

**From:** [Mountainside Quarries](#)  
**To:** [Malt, Joshua F\\_LNR:EX](#)  
**Cc:** ["John Moonen"; tomlath@telus.net](#)  
**Subject:** MountainSide quarries  
**Date:** January 11, 2021 12:10:53 PM  
**Attachments:** [image003.png](#)  
[CCE20210111\\_0001.pdf](#)

---

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Hi Josh,

Attached are signed documents and a response to your question as per Brent Palmer.

Regards,

Alexis

**MountainSide Quarries Group Inc.**

**[Info.msq@telus.net](mailto:Info.msq@telus.net)**

604-504-4461



Virus-free. [www.avast.com](http://www.avast.com)

**From:** [Mountainside Quarries](#)  
**To:** [Malt, Joshua FLNR:EX](#)  
**Subject:** RE: MountainSide quarries  
**Date:** January 11, 2021 2:23:13 PM  
**Attachments:** [image004.png](#)  
[image005.png](#)  
[image001.png](#)  
[image002.jpg](#)  
[Peregrine falcon Mitigation agreement.pdf](#)

---

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Hi Josh,

I have attached the agreement as its own file.

Regards,

Alexis

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---

**From:** Malt, Joshua FLNR:EX  
**Sent:** January 11, 2021 1:08 PM  
**To:** 'Mountainside Quarries'  
**Cc:** 'John Moonen' ; [tomplath@telus.net](mailto:tomplath@telus.net); Brent Palmer  
**Subject:** RE: MountainSide quarries

Hi Brent,

Thanks for your response. A couple of points:

- Please resend the signed mitigation agreement as a stand-alone document. This would be included as an attachment in the final permit, so must be a separate document.
- I am somewhat surprised by your reticence to provide complete details/rationale on why the impact to the nest site cannot be avoided. To be clear, I'm not asking for this information to delay

the process or be obstructionist. Rather, I'm simply doing my due diligence as a decision maker. This is in your best interest, since providing a strong rationale will make this a more durable decision, and provide a stronger defence if this decision is appealed.

- Also, it is not true that this is not part of the mitigation plan. As per government EMP policy, an essential component of mitigation planning is to first demonstrate whether you can avoid or minimize the impact. Only after you've demonstrated that impacts cannot be avoided or minimized, can you proceed to mitigation/offset options. I understand that some of this information may have been provided previously, and/or is with the mines application. Unfortunately I don't have any of these details at my fingertips. If you could provide a more detailed and professional rationale, that will make all of our lives easier. The agreement does not need to be changed.

Thanks,

Josh



**Josh Malt, M.Sc., R.P.Bio.**  
**Section Head, Terrestrial Wildlife Resources**

South Coast Resource Management  
Forests, Lands, Natural Resource Operations, and Rural Development  
Suite 200, 10428 - 153 St, Surrey, BC, V3R 1E1  
(778) 572-2269 | Cell: (604) 992-7164

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---

**From:** Mountainside Quarries  
**Sent:** January 11, 2021 12:11 PM  
**To:** Malt, Joshua FLNR:EX  
**Cc:** 'John Moonen' ; tomlath@telus.net  
**Subject:** MountainSide quarries

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**To:** [Malt, Joshua FLNR:EX](#); [Brent Palmer](#)  
**Cc:** [John Moonen](#)  
**Subject:** Re: PEFA Mitigation Agreement & Plan  
**Date:** January 8, 2021 3:06:39 PM  
**Attachments:** [image001.png](#)

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Hi Joshua,

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**From:** "Joshua Malt"  
**To:** "Tom Plath"  
**Sent:** Friday, January 8, 2021 10:26:15 AM  
**Subject:** RE: PEFA Mitigation Agreement & Plan

Hi Tom,

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**Sent:** January 4, 2021 1:23 PM  
**To:** [Malt, Joshua FLNR:EX](#)  
**Cc:** [Brent Palmer](#) ; [John Moonen](#)  
**Subject:** Re: PEFA Mitigation Agreement & Plan

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Hi Joshua,

Happy New Year. We have reviewed the changes and accept the proposed plan and agreement. Attached is the updated plan with the requested "changes" - the addition of some references and clarification of costs. Please send an approved plan and agreement for signing. Thanks

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Also, note that I have changed the agreement such that commitments are related to the potential issuance of the permit rather than project activities, to expedite mitigation measures given the tight timelines.

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**From:** [tomplath@telus.net](mailto:tomplath@telus.net) <[tomplath@telus.net](mailto:tomplath@telus.net)>

**Sent:** December 18, 2020 12:56 PM

**To:** Malt, Joshua FLNR:EX <[Joshua.Malt@gov.bc.ca](mailto:Joshua.Malt@gov.bc.ca)>

**Cc:** Brent Palmer <[quarries@telus.net](mailto:quarries@telus.net)>; John Moonen <[johnmoonen@telus.net](mailto:johnmoonen@telus.net)>

**Subject:** Re: Please sign the attached approved Dec 3rd mitigation package.

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Hi Joshua and Brent,

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2. Mountainside quarries accepts the 50 metre buffer should the Peregrines decide to nest. This has been written into the agreement.
3. Upon issuance of the permit, the mitigation amount of \$75,900 will be paid into a trust account established with the Proponent's solicitors.
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I believe the agreement is ready to be signed by all parties.

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Thomas Plath

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To complete the process, there are a few outstanding issues that need clarification:

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2. As you are aware, we are approaching the breeding season window of March 30 - July 20, during which the Quadling nest site, if active, may contain adults with eggs and/or young. As such, it is possible that nest boxes won't be installed in time to successfully attract the resident pair. If this is the case (e.g. the pair decides to nest on site, and does not move into newly-established nest boxes nearby this year), a 50 meter non-disturbance buffer will need to be established surrounding the nest site until the end of the breeding season. This will avoid direct mortality or injury to nesting birds, reduce the risk of nest abandonment, and provide ample time for the successful establishment and use of nesting boxes the following year. If a Qualified Professional determines definitively that the Quadling nest site is not active this year (no nesting by the resident pair; as determined at the beginning of the breeding season window), then destruction of the nest site can proceed. Otherwise this will need to be avoided until after July 20.
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-----Original Message-----

From: [tomplath@telus.net](mailto:tomplath@telus.net) <[tomplath@telus.net](mailto:tomplath@telus.net)>

Sent: December 17, 2020 10:21 PM

To: Malt, Joshua FLNR:EX <[Joshua.Malt@gov.bc.ca](mailto:Joshua.Malt@gov.bc.ca)>

Cc: Brent Palmer <[quarries@telus.net](mailto:quarries@telus.net)>; John Moonen <[johnmoonen@telus.net](mailto:johnmoonen@telus.net)>

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Hi Josh,

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I trust the above will satisfy all outstanding requirements and allow you to issue the requested permit immediately.

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**To:** [Malt, Joshua FLNR:EX](#)  
**Cc:** [Brent Palmer](#); [John Moonen](#)  
**Subject:** Re: PEFA Mitigation Agreement & Plan  
**Date:** January 8, 2021 12:53:19 PM  
**Attachments:** [image001.png](#)

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Hi Joshua,

the section of the quarry that the Peregrine nested at is slated for removal as part of quarry works. For the quarry to be viable and the nest area has to be removed. The quarry is anticipated to be active for 10-12 years. Brent is better suited to give you details of the proposed quarry works and duration. Thanks

---

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**Date:** January 8, 2021 4:43:34 PM  
**Attachments:** [image001.png](#)  
[PEFA Mitigation Agreement\\_2021Jan8.docx](#)  
[PEFA Mitigation Agreement\\_2021Jan8\\_clean.docx](#)  
[PEFA Mitigation Plan\\_2021Jan8.docx](#)

---

Hi Tom,

I have made a few changes. Apologies for the many iterations on this.

Please review with the proponent and let me know if there is agreement with these changes. I have also included a clean version of the mitigation agreement for efficiency.

Before we finalize this, I would like to get a more complete understanding of why this nest site cannot be avoided. I'm not necessarily disputing this assertion, I just do not have enough detail to fully understand the rationale.

I understand that the nest is in the middle of the extraction area, and that it is slated for removal. The assertion is that for the quarry to be viable the nest site must be removed. However, I have no technical details to understand why this is the case. For instance, if the nest site was retained what percentage of extractable materials could still be mined around it? How would this affect economic viability? Can you provide a map or some engineering drawings to support this?

I have also reached out to Jim Dunkley on this but he is on vacation until January 20.

Given the intense public scrutiny on this, this information will help ensure that this is a robust and defensible decision.

Once I have that information, we can add it to the mitigation plan. If all information is complete and satisfactory, we can then sign the mitigation agreement, and then proceed with issuance of the permit.

Thanks,

Josh



**Josh Malt, M.Sc., R.P.Bio.**  
**Section Head, Terrestrial Wildlife Resources**

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These should be kept as separate documents moving forward (the Plan is referred to as "attached" in the Agreement ).

Please go through my recommended changes and accept them or respond.

Please note that I have made suggested changes directly in the document for efficiency, but this document is ultimately the sole responsibility of the proponent and their consultant. Suggested changes are for your consideration only based on my review of your proposal.

In general, this document was poorly organized and difficult to follow, despite being given many opportunities to finalize this.

The budget is fragmented and also difficult to follow. I am not clear if all proposed costs are incorporated into the \$75,900 total. Please consolidate all costs into one itemized table for clarity (e.g. attached as an Appendix).

Also, note that I have changed the agreement such that commitments are related to the potential issuance of the permit rather than project activities, to expedite mitigation measures given the tight timelines.

s.22

but will respond to any inquiries as soon as I am back.

Sincerely,

Josh Malt



**Josh Malt, M.Sc., R.P.Bio.**  
**Section Head, Terrestrial Wildlife Resources**  
South Coast Resource Management  
Forests, Lands, Natural Resource Operations, and Rural Development  
Suite 200, 10428 - 153 St, Surrey, BC, V3R 1E1  
(778) 572-2269 | Cell: (604) 992-7164



Our Mission is: *To maintain, enhance, and restore British Columbia's native wildlife populations, habitats, and ecosystems through science-based management and conservation, on behalf of current and future generations.*

---

**From:** [tomplath@telus.net](mailto:tomplath@telus.net) <[tomplath@telus.net](mailto:tomplath@telus.net)>

**Sent:** December 18, 2020 12:56 PM

**To:** Malt, Joshua FLNR:EX <[Joshua.Malt@gov.bc.ca](mailto:Joshua.Malt@gov.bc.ca)>

**Cc:** Brent Palmer <[quarries@telus.net](mailto:quarries@telus.net)>; John Moonen <[johnmoonen@telus.net](mailto:johnmoonen@telus.net)>

**Subject:** Re: Please sign the attached approved Dec 3rd mitigation package.

**[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.**

Hi Joshua and Brent,

excellent. Thanks for the fast review. Mountainside accepts the mitigation package. I have updated both the agreement and appended mitigation plan to agree. For outstanding issues:

1. Attached is the revised agreement with appended mitigation plan updated to reflect changes agreed upon by FLNR and Mountainside Quarries Ltd.
2. Mountainside quarries accepts the 50 metre buffer should the Peregrines decide to nest. This has been written into the agreement.
3. Upon issuance of the permit, the mitigation amount of \$75,900 will be paid into a trust account established with the Proponent's solicitors.
4. Mountainside quarries has retained Thomas Plath Environmental Services to conduct the mitigation efforts.

I believe the agreement is ready to be signed by all parties.

Respectfully Yours  
Thomas Plath

---

**From:** "Joshua Malt" <[Joshua.Malt@gov.bc.ca](mailto:Joshua.Malt@gov.bc.ca)>

**To:** "Tom Plath" <[tomplath@telus.net](mailto:tomplath@telus.net)>

**Cc:** "Brent Palmer" <[quarries@telus.net](mailto:quarries@telus.net)>, "John Moonen" <[johnmoonen@telus.net](mailto:johnmoonen@telus.net)>

**Sent:** Friday, December 18, 2020 11:21:52 AM

**Subject:** RE: Attached approved Dec 3rd mitigation package.

Hi all,

Thank you for the recent updates you have sent. I am comfortable capping the mitigation amount at \$75,900; and am committed to continuing to prioritize adjudication of this

permit.

To complete the process, there are a few outstanding issues that need clarification:

1. As described previously, issuance of the permit will require a signed Mitigation Agreement with the Mitigation Plan appended. As such, any changes to the plan need to be reflected in the agreement.
2. As you are aware, we are approaching the breeding season window of March 30 - July 20, during which the Quadling nest site, if active, may contain adults with eggs and/or young. As such, it is possible that nest boxes won't be installed in time to successfully attract the resident pair. If this is the case (e.g. the pair decides to nest on site, and does not move into newly-established nest boxes nearby this year), a 50 meter non-disturbance buffer will need to be established surrounding the nest site until the end of the breeding season. This will avoid direct mortality or injury to nesting birds, reduce the risk of nest abandonment, and provide ample time for the successful establishment and use of nesting boxes the following year. If a Qualified Professional determines definitively that the Quadling nest site is not active this year (no nesting by the resident pair; as determined at the beginning of the breeding season window), then destruction of the nest site can proceed. Otherwise this will need to be avoided until after July 20.
3. Given the timing constraints described above, mitigation activities should commence upon issuance of the permit. As such, the Mitigation Agreement should be structured to facilitate payment to the contractor (or in trust) with the issuance of the permit such that work could begin immediately.
4. I understand that you are in the process of selecting a consultant to implement the mitigation measures specified in the mitigation plan/agreement. Once you have retained this consultant, please let us know, as having the professionals with the appropriate qualifications will be essential to maximize the probability of success of these measures. On that note- the Mitigation Plan still lists Envirowest as your consultants, which I understand is no longer the case.

Sincerely,

Josh Malt

Josh Malt, M.Sc., R.P.Bio.

Section Head, Terrestrial Wildlife Resources

South Coast Resource Management

Forests, Lands, Natural Resource Operations, and Rural Development

Suite 200, 10428 - 153 St, Surrey, BC, V3R 1E1

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-----Original Message-----

From: [tomplath@telus.net](mailto:tomplath@telus.net) <[tomplath@telus.net](mailto:tomplath@telus.net)>

Sent: December 17, 2020 10:21 PM

To: Malt, Joshua FLNR:EX <[Joshua.Malt@gov.bc.ca](mailto:Joshua.Malt@gov.bc.ca)>

Cc: Brent Palmer <[quarries@telus.net](mailto:quarries@telus.net)>; John Moonen <[johnmoonen@telus.net](mailto:johnmoonen@telus.net)>

Subject: Attached approved Dec 3rd mitigation package.

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Josh,

ignore the last e-mail - wrong mitigation package sent off. Attached is the mitigation package developed by the Province Dec 3rd and presented to Mountainside Quarries Ltd.

Mountainside quarries has concerns that another mitigation review would further delay permit issuance and wish to accept the Dec 3rd mitigation version developed by FLNR provided: a) the mitigation funding amount of \$75,900 is a maximum (capped at \$75,900)

and b) there are no delays in issuing the permit. As stated Mountainside accepts the mitigation package from the Ministry including artificial nest boxes and telemetry. The Province requested further mitigation plan details which is provided in your updated mitigation plan.

I trust the above will satisfy all outstanding requirements and allow you to issue the requested permit immediately.

Respectfully Yours

Thomas Plath

## PEREGRINE FALCON MITIGATION AGREEMENT

This Peregrine Falcon Mitigation Agreement is made this 8<sup>th</sup> day of January 2020, between Mountainside Quarries Ltd. (the “**Proponent**”), and Her Majesty the Queen in Right of the **PROVINCE OF BRITISH COLUMBIA** (the “**Province**”), as represented by the **MINISTRY OF FORESTS, LANDS & NATURAL RESOURCE OPERATIONS AND RURAL DEVELOPMENT** (“**FLNRORD**”).

### WHEREAS:

- A. The Proponent intends to conduct rock and gravel extraction through open pit blasting at the Quadling Road Quarry (the “**Project**”), located at 40251 Quadling Road, Abbotsford, British Columbia;
- B. A Peregrine Falcon nest has been established at the Quadling Road Quarry since at least 2016, with young successfully raised over multiple years thereafter;
- C. Cliff Swallows and other bird species have been observed to be nesting on-site, and these nests are protected under the Wildlife Act when occupied by eggs or young;
- D. Proposed Project activities cannot avoid destruction of the Peregrine Falcon nest site, and ongoing Project activity over the next 10-12 years will preclude nesting;
- E. The Proponent has received a permit Q-7-086 under the Mines Act for the Project;
- F. The Proponent requires a permit from FLNRORD under the Wildlife Act to destroy the Peregrine Falcon nest site (the “**Permit**”);
- G. The Proponent and FLNRORD have reviewed and discussed the Project and the nature of the anticipated impacts to Peregrine Falcon nesting habitat resulting from the Project;
- H. The Proponent and FLNRORD have agreed that the Proponent will undertake the mitigation efforts and required funding for the purposes of mitigating anticipated impacts to the Peregrine Falcon nest site arising from the construction by the Proponent of the Project, as detailed in the Peregrine Falcon Mitigation Plan attached hereto as Schedule A; and
- I. FLNRORD has agreed that through the funding and the implementation of the commitments set out in the Plan and summarized below, the potential impacts of the Project to the Peregrine Falcon nest site will be reduced and the residual effect on Peregrine Falcon nesting is not anticipated to be significant.

NOW THEREFORE in consideration of the promises and mutual agreements between the parties and for other good and valuable consideration, the parties agree as follows:

1. **The Proponent's Obligations**

- (a) **Mitigation.** The proponent will implement the measures outlined below and described in the Peregrine Falcon Mitigation Plan (Schedule A):

**This section should be consistent with the conditions and the mitigation committed to in the Peregrine Falcon Mitigation Plan. If any discrepancies exist, the proponent shall defer to the obligations within this agreement.**

- (i) establish a minimum of three (3) Peregrine Falcon nest boxes within one (1) year of issuance of the Permit for the Project;
- (ii) monitor the success of nest boxes for at least five (5) years from the date of the first nest box establishment;
- (iii) capture and fit satellite transmitters to the 2 adult Peregrine Falcons on site, or adults nesting nearby as a secondary option if that is not possible;
- (iv) track movement and nesting success of Peregrine Falcons tagged with satellite transmitters for at least four (4) years;
- (v) submit a final report outlining the results of measures i-iv above, by 5 years from the issuance of the Permit;
- (vi) if the Peregrine Falcons nest on-site in 2021, establish a 50-metre no-disturbance buffer around the nest site until the end of the breeding season (March 30 – July 20, 2021); and
- (vii) postpone any mining activities that may damage or physically disturb active nest sites of Cliff Swallows or other nesting birds during the songbird breeding season (March 15<sup>th</sup> to August 15<sup>th</sup>).

Deleted: on Crown Land

- (b) **Funding.** The Proponent will provide a total lump sum of \$75,900 held "In Trust" (the "**Funds**"), within 30 calendar days of issuance of the Permit. It is not anticipated that mitigation costs will exceed this amount. This funding will be used to implement the mitigation measures outlined in sections 1a) i-iv of this agreement and the Peregrine Falcon Mitigation Plan (Schedule A), including an estimated \$60,200 for establishing and monitoring nest boxes, and \$15,700 for tagging and monitoring adult Peregrine Falcons.

Deleted: The proponent will not exceed this amount.

2. **FLNRORD Obligations**

- (a) Based on the information provided to FLNRORD by the Proponent as of the date of signing this Agreement, FLNRORD agrees that the provision of Funding set out in Section 1(a) and commitments set out in the Plan adequately mitigate the potential impacts of the Project on the Peregrine Falcon nest site. FLNRORD further agrees the

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- 3 -

residual effect on Peregrine Falcon habitat is not anticipated to be significant and no further compensation or mitigation from the Proponent is expected.

**3. General Terms and Conditions**

- (a) **Term.** This Agreement will expire on the later of:
- (i) the fulfilment by the Proponent of the obligations set out in Section 1; or
  - (ii) December 31<sup>st</sup>, 2028

**IN WITNESS WHEREOF**, the parties have signed this Agreement as of the date first written above.

**Proponent**

Per: \_\_\_\_\_  
Name  
Title:

**MINISTRY OF FORESTS, LANDS AND  
NATURAL RESOURCE OPERATIONS AND  
RURAL DEVELOPMENT**

Per: \_\_\_\_\_

Name: Josh Malt  
Title: Terrestrial Wildlife Resources Section Head, South  
Coast Region  
Business Address: \_\_\_\_\_

**Error! Unknown document property name.**

## PEREGRINE FALCON MITIGATION AGREEMENT

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- F. The Proponent requires a permit from FLNRORD under the Wildlife Act to destroy the Peregrine Falcon nest site (the “**Permit**”);
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- H. The Proponent and FLNRORD have agreed that the Proponent will undertake the mitigation efforts and required funding for the purposes of mitigating anticipated impacts to the Peregrine Falcon nest site arising from the construction by the Proponent of the Project, as detailed in the Peregrine Falcon Mitigation Plan attached hereto as Schedule A; and
- I. FLNRORD has agreed that through the funding and the implementation of the commitments set out in the Plan and summarized below, the potential impacts of the Project to the Peregrine Falcon nest site will be reduced and the residual effect on Peregrine Falcon nesting is not anticipated to be significant.



**NOW THEREFORE** in consideration of the promises and mutual agreements between the parties and for other good and valuable consideration, the parties agree as follows:

**1. The Proponent's Obligations**

- (a) **Mitigation.** The proponent will implement the measures outlined below and described in the Peregrine Falcon Mitigation Plan (Schedule A):

**This section should be consistent with the conditions and the mitigation committed to in the Peregrine Falcon Mitigation Plan. If any discrepancies exist, the proponent shall defer to the obligations within this agreement.**

- (i) establish a minimum of three (3) Peregrine Falcon nest boxes within one (1) year of issuance of the Permit for the Project;
  - (ii) monitor the success of nest boxes for at least five (5) years from the date of the first nest box establishment;
  - (iii) capture and fit satellite transmitters to the 2 adult Peregrine Falcons on site, or adults nesting nearby as a secondary option if that is not possible;
  - (iv) track movement and nesting success of Peregrine Falcons tagged with satellite transmitters for at least four (4) years;
  - (v) submit a final report outlining the results of measures i-iv above, by 5 years from the issuance of the Permit;
  - (vi) if the Peregrine Falcons nest on-site in 2021, establish a 50-metre no-disturbance buffer around the nest site until the end of the breeding season (March 30 – July 20, 2021); and
  - (vii) postpone any mining activities that may damage or physically disturb active nest sites of Cliff Swallows or other nesting birds during the songbird breeding season (March 15<sup>th</sup> to August 15<sup>th</sup>).
- (b) **Funding.** The Proponent will provide a total lump sum of \$75,900 held “In Trust” (the “**Funds**”), within 30 calendar days of issuance of the Permit. It is not anticipated that mitigation costs will exceed this amount. This funding will be used to implement the mitigation measures outlined in sections 1a) i-iv of this agreement and the Peregrine Falcon Mitigation Plan (Schedule A), including an estimated \$60,200 for establishing and monitoring nest boxes, and \$15,700 for tagging and monitoring adult Peregrine Falcons.

**2. FLNRORD Obligations**

- (a) Based on the information provided to FLNRORD by the Proponent as of the date of signing this Agreement, FLNRORD agrees that the provision of Funding set out in Section 1(a) and commitments set out in the Plan adequately mitigate the potential impacts of the Project on the Peregrine Falcon nest site. FLNRORD further agrees the

residual effect on Peregrine Falcon habitat is not anticipated to be significant and no further compensation or mitigation from the Proponent is expected.

**3. General Terms and Conditions**

- (a) **Term.** This Agreement will expire on the later of:
- (i) the fulfilment by the Proponent of the obligations set out in Section 1; or
  - (ii) December 31<sup>st</sup>, 2028

**IN WITNESS WHEREOF**, the parties have signed this Agreement as of the date first written above.

**Proponent**

Per: \_\_\_\_\_  
Name  
Title:

**MINISTRY OF FORESTS, LANDS AND  
NATURAL RESOURCE OPERATIONS AND  
RURAL DEVELOPMENT**

Per: \_\_\_\_\_  
Name: Josh Malt  
Title: Terrestrial Wildlife Resources Section Head, South  
Coast Region  
Business Address: \_\_\_\_\_

**SCHEDULE A**  
**Peregrine Falcon Mitigation Plan**  
**Mountainside Quarries**

**Proponent:** Mountainside Quarries Ltd.  
Contact: Brent Palmer Owner / Operator  
Location: 40251 Quadling Road, Abbotsford, BC.

MountainSide Quarries office:  
34912 Panorama Drive, Abbotsford BC V2S 7S3  
604-504-4461

QEP Consultant: Thomas Plath Environmental Services  
QEP Contact: Thomas Plath (tomplath@te.us.net)

**Species of Concern:** Peregrine falcon (*Falco peregrinus anatum*)  
Provincial Conservation Status: S2  
SARA Listing: Not at Risk  
COSEWIC: Not at Risk  
Public Record: <https://ebird.org/view/checklist/S46786543>

**Background**

The Quadling Road quarry has been existence for 30+ years. The former owner went bankrupt and the quarry ceased works in 2014-2015. The site was purchased shortly afterwards with the intent of continuing mining activities. The inactivity during the quarry closure allowed for a Peregrine Falcon nest to be established.

A review of E-bird records including some with photos, show that a Peregrine pair raised three young at the Quadling quarry in 2016; in 2017 there is a record of a Peregrine on the nest but without details (John Ford June 12, 2017); in 2018 four young were raised (photos); in 2019 a pair was present during the breeding season however, no evidence that young were produced; and 2020 there has been one unverified (no documentation) report of an adult with one young at the quarry.

A status review of the Peregrine Falcon by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in 2017 led to a designation of "Not at Risk" due to a significant rebound in populations across Canada the past few decades. The observed increase in the number of nesting territories over a 20-year period averaged 162% (+50% to +3233%) in southern Canada with subpopulations in southern Canada projected to continue to increase. Results of the 2015 BC nest inventory of Peregrines were the highest totals ever recorded for both peregrine subspecies in BC (Chutter 2016).

The site's cliffs were created through blasting (anthropogenic) with the intended purpose as quarry operations. The area used by the Peregrine Falcons for nesting is still in a partial natural state however on either side of the nest area quarry operations have created cliffs.

**Proposed Activity:**

Mining operations have been proposed to resume in 2020 and a mining Permit has been issued. Activities will include rock/gravel extraction through open pit blasting including the area of the

quarry, the Peregrine's were using. The proposed project design cannot avoid the nest and will be ongoing for 10-12 years. Mining activities will preclude Peregrines from nesting.

Under the BC Wildlife Act<sup>1</sup> a permit can be granted for the destruction of the nest of a provincially regulated species when necessary or acceptable. During the reclamation phase of this mine site a similar cliff structure will be produced, suitable for Peregrine falcon nesting as part of the long-term mitigation, and to satisfy Mine Permit requirements.

#### **Site Limitations:**

The Guidelines for Raptor Conservation during Urban and Rural Land Development in BC (BC MOE 2013) recommend a permanent buffer of 1.5 tree lengths or 50 metres from the cliff edge above the nest, with an additional 100 meter "quiet zone" applied during the breeding season (March 30 – July 20) if the nest is active.

Swallows are using the cliff face to nest. During Peregrine monitoring on June 5<sup>th</sup>, 2019, 118 American Cliff Swallow (*Petrochelidon pyrrhonota*) nests were counted on the southwest side of the quarry face with a few other nests scattered on other parts of the cliff, as well as several Violet-green Swallow (*Tachycineta thalassina*) and a Canada goose (*Branta canadensis*) nest. Mining operations within the core-breeding season March 15<sup>th</sup> to August 15<sup>th</sup> require a nest survey by a qualified biologist in accordance to Environment Canada's window for songbirds to ensure breeding birds are not impacted. To ensure compliance with the Wildlife Act, mining activities that may damage or physically disturb active nest sites of Cliff Swallows or other nesting birds must be postponed until the end of the breeding season (March 15<sup>th</sup> to August 15<sup>th</sup>).

#### **Proposed Mitigation:**

The mitigation package follows the principles and direction set out by the Provincial Environmental Mitigation Procedures (May 27, 2014) and satisfies mitigation requirements and expectations of senior government.

Under the B.C. Environmental Mitigation Policy<sup>2</sup> (BC EMP) whenever possibly the following should be attempted: Avoid > Minimize > Restore on-site > Offsets. For this project two mitigation options are being proposed to mitigate both the long-term and short-term impacts:

1. A restoration on-site to occur during the reclamation phase of the mine; and
2. Additional offsets related to the loss of the site, including nest-box establishment and monitoring.

Mitigation for long-term impacts of the mining activities is addressed within the Mining Permit conditions.

#### **On-Site Remediation:**

Under the B.C. EMP it is imperative that the continued loss of a wildlife feature be avoided. As stated under the B.C. EMP restore-onsite is a tool that allows for the avoidance of long-term loss.

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<sup>1</sup> [http://www.bclaws.ca/EPLibraries/bclaws\\_new/documnet/ID/freeside/00\\_96488\\_01](http://www.bclaws.ca/EPLibraries/bclaws_new/documnet/ID/freeside/00_96488_01)

<sup>2</sup> <https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/laws-policies-standards-guidance/environmental-guidance-and-policy/environmental-mitigation-policy>

During the reclamation process of the mining site, restoration on-site of Peregrine falcon appropriate nesting ledge will be created.

*Description of Mitigation:*

The long-term offset mitigation is described within the Mining Permit Site Specific Condition 6: "Upon completion of the authorized works the permittee will leave a potential peregrine falcon nesting site consisting of a ledge, preferably with overhang, on a 12m to 18m high cliff, 3-6 m in length and 1.5-2m in width with no access from above, below or the sides."

These features would be created in re-contouring the upper section of the mine site therefore allowing for the Peregrines to potentially nest at this site again. Ditch blasting has been proven to increase productivity of Peregrine nests.

*Estimated Costs:*

\$25,000 (rough estimate for blasting)

*Justification for Long-term Mitigation:*

This on site restoration is intended to account for the predicted long-term loss of the original nest site.

**Nest Box Establishment:**

General principles for offsets within the Provincial Environmental Mitigation Procedures Handbook include determining ecological equivalency (in this case a peregrine eyrie) for type of offsetting. Accordingly, offsets should deliver tangible, measurable outcomes directly linked to the impact.

The same unit of measurement should be used for the impact and proposed offset in this case replacing nesting Peregrine Falcons. Establishment of nesting Peregrines in artificial nest sites is in direct alignment with these principles. The responsibility of offsetting rests with the proponent as per the Provincial Environmental Mitigation Procedures.

There is plentiful evidence that Peregrines readily take "nest boxes" worldwide including in the UK, Germany and in several cities in Canada (Gahbauer et al 2015, Kettle et al 2018). A few studies actually show increased fledgling success with the use of artificial nest sites (Cade et al 1996). There are many cliff faces in the Lower Mainland but likely very few that have the micro-characteristics for nesting peregrines. Rain has been shown to be a major factor in reduced fledgling success, so protection from the elements is important, as is a wide enough shelf, free from access by predators and nearby ledges for the young during fledging. The 2015 Peregrine summary report for the Lower Mainland shows 39 potential sites checked, which includes 21 known sites verified to have been occupied once during agency surveys (1993-2015), and additional sites including four bridges and a crane. Eleven nests were deemed to be occupied which is an increase but includes birds nesting on man-made sites. These sites are for the most part widely distributed across the Lower Mainland separated by many kilometres. This would suggest that suitable sites might be a limiting factor.

*Description of Mitigation:*

A minimum of 3 nest boxes (e.g., a ratio of 3:1) and up to 5 boxes must be constructed on Crown Land or private lands as an offset for impacts associated with the proposed removal of the Peregrine Falcon nest. Prior to establishment, the proponent must submit the final list of proposed sites to FLNRORD for review. These nests will be constructed within 1 year of the issuance of the Wildlife Act permit.

Peregrine Falcon Mitigation Plan

Next box monitoring is required for 5 years. If at least one Peregrine pair nests successfully for two consecutive years (in an artificial nest site) or Peregrines fledge at two different artificial nest sites before the end of the 5-years monitoring term, consideration may be given to end this monitoring component, or shift resources to other mitigation efforts, upon agreement with FLNRORD.

**Deleted:** Mitigation is complete when

**Deleted:** within

**Deleted:**

#### *Total Estimated Costs:*

The total estimated costs for the mitigation plan is presented below:

Consultation (NGO / Consultant):	\$5000
Permitting (BC Lands Department):	\$500
Nest site selection:	\$6,000
Nest Box Construction x 3:	\$5,200
Nest Box Installation:	\$17,500
Monitoring artificial & Quadling eyrie short term	\$6,000
Monitoring artificial long term 5 years:	\$15,000
Capture and Telemetry:	\$15,700
Report Writing:	\$5000
<b>Total:</b>	<b>\$75,900</b>

A breakdown of the estimated costs is detailed in the following mitigation details.

#### *Not included:*

Artificial nest boxes on private sites will be of a different design to accommodate building configuration using specifics for proven Peregrine nest boxes. If accepted by falcons a web-cam could be installed to monitor artificial nests and provide education and public relations opportunity.

If a private site is selected and used by falcons, funds will be allocated to maintain the artificial nest site ensuring boxes are secure, debris is cleaned out and nesting substrate filled/replaced.

#### *Artificial Nest Box Specifics*

Artificial nest boxes for cliffs will be made of light weather-resistant material (aluminum 1/16 inch) 1m x 2m wide, 0.75 m tall, covered on three sides with an overhanging roof, open front with a floor lip 15 cm high to hold in 20 kilos of pea gravel. The top of the front lip will be "beaded" to provide a rough surface to minimize raptor foot problems. Artificial nest boxes are heavy and will be anchored to a cliff face. Installation of nests is an expensive affair using helicopters and climbers. Costs and steps provided below are estimates only and may not reflect true costs due to remoteness or access difficulties.

Construction of 3 nest boxes:	
6 sheets aluminum 1/16, 1/4	\$,2400
1 day shearing	\$800
2.5 days welding finishing	\$2,000
<b>Total</b>	<b>\$5,200</b>

Peregrine Falcon Mitigation Plan

#### *Site Selection and Artificial Nest Placement*

The first priority will be to attract the birds away from the nest site but within the vicinity of the current nest site. Attempts will be made to establish a nearby artificial nest before breeding attempts by the pair occupying the quarry. Based on e-bird records this pair has fledged young from the end of June to the first few days of July with egg laying roughly April 7-14<sup>th</sup>. In 2019 this pair was on site in late February.

Preferred or optimal nesting habitat is large cliffs with smaller ledges with wooded slopes or open land below, with nearby riparian areas and isolated from human disturbance. Habitats supporting high concentrations of birds within a 16 km radius of nesting sites are considered essential to the peregrine falcon, which include grain croplands and riparian areas along rivers, ponds, marshes, and meadows. Open areas where avian prey is vulnerable, are highly beneficial to peregrine falcons (Torres et al 1978).

Sites with these characteristics but lacking suitable nest sites will be selected. The Lower Mainland nest surveys have identified several suitable-looking cliffs but with no evidence of nesting. Some of these will be surveyed and if suitable and selected, will be surveyed for occupancy prior to installation of artificial nests. Additionally, the current status and locality, and proximity of the nearest breeding pair will be established by reviewing Provincial records for the Lower Mainland Region.

#### *Estimated Nest site reconnaissance costs:*

2 hour helicopter	\$5000
2 persons x 4 hours	\$600
Summary report	\$150
Property search	\$250
Total	\$6000

#### *Preliminary Potential Donor Sites for Artificial Nest Boxes*

Potential donor sites within a few kilometres of the quarry include:

1. McDonald Park, No. 3 Road – cliffs opposite park.
2. Cliff faces a few hundred metres above the quarry.
3. Cliff faces at I.R. 12 north of the quarry.

These cliff sites have been identified by the Province as having good potential for nesting Peregrines but not known to have nesting birds or there exists historical records:

1. Maria Slough: UTM not known, southern flank of Bear Mt searched on spec
2. Harrison Hill: N 49 13 08 W 121 58 50
3. Buntzen Lake: N 49 22 16 W 122 51 19; good potential
4. Yale Tunnel: N 49 33 46 W 121 24 37; good potential
5. Saddle Rock: N 49 38 58 W 121 24 51

Territory size may be influenced by prey abundance. Some breeding pairs on Langara Island, British Columbia, nested less than 0.25 mile (0.4 km) apart (Nelson 1977). Generally, there were no signs of aggression between breeding pairs on Langara Island, British Columbia, despite the close proximity of nests (Beebe 1960). Artificial nest sites will be placed a minimum 1 kilometre away from known active Peregrine eyries.

Peregrines frequently indicate preferences for a particular building or structure by regular perching, feeding by day or roosting by night. A review of e-bird records and a canvass of observers will be conducted to identify potential structures for installation of artificial nest sites. Potential sites include the BC Ferry Terminal at the end of the Tsawwassen jetty, tall buildings at UBC and/or downtown.

*Installation steps:*

Mountainside Quarries Ltd has a qualified climber and Search and Rescue member to conduct the artificial nest installation.

1. Two persons (climbers) hike/helicopter to selected cliff.
2. Climbers repel cliff and put bolts/anchors into cliff face at chosen location.
3. Helicopter flies in with completed artificial nest box.
4. Climbers secure artificial nest box in place.

*Installation costs per nest box:*

2 persons x 10 hours	\$2000
1.5 hour helicopter	\$3750
Total	\$5750 x 3 sites = \$17,500

## **Monitoring**

### **On-site Monitoring**

The quarry nest will be monitored during remedial works to address safety concerns once a week beginning March 1<sup>st</sup>. If the QEP determines that the pair is nesting again at the original site in 2021, a 50 meter non-disturbance buffer will be established surrounding the nest site until the end of the breeding season (March 30 – July 20). Artificial nests established before the nesting season in the vicinity of the quarry nest will be monitored for occupancy every two weeks until the end of April beginning March 1<sup>st</sup>.

*Short Term monitoring costs:*

4 visits artificial nest site(s)	\$2000
8 visits quarry site	\$4000
Total:	<b>\$6000</b>

Visits to erected artificial nest sites during the breeding season in early to mid June will determine occupancy for other artificial nest boxes erected. Peregrine adults and older young are often very vocal near the nest site making detection easier. Monitoring will take place at each artificial nest location on two days between June 1<sup>st</sup> and June 20<sup>th</sup>, beginning at sunrise and continuing for up to four hours after sunrise on a day and location conducive to viewing. Occupancy and productivity will be determined and a summary report provided to the FLNR by August 1<sup>st</sup>.

*Long Term Monitoring Costs:*

2 visits x 3 sites x 5 years = **\$15,000**

If accepted by falcons a web-cam could be installed to monitor artificial nests and provide education and public relations opportunity.



**Monitoring of Movement and Habitat Selection:**

Information is limited on the annual movements of adult peregrines in the Fraser Valley. Use of space within their breeding season home range, migration, timing of movements, and utilization of wintering areas is unknown. Some peregrines are known to remain on breeding territories throughout the non-breeding seasons, while others disperse once breeding season is completed.

Using a QEP, the proponent will be responsible for capture and fitting of satellite transmitters on adult Peregrine Falcons in the area, with the nesting pair on site being the first priority, followed by other peregrines located on the same cliff band.

Capture: \$700  
Radio Tags: \$3000 X 2  
Digital Costs Monitoring Annually: \$4000/Year over 4 Years.  
Data Analysis: \$3000  
Report Writing: \$2000  
Total: \$15,700

*Justification for Short-term Mitigation:*

This offset is to mitigate for the loss of this site for the 10-12 year operation of the mine, and to account for some uncertainty related to the effectiveness of mitigation measures. As such, The purpose of this monitoring is to a) determine the effectiveness of proposed mitigation measures and make adjustments if necessary (e.g. do they relocate and nest successfully nearby in newly-established nest boxes?), and b) understand the broader context of these predicted impacts and proposed mitigation, including the availability of suitable nesting platforms locally, and breeding productivity of other pairs.

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### **Appendix 1.**

The total estimated costs for the mitigation plan is presented below:

Consultation (NGO / Consultant):	\$5000
Permitting (BC Lands Department):	\$500
Nest site selection:	\$6,000
Nest Box Construction x 3:	\$5,200
Nest Box Installation:	\$17,500
Monitoring artificial & Quadling eyrie short term	\$6,000
Monitoring artificial long term 5 years:	\$15,000
Capture and Telemetry:	\$15,700
Report Writing:	\$5000
Total:	<b>\$75,900</b>

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**WEDLER**  
ENGINEERING

January 12, 2021

File Ref: A17-0811/A

South Coast Resource Management  
Forests, Lands, Natural Resource Operations and Rural Developments  
Suite 200, 10428 – 153 Street  
Surrey, BC V3R 1E1

Attention: Josh Malt, M.Sc., R.P.Bio., Section Head, Terrestrial Wildlife Resources

**Reference: 40251 Quadling Road, Abbotsford, BC**  
**Operation of Quadling Pit and Effect on Peregrine Falcon Nest**

On behalf of our client, MountainSide Quarries, this letter is provided to confirm that the existing Peregrine Falcon nest cannot be saved due to site safety. At present rock fall from the pit is posing a safety hazard to the public as projectile rock is landing onto Quadling Road. In order to make the site safe the rock face needs to be pulled back away from Quadling Road and made less steep.

For reference, please see the attached Wedler plans which show the approximate location of the Peregrine Falcon nest in both plan view and in cross section. These plans were approved by the Ministry of Mines and incorporates recommendations provided by experts in the field of geotechnical and rock engineering. These experts have recommended a maximum rock face height of 10 metres. In order to safely reach the top of the pit, the rock faces are set back 10m producing a series of steps (benches) to ultimately provide a safe slope of 45 degrees. These benches are intended to catch rock fall ensuring workers safety during the operation of the pit and the public's safety when using Quadling Road.

We draw your attention to the height of the rock face at the Peregrine Falcon nest, it is nearly vertical and is approximately 45 metres high. In order to meet the criteria of a maximum face height of 10 metres there is no safe way to leave a column of rock 45 metres in height. Similarly, in order to provide worker and public safety the rock face needs to be relocated approximately 45 metres from its present location; there is no safe way to leave a column of rock protruding 45 metres from the rest of the face.

Should you have any questions, please feel free to contact undersigned.

Yours truly,  
Wedler Engineering LLP

Per:

Kelly Kerr, P.Eng.  
Partner • Project Manager  
[kkerr@wedler.com](mailto:kkerr@wedler.com)



cc: MountainSide Quarries, Brent Palmer

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