
**PRELIMINARY OVERVIEW HERITAGE IMPACT ASSESSEMENT
OF THE WHITEHORSE COPPER DEVELOPMENT AREA**

STAGE 1 - FINAL REPORT

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INTRODUCTION

The Whitehorse Copper Development study area is approximately 1964 hectares in size. It is bounded by the realigned Mt. Sima road and McLean Lake subdivisions to the north, the residential and highway commercial properties along the Alaska Highway to the east, Wolf Creek and Wolf Creek North subdivisions to the south and the former Copper Haul Road to the west (Figure 1). An area development scheme (ADS) was completed in 1999 and the Development Concept approved by the City of Whitehorse in 2000. The development consists of a variety of land use or development areas that range from environmental reserves and community resource lands to country residential, commercial and service industrial areas.

The purpose of the Stage 1 preliminary overview heritage impact assessment carried out in October of 2001 within the study area was to provide land use planners with a general assessment of the area regarding heritage potential. A variety of methods were to be used in this overview that included the use of informants from the Kwanlin Dun First Nation (KDFN) and Ta'an Kwach'an Council (TKC), analysis of air photographs and topographical maps of the study area, and a preliminary field survey.

Unfortunately, the early snowfall abruptly halted the fieldwork that was just beginning. Two days were spent in the field, most of which concentrated on the WWII camp located on the eastern margins of the study area. After repeated attempts and all though interested in the project, KDFN did not provide an informant for the gathering of traditional land use information. In meetings with the TKC elder coordinator it was felt by TKC that due to the low potential of the area there was no need for an informant.

As a result of the work undertaken 28 areas of potential were identified. Only one of these areas (Area 4 and 4a) is identified as having high potential. This area encompasses the World War II McCrae Alaska Highway Camp and associated dump (see Figure 2.). Measures will need to be undertaken at this location to mitigate impact if the planned commercial development is to occur or if the area will be impacted as a result of other development (See Stage 1 Recommendations section). The remaining 27 areas of potential rank from moderate to low and low to moderate. In ranked areas where significant development is to occur an archaeological impact assessment will be required



Figure 1. Schematic diagram showing boundaries of the study area.

prior to development. This requirement is due to the gap in the knowledge of the traditional land use of this area coupled with the intensity of the early 20th century historic activity associated with the Whitehorse Copper Mine and its early exploration and development.

This document is a working document and consists of a compilation of the findings as a result of the Stage 1 work completed. It details the methodology used during the study, provides the results from the fieldwork undertaken and presents the recommendations based on the data gathered. It does not

report on the current understanding of the traditional and historical use of the area since this will be included in a separate report once the scheduled spring fieldwork and background research is completed. The scope of this fieldwork is still being decided upon and is somewhat contingent on the finalization of development plans within the Whitehorse Copper Development Area.

METHODOLOGY

The preparation work carried out to conduct the preliminary overview assessment of the Whitehorse Copper Development area consisted of a literature review, meetings with the KDFN and TKC as well as with Heritage Branch archaeologists. As well, the historic sites and archaeological sites databases were reviewed to determine whether or not any known sites existed within the study area.

KDFN employees Ms Gillian McKee, Land Use Planner, and Mr. James Smith, elder coordinator, were met with during early October. At this meeting a traditional land use map was reviewed, however, it was very general and at a large scale (1:250,000). No

record exists of any more specific KDFN traditional land use studies that have been done within or close to the study area. The study area, however, is situated near a major traditional route between Coal Lake and the Whitehorse Rapids Camp to the south and the Ibex and Alligator lakes to the west and south (Gotthardt and Hare 1994). Mr. Smith was to identify and contact a KDFN elder knowledgeable of the area, however, this has not been completed as yet.

Ms Gloria Kerwin, human resources, and elder and elder coordinator Ms. Francis Wosely were met with at TKC. Upon a second meeting with Mr. Joe Jacobs, TKC's band resource officer, and Mr. Willie Asp, it was determined that no known traditional sites existed within the area and no traditional studies encompassing the study area had been undertaken. Ms. Wosely reviewed the study area map and had no concerns regarding TKC's traditional use of the area.

Heritage Branch archaeologists were met with and the study area was reviewed with them. Except for the McCrae highway camp, no known significant sites occur within the study area. During discussions, and based on previous work near the study area, it was determined that the general region had low to moderate archaeological potential (note: Mr. Greg Hare conducted an assessment in 1994 in the Mr. Sima area). A day was spent with Mr. Hare in the field to relocate some of the historic features he encountered during his 1994 study. A discussion was also carried out with the Yukon Paleontologist Dr. John Storer. Eocene era fossils have been reported to have come from a location within the study area; however, the Dr. Storer has not been able to relocate the source and is somewhat skeptical of the provenience assigned to the fossils.

After discussions with the two First Nations, Heritage Branch officials and the review of the archaeological site database and maps the general area was concluded to have low to moderate archaeological potential. The general terrain further supports this conclusion. It is characterized by wetland areas consisting of small ponds and slow moving streams with dryer areas that are, in locations, incised by narrow, steep canyons resulting from the streams original cut through the basalt lava flows. In general, the study area is heavily forested. Slopes are steep, uneven and have little in the way of deposition.

Inukshuk Planning and Development provided air photographs of the study area in addition to a 1:5000 topographic map and these were used to determine areas of heritage potential. Heritage potential categories were devised—high, high to moderate, moderate to low and low to moderate—based on an area’s proximity to water, streams, topographical features and known resources within the study area. Areas considered to be of moderate to low potential had topographical relief located next to a water source; whereas, areas identified as low to moderate in potential consisted only of topographical relief with southern exposures not associated with water sources. High and high to moderate potential areas were where known historic activity existed.

Little in the way of predictive modeling has been carried out in Yukon and there has been no testing as to its reliability when carried out. With this in mind, four days of fieldwork were scheduled to occur in order to gain a more intimate knowledge of the study area as well as to undertake pedestrian survey within the ranked areas. An assistant for TKC and KDFN helped with the fieldwork, however, it was stopped short due to the early snowfall.

RESULTS

As a result of the work undertaken a total of 28 areas are identified as being higher than low in potential, which account for approximately 30 percent of the overall area (Figure 2). One of the 28 potential areas ranks as a high and a high to moderate, 18 are considered to be moderate to low, and 9 rank as low to moderate. Only areas 1, 4 and 5 were subject to pedestrian survey and Area 4 was the only area to yield significant cultural resources.

Within the areas ranked, excluding areas 1 and 5, an archaeological assessment is needed if significant development is to occur. Significant development is defined here as any activity that would alter the character and/or integrity of a heritage feature whether by ground disturbance or otherwise. The actual potential to yield archaeological material within these areas is low and if this was the only determining factor to spur an assessment none would be needed. However, it is possible that traditional and historic resources related to hunting, travel, trapping and mining exist within these areas. As a result of the data gaps, nothing short of a physical pedestrian survey will ensure that no significant heritage resources will be impacted due to development. Survey in the ranked areas

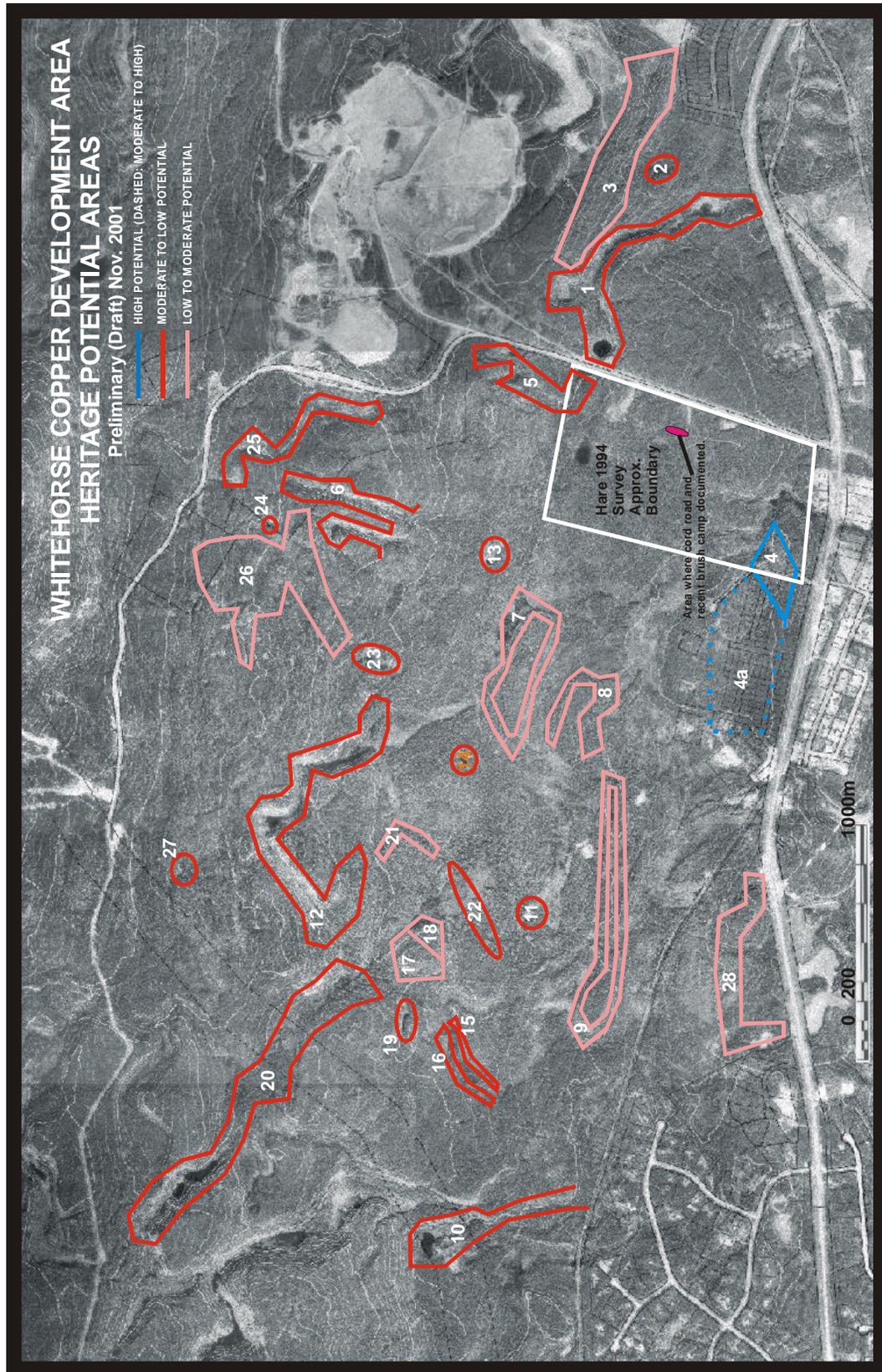


Figure 2. Composite mosaic of study area showing areas of heritage potential.

identified is adequate coverage for the study area unless a site specific is identified within the unranked or low potential areas as a result of further archival and/or informant research. No more than a maximum of four to five days would be required to carry out an assessment on the remaining areas of potential. Elder interviews are still recommended due to the existing data gaps in the traditional use of the study area and would add greatly to the resolution to the field survey, but are not essential. Such interview work could be carried out concurrently with the field assessment and would involve one KDFN elder for half a day.

Hare (1994) recorded three features during his survey of the Mount Sima Subdivision Area. Stop 2 was a cement building pad and water cistern, which has now been destroyed as a result of development. The second feature was a section of corduroy road (GPS Coordinates NAD 83 08 498711E/6722882N – coordinates from Hammer 2001 on relocation of road at Mr. Ian Robertson's request). In the immediate vicinity of this road a recent brush camp (NAD 83 08 498705E/6722894N) and refuse area (50m southwest of the brush camp) were recorded during 2001 studies. These are considered recent and not significant heritage resources and no further work is required.

Hare's Stop 4 and 5 are features that are included within the 2001 study's Area 4 as are the two cellar type depressions recorded by Mr. Ian Robertson at the base of the northwest slope. Area 4 marks the border of the McCrae World War II highway construction camp. A preliminary survey of this area was carried out during the 2001 investigations in order to determine the camp's borders (see Figure 2). During this survey a number of former building outlines were observed along with a number of deep, wood cribbed depressions associated with piping. As well, a large dump containing era related and more recent material was observed located along the northwestern border of the camp.

It is clear that any development of this area would first need to be preceded by mitigative measures. Avoidance is preferred. If avoidance is not possible then a program of mapping and feature identification of the camp would need to be undertaken. This mapping complemented with an in-depth archival search would successfully mitigate any impacts as a result of development. It is estimated that mapping of the site would take



Figure 3. Peter Borotsik of TKC stands to the side of the Corduroy Road Documented by Hare in 1994.

seven to ten days with an equal amount of time allotted for archival research and write-up.

The McCrae site was a major army highway construction camp and as such has high interpretive value. Interpretive signage is present on the opposite side of the highway and there are currently no plans for further interpretation of this site by Heritage Branch (Hare personal communication 2002). Nevertheless, the interpretive potential of the features present and the site as a whole may want to be taken into account during development of this area. The interpretive potential of the site will become more clear when the mapping and archival research is complete.

The historic dump poses considerable problems not only for heritage mitigation work but also potential for general environmental and safety issues. The latter two issues, however, are beyond the scope and expertise of the author. Issues related to heritage mitigation include the dump's size, grossly estimated at 200m x 150m, and the massive amounts of material culture contained within it. Even a small sampling of the dump (5 percent) would generate a massive artifact collection that would either be impossible to store within- or tax the existing Heritage Branch storage space for collections. Furthermore, the sampling strategy would need to take into account artifact sorting within a colluvium type depositional environment and require a larger than 5 percent sample in order to be representative. Although not impossible to develop and



Figure 4. Remains associated with the McCrae WWII Highway Construction Camp.



Figure 5. Large cribbed depression associated with the McCrae WWII Highway Construction Camp.

carryout, the cost of such a strategy coupled with the problems of artifact analysis and storage would far out way the information gleaned concerning the social history of a WWII Alaska Highway construction camp.

Discussions were held with Greg Hare of the Yukon Heritage Branch about the dump, its potential for significance and mitigation strategies if it were to sustain impact, which includes any type of clean-up. It is assumed here that development of and/or

impact to the dump means the clean up and removal of material from the dump. The dump is regarded as having significance and avoidance of it is preferred. If avoidance of the dump is not possible then two options exist to mitigate impacts. One option is to cap or bury the remains thereby protecting them from surface disturbance and occasional collecting; however, if subsurface disturbance is to occur then capping is not an effective course of action. The second option is to monitor the development (i.e. clean up) of the dump as it occurs. This would entail a material culture specialist and/or an archaeologist to monitor the removal of material and select those items that are considered to be significant. As well, by observing the contents of the dump, general comments can then be made on its contents and any patterning of those contents.

Area 4a was briefly surveyed with no significant remains documented. This area deserves further survey and mapping if development is to proceed to ensure that no peripheral features associated with the McCrae camp are missed.

STAGE 1 RECOMMENDATIONS

The following is a recap of the recommendations presented within the results section of this report.

1. *It is recommended that an archaeological impact assessment within the ranked areas identified be carried out and that this is an adequate coverage of the study area unless a site specific is identified within an unranked or low potential area.*
No more than a maximum five days would be required to carry out this impact assessment.
2. *Elder interviews are recommended due to the existing data gaps in the traditional use of the study area. Such an interview would add greatly to the resolution to the field survey.*
Such interview work could be carried out concurrently with the archaeological impact assessment and would involve one KDFN elder for half a day.
3. *It is recommended that impact to the McCrae World War II Alaska Highway Construction Camp be avoided (Areas 4 and 4a Figure 2). If impact to the camp is unavoidable then it is recommended that a program of mapping and feature identification of the camp be undertaken. In conjunction with the mapping activities an archival search for detailed background information would also be required. This work would successfully mitigate any impacts as a result of development of the camp.*
It is estimated that mapping of the site would take seven to ten days with an equal amount of time allotted for archival research and write-up.

4. *It is recommended that impact to the dump associated with the McCrae World War II Alaska Highway Construction Camp be avoided. If avoidance of the dump is not possible then the remains should be capped to bury the remains thereby protecting them. If capping is not possible and/or subsurface disturbance is to occur and/or dump material is to be removed then it is recommended that the removal of material be monitored as it occurs. It is recommended that a material culture specialist and/or an archaeologist carry out the monitoring and collecting of significant artifacts.*
The monitoring would require one, preferably two archaeologists--depending on the size of the effort—to be onsite during the removal of the material.

ONGOING WORK

Stage 1 or the preliminary heritage overview assessment of the study area is complete. At a meeting in December of 2001, with Mr. Brian Ritchie of, Manager of Land Development of Engineering and Development Branch, Community and Transportations Services, and Mr. Ian Robertson of Inukshuk Planning and Development it was proposed that the following tasks be carried out by Hammerstone Archaeological Consulting up to and in the spring of 2002.

1. That a mitigation strategy and options be developed to mitigate potential impacts to the McCrae WWII dump. (this is complete and is presented in the body of this report).
2. That archival research be carried out concerning the McCrae WWII Highway Construction Camp in preparation for surveying mapping activities to occur in the spring. This research would also aid the land use planners.
3. That a program of archaeological survey and mapping be carried out in the location of the McCrae WWII Highway camp to identify and map significant heritage resources associated with the former camp.
4. To carry out an archaeological assessment on the ranked areas presented within this report in the spring of 2002. The number of areas to be survey would be dependent on the type of development activities to occur within or near them.

REFERNCES CITED

Gotthardt, R. and G. Hare

1994 *Fish Lake: Uncovering the Past*. Kwanlin Dun First Nation, Whitehorse.

Hare, P.

1994a *Final Report on the Archaeological Survey of Six Developments in the Greater Whitehorse Area*. Report on file with Heritage Branch, Whitehorse.