



**Avalon consulting**

high / difficult access  
a division of avalon industrial services ltd

P.O. Box 5187  
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Hamilton, N.Z.  
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Tauranga District Council  
91 Willow Street  
Tauranga



For the attention of s 7(2)(f)(ii)

16<sup>th</sup> January 2004

**Mauao Camp Bluff; Zone 4 Boulder Scaling Works 15 January 2004**

On 13 January s 7(2)(f)(ii), contacted s 7(2)(a) - Privacy with Avalon regarding an unstable looking boulder which had been spotted on the northern slopes Mauao and which required removal as soon as possible. This letter reports the work carried out.

It was arranged that Avalon would send a three person scaling team on Thursday 15<sup>th</sup> January. TDC was to arrange for security guards to isolate the affected walking tracks whilst the boulders were scaled.

The boulder was approximately 1.5 x 1.0 x 0.75m in size and as such was a weight of approximately 3t. The boulder was partly supported by a smaller boulder (approx 0.5 x 0.5 x 1.0m) below, which also required removal.

The boulder was located in Zone 4 (see Avalon's 12/7/03 Report\*) approximately 15m down from the head of gully 4d.

The following photographs show the location and general appearance.



January 19, 2004



The boulder has moved forward recently by 150 to 200mm, as can be seen in the following photograph.



The boulder and surrounding areas showed signs of impacts indicating it may have been struck by a rock falling (pushed?) from above. The boulder was in a marginal position and may have already moved forward due to the supporting loose sand having been eroded by wind and rain.

The position was marginally stable and the boulder certainly presented a very real hazard to track users.

This was confirmed by the ease of scaling (the boulder was dislodged by 2 men using 1.5m steel bars).

The boulders did not split whilst falling and came to rest on the shoreline having crossed travelled down gully 4c and over both the Oruahine and Base Tracks.

After the scaling we accessed the gully below, checking the falling boulders had not destabilised any other rock and clearing off the worst of the other loose surface rocks.

A quick inspection of other slopes on Mauao revealed sand scour had become quite widespread on the slopes burned of in the January 2003 (and since the March 2003 scaling work carried out by Avalon). This was anticipated due to the loss of the binding effect of the grass roots on this loose sandy soil. The northern slopes were the most affected as would be expected due to their prevailing weather exposure.

It is recommended that all slopes should be lightly scaled after this summer season. Once the vegetation becomes re-established the scouring should reduce significantly.

s 7(2)(a) - Privacy

\* Avalon Consulting Report No 0314, for Tauranga District Council; Mauao Rock Slopes and Rockfall Hazards.

Y260-1-10



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## Fax

Our Job No: 0403

To: [Redacted] s 7(2)(f)(ii)

From: [Redacted] s 7(2)(a) - Privacy

Fax: 07 577 7099

Pages: 6

Phone: 0272 860 497

Date: 19 Jan 04

Re: Osh etc from last Thursdays boulder scaling

This fax is confidential. If you received it in error, or you are not the intended recipient please return it to sender and destroy any copies. Thank you.

Hi [Redacted] s 7(2)(f)(ii)

Info for your file to follow as promised

Regards

[Redacted signature block] s 7(2)(a) - Privacy

C:\Documents and Settings\General\Desktop\Consulting Fax.doc

Brief description of work: Removing rock from Climbing Bluff on west elevation using rope access and scaling techniques.

Due date of commencement: 15/01/04

Estimated time to complete: 1 weeks

Date: 14/01/04

Signed: [Redacted] s 7(2)(a) - Privacy

**Avalon Industrial Services Ltd**

# Hazard Management Plan

**Job Name:** Boulder removal

**Job No:** 0403

**Site Supervisor:** s 7(2)(a) - Privacy

**Sheet 1 of 1**

The object of this plan is to identify and safely manage all hazards in our operations.

This plan may be partially completed by management staff before arriving on site, however, it **must** be reviewed and fully completed by the **Site Supervisor** at the on site **Job Briefing**, with all members of our site team (and the clients representative if applicable) present. The **Emergency Plan** must also be completed.

If the job involves more operations than can be covered by these sheets then use additional sheets. The effectiveness of this plan must be continually monitored and changed if necessary (on some jobs new sheets will be required daily, or for each work task).

If Confined space work is necessary? Refer to Confined Space Hazard Management Plan in this file BEFORE WORKS COMMENCE.

### Description of Operations:

Rock scaling on climbing bluff at Mauao

**Specific checklist:** (check applicable hazards then complete the following pages)

Hazard	Present?	Hazard	Present?
0 Working at heights	Y	22 Working with inexperienced personnel	
1 Heat & Cold		23 Cutting / burning / welding	
2 Sun	Y	24 Power tools	
3 Wind	Y	25 Other tool hazards	Y
4 Rain	Y	26 Working with cranes	Y
5 Lightning	Y	27 Parties working above	
6 Water		28 Parties working below	
7 Darkness		29 Working above public areas	Y
8 Waves		30 Public access to ropes / rigging / tools	Y
9 Noise		31 Public access to roof / hazardous areas	
10 Gas		32 Power lines	
11 Chemicals		33 Open / moving / rotating machinery	Y
12 Electricity		34 Road traffic / vehicles	
13 Radiation		35 Work over water	
14 Asbestos		36 Work in confined spaces	
15 Toxic Substances		37 Poor / awkward Anchor points	Y
16 Dust	Y	38 Fragile / glazed surfaces	
17 Fire Hazards		39 Oily / slippery surfaces	
18 Vermin / biohazards		40 Loose debris / items on surfaces	Y
19 Sharp edges & rub-points	Y	41 Manual handling / lifting	Y
20 Hot pipes		42 Leaving items behind inside clients plant	
21 Communication difficulties	Y	43 Other	

# Hazard Management Plan

## Specific Hazard Management Procedures:

Checklist No	Description of Identified hazard	E/I/M	Management procedures to be used
0	Locations with potential fall >3m.	M	Follow your training and Avalon Safe Working Procedures.
1,2,3,4,5	Weather conditions	M	Wear appropriate clothing for the conditions and stop work in bad conditions
16	Sand & silt blowing up the face, and drilling operations	M	Wear goggles/dust masks, and ear protection as necessary
17	Fire Hazard diesel fuel petrol	E	Store away from hot items and cover hazard with fire extinguisher
19	Rub points on rigging	M	Rig carefully, use rope protectors, and/or carpet
21	Communication	M	Use radios
24	Power Tools	I	Use RCB and wear appropriate PPE
25	Scaling bars	M	Follow safe working procedures for all tools, use and wear appropriate PPE for task.
29	Working over public areas	E	Use security services and radio comms to ensure public are clear of all works and potential danger.
30	Public access to ropes and rigging	E	Use security services and radio comms to ensure public are clear of all works and rigging area.
37	Rigging from ground anchors	M	Ensure anchors are placed soundly and always "back up"
40	Loose material, falling rocks and debris from slope	M	Proceed with care on slope, advise other personnel of danger area and ensure no parties are working below, ensure other personnel are outside the base exclusion zone and ensure exclusion barriers are effectively located
41	Manually handling heavy items and mesh	M	Always lift correctly and where possible minimise weight by using effective hauling systems
43	Off road track	M	Only experienced Avalon staff to drive on track to the top of Mauao. Four wheel drive only.

## Description of anchorages to be used (all to be >15kN):

Ground Anchors, 150mm drilled dyna bolts

## General:

Does the team fully understand the operations to be carried out?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Is the team sufficiently trained and competent to carry out this work?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Is the team sufficiently equipped to safely carry out these works?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Have all safety issues/hazards been addressed?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Are any necessary permits / isolations / special procedures in place?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Are access/egress routes clear?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Are suitable anchor points available?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Are anchor points in certification?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Are team communications clear?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Is the emergency plan in place & fully understood?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Has the OSH notice been sent?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>



# Hazard Management Plan

All site team members must print and sign below including clients representative (if applicable):

Name	Company	Signature	Date
s 7(2)(a) - Privacy	Avalon Ind.	s 7(2)(a) - Privacy	15/1/04
s 7(2)(f)(ii)	TDC	s 7(2)(f)(ii)	15/1/04
s 7(2)(a) - Privacy	Avalon	s 7(2)(a) - Privacy	15/1/04
s 7(2)(a) - Privacy	AVALON	s 7(2)(a) - Privacy	15/1/04

s 7(2)(a) - Privacy



# Emergency Plan

This plan may be partly completed by the office based job manager, however, it is the *site supervisor's responsibility* to ensure that this sheet is fully completed and discussed at the 'Job Briefing', before work commences.

**Job name: Mount Maunganui climbing bluff scaling**

**Job No: 0403**

**Site Supervisor:** s 7(2)(a) - Privacy

**Sheet 1 of 1**

**Emergency Contacts:**

Name	Position	Company	Phone No
Avalon Office			07 846 1686
s 7(2)(a) - Privacy		Avalon	s 7(2)(a) - Privacy
		Avalon	
		Avalon	

**Emergency Scenario & Response:**

Scenario	Response
Injury to person whilst on ropes	Alert others on site to assist, carry out snatch rescue and lower casualty to ground
Rockfall or slip of loose material on slope	Evacuate slope and re-assess before gaining further access.

**Notes:**



# Fax OSH Notification

## Fax To OSH

## Tauranga; 07 577 6396

### Notification of Particular Hazardous Work

Notification is hereby given under the Health & Safety in Employment Regulations 1995 in respect of the following work:

- Work on buildings, structures & slopes over 5 metres
- Use of a lifting appliance
- Confined space
- Other

Address of worksite: Mauao  
 Main access road: Marine Parade  
 Location: Mt Maungenui

Principal: Tauranga District Council  
 Address: Private Bag 12022, Tauranga, .  
 Contact: [Redacted]  
 Phone: s 7(2)(f)(ii)  
 Fax: [Redacted]

Notifying Employer: Avalon Industrial Services Ltd  
 Address: PO Box 5187  
 Frankton  
 Hamilton  
 Contact: [Redacted]  
 Phone: s 7(2)(a) - Privacy  
 Fax: [Redacted]

**FAXED**  
**14 JAN 2004**

Certificate Holder: Not applicable

Brief description of work: Removing rock from Climbing Bluff on west elevation using rope access and scaling techniques.

Due date of commencement: 15/01/04

Estimated time to complete: 1 weeks

Date: 14/01/04

Signed

(for employer)

s 7(2)(a) - Privacy

# The Plan

for the rock scaling Northern side of Mauao above steep corner on 4WD track. Thursday 14 January 2004.

7am: at surf club- s 7(2)(f)(ii) s 7(2)(a) - Privacy meet 4x Nutech guards, guards given instructions and maps of where they are going. Name of guards at each location recorded. (s 7(2)(a) - Privacy is contact person for Guards)

7.15am: s 7(2)(a) - Privacy put up signs at start of Base track as per Map-Signs behind s 7(2)(f)(ii) Office

7.15am: s 7(2)(a) - Privacy drives guards up to start of Oruahine on 4WD track. Guards start clearance

7.30am: s 7(2)(a) - Privacy back to base to pick up s 7(2)(a) - Privacy and return to steep corner

7.45am: Guards in position have called in all clear to s 7(2)(a) - Privacy track signs in place.

7.50am s 7(2)(a) - Privacy starts circuit of track ensure all clear -down the steep track, along base track, overland to Oruahine track finishing at the steep corner.- check in with guards as you go so s 7(2)(a) - Privacy can track progress -(take mobile in case reception not good)

8.00am: s 7(2)(a) - Privacy and Avalon arrive at surf club

8.15 am: s 7(2)(a) - Privacy s 7(2)(f)(ii) and Avalon arrive at rock

8.30am: s 7(2)(a) - Privacy arrives at rock, Robbie has cam cord set up

8.35am: s 7(2)(a) - Privacy check in with Guards - confirm all clear

8.40am: Dislodge rock

9am: (you have to be optimistic) Rock gone, Avalon follow rock route to insure that loose rocks on the path down are safe.

11am: Scaling completed. -

11am: s 7(2)(f)(ii) walks Oruahine to Access damage s 7(2)(a) - Privacy inspects Base track.

11.20 s 7(2)(a) - Privacy and s 7(2)(f)(ii) meet 1/2 way to discuss damage and call in Street Smart if Necessary - (they are on standby). But most likely .....

11.30: Guards stand down, Signs removed - track now open

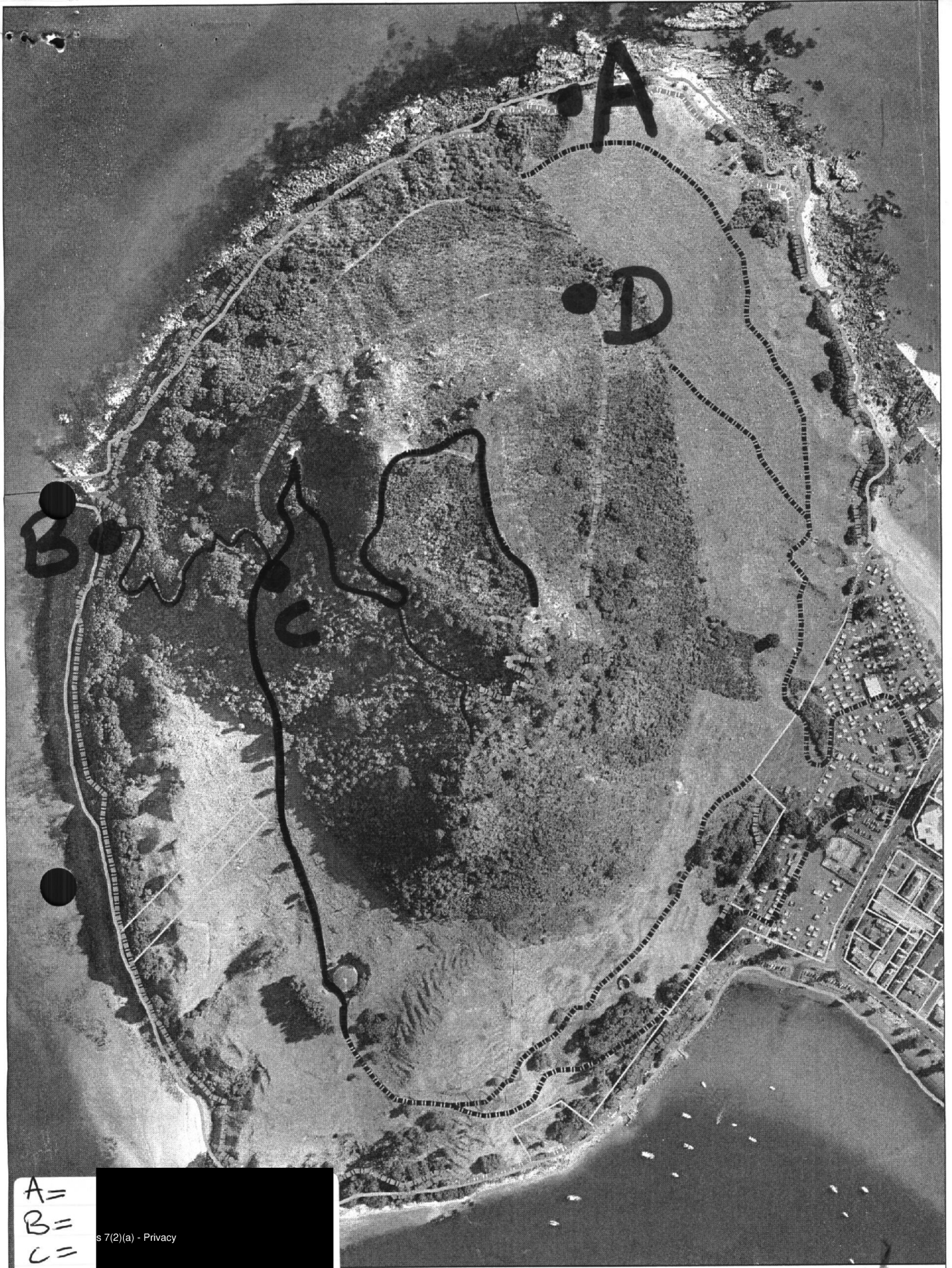
Check list

Safety Vests

Phone Numbers

Signs - Sledge hammer, staple gun, posts

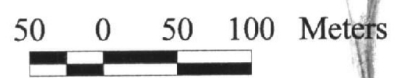
First Aid kit ✓



A = [Redacted]  
B = [Redacted]  
C = [Redacted]  
D = [Redacted]

s 7(2)(a) - Privacy

s 7(2)(a) - Privacy



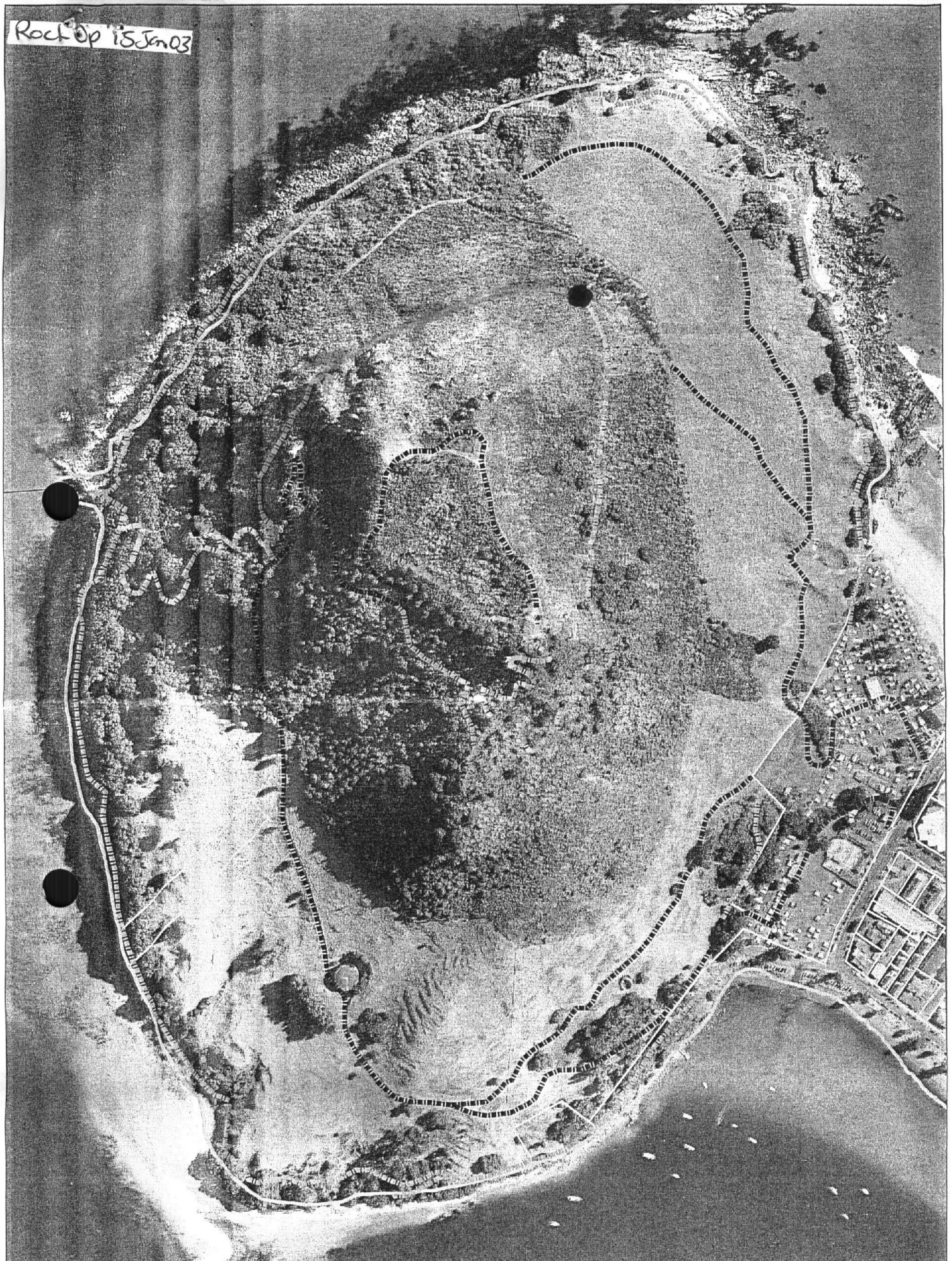
1:5000

Map printed 11/21/2003



Imation

Rock Op 15 Jan 03



**Mauao**

(Note - one of these to each

50 0 50 100 Meters

**D** clear machine do not let anyone guard,  
access track.

○ Restricted Zone.

look up for rock climbers, visual check on Area below as walking.

1:5000

Map printed 11/21/2003



Instructions for the Guards Rock removal – North/East face of Mauao above steep  
Corner on 4WD track.

All Communications to David Green

**A:** Get dropped at the junction of the 4WD track and the Oruahine track, Walk down the steep track with Guard B- Check the lookout on your way down. When you get on to the base track turn right – counting people as you pass them, relay the information to guard B. When you reach the end of the planted area stop and do not let allow people through.

**B:** Get dropped at the junction of the 4WD track and the Oruahine track, Walk down the steep track with Guard A – wait while guard A checks the lookout. When you get to the base track do not let people through in to the restricted Zone. Count people as they come out of the area to ensure they are all out.

**C:** Get dropped at the junction of the 4WD track and the Oruahine track. Stand on the 4WD track and do not allow access onto the steep track or the Oruahine track, count people as they come out. Relay this information to D when he is in position.

**D:** Get dropped at the junction of the 4WD track and the Oruahine track. Walk down the Oruahine track count people as they walk past you, once you are in position do not let any one onto the Oruahine track, relay how may people you walked past to C –

Let people know that we are pushing a rock off, it's not a huge rock but in a position above the Oruahine and the Base track. As long as the tracks are not damaged they should be open between 11 an 12pm. The rock is above the steep corner on the 4WD track. Qualified abseilers/geologists are pushing the rock off.

s 7(2)(f)(ii)

**From:**

s 7(2)(a) - Privacy

**Sent:**

Wednesday, 14 January 2004 12:34

**To:**

s 7(2)(f)(ii)

s 7(2)(a) - Privacy

s 7(2)(f)(ii)

**Subject:**

Tomorrow morning

first instructions at this stage

s 7(2)(a) - Privacy be at surf club at 7am

s 7(2)(a) - Privacy in back carpark at 6.50 s 7(2)(f)(ii) will pick you up

s 7(2)(f)(ii) My office at 8am (unless you want to be earlier)- Avalon will arrive at the same time

Please all bring

safety vest

Good shoes

Charged phones if possible

Water bottle

(ive got a first aid kit)

If you a copy of the time line when I get back later today

s 7(2)(f)(ii)

Instructions for the Guards Rock removal – North/East face of Mauao above steep  
Corner on 4WD track.

All Communications to s 7(2)(a) - Privacy

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# H+S check.

Rock Removal North/East Face Thursday 15 January 2004-01-14

- Safety Vests must be worn at all times
- All Nutech Guards must have a radio – s 7(2)(a) - is the co-ordinator for the Nutech staff
- All Council Staff must have a mobile phone
- All personnel involved in the project must be wearing sturdy shoes
- Guards must stand at the designated points
- Nobody is allowed in to the fall zone
- If a person insists in going through into the no-go area radio s 7(2)(a) - Privacy do not follow them
- First Aid kit in s 7(2)(f)(ii) ute.
- Be aware that the track surface is uneven in places – do not rush
- Keep the public away from where the abseilers are working

s 7(2)(a) - Privacy