



Limited Agriculture Subdivision Environmental Assessment Final Screening Report

Haines Junction, Yukon

August 2004

Prepared by:

INUKSHUK PLANNING & DEVELOPMENT



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Executive Summary

This document summarizes the results of the environmental assessment process. It includes the information contained in the project description, which was circulated for comment supplemented by the response to the feedback received, and the final conclusion reached.

The project, initiated at the request of the Village of Haines Junction, is to develop a portion of the former Brewster grazing lease for a limited agriculture subdivision. The proponent is the Government of Yukon, Department of Community Services who is responsible for submitting the application for subdivision approval and construction of the subdivision. The Department of Energy, Mines & Resources coordinates lot sales and issues the required land use permits. The Village of Haines Junction is responsible for initiating the required amendments to the Official Community Plan (OCP) and Zoning Bylaw (ZB). Subdivision approval is dependent on amendments to these documents and includes a statutory public hearing requirement.

The environmental assessment has concluded that the project can proceed.

1.0 General Environmental Assessment Information

Project Title:	Limited Agriculture Subdivision
Proponent:	YG Community Services
EA Type:	Screening
EA Start Date:	February 09, 2004
EA Completion Date:	August 2004

2.0 Responsible Authority Identification

Responsible Authorities:	Department of Community Services, Government of Yukon Department of Energy, Mines & Resources, Government of Yukon
Responsible Authority Contact(s)	G. Brian Ritchie, A.Sc.T. - Manager, Land Development, Community Development Branch, Community Services Tel (867) 667-3093, Fax (867) 393-6216, E-mail: brian.ritchie@gov.yk.ca Bryony McIntyre – Manager, Lands Client Services, Lands Branch, Energy, Mines and Resources Tel (867) 667-5882, Fax (867) 667-3214 E-mail: bryony.mcintyre@gov.yk.ca Marg White – Manager, Land Use Client Services, Lands Branch Energy Mines and Resources Tel: (867) 667-3173, Fax: (867) 667-3214 E-mail: marg.white@gov.yk.ca
Lead Responsibility Trigger:	Project proponent & Funding
Lead Type of Approval:	Funding
Other Triggers:	Land Use Permits and Lot Sales
Other RA Types of Approval:	N/A

3.0 Project Location

Region:	South-west Yukon
Topographic Map Sheet:	115A13 1:50,000
Geographic Location:	Haines Junction
Latitude & Longitude:	Entrance to Highway 60° 47' 21" N 137° 32' 44" W Westernmost corner 60° 46' 36" N 143° 33' 2.4" W
Watershed:	Alsek River
Street Name:	Airport Road, near Alaska Highway
Nearest Community:	Within Haines Junction limits
Traditional Territory:	Champagne and Aishihik First Nations (CAFN)

4.0 Introduction

The project, initiated at the request of the Village of Haines Junction, is to develop a portion of the former Brewster grazing lease for a limited agriculture subdivision. The proponent is the Government of Yukon, Department of Community Services who is responsible for submitting the application for subdivision approval and construction of the subdivision. The Department of Energy, Mines & Resources coordinates lot sales and issues the required land use permits. The Village of Haines Junction is responsible for initiating the required amendments to the Official Community Plan (OCP) and Zoning Bylaw (ZB). Subdivision approval is dependent on amendments to these documents and includes a statutory public hearing requirement.

The Village of Haines Junction has initiated the OCP and rezoning processes and held the required public hearings. The Government of Yukon has undertaken this environmental assessment and completed the supplementary research to complete the project assessment. A formal subdivision application has also been filed which will allow the land to be surveyed, the plan registered and construction to proceed.

The Village identified the need for larger land parcels (up to 6 ha.) within the community capable of accommodating limited agricultural development in association with a country residential lifestyle. The chosen site is located between the airport and Alaska Highway west of Airport Road.

This document summarizes the results of the environmental assessment process. It includes the information contained in the project description, which was circulated for comment supplemented by the response to the feedback received, and the final conclusion reached.

Publication of a final screening report is one of the requirements for completing a project assessment under the Yukon *Environmental Assessment Act*. The requirement for a formal environmental screening arises from the passage of the *Yukon Environmental Assessment Act* and transfer of land and water management responsibilities from Canada to Yukon through devolution on April 1, 2003.

A Responsible Authority (RA) under the *Yukon Environmental Assessment Act* is defined as a territorial agency when it acts as the project proponent, helps finance the project, disposes of land or an interest in land, or is a regulator for a function that appears in the Law List. When more than one government department is involved in a project, each department is a responsible authority (RA). To co-ordinate efforts and ensure a smooth and efficient process a lead RA manages the environmental assessment.



(Left): Location of subject property

For the purposes of this project, the Department of Community Services, Community Development Branch of the Government of Yukon is the lead RA. They are required to conduct the environmental assessment of the subdivision proposal because they are the project proponent and will be required to finance infrastructure construction. Energy, Mines & Resources is also a responsible authority because they issue the land use permits and manage the land sales in accordance with the *Lands Act*.

Under the *Environmental Assessment Act*, the environment means the components of the Earth, and includes:

- (a) land, water, and air, including all layers of the atmosphere;
- (b) all organic and inorganic matter and living organisms; and
- (c) the interacting natural systems that include components referred to in (a) and (b) above.

An “environmental effect” means, in respect of a project:

- (a) any change that the project may cause in the environment, including any effects of any such change on health and socio-economic conditions, on physical and cultural heritage, on the current use of lands and resources for traditional purposes by aboriginal persons, or on any structure, site, or thing that is of historical archaeological, palaeontological, or architectural significance; and
- (b) any change to the project that may be caused by the environment.

Environmental assessment under the Yukon *Environmental Assessment Act* can follow different formats depending on the scale and nature of a project and the level of public concern. Environmental assessments may be conducted as screenings, comprehensive studies, mediations and Panel reviews. This project meets the requirements for a screening.

Under a screening the responsible authority is required to consider the following factors in an assessment:

- (a) The environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
- (b) The significance of the effects referred to in (a);
- (c) Comments from the public that are received in accordance with the *Act* and the *Regulations*;
- (d) Measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and
- (e) Any other matter relevant to the screening, such as the need for the project and alternatives to the project that the responsible authority may require to be considered.

An environmental screening involves four stages:

- (a) Preparation and issuance of a project description describing all aspects of the project and associated activities;
- (b) Identifying the type and duration of possible impacts as they relate to the nature of the project and the environment in which the project is situated;

- (c) Assessment of the likelihood and significance of adverse environmental effects; and
- (d) Reporting the findings and outcome of the assessment including any public comment.

We are now at the final reporting stage. Only after an environmental assessment is completed, and finds that the project is not likely to cause a significant adverse environmental effect, can government proceed with project development and land disposition.

Consideration of potential environmental impacts is part of the normal subdivision design and planning process. This project started in 1999 when the first feasibility studies were initiated including an assessment of the suitability of the local soils to support agricultural development.

4.1 The Public Role in this Screening

The project description was prepared and circulated to all known interested parties. Copies of the project description were also made available for review in the Haines Junction municipal office and in Whitehorse at the Lands Branch and Community Services offices.

The screening is now at the final reporting step where the responsible authority reports back on the results of the assessment and decision reached.

The assessment has considered the effects of the project on the environment, including the type of land use proposed, the location, and the impacts associated with land clearing, and the long-term presence of this development on wildlife movement and adjacent land use. The final assessment report also discusses how input received through the consultation process was considered along with the outcome of any additional studies that were undertaken as a result of the feedback received.

Given the nature of development and location, decommissioning is not an issue.

5.0 Project Background

The availability of land is fundamental to the economic development and social well being of the Yukon. The Government of Yukon develops and makes available for purchase a variety of types of land throughout the territory. Municipalities also have land development responsibilities under the *Municipal Act*. To meet these obligations, the Government of Yukon works with municipalities to develop and maintain a two-year inventory for most classes of land within each community. The two-year inventory has been established as the desirable minimum supply level, given the length of time it takes to plan and develop new land and the difficulties that result when there is insufficient land to meet demand. Currently in the Village of Haines Junction, there are no Limited Agriculture lots.

Municipalities, through their community planning and zoning processes, have control over all land development within their jurisdiction. The Government of Yukon, as the land developer, cannot proceed with any land development within municipal boundaries without the full support and approval of the municipality. This project responds to a specific request from the Village of Haines Junction to provide a limited agricultural land option within municipal boundaries.

To that end, Village Council has initiated the process to amend the Official Community Plan and Zoning Bylaw. Subdivision approval is dependent on approval of these amendments.

An application to reserve this site for agricultural purposes was put forward to the Land Application Review Committee in the fall of 1999. The initial land development feasibility study was initiated in 2000. That study further confirmed soil and terrain suitability. The principal environmental concern identified was the presence of a wildlife movement corridor used by grizzly bears and moose moving between the Dezadeash and Alsek River valleys. The need to maintain the integrity of this corridor became a primary planning consideration following discussions with the regional wildlife biologist Bob Hayes. These discussions focused on defining an appropriate buffer width, determining how it should be managed and what limitations should be placed on the adjacent new subdivision to minimize the potential for wildlife conflicts.

In 2003, the Village of Haines Junction asked the Government of Yukon to proceed with subdivision design for a limited agriculture subdivision with a 6 ha maximum parcel size. This resulted in additional discussions and the present development proposal (Subdivision Plan – following page) to create 14 lots with access from the existing airport road. Approximately 1.4 km of new road will be constructed.

5.1 Site Context & Adjacent Land Use

As mentioned, the area was formerly used as a grazing lease but was not cleared. Horses were allowed to roam freely creating their own trails. The land slopes gently from the west and east to a central depression that drains northwest towards Pine Creek. The central depression contains a narrow band of poorly draining silt/clay soils that are seasonally wet and create pockets of meadows where horses tended to concentrate their grazing activity. Evidence of moose browse and bear passage is also apparent along the same corridor.

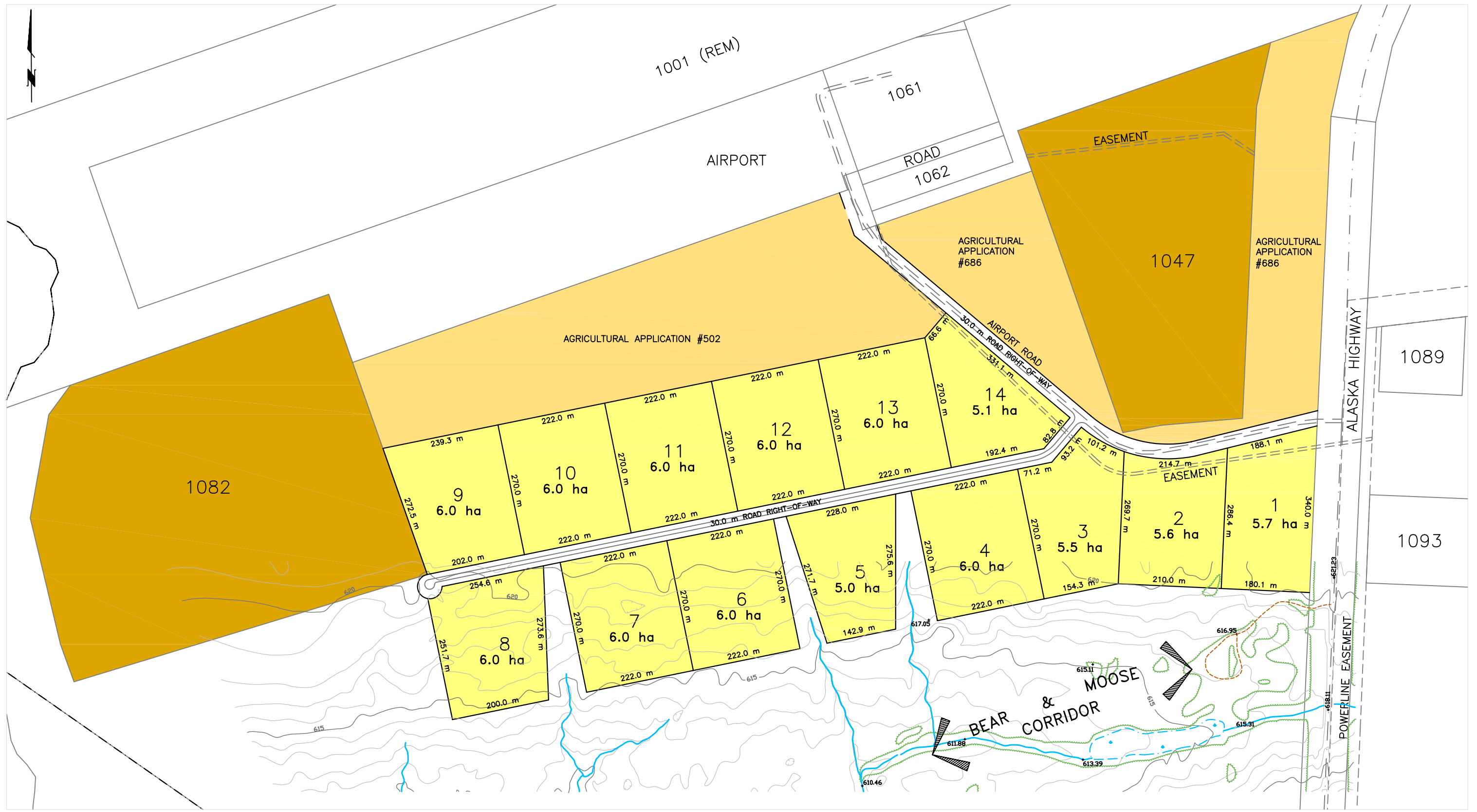


(Above): Wildlife corridor from Alaska Highway

There are two main trails that pass through the area in a north south direction. The first trail east of the sewage lagoons connects the former agricultural lands on the experimental farm to the municipal dump while the second trail follows the intermittent drainage through the depression. Both appear to be used by wildlife moving between the Dezadeash and Alsek river valleys. The regional biologist confirms that moose and grizzly bear move through the area. There is little evidence of human trail use except along the Alaska Highway right-of-way and the former power line that parallels the airport.

There are no Champagne & Aishihik First Nations Land Selections in this area.

The 1999 Subdivision Regulations contain revised rules regarding residential land use in the proximity to both municipal landfills and sewage treatment facilities. The new requirements for a landfill state that a proposed subdivision should not be situated “within 450 metres from the working area within a parcel of land that is being used or is identified for use as a dump or waste disposal system”. The requirements for a sewage treatment facility state that residential development must be set back at least 300 metres. Neither restriction affects this development.



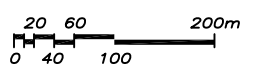
- RIVER
- SWAMP
- PROPOSED ROAD
- EXISTING ROAD
- EXISTING TRAIL

- EXISTING LOTLINE
- EXISTING EASEMENT
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- SPOT HEIGHT
- TREE LINE

- EXISTING TAIT AGRICULTURAL LOTS
- PROPOSED TAIT AGRICULTURE EXPANSION
- PROPOSED LIMITED AGRICULTURAL LOTS

REVISION: 26/07/2004

SCALE 1:7,500



MAP 1

HAINES JUNCTION LIMITED AGRICULTURE SUBDIVISION

Yukon
Community Services
Community Development Branch

INUKSHUK
PLANNING & DEVELOPMENT

To the north of the site between the airport and the proposed development area, there are several parcels of land that have already been designated for agricultural use in the Haines Junction OCP. All of these are either owned or under application by Rod and Enid Tait. The Tait grazing lease predates 1984. They currently hold title to lots 1047 and 1082 and have an outstanding application (#502) for 65 ha of land between Airport Road and Lot 1082 dating back to April 1991. In 1998, they also applied for the triangle of land between Lot 1047, the airport road and the Trans North Helicopter property adjacent to the airport (application #686).

A meeting was held March 17, 2004 between Village Council, Mr. Tait and representatives from the Government of Yukon to review the project proposal and potential impacts on Mr. Tait's agriculture development plans. The idea of a land exchange was put forward that would allow Mr. Tait to expand Lot 1047 east to the Alaska Highway and west to the Airport Road in exchange for a portion of the 65 ha under application #502.

The rationale for the exchange was based on the compatibility of the two types of agricultural uses and the development efficiencies that would accrue to all parties through double-sided lots on the proposed access road. In addition to providing improved access to lot 1082, the added lots would result in significant servicing cost economies and reduced lot prices. Mr. Tait indicated he was amenable to the arrangement and Village Council confirmed their support and directed Community Services to prepare the subdivision design accordingly.

The Aviation & Marine Branch was also contacted as the agency responsible for airport management. The principal concern of airport managers relate to animals finding their way onto the runway since the perimeter is not fenced. They are also concerned that the type of agricultural activity carried out does not attract flocks of birds that could pose a hazard to aviation. Fencing will be required and the types of agricultural activities anticipated to occur should not, by their nature, attract unusual bird activity.

5.2 Official Community Plan and Zoning Bylaw

The 1995 Official Community Plan discourages "designation of large tracts of agricultural land inside the municipal boundary". The OCP also contemplated the development of both country residential and mixed rural residential/agricultural lots within the community. The policy intent was to encourage the larger scale, more intensive form of agriculture development to occur outside municipal boundaries while recognizing the emerging lifestyle interest in the community for minor agricultural pursuits to be allowed in a country residential setting. Council noted that due to a lack of larger country residential lots, "individuals wishing larger rural residential lots with small agricultural activities are locating to land parcels outside of the municipal boundaries. Uncontrolled development and service demands on Village infrastructure are resulting concerns for Council".

This subdivision seeks to fill the need for larger parcels than current the zoning bylaw allows under the Country Residential zone, where the maximum lot area is 3 hectares. The Limited Agriculture (AL) zone allows lots up to 6 hectares in size, and permits single-family dwelling units as accessory uses.

No proposed parcel is larger than 6 hectares, meaning that agricultural uses will remain limited in scale (e.g. greenhouses, small-scale livestock operations, agricultural product sales, etc).









PROPOSED OFFICIAL COMMUNITY PLAN AMENDMENT

- | | |
|---|---|
|  AMEND COMMERCIAL TO AGRICULTURE |  AMEND OPEN SPACE TO AGRICULTURE |
|  AMEND COMMERCIAL TO OPEN SPACE |  AMEND INDUSTRIAL TO AGRICULTURE |



PROPOSED ZONING PLAN AMENDMENT

- | | |
|--|---|
|  AMEND COMMERCIAL TOURIST (C2) TO AGRICULTURE GENERAL (AG) |  AMEND INDUSTRIAL LIGHT (M1) TO AGRICULTURE LIMITED (AL) |
|  AMEND COMMERCIAL TOURIST (C2) TO COMMUNITY OPEN SPACE (OS) |  AMEND AGRICULTURE GENERAL (AG) TO AGRICULTURE LIMITED (AL) |
|  AMEND COMMERCIAL TOURIST (C2) TO AGRICULTURE LIMITED (AL) |  AMEND AGRICULTURE LIMITED (AL) TO COMMUNITY OPEN SPACE (OS) |

Both the existing Official Community Plan and Zoning Bylaw are being amended to accommodate the proposed subdivision and Tait land swap. **Figure 1** (left) illustrates the extent of the OCP amendments required while **Figure 2** (below) shows the accompanying Zoning Bylaw changes.

The principal changes can be summarized as follows:

- (a) elimination of the M-1 light industrial triangle;
- (b) reduction in the amount of C-2 tourist commercial land along the Alaska highway;
- (c) reduction in the amount of limited agriculture land and consolidation of agricultural uses in an area south of the airport between Pine Creek and the Alaska Highway; and
- (d) conversion of limited agriculture and tourist commercial lands to open space to protect the integrity of the existing wildlife corridor.

(Top left): Figure 1 – Proposed Official Community Plan Amendment

(Bottom left): Figure 2 – Proposed Zoning Plan Amendment

5.3 Subdivision Proposal

The subdivision plan creates 14 Limited Agriculture parcels of up to six hectares in size. The lots are oriented for sun exposure and to maximize views towards the mountains to the south and west. The orientation and layout also takes into account the desire to maintain a minimum, uninterrupted wildlife corridor width of 300m that encompasses the two main trails.

5.4 Access, Utilities & Services

A new 1.4 km access road would be constructed from the existing Airport Road. The new road has been planned to meet the airport road at a 3-way intersection, where good sightlines are offered. The airport road is to be upgraded and chip-sealed during the summer of 2004. The 1.4 km of new road required for this development will be built to an RLU 50 standard with an 8-meter top as defined by the Transportation Association of Canada. The right-of-way will be 30 meters wide and bituminous surface treatment (BST) will be applied to the road surface. This road could also be extended in the future west across Pine Creek to connect to the North Alaska Highway eventually creating a loop road.

Power and telephone currently follow the existing airport road. A new single-phase overhead power line will be installed in the road right-of-way. The airport access road has not been legally surveyed but the road centre line has been identified on the cadastral mapping. It will be surveyed as part of this project. It



also means that sections of the existing airport road power line are not located within the right-of-way and easements will be required across lots 1,2,3 and 14 and the Tait agriculture applications.

Northwestel will be upgrading their telephone services to Haines Junction by installing a fibre optic cable along the Alaska Highway right of way through Haines Junction in 2004 or 2005. At a minimum the portion to Pine Lake Subdivision will be completed by 2004, including a "remote access terminal" installed near the Pine Lake Subdivision access road. This terminal will service the airport and the new lots in the subdivision via the overhead power line pole system. Both Yukon Electric and Northwestel indicate the new lots can be serviced off the airport road lines.



Water supply and wastewater disposal will be the responsibility of individual lot owners. For water, owners may choose to either install wells or obtain private water delivery. The geotechnical work carried out in 2000 observed some discontinuous permafrost in the area and EBA cautioned that pump out tanks would likely be the preferred method for sewage handling.

(Top): Airport Road near the junction of the proposed access road

(Bottom): Soil conditions at Test Pit #11, in the vicinity of Lot 1

It is possible that given the size of the new parcels, suitable ground may be found within each property such that onsite sewage disposal is an option. This would require additional geotechnical testing by the lot purchaser with the results and system design submitted to Environmental Health for approval on a lot-by-lot basis.

The subdivision is located within 1 km of the Village landfill site and sewage lagoons on the Alaska Highway.

5.5 Timing of Work

Both the amendment to the Official Community Plan and Zoning Bylaw require formal public hearings that occurred in July 2004. Assuming the Minister of Community Services endorses the OCP amendment and Council gives third reading to both the plan and zoning amendments, subdivision approval should be received in September with legal survey and initial road clearing occurring in late fall. To the extent possible, road construction will be coordinated with other roadwork planned in the general vicinity. The subdivision access road would be constructed in spring 2005 and chip sealed later that summer. Lots would be available for sale by the summer of 2005.

6.0 Scope of Environmental Screening Performed

The public and agency consultation did not result in any requirement to expand the scope of work outlined in the project description. The following aspects of the project were screened:

- Legal survey of 14 Limited Agriculture lots and road right of way;
- Road right-of-way clearing, grubbing and stripping;
- Construction of approximately 1.4 km of new road, including drainage ditches, culverts and BST surface treatment;
- Installation of overhead power and telephone lines to the property line; and
- Sale of lots and resolution of the Tait agriculture land applications.

7.0 Work Carried Out to Date

A number of studies and investigations were carried out as part of the initial planning. These included:

- Final Geotechnical Report – Country Residential & Agricultural Development – Brewster Lease Area of Haines Junction, Yukon - EBA Engineering Consultants Ltd. – December 2000
- Haines Junction Land Feasibility Study – Concept E, Willow Acres Expansion, Brewster Lease – Inukshuk Planning & Development – July 2000
- Geotechnical Evaluation Site Suitability Study, Haines Junction, Yukon – EBA Engineering Consultants Ltd - February 1993

A heritage Impact Assessment was also commissioned and completed in June 2004. The assessment did not find any sites of archaeological or heritage significance that would warrant changes to the subdivision plan.

8.0 Description of Environment

The following is a general summary of the relevant local environmental conditions pertaining to the project:

8.1 Drainage

In general, the surface is moderately drained over most of the site. The topography of the area indicates that the central trough area running roughly south to north across the entire length of the site handles seasonal runoff from approximately 400 hectares and drains into Pine Creek. During spring melt, and after an extended rain, water saturates the ground and pools up on the surface because the silts and clays create a perched water condition. These wet areas are quite localized and correspond with the grass meadows in the central trough. Horses following the intermittent drainage course have created a trail through the centre of this area.

During a May 2000 site visit, water was seen flowing at the west end of the central trough towards Pine Creek. In these areas, fine-grained soils limit the infiltration potential of surface flow into the soil. Throughout the remainder of the subdivision there are only small patches of surface water with the majority of the areas being adequately drained.

8.2 Vegetation

The areas of the site that are well drained are vegetated primarily by white spruce (*Picea glauca*) and trembling aspen (*Populus tremuloides*), with a widespread groundcover of common bearberry or kinnikinnik (*Arctostaphylos uva-ursi*). Poorly drained areas are vegetated largely by black spruce (*Picea mariana*), various willow species (*Salix* spp.) and grasses. Periodic shrubby cinquefoil (*Potentilla fruticosa*) was also found in some of the wetter portions of the site. Examples of the tree and ground cover that are indicative of the site are shown at right.



(Top): Perched water condition

(Second from top): Vicinity Test Pit #19,
centre trough

(Second from bottom): Vegetation vicinity of
Lots 12 & 13

(Bottom): Vegetation vicinity of back of Lot 8

There is also evidence of one larger, and older forest fire as well as two more recent minor burns. The majority of the proposed limited agriculture lots would be located on land containing merchantable, mature spruce. However, a helicopter survey of the area suggests that the spruce beetle infestation is quickly reducing any remaining timber values as 30-40% of the trees are already infected. This also adds to the potential forest fire risk.

The subdivision area is also subject to high winds and the shallow rooted coniferous trees are susceptible to blow-down. No rare or endangered plant species were identified during site inspections or in the literature.

8.3 Terrain and Soils

Dave Murray of Yukon Agriculture Branch first mapped the soil and agriculture capability of the former Brewster grazing lease in 1996. He advises the proposed subdivision design conforms to the land most suited for agricultural use and the land identified for limited agricultural lot development “meets minimum requirements for arable agriculture as defined by the Agriculture Policy”. The majority of the area is suitable for forage crops and animal husbandry.

EBA Engineering Consultants of Whitehorse examined the Brewster lease area in April 2000. EBA and Agriculture Branch testing has shown that some areas of the larger study area feature soils that are fairly saline or show a near surface water table. These marginal areas for agriculture use are mainly located in the central trough coinciding with the wildlife movement corridor. These areas have been set aside, to be retained as open space. EBA also undertook a test pit evaluation program and made a general recommendation that the area is suitable for the intended use. Their conclusions also included the following additional observations:

1. “Holding tanks with pump-outs are the preferred method for on-site sewage disposal given local soil conditions”.

(It is noted that several existing landowners in this general area have been able to install septic fields. The size of these parcels makes septic systems a possible option subject to more site specific testing. Individual lot owners interested in the septic system option will need to undertake additional testing and obtain Environmental Health approval).

2. “The proposed roadway should be cleared of any organic material at least one construction season in advance of any roadway construction”.

This pre-clearing would allow for a significant percentage of any pockets of discontinuous permafrost that might be encountered to thaw, minimizing the potential for settlement after completion of roadway construction. Additional detailed geotechnical testing of the proposed road right-of-way will either confirm that this approach is prudent or not required.

8.4 Wildlife

The principal concerns are the bear (both black and grizzly) and moose that transit the “trough” immediately to the south of the proposed subdivision to travel between the Dezadeash and Alsek river valleys. At the time of the original feasibility study, a buffer of approximately 300 m to 350 m between development blocks was proposed following discussions with the Department of the Environment Regional Biologist Bob Hayes. One of the main concerns with limited agricultural activity on these lots is a concern that residents might raise poultry or swine that would attract predator interest.

The development plan proposes to leave the trough area as open space and maintain a minimum buffer of 300m.

Lorne Larocque, Fish & Wildlife Technician for the Kluane Region and contributor to the initial study, notes the importance of this trough as habitat for moose during winters with heavier snowfall. He states, "They use both the riparian areas along the river and the heavier timber for cover and movement".

Corridor width, retention of the natural vegetation cover to screen movement and lot depth have been incorporated into the proposed lot layout to minimize the potential for inter-valley wildlife movement conflict. While perimeter lot fencing is recommended, most development and clearing will likely occur on the higher ground closer to the access road. The change of zoning in the trough back to "open space" will ensure that the currently existing forest stands remain as is. It is felt these measures will allow moose and bear to continue to move discretely through the area with minimal conflict risk.

Mr. Larocque goes on to say that the Fish & Wildlife Branch of the Department of Environment is, in principle, "supportive of planned small scale agricultural development in this region. It's much easier on wildlife and wildlife habitat values than the other alternatives".

8.5 Heritage Considerations

Greg Hare, Yukon Government Heritage Archaeologist, observed, "while no heritage sites have been identified within the development area, the presence of known archaeological sites nearby, indicates that this area has moderate to good archaeological potential." Consequently, Thomas Heritage Consulting was commissioned to conduct an archaeological impact assessment. Fieldwork was undertaken May 29 2004.

In his assessment report, archaeologist Christian Thomas writes:

"During the course of the present field survey we were unable to identify any significant historic or archaeological sites. Several areas were identified that contain evidence of relatively modern recreational use sites. The sites are small, not culturally or historically significant and are not protected sites as defined by the Yukon Historic Resources Act and annexed Archaeological Sites Regulation.

It is the consultant's opinion that no historic or archaeological sites will be impacted by the development of this property. The consultant does not foresee or recommend further heritage sites assessment work (will be required) in advance of the development of the Limited Agricultural Subdivision".

Based on this independent assessment, there are no heritage concerns.

8.6 Community Development Considerations

The subdivision is anticipated to have a positive impact on the community. The community has not grown to the degree projected with the population remaining in the 800 range for over a decade. As noted by Village Council, when this form of development occurs outside the municipal boundary, the landowners still make use of community facilities. By providing this development option within the community boundary and in a location that does not restrict the community's natural growth, the Village obtains the benefits of the additional tax revenue and provides a new housing option within municipal boundaries.

Using a household composition factor of 3-3.5 persons per residence, the new development could generate between 40 and 50 new residents. This assumes people wanting to move to the community purchased all the lots. However, Village staff and Council believe it is more likely that one-third to half of the lots would be purchased by existing residents so the net population increase is probably half that number.

The St. Elias school population has fluctuated between 140 and 150 students in recent years down from 173 in 1994. According to Gordon deBruyn, Manager of Facilities for the Department of Education, the school is at approximately 75% capacity. The consistent trend across Canada is that enrolment is declining and it is unlikely that more than one student per household would be generated by the new subdivision for a maximum of 14 students assuming none are simply local relocations and already accounted for. "Absorbing an additional 14 students would not be an issue", he states¹.

Table 1 (following page), summarizes the Environmental Components in the project area. Those that are present and could be potentially impacted have been assessed in this report.

¹ Personal communication - G. deBruyn, Manager, Facilities, Department of Education 2004-04-07

Table 1. Summary of Environmental Components

Environmental Component	Component Status				Reference in report
	Present in the Study Area?			Comments	
	Yes	No	Uncertain		
Terrain and Topography	X			The terrain is relatively level with a central trough	Yes
Species/Habitat of Special Status		X		None identified during site inspections or recorded in the literature	Yes
Vegetation	X			Primarily mature spruce in the subdivision with aspen poplar; 30-40% of the timber value has already been lost to the spruce beetle infestation	Yes
Wildlife/Habitat	X			Moose and bear are the species of most significance because they maintain a travel corridor between the Alsek and Dezadeash river valleys through the area	Yes
Fish and Fish Habitat		X		Not applicable	No
Soils and Agriculture	X			Soils have been mapped and determined to be suitable for agricultural purposes	Yes
Groundwater	X			There should be no impact on groundwater	None
Surface Waters	X			There is seasonal wetness and intermittent drainage in the central trough which will be left as open space	None anticipated
Wetlands		X		There are no significant wetlands located immediately within the project area	None
Climate and Air Quality	X			The project is located over a kilometre from the municipal landfill and sewage lagoon; High winds can cause blow-down	Yes
Transportation	X			Access is provided from a new road off the existing airport road; Construction will be coordinated with upgrades planned to that road	None
Land Use	X			Compatible with adjacent agriculture uses and not anticipated to have an impact on airport operations or wildlife movement	See Description of Project Effects
Human Health		X		There should be no impact	None
Socio-economic Conditions	X			There is an opportunity for local employment during construction and in-migration of new residents	None
Physical/Cultural Heritage			X	Heritage impact assessment has been commissioned; Preliminary report due in June 2004.	None anticipated
Aboriginal Use of Traditional Lands/Resources		X		No impacts have been identified to date. Heritage impact assessment fieldwork planned late May/June 2004	None
Structures/Sites of Significance		X		There are no buildings of historical interest within the project limits	None
Other					

9.0 Consultation/Referral of Project

Date Referred to Government Departments: April 15, 2004
 Deadline for Comments: May 31, 2004

Referral	Agency	Response Received
Yukon Government	Environment	Yes
	Tourism & Culture, Heritage Resources	No
	Environmental Health Services	No
	Highways & Public Works, Aviation & Marine Branch, Transportation Engineering	Yes
	Energy, Mines & Resources	No
	Economic Development	No
First Nation	Champagne and Aishihik First Nations	No
Municipality	Village of Haines Junction	Yes
Other Groups	Adjacent Property Owners	No

For the subdivision to go ahead, amendments are required to both the Village of Haines Junction Official Community Plan and Zoning Bylaw as noted in section 5.2. Discussions on this project were held March 17, 2004 with the largest, adjacent property owner, Mr. Rod Tait who farms property adjacent to the proposed subdivision. The Tait's also have applications for additional land pending. As a result of the discussions in Council Chambers, revisions to the proposed subdivision plan were proposed and agreed to by all parties that would involve a more optimum subdivision design, lower cost to potential purchasers and a more efficient operation of the Tait farm.

In accordance with the Municipal Act, the formal public hearing process was initiated for an amendment to the community Official Community Plan and Zoning Bylaw. The public hearings for both bylaws were held June 2nd, 2004. In addition 3 letters of opposition were received. The principal concerns raised by those with reservations concerning the proposed subdivision involved:

- Questioning the need for more agricultural land within municipal boundaries where the actual land use may be rural residential
- Potential loss of highway commercial land
- Concerns with types of land uses that would be permitted on limited agricultural lots including the intensity of uses that might be allowed (e.g. restrictions on the number of dogs allowed in a dog mushing operation) and level of home-based commercial activity appropriate in such a zone.

Both the Official Community Plan and Zoning Bylaws received 1st and 2nd readings at Council's meeting of June 23rd, 2004. The OCP amendment has been referred to the Minister for comment prior to third reading. Once the OCP has been given 3rd reading, the Zoning Bylaw can also receive 3rd reading since the Zoning Bylaw must conform to the OCP. An additional public meeting was also held July 21st, 2004 to allow additional discussion of the proposed text amendments for the Limited Agriculture zone.

Summary of Issues Raised
Haines Junction Limited Agriculture Subdivision Environmental Screening

Issue	Response	Mitigation	Residual Effects
Wildlife Protection – Travel Corridor	Minimum 300m open space corridor retained centred on natural movement route	Haines Junction OCP & Zoning Bylaw amended to protect integrity of corridor; additional land use regulations added to Limited Agriculture zone to control types of land use permitted, intensity of agricultural activity permitted and fencing requirements to reduce wildlife/resident interface conflicts	While providing a wildlife movement corridor can reduce the potential for wildlife/human interface conflicts, the potential for conflicts cannot be completely eliminated
Access to the Alaska Highway	Highways & Public Works have suggested turning lanes at Airport Road	Sight lines, visibility and traffic volumes do not warrant the provision of turning lanes according to RTAC standards. No new highway access is proposed. The Alaska Highway is currently being rebuilt in this area and turning lanes could be added at minimal additional cost but cannot be justified on grounds of need or safety	None anticipated for the foreseeable future
Loss of Highway Commercial Land	The Village has more than sufficient suitably zoned highway commercial land to meet its long-term needs. The strips of highway frontage that would be rezoned represent a trade-off to protect the integrity of the existing wildlife corridor and their development suitability is already constrained due to proximity to the municipal sewage lagoons and landfill site	Not required, sufficient suitably zoned land available elsewhere in the community to meet long-term needs	None anticipated
Concern regarding loss of property value, lot pricing and unfair competition from home-based business	Lot price is determined by market value and development cost. Local Zoning Bylaw and regulations in the limited agriculture zone govern amount of commercial activity permitted	Village of Haines Junction is reviewing the uses that will be permitted and regulations in the limited agriculture zone and they will be modified prior to development of the subdivision and release of the lots	None anticipated

Summary of Issues Raised Continued
Haines Junction Limited Agriculture Subdivision Environmental Screening

Issue	Response	Mitigation	Residual Effects
<p>Concern regarding the types of uses that may be permitted (e.g. dog teams) and the types of limits that should or should not be imposed. Suggestion that this will really end up as rural residential development and rules will not be enforced</p>	<p>This is a municipal zoning matter and is being addressed in the revisions to the regulations in the limited agricultural zone. Council is aware of the enforcement concern and range of views on the subject of which land uses should or should not be permitted. Council has considered the public comment received and given 1st and 2nd reading to the bylaws amending the OCP and Zoning Bylaw</p>	<p>Being addressed in municipal Zoning Bylaw amendment and development permit requirements by Village Council. Council held an extended public consultation process including an additional public hearing dealing specifically with the proposed revisions to the regulations in the Limited Agricultural zone</p>	<p>Enforcement of the rules has been an issue in other communities in the past</p>
<p>Lot sizing</p>	<p>The lot size is intended to provide an option for a semi-rural lifestyle within municipal boundaries. The present country residential zone has a maximum lot size of 3ha while the limited agriculture maximum lot size in the Zoning Bylaw is 6ha. The OCP calls for large scale, intensive agriculture to be located outside the municipality</p>	<p>None required. The proposed lot sizes are consistent with the existing Zoning Bylaw, and meet local needs without compromising the orderly development of the community</p>	<p>Loss of undeveloped open space due to conversion to a more intensive, developed land use</p>
<p>Not really suited for agriculture purposes even of a limited nature</p>	<p>Agricultural Branch has confirmed soil suitability. Village Council initiated the request to develop this subdivision to meet local demand and provide a more suitable location on lots of sufficient size to accommodate the types of uses that were occurring in Willow Acres</p>	<p>Locating the development within municipal boundaries provides a better-planned solution than allowing piecemeal strip development along the Alaska Highway adjacent to municipal boundaries. It also results in a more compact development form and additional tax revenue to the community</p>	<p>None anticipated</p>

10.0 EAA Determination

EAA Determination:

Environmental Assessment Act, Section 16 (1) (a):

The project may proceed as it is not likely to cause significant adverse environmental effects.

Authorized By: _____ Date: _____

Eric Magnuson
Director, Community Development Branch
Department of Community Services

Authorized By: _____ Date: _____

Lyle Henderson
Director, Lands Branch
Department of Energy, Mines and Resources