

Alteration to sites GcTg-22, 25, 26, 27, 31, 32 associated with Improvements to the Mile 28 Crossing, Terrace BC, MOTI LKI Segment 1508 from km 103.10 to km 106.50
 Brent Persello
 Ministry of Transportation and Infrastructure



HERITAGE CONSERVATION ACT

APPLICATION FOR ALTERATION PERMIT (R)

The undersigned hereby applies for a permit, under **Section 12** of the *Heritage Conservation Act*, to carry out an alteration in accordance with the information requested on the reverse of this form.

Name: <i>Brent Persello</i>	Company: <i>Ministry of Transportation and Infrastructure</i>	
Address: <i>231-447 Columbia Street, Kamloops B.C., V2C 2T3</i>		
Phone: <i>250-828-4197</i>	Fax: <i>250-828-4083</i>	Email: <i>Brent.Persello@gov.bc.ca</i>

The proposed alterations require a qualified archaeologist to act as a co-applicant:

Permit Deliverables are due:	<i>30 December 2018</i>
Permit expiry date:	<i>30 December 2018</i>

PERMIT CO-APPLICANT'S CERTIFICATION(S)

I certify that I am familiar with the provisions of the *Heritage Conservation Act* of British Columbia, and that I will abide by the terms and conditions listed herein, or any other conditions the Minister may impose, as empowered by said *Act*.

Permit Co-Applicant's Certification(s)

Date: <i>2017.01.08</i>	Permit Applicant Name: <i>Brent Persello</i>	Signature: 
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GENERAL TERMS AND CONDITIONS OF PERMIT

1. Permits shall be valid for the term stipulated on the front of the permit unless otherwise suspended or cancelled. Extensions to the term of the permit, or other amendments, will be considered upon submission of a request to the Archaeology Branch at least 45 days prior to the expiry date of the permit.
2. The permit-holder shall provide the Archaeology Branch with one (1) bound copy, if longer than five (5) pages, and one (1) electronic copy in PDF format of a written report outlining the work carried out under the terms of the permit.
3. The title page of all reports must indicate the name(s) of the copyright owner(s) and, where agreed to, a Grant of License statement completed and signed by the copyright owner(s).
4. The permit-holder shall provide the Archaeology Branch with an updated British Columbia Archaeological Site Inventory Form for any site altered under authority of the permit.
5. A person appointed by the Branch may at any time inspect any aspect of a project conducted under the terms of this permit. To further their inspection, the appointee may request field data, or conduct excavations within the study area. Notwithstanding the expiration or earlier termination of the term of the permit this provision will remain and continue in full force and effect.
6. Where a condition for archaeological monitoring of development is attached to the permit, the permit-holder shall arrange for a secure repository to curate any materials recovered under authority of the permit.
7. Heritage objects and associated materials recovered under authority of the permit may not be sold or exchanged for financial gain. Any other transfer of heritage objects, materials and records, or changes to the conditions identified under the "Disposition of materials collected..." section of the permit, may only be carried out with prior consent of the Minister.
8. A permit does not authorize the holder of the permit to enter property, or to make any alteration to property, without the permission of the owner or occupier.
9. In the event that human remains are encountered, all work must cease in the vicinity of the remains and the Archaeology Branch must be contacted for direction, unless otherwise provided for in the permit application.
10. Where concurrent archaeological studies are required, per Section 5 of the application, an Eligible Archaeologist, as approved by the Branch, will be retained by the applicant. Any ground-altering activities must be conducted under the direction of the archaeologist.
11. Any other conditions that may be specified in the permit.

PROJECT DESCRIPTION

(Provide full information under appropriate headings)

1. TYPE OF SITE ALTERATION

Specify the nature of, and rationale for, alterations. The Ministry of Transportation and Infrastructure has proposed tree removal relating to improvements to Highway 16 associated with the Mile 28 Crossing. Two development areas; the road realignment right-of-way (20.2 ha) and the Andesite Pit (31.9 ha) will impact protected archaeological resources. Timber harvest of pre-1846 CMTs within culturally modified tree sites GcTg-22, 25, 26, 31 and 32 as well as potential impact to archaeological site GcTg-27, all related to The Ministry of Transportation and Infrastructure’s proposed improvements to Highway 16 associated with the Mile 28 Crossing Also, timber harvest of pre-1846 CMTs within culturally modified tree sites GcTg-31 and 32 related to the Ministry of Transportation and Infrastructure’s proposed expansion of the nearby Andesite Pit for material extraction for this and other MOTI projects.

Works at GcTg-22, GcTg-25, GcTg-26, GcTg-31, and GcTg-32, will require clearing that will impact protected CMTs (see attached location map, Table 1 and Figure 1). Trees will be cleared using conventional ground-based equipment in order to undertake the work; including road improvements and quarrying of supplies for improvements. These activities will conflict with five pre-1846 Culturally Modified Tree (CMT) sites; GcTg-22 (of which six will or may be impacted [CMT1-3, 14-16]), GcTg-25 (one CMT), GcTg-26 (two CMTs), GcTg-31 (two CMTs), and GcTg-32 (three CMTs) (see attached Figure 2-7 Site Maps). In the case of GcTg-22 CMTs 1 - 3 and 15 & 16 are not in the construction right-of-way, however, construction activities may leave the sites without the recommended 30 m wind firm buffer surrounding them. In those instances the site locales will be assessed by a qualified forester to determine if protected CMTs are at risk. If the trees are at risk they will be felled for the age information in case they are lost to weather events during or after construction.

Table 1. CMTs that will or may be harvested/impacted.

<i>Site</i>	<i>Trees that will be impacted</i>	<i>Trees that may be impacted</i>
GcTg-22	CMT 14 (See Figure 2)	CMT 1-3; CMT 14-16
GcTg-25	CMT 1 (See Figure 3)	
GcTg-26	CMT 6 & 7 (See Figure 4)	
GcTg-31	CMT 1 & 2 (See Figure 6)	
GcTg-32	CMT 3-5	

In the event that any archaeological remains (excluding CMTs) are discovered during development activities, all activities within the vicinity of the remains will cease and the Archaeology Branch and the affected First Nations will be notified immediately.

Improvements to Highway 16 will also require some blasting of bedrock, resulting in the dispersal of blast rock. As a result, while the lithics site GcTg-27 (see Figure 1 and 5) will be excluded from impacts from construction, it may be adversely impacted by blast rock. In order to protect the site it will be covered with a layer of geotextile and a thin cover of gravel to ensure it is shielded from inadvertent damage through adjacent works. This covering will be permanent.

Sector: Transportation

2. ARCHAEOLOGICAL PERSONNEL

Is an archaeologist required to monitor the alterations and conduct an assessment?

No. Provide rationale and proceed to Section 3:

Systematic recording of the CMTs to be impacted has already been undertaken by ARCHER and Kleanza crews. No further field work is required. Once felled ARCHER CRM Partnership will be contacted to date all collected stem-round disc samples.

Preparation of the site area for placement of geotextile and fill over the protected site of GcTg-27 will be monitored by archaeologists to ensure that no damage is done to the site, nor artifacts or features exposed in adjacent work areas. No artifacts or other cultural materials will be collected from GcTg-27 as a result of this work.

3. BACKGROUND

Indicate previous archaeological studies specific to these alterations.

Details:

Table 2. Previous Archaeological Studies

<i>Type of Assessment</i>	<i>Distance and Direction from Proposed Alteration</i>	<i>Year of Assessment</i>	<i>HCA Permit # if applicable</i>
AIA	Overlapping	2011	2009-0386
AIA	Overlapping	2015, 2016	2014-0108
PFR	Overlapping	2015	2014-0108

Describe archaeological site type(s) and provide permanent site identification number(s).

Table 3. Archaeological Site(s)

<i>Borden Number</i>	<i>Site Description</i>
GcTg-22	Fourteen living western redcedar CMTs which are a mixture of pre and post-1846 CMTs recorded under permit 2009-0386.
GcTg-25	One living western redcedar bark strip CMT recorded under permit 2014-0108. The site was ascribed a low scientific significance of 12/36 (as per Eldridge 1997).
GcTg-26	One living western redcedar testhole CMT and one living western hemlock blazed CMT recorded under permit 2014-0108. The site was ranked as low scientific significance, scoring 18/39 (as per Eldridge 1997).
GcTg-27	Subsurface lithics site of low density recorded under permit 2014-0108. No diagnostic remains or dateable materials were identified during either field visit (ARCHER 2016a, 2016b).
GcTg-31	One living and one dead western redcedar bark strip CMTs recorded under permit 2014-0108. The site was ascribed a low scientific significance of 10/36 (as per Eldridge 1997).
GcTg-32	Three living western redcedar bark strip CMTs recorded under permit 2014-0108. The site was ascribed a low scientific significance of 10/36 (as per Eldridge 1997).

Details:

GcTg-22 The final report for this site is not yet available for reference. However, the site form recommends avoidance. In the absence of avoidance the acquisition of a Section 12 SAP with the collection of stem-round samples for dating the alterations (Government of BC n.d.). The CMT table which is accessible from RAAD demonstrates that the trees have been recorded to Level II standards and thus a S12 is warranted.

GcTg-25 It was recommended that the site be avoided. In the event this was not possible it was recommended that a Section 12 SAP be acquired and that stem round samples be collected for determining CMT ages. Level II CMT metrics had been collected at the time the recommendation was made (ARCHER 2015).

GcTg-26 It was recommended that the site be avoided. In the event this was not possible it was recommended that a Section 12 SAP be acquired and that stem round samples be collected for determining CMT ages. Level II CMT metrics had been collected at the time the recommendation was made (ARCHER 2015).

GcTg-27 It was recommended that the site be avoided, In the event this was not possible it was recommended that a Section 12 SAP be acquired.

GcTg-31 It was recommended that the site be avoided. In the event this was not possible it was recommended that a Section 12 SAP be acquired and that stem round samples be collected for determining CMT ages. Level II CMT metrics had been collected at the time the recommendation was made (ARCHER 2016b).

GcTg-32 It was recommended that the site be avoided. In the event this was not possible it was recommended that a Section 12 SAP be acquired and that stem round samples be collected for determining CMT ages. Level II CMT metrics had been collected at the time the recommendation was made (ARCHER 2016b).

4. LOCATION

Table 4. Location

<i>Choose as Appropriate</i>	<i>Description</i>
<input checked="" type="checkbox"/> Private Property	<i>GcTg-25, GcTg-26, GcTg-27: Range 5, Coast District, PT of DL 65558 R5C on P11474.</i>
<input checked="" type="checkbox"/> Crown land	<i>GcTg-22; GcTg-31; GcTg-32: Range 5 Coast District; Unsurveyed Crown Land. Note: GcTg-31 & 32 are within the Andesite Creek Gravel Reserve.</i>

Provide location/development/archaeological site maps. Applications submitted by professional archaeologists must include maps which comply with provincial [standards](#).

5. ARCHAEOLOGICAL STUDIES

Are archaeological studies proposed?

Yes.

Procedure for stem round sample collection:

- Assure proper identifiers/labels are present on CMTs at time of harvest.
- Stem round sample to be collected from butt of fallen tree, and is to contain segment of scar face.

- Stem round sample labeled in field by affixing original identifier to it (flagging or tag), and also spray painted or marked with thick black marker with tree # and site #.
- If stem round sample shatters during collection, a second stem round sample should be collected and the first discarded. If stem round samples cannot be collected intact, the fragments of each individual fragmented stem round sample are to be placed together in one burlap (or equivalent) bag.
- The ages of CMT scar event dates found in stem round samples will be verified by an archaeologist for summary and discussion in the S12 report.

5.2 Data Analysis

Stem-round samples will be collected from felled CMTs to verify the period of activity associated with cultural modifications at this site. The information will complement photos and CMT feature attribute data obtained for archaeological site GcTg-22, GcTg-25, GcTg-26, GcTg-31 and GcTg-32 by ARCHER (2015, 2016a, 2016b).

6. DISPOSITION OF CULTURAL MATERIALS

Will the proposed alterations require a repository?

No. CMT samples will be analysed and offered to the relevant First Nations. If the CMT samples are not claimed, they will be discarded one year after the expiry of the permit.

No disturbance is anticipated to site GcTg-27, no artifacts or cultural materials will be collected, and no repository will be required.

7. SCHEDULE

Alteration schedule: January 2017 – October 2018

Details: Project is expected to commence with clearing of the right-of-way and culvert installations as early as January 2017. The construction work is anticipated that the work will take place over two construction seasons and be complete by October 2018. It is requested that this permit be active from the date of issuance until December 30, 2018. A final report and updated site forms will be submitted to the Archaeology Branch prior to permit expiry. The final report will include results of stem round sample analysis.

8. REPORTING

A report will be provided by the date cited on the front of the permit. The report will summarize the alterations to the sites and any archaeological studies conducted. The report will document: the dates, locations and extent of alterations (horizontal and vertical extent,

volume); the methods employed; the nature and integrity of cultural deposits impacted and the estimated proportion of intact deposits remaining; the results of any analyses; an evaluation of site significance; and any future recommendations.

Copies of the report will be sent to First Nations with an asserted Traditional Territory in the project area who have expressed an interest in receiving these reports.

9. PREVIOUS PERMITS HELD BY APPLICANT

Is this the applicant's first permit?

No. The applicant has held and completed more than three permits.

NOTICE REGARDING COPYRIGHT

At the time of report production, the owner(s) of the report copyright will be asked to grant a non-exclusive license to the Province of British Columbia for the purpose of copying and distributing the report. The granting of this license will facilitate access to the archaeological data contained within the report and will therefore contribute to the protection of heritage resources throughout the Province. Copyright owners who refuse to grant a license to the Province, and anyone carrying out research on behalf of those copyright owners, will not be granted access to the Archaeology Branch's online library and will not be permitted to photocopy reports within the Branch office.

NOTICE REGARDING OTHER PERMITS

No permits or approvals, other than a *Heritage Conservation Act* permit, are required to carry out the alterations described in the permit application. However, licensees and property owners or developers may also require other approvals such as forestry cutting permits and municipal development permits.

10. REFERENCES CITED

ARCHER CRM Partnership

2015 Preliminary Field Reconnaissance of Ministry of Transportation and Infrastructure Highway 16 – Mile 28 Level Crossing. Prepared for Ministry of Transportation and Infrastructure, Prince George BC. Consultant file #10944. Copies available from ARCHER CRM Partnership.

2016a Archaeological Impact Assessment of Improvements to the Mile 28 Crossing, Terrace BC; MOTI LKI Segment 1508 from Km 103.81 to Km 107.1. HCA Permit 2014-0108. Prepared for Ministry of Transportation and Infrastructure, Prince George BC. Consultant file 11313. Copies Available from the Archaeology Branch of British Columbia, Victoria, BC.

Alteration to sites GcTg-22, 25, 26, 27, 31, 32 associated with Improvements to the Mile 28 Crossing, Terrace BC, MOTI LKI Segment 1508 from km 103.10 to km 106.50

Brent Persello

Ministry of Transportation and Infrastructure

2016b Archaeological Impact Assessment of Improvements to the Mile 28 Crossing, Terrace BC; MOTI LKI Segment 1508 from Km 103.10 to Km 106.50. HCA Permit 2014-0108. Prepared for Ministry of Transportation and Infrastructure, Prince George BBC. Consultant file 11469. Copies Available from the Archaeology Branch of British Columbia, Victoria, BC.

Eldridge, Morley

1997 *The Significance and Management of Culturally Modified Trees*. Final Report prepared for Vancouver Forest Region and the Culturally Modified Trees Steering Committee. Available at http://www.ceaa-acee.gc.ca/050/documents_staticpost/cearef_3394/hearings/SM03.pdf. Accessed 3 August 2016.

Government of British Columbia

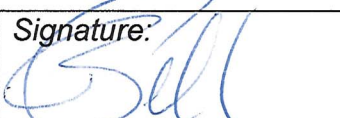
No date GcTg-22. Victoria, BC, Remote Access to Archaeological Data (RAAD). Accessed 3 August 2016.

CONSENT TO THE USE OF PERSONAL INFORMATION

Permit applicants and their clients must consent to the use of personal information such as names, addresses, and telephone numbers that is included in permit applications, site inventory forms or permit reports. **However, consent is not required from representatives of corporate clients. Property owners must also consent to the use of this information if the application applies to private property.** This consent is necessary as the Archaeology Branch collects and distributes personal information that is subject to the Freedom of Information and Protection of Privacy Act.

I consent to the use of personal information contained in this application, as well as the personal information contained in the resulting site inventory form and permit report, for contact and verification purposes. I understand this information will be retained in the provincial archaeological site database and permit report. I also understand this information may be disclosed to researchers, consulting archaeologists and other users of the database and permit report. Database users must identify themselves and the purpose of their information request, and are precluded from further distribution of the information they obtain. The permit report will be publicly available once it has been accepted as meeting permit terms and conditions.

Permit Co-applicant's Consent to the Use of Personal Information (when held by an individual)

Date: 2017.01.08	Permit Co-Applicant Name: Brent Persello	Signature: 
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*The location maps associated with this document contain confidential information regarding the location of protected Archaeological resources. To obtain a copy of the location maps please forward your request to:
bill.rose@wdrprojects.ca*