participate in the Waitakere "on-line" strategy being developed.

Medium and longer term business requirements of the organization will require Council to address the issue of broadband access and use. This is in line with Council's overall direction for the city. When combined with Council's short term need to make decisions as to whether to invest in expanding existing dial-up access capability, it seems to make sense to move to broadband at the current time, especially as a move to this technology was already being planned as a medium term infrastructure upgrade path.