

Gwich'in Land and Water Board  
Land Use Permit Application-FL McPherson

December 16, 2002

**GWICH'IN LAND AND WATER BOARD  
LAND USE PERMIT APPLICATION**

BOX 2018 INUVIK NT XOE OTO  
PH 867 777 4954 FX 867 777 2616

**SCHEDULE 2**

(Subsection 19(2) of Mackenzie Valley Land Use Regulations)

**INFORMATION IN SUPPORT OF AN APPLICATION FOR A LAND USE PERMIT**

**NEW APPLICATION**

**1. APPLICANTS NAME AND MAILING ADDRESS**

NorthwestTel Inc.

P.O. Bag 2727

3<sup>rd</sup> Floor, 4114 - 4<sup>th</sup> Avenue

Whitehorse, Yukon

Y1A 4Y4

Telephone (867) 668-5385

Fax (867) 667-6636

Attention: Mr. Glenn Bushell

Agent for applicant: EBA Engineering Consultants Ltd.

6 - 151 Industrial Road,  
Whitehorse, Yukon Y1A 2V3

Attention: Jack Dennett, P. Geo. (BC)

Telephone: (867) 668-2071 ext. 30 - Fax: (867) 668-4349

c-mail: jdennett@eba.ca

**2. HEAD OFFICE ADDRESS**

Same as above

**3. OTHER PERSONNEL**

Personnel on Site:	EBA Engineering Consultants	<u>1</u>	(3 days)
	Drilling Contractor	<u>2</u>	(2 days)
	Surveying Contractor	<u>2</u>	(2 days)
	Line cutting crew	<u>2</u>	(1-2 days)
Total Number of Persons on Site:		<u>7</u>	

Gwich'in Land and Water Board  
Land Use Permit Application-Ft. McPherson

December 16, 2002

#### 4. ELIGIBILITY

(Refer to section 18 of the Mackenzie Valley Land Use Regulations)

(a) (i)     (a) (ii)     (a) (iii)     (b) (i)     (b) (ii)

#### 5. SUMMARY OF OPERATION (Describe purpose, nature and location of all activities)

##### a) Summary of Operation

**Purpose:** The purpose of the land use activity is geotechnical testing of surficial material and shallow bedrock. The geotechnical testing is required to establish ground conditions in order to design foundations for a guyed communication tower, 2 small buildings and a short (800 m) access trail.

The proposed land use activity is 8 shallow investigative boreholes: 4 along a proposed access road route and 4 at the tower site. The boreholes are estimated to be approximately 8 m in depth and 15 cm in diameter. A tracked prospector drill rig with reverse circulation air drilling, operated by Midnight Sun Drilling, would be used. A photograph of the equipment is appended to this application.

**Location:** The study site is located approximately 800 m off the southeast side of the Dempster Highway at approximate km 107 north of the NWT/Yukon border. The site is located 21 km north of Ft. McPherson. The northeast end of Deep Water Lake is located approximately 850 m southeast of the site (Figure 1, attached).

The site required for land use is the crest of a low relief rise or elongate hillock. The highest point along the ridge is proposed as the tower site. The area of the tower site pad is estimated to be approximately 28 m by 35 m. Geotechnical borehole locations would be limited to within this area and along the proposed access road route. Approximate locations of proposed shallow boreholes are shown on Figure 1, attached.

A narrow trail, approximately 800 m long, is proposed to link the site to the Dempster Highway. A 2.5 m wide path is proposed to allow surveying of the proposed future access road route and to allow access by the drill. Some clearing of trees will be required to allow access to the test sites by the self-propelled drill rig. Trail cutting for surveying and drill access is estimated to affect less than one-quarter hectare in area.

**Note that this permit application is for a geotechnical testing program only;** permits for construction of an access road, tower and small building will be applied for separately.

The proposed geotechnical exploration program will not impact the following: dams, ditches, railroads, roads, transmission lines, pipelines, survey lines, monuments, air landing strips, trap lines or cabins. No known historical or archaeological sites have been identified; however, this should be confirmed by the appropriate agency responsible for inventorying such sites.

b) No camp is to be set-up. Personnel will be accommodated in the town of Ft. McPherson.

Gwich'in Land and Water Board  
Land Use Permit Application-Ft. McPherson

December 16, 2002

## 6. SUMMARY of POTENTIAL ENVIRONMENTAL and RESOURCE IMPACTS

(Describe the effects of the proposed land-use operation on land, water, flora and fauna and related socio-economic impacts)

### *Land*

Impact to the land is anticipated to be minimal. The site and proposed access route are located on a local height of land and are relatively dry. It is mapped as being underlain by a veneer to blanket of till and weathered bedrock over well-bedded, flat-lying sedimentary bedrock. The area lies within the zone of continuous permafrost. The borehole testing program will be carried out in the winter and minimal impact to the soil or vegetative mat is anticipated. Cuttings from the boreholes are expected to be minimal and will be back-filled into the borehole, with any remaining soil being dispersed at the site.

### *Water*

There is no anticipated impact to any local watercourses. No streams will be crossed to access the site. The nearest stream, which links a chain of small lakes, is located approximately 650 m west of the site. Deep Water Lake is located approximately 850 m southeast of the site. Water will not be used for the drilling process.

### *Flora and Fauna*

Mixed conifer and deciduous trees and sparse, low bushes forest the area. Trees are relatively widely spaced. Selecting a path with least impact wherever possible will minimize tree removal required for access to the proposed tower site. The drill access route will follow the proposed future (if approved) access road route. The study area is typical of the topography in the region and is not anticipated to encompass unique ecosystem characteristics.

### *Least Environmental Impact Strategy*

Access and test sites will be chosen using a least-impact strategy. Wherever possible, the path of least impact will be selected to access test sites. An access trail to be followed by the drill will be narrow, will follow the proposed future (if approved) road route, and only those trees required to permit access will be cut. Except at the trailhead at the Dempster Highway, the visual impact of the trail is anticipated to be negligible. No introduced material will be left at the site.

No camp, buildings, or fuel caches are to be set up. No equipment or material is to be left at the study area. Once sampling and mapping of boreholes is complete, minimal borehole cuttings will be back-filled into the holes with excess dispersed at the site.

### *Socio-Economic Impacts*

No adverse socio-economic impacts are anticipated.

Gwich'in Land and Water Board  
Land Use Permit Application-Pt. McPherson

December 16, 2002

## 7. PROPOSED RESTORATION PLAN

Disturbance to the area will consist of cutting of some trees to allow access along a proposed future (if approved) access road and drilling of boreholes (8 holes are estimated). The drill hole is expected to be 15 to 20 centimetres in diameter at the surface. Some borehole cuttings will be back-filled into the hole. Excess material will be dispersed at the site.

Any trees that are cut will be limbed, bucked and laid flat. At the close of testing, the site will be inspected to ensure that no foreign material is left at the site. Upon completion of the project, the snow ramp at the stream crossing will be v-notched or otherwise removed.

## 8. OTHER RIGHTS, LICENSES or PERMITS RELATED to this PERMIT APPLICATION

(Mineral rights, timber permits, water licenses, etc.)

No mineral rights have been or will be applied for. No timber permits are applicable. There will be no water use or disposal as a result of the proposed operation and no water license has been applied for.

A permit to Access Gwich'in Settlement Lands for the geotechnical testing is being applied for concurrent with this application.

Permits for land use, from the Gwich'in Land and Water Board, and for access, from the Gwich'in Land Administration, for the construction of an access road, tower and small building will be applied for separately.

## 9. ROADS:

No roads are to be constructed to carry out the proposed geotechnical testing program. An 800 m long trail is proposed along a potential future access road route. This will allow access to the test site by the tracked drill. The trail will be opened by tree removal but preserving ground vegetation and low bushes.

## 10. PROPOSED DISPOSAL METHODS

- a) Garbage Negligible garbage will be generated by the proposed activities. All sites evaluated during the field program will be maintained free of litter and all used materials will be kept with the equipment for removal upon demobilization. Such garbage will be collected and removed to a suitable landfill or other approved disposal site.
- b) Sewage (Sanitary and grey water) No formal sewage facilities will be required on site. Crews will be based in Ft. McPherson and work at the site will be completed within 2 to 3 days.
- c) Bush and trees Wood debris from any required tree cutting will be limbed and bucked up in place. Limbs and trunk sections will be laid flat.
- d) Overburden (organic soils, waste material, etc.) No removal of overburden will be undertaken. Disturbed soils will be limited to borehole cuttings. Cuttings from boreholes are expected to be minimal and will be back-filled, with excess material dispersed at the site.

Gwich'in Land and Water Board  
Land Use Permit Application-Ft. McPherson

December 16, 2002

### 11. EQUIPMENT

(Includes drills, pumps, etc.)

Type and Number	Size	Proposed Use
<u>Rig #2 1994 Prospector Drill</u>	<u>2.5 m X 5.8 m</u> <u>16,400 kg.</u>	<u>borchhole drilling</u>
Snowmobiles		transport of personnel and accessory equipment

### 12. FUEL

Diesel		No fuel of any kind will be stored at the study area. Fuel required for equipment is expected to be limited to internal fuel tanks on the equipment (Rig #2 capacity is 500 litres). If re-fuelling is required, diesel fuel will be transferred to drill from a tidy tank hauled by snowmobile. A spill kit will be kept on site during all drilling operations. Equipment will be checked to ensure all hydraulic connections are secure and leak-free prior to the work.
Gasoline	No	
Aviation fuel	No	
Propane	No	
Other	No	

### 13. CONTAINMENT FUEL SPILL CONTINGENCY PLANS

- On-site fuel or hydraulic oil will be limited to that contained in the on-board, integral fuel tanks of the equipment.
- Any potential spill would be of a small volume and would immediately be contained with a berm constructed by on-site equipment or by hand with shovels kept at the site.
- A spill kit will be kept on-board the equipment and will provide an immediate source of absorbent pads in the event of a small spill.
- Contaminated absorbent pads would be removed from the construction site for disposal in a manner that satisfies regulatory requirements.
- In the event of a fuel spill, the spill will be reported to the appropriate regulatory agency. The 24-hour emergency report telephone numbers for oil spills or other environmental emergencies are (867) 920-8130 or (867) 873-6924.
- Canada Department of Environment, telephone (867) 667-3400.

### 14. METHODS of FUEL TRANSFER

Fuel required for equipment is expected to be limited to internal fuel tanks on the equipment. If re-fuelling is required, diesel fuel will be transferred to equipment from a tidy tank hauled by snowmobile.

### 15. PERIOD OF OPERATION

(Includes time to cover all phases of project applied for, including restoration.)

Three days are estimated to complete the work, including restoration. The work is dependent on snow cover and ground conditions, and is proposed to be completed in January or February, 2003.

Gwich'in Land and Water Board  
Land Use Permit Application-Ft. McPherson

December 16, 2002

**16. PERIOD OF PERMIT**

Start Date January 15, 2003

Completion Date April 15, 2003

**17. LOCATION OF ACTIVITIES BY MAP COORDINATES**

Minimum latitude (degree, minute)

67° 25' 24"

Maximum latitude (degree, minute)

67° 25' 50"

Minimum longitude (degree, minute)

134° 29' 00"

Maximum longitude (degree, minute)

134° 29' 37"

Map Sheet Number 106M/8

**18. APPLICANT**

Name for Glenn Bushell

Signature [Signature] for NorthwesTel Inc.

Date 20 Dec '02

**19. FEES**

Type A \$150 \$ 150

Type B \$150 \$ \_\_\_\_\_

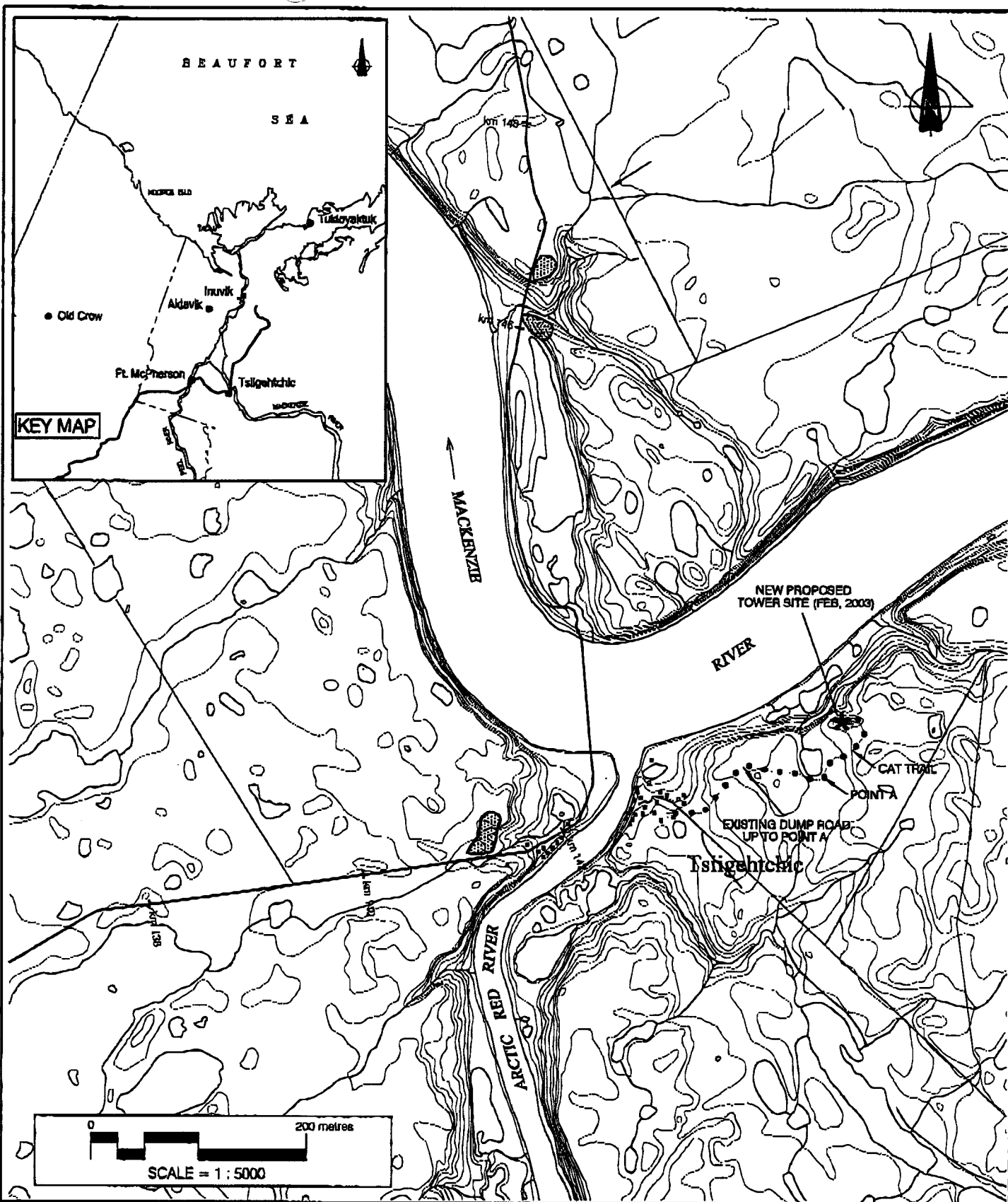
Land Use Fees 0.25 hectares @ \$50.00/hectare \$ 50

Assignment fee \$50 \$ \_\_\_\_\_

**FOR OFFICE USE ONLY**

Application Fee Amount: \$ \_\_\_\_\_ Receipt No.: \_\_\_\_\_

Water Use Deposit Amount: \$ \_\_\_\_\_ Receipt No.: \_\_\_\_\_



 **EBA Engineering Consultants Ltd.**

PROJECT GEOTECHNICAL BOREHOLE TEST PROGRAM  
PROPOSED NWTel TOWER SITES, TSIIGEHTCHIC, NWT.

CLIENT  
 **Northwestel Inc.**

TITLE LOCATION MAP SHOWING NEW PROPOSED  
ACCESS ROUTE AND TOWER SITE

DATE FEB. 2003	DWN. CPC	CHKD. JTD/JRT	FILE NO. 0201-1200032	DRWG. FIGURE 1
----------------	----------	---------------	-----------------------	----------------