

National Energy
Board



Office national
de l'énergie

DECISION

File OF-Fac-Oil-T260-2013-03 15
8 March 2018

Mr. Keelan Petterson
53108 Range Road 20
Parkland County, AB T7Y 2G8
Email: silvercrestcontracting.inc@gmail.com

Mr. Darryl Carter
Solicitor
Stringam LLP
#102, 10126-97 Avenue
Grande Prairie, AB T8V 7X6
Email: darryl@stringam.ca

Mr. D. Scott Stoness
Vice President, Regulatory and Finance
Kinder Morgan Canada Inc.
Suite 2700, 300 – 5th Avenue SW
Calgary, AB T2P 5J2
Email: regulatory@transmountain.com

Mr. Shawn H.T. Denstedt
Osler, Hoskin & Harcourt LLP
Suite 2500, 450 – 1st Street SW
Calgary, AB T2P 5H1
Email: regulatory@transmountain.com

Dear Mr. Petterson, Mr. Carter, Mr. Stoness, and Mr. Denstedt:

**Trans Mountain Pipeline ULC (Trans Mountain)
Trans Mountain Expansion Project - Certificate OC-064
Decision for Detailed Route Hearing MH-019-2017
Mr. Keelan Petterson**

1. Background

On 19 May 2016, the National Energy Board (NEB or Board) issued its Report recommending that Governor in Council approve the Trans Mountain Expansion Project (TMEP), subject to 157 conditions ([A77045](#)).

The TMEP included twinning the existing 1,147 kilometre long Trans Mountain Pipeline (TMPL) system in Alberta (AB) and British Columbia (BC) with approximately 981 kilometres of new buried pipeline; new and modified facilities, such as pump stations; additional tanker loading facilities at the Westridge Marine Terminal in Burnaby; and reactivating 193 kilometres of existing pipeline between Edmonton and Burnaby. Trans Mountain requested approval of a 150 metre-wide corridor for the TMEP pipeline's general route.

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On 29 November 2016, Governor in Council directed the Board to issue Certificate of Public Convenience and Necessity (Certificate) OC-064 ([A80871](#)), the effect of which was to approve the TMEP, including the 150 metre-wide corridor.

On 17 and 24 February 2017, Trans Mountain applied to the Board for its detailed route, submitting the Plan, Profile, and Book of Reference (PPBoR) for Segments 1 and 2 of the TMEP. Under section 34 of the *National Energy Board Act* (NEB Act), Trans Mountain made available for public viewing copies of its PPBoR, served notices on owners of lands proposed to be acquired for the proposed detailed route,¹ and published notices in newspapers in the vicinity of the proposed detailed route².

In all detailed route hearings, the Board considers the following issues:

1. the best possible detailed route of the pipeline;
2. the most appropriate method of constructing the pipeline; and
3. the most appropriate timing of constructing the pipeline.

In its 31 August 2017 Letter of Decision ([A85762](#)), the Board stated that it would not consider the issue of compensation to be paid to landowners as that matter is not within its jurisdiction.

2. Detailed Route Hearing MH-019-2017

Mr. Petterson is the registered owner of lands located at SE 12-53-2-W5M, Lot A, Block 2, Plan 8120870 (Title Number 152 281 869), in the Rural Municipality of Parkland County, AB. The property is shown on PPBoR: M002-PM03006-011 and in Figure 1³. Trans Mountain identified this land as Tract 254. Trans Mountain proposes crossing these lands as well as using them for temporary workspace and extra temporary workspace for the new TMEP pipeline's construction in Segment 2. Mr. Petterson, his wife and his child, reside on the land. He also uses it as a worksite for his business of constructing modular homes.

Mr. Petterson filed his statement of opposition ([A82482](#)) with the Board on 6 April 2017. On 31 August 2017, the Board issued a Letter of Decision ([A85762](#)) granting detailed route hearings in relation to Segment 1 and Segment 2. The Board granted a hearing to Mr. Petterson and issued Hearing Order MH-019-2017 ([A85764](#)) on 31 August 2017. The Hearing Order set a November-December 2017 timeframe for the hearing to occur with details to follow in a procedural update.

¹ As required by [paragraph 34\(1\)\(a\)](#) of the NEB Act.

² As required by [paragraph 34\(1\)\(b\)](#) of the NEB Act.

³ The map in Figure 1 was originally filed by Trans Mountain as part of its evidence for detailed route hearing MH-019-2017 ([A86691](#)). It was used and marked during the hearing and subsequently entered as an exhibit on the record ([A88172](#)).

A request for a site visit of Mr. Petterson's lands was filed with the Board ([A87154](#)). In Ruling No. 4 ([A87818](#)), issued 15 November 2017, the Board set out its decision as to which properties would have a site visit in Segment 1 and Segment 2. The Board did not grant a site visit for Mr. Petterson's lands.

Figure 1 - Map of Keelan Petterson's Property



On 20 October 2017, Mr. Darryl Carter, legal counsel for Mr. Petterson, filed a Notice of Motion requesting additional information from Trans Mountain. The Board dismissed the motion on 31 October 2017, having received comments from Trans Mountain, noting that Trans Mountain had voluntarily provided additional information in response to the motion ([A87403](#)). The Board did extend the deadline for Mr. Petterson to file his written evidence from 31 October 2017 to 7 November 2017.

On 31 October 2017, Mr. Carter filed a letter on behalf of his client ([A87420](#)), stating that the information provided by Trans Mountain was insufficient. The Board viewed this letter as a new Notice of Motion, and requested comments from Trans Mountain and Mr. Carter on behalf of his clients. On 24 November 2017, the Board issued Ruling No. 5 dismissing the motion ([A88137](#)).

The oral hearing for Mr. Petterson was held on 1 December 2017, in Spruce Grove, AB. Trans Mountain presented a panel of witnesses for cross-examination. Mr. Petterson filed written evidence and was present at the hearing where he made an opening statement and answered questions. Mr. Petterson's lawyer asked questions of Trans Mountain's witness panel, and provided final argument.

2.1 Proposed Detailed Route

2.1.1 Trans Mountain's Routing Criteria

In selecting its 150 metre-wide corridor and detailed route for the new TMEP pipeline, Trans Mountain submitted in its written evidence and opening statement at the detailed route hearing that it had established a hierarchy of routing principles. Of the four principles, the highest preferred criteria Trans Mountain used was, where practicable, co-locate the new TMEP pipeline on or adjacent to the existing TMPL easement. Trans Mountain used this principle when locating the new TMEP pipeline on the Petterson lands.

Trans Mountain stated that it had been engaging landowners in its routing discussions since 2012 and used feedback received to optimize the location of its 150 metre-wide corridor. It also stated that the corridor width provided flexibility for minor route adjustments, including those informed by landowner input. Trans Mountain also stated that the corridor was put in place in anticipation that there would be some change through its continued engagement with landowners. Trans Mountain also went on to say that it would accommodate changes where it will balance all factors of safety, operability, constructability, and landowners' interest.

Trans Mountain submitted that construction of this portion of the new TMEP pipeline within its existing TMPL easement is consistent with its routing principles. Trans Mountain further submitted that it will leverage the existing pipeline protection program and landowner knowledge of the location and nature of the existing pipeline to maximize pipeline integrity and safety.

2.1.2 Proposed Detailed Route on the Petterson Lands

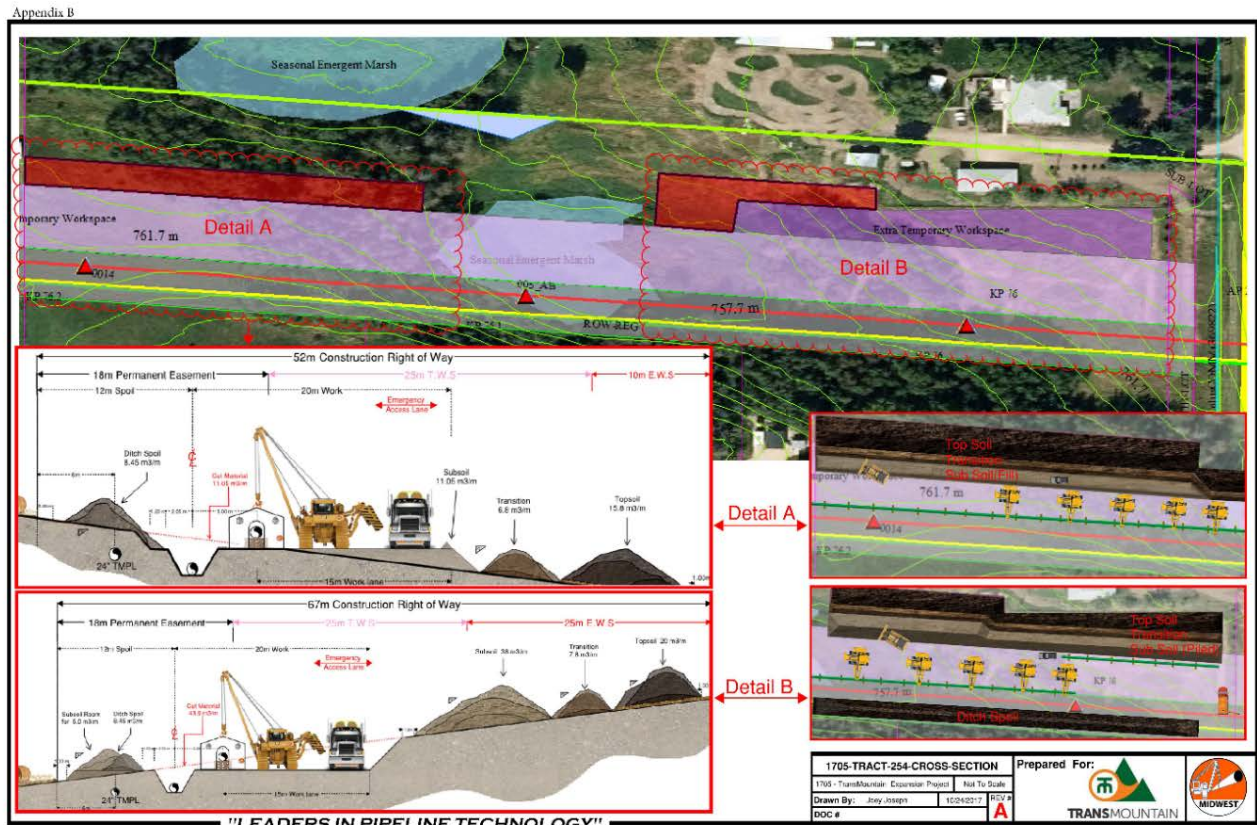
The proposed detailed route for the new TMEP pipeline on Mr. Petterson's lands follows the existing TMPL easement (also referred to as right-of-way). Trans Mountain proposes to construct the new TMEP pipeline immediately adjacent to and north of the existing TMPL pipeline, within the existing TMPL easement. The southern boundary of the existing TMPL easement runs along the southern boundary of Mr. Petterson's property.

Approximately 259.62 metres of pipeline and a corresponding permanent easement area of 0.467 hectares (1.15 acres) would be situated on the property. In addition to the permanent easement, Trans Mountain is proposing 1.56 acres of temporary workspace, and 1.08 acres for extra temporary workspace. The total project area, including permanent easement and temporary work space, on Mr. Petterson's property is 3.8 acres. See Figure 2 below.

Figure 2 - Diagram of temporary workspace requirements⁴

Views of Mr. Petterson

In his statement of opposition, Mr. Petterson stated that he was opposed to the 1.08 acre area required for extra temporary workspace. Mr. Petterson stated that the extra temporary workspace could destroy the existing fence, void the professional survey pins, and destroy the existing trees, which he considers to be irreplaceable. During the hearing, Mr. Petterson submitted that he is not objecting to the pipeline, rather to how it is being installed on his property and the associated area of extra temporary workspace.



Mr. Petterson did not provide any evidence that he opposed the timing of construction of the pipeline.

2.2 Method of Construction

On Mr. Petterson’s lands, the construction method Trans Mountain proposes to use is an open cut (as shown in the Appendix B diagram from Trans Mountain’s reply evidence) and a horizontal drill bore for the crossing of Range Road 20.

⁴ Filed by Trans Mountain in reply evidence ([A87765-1](#), Appendix B)

Views of Mr. Petterson

In his written evidence, Mr. Petterson stated that when he purchased the land in April 2015, he was aware of the new TMEP pipeline's planned construction. He also stated that he was aware of the agreement made between Trans Mountain and the previous landowner for a 24 metre-wide strip of land (an area of 1.54 acres), adjacent to the north boundary of the existing TMPL easement, to be used for workspace.

In his written evidence, Mr. Petterson filed a copy of the Agreement for Grant of Easement and Right-of-Way (easement agreement) between Trans Mountain and the previous landowner, which set out information about the temporary workspace, including size and location.

Mr. Petterson stated that the new proposed workspace for construction of the new TMEP pipeline was much larger than what was agreed upon with the previous landowner. He stated he wanted it to be limited to the original agreed-upon area. Mr. Petterson stated that three weeks before the hearing, Trans Mountain proposed two additional areas of extra temporary workspace (shown in Figure 2, shaded in red) in addition to the extra temporary workspace already identified in Trans Mountain's evidence for the Petterson property (see Trans Mountain Evidence, [A86691-1](#), Diagram at PDF page 6 of 6 for the original amount shown with purple outline). In Figure 2, the total extra temporary workspace area of concern to Mr. Petterson is shown together in red and dark purple above the areas noted as "Detail A" and "Detail B". Mr. Petterson also suggested alternate areas on his property that could be used for soil storage and would not result in trees being removed.

Mr. Petterson cross-examined Trans Mountain on its ability to return the slopes on his lands to pre-construction conditions. Mr. Petterson also sought a commitment from Trans Mountain that the terrain and trees will be replaced as soon as possible after construction, and the work area be fenced with child-proof fencing at all times when work is taking place on his property.

Views of Trans Mountain

In its written evidence filed in October 2017, Trans Mountain stated that the extra temporary workspace on Mr. Petterson's lands (which was not to the extent as shown later in reply evidence) was identified in April 2017 during the constructability review with the pipeline contractor. Trans Mountain stated at the hearing that the drawing generated in October 2017 to reflect grade plans was a constructability driven layout but also incorporated Mr. Petterson's concerns.

In its reply evidence filed in November 2017, Trans Mountain provided an updated diagram of its construction method and workspace and stated that the extra temporary workspace is required to store topsoil, transitional soil, and graded materials to create a level right-of-way for safe construction. Trans Mountain also said that the method of soil storage was addressed in its environmental protection plan and that the slope of the lands would impact the soil handling. Trans Mountain reiterated at the hearing that although it was willing to configure a workspace with minimal impacts on Mr. Petterson, it also had to balance the safety of its workers and safe

execution of the project. It also stated that at a minimum, it needed the flat graded area, but that there was some flexibility on where the topsoil was stored.

At the hearing, Trans Mountain indicated they were looking to work with Mr. Petterson to figure out ways to mitigate the impacts on his property and committed to continued engagement with Mr. Petterson.

Trans Mountain also committed to rebuild or replace any damaged fencing, and install construction safety fencing around the perimeter of the construction area to ensure the safety of Mr. Petterson's family. Trans Mountain further committed to fully restoring Mr. Petterson's land back to its pre-construction grade and profile. Trans Mountain stated that if the slopes cannot be replaced to exactly what they were before, it committed to work with Mr. Petterson and to develop a plan to replace the slopes to a stable condition.

Trans Mountain stated that what it had submitted to the Board in its evidence was the best footprint to execute construction on Mr. Petterson's property.

2.2.1 Alternate Methods of Construction

Views of Mr. Petterson

During the hearing, Mr. Petterson proposed two alternate options for construction methods including: 1) using a horizontal directional drill to cross the Petterson property; and 2) further extending the horizontal drill bore that is proposed as the method of construction under Range Road 20. Mr. Petterson submitted that these options would minimize the number of trees that would require removal on his property.

Mr. Petterson also suggested that Trans Mountain could have conventional welding trucks come and weld the pipe, and that the construction could be limited to the trench and the roadway.

Views of Trans Mountain

Regarding the possibility of using a horizontal directional drill to extend the length of Mr. Petterson's property, Trans Mountain said that crossing Mr. Petterson's property by horizontal directional drill, while reducing the number of trees to be removed on his property, would have bigger impacts on the adjacent properties. Trans Mountain submitted that this technique is reserved for rare circumstances, such as major watercourse crossings, and is not warranted in these circumstances.

Trans Mountain initially said that it planned a slip bore, with a range of up to 120 metres, to cross Range Road 20. Trans Mountain stated in its reply evidence that the shelter belt of trees along Range Road 20 could be included in the bore across the road and left largely intact. Trans Mountain subsequently said at the hearing that removal of the shelter belt of trees located along the road on the east side of the property can be minimized by extending the horizontal drill bore crossing under Range Road 20 to include that shelter belt.

Trans Mountain also stated at the hearing that a horizontal drill bore can bore up to 200 to 250 metres, depending on ground conditions. Trans Mountain said that to fully traverse Mr. Petterson's land, it estimated that it would be about a 320 or 330 metre bore. Trans Mountain also stated that the presence of the wet area at kilometre post 76.1 would present a challenge for a horizontal drill bore and that the ground conditions and the nature of the wetland would need to be assessed. Trans Mountain further stated that if the horizontal drill bore could be extended to this area, it would likely result in less extra temporary workspace being required.

2.2.2 Alternate Location of Extra Temporary Workspace

Views of Mr. Petterson

In response to Trans Mountain's submission that the extra temporary workspace is required to store soils, Mr. Petterson provided a number of alternate locations to store soil including: the open area where there are no trees in the yard site of his property; the area located on the north half of his property (outside of the approved 150 metre-wide TMEP corridor); and on the pasture land to the east of Range Road 20 (on Tract 252 which is not owned by Mr. Petterson).

Views of Trans Mountain

Initially, Trans Mountain stated in its reply evidence that reducing the extra temporary workspace on Mr. Petterson's lands would not be feasible as it would force subsoil to be stored on top of topsoil, with potential for soil mixing, and may impede grading of a level area for construction and right-of-way.

At the hearing, Trans Mountain stated that if it could store the soil in an alternate location it would not require the extra temporary workspace that was of issue for Mr. Petterson, but that the other storage area would need to be of a similar size, and access would be required to transport the soil. Trans Mountain submitted that relocating the soil storage location further away from the source would increase the construction footprint due to additional transportation of the soil and could also extend the duration of construction on Mr. Petterson's property. Trans Mountain also said that if it was the preference of the landowner, it was something they could look at.

Trans Mountain submitted at the hearing that some of Mr. Petterson's suggested locations would require additional environmental or archeological assessments because they are located outside of the approved 150 metre-wide TMEP corridor. Trans Mountain stated that, generally, materials are excavated and stored near the source to minimize soil handling and maintain soil structure, and submitted that storing soil at an area away from the construction trench introduces safety, logistical and environmental risks. Trans Mountain further stated that minimizing soil handling is ideal.

2.2.3 Tree Removal

Views of Mr. Petterson

In addition to the planted shelter belt, located to the west of Range Road 20, Mr. Petterson expressed concerns with the removal of trees in the extra temporary workspace on the southern part of his property. Mr. Petterson submitted that he had determined through his own tree survey, that the total proposed temporary workspace would remove 760 trees from his property. He noted that many of these trees are 36 inches round and over 40 to 60 feet tall. Mr. Petterson submitted that the 125 trees proposed to be planted on his property by Trans Mountain as replacements would equal less than 16% of the trees removed, and would only be two inch [trunk width] trees of 15 feet in height.

Mr. Petterson stated that the trees on the southern portion of his property provide a buffer between his yard site and his residence and the houses located further to the south. He submitted that these trees act as a noise and wind break, wildlife and animal habitat, and help with runoff and erosion control in addition to providing privacy. Mr. Petterson stated that removing these trees would impact his property for many years and submitted it would result in losing 25 years of tree regrowth.

Mr. Petterson stated at the hearing that even given the commitments by Trans Mountain, he still had outstanding concerns because he has outstanding questions and he seems to not be able to get answers from Trans Mountain.

Views of Trans Mountain

Trans Mountain noted that during the hearing it was stated it had meetings with its contractors and Mr. Petterson in the weeks leading to the hearing, attended Appropriate Dispute Resolution (ADR), and made numerous commitments despite the fact that it already has an easement agreement, in an effort to further minimize the impacts of the extra temporary workspace.

Trans Mountain stated that it appreciates that the trees act as a buffer, and committed to working with Mr. Petterson to optimize the workspace location to meet both the constructability needs and to minimize impacts.

2.3 Summary of Commitments

During the hearing and in its evidence, Trans Mountain committed to:

- Replacing trees removed from the temporary workspace during construction with similar trees or compensating the landowner;
- Avoiding removal of the shelter belt of trees along the west side of Range Road 20 in its horizontal drill bore;
- Situating the construction footprint to avoid damage to fencing;
- Rebuilding or replacing any damaged sections of the fence as necessary;

- In the event that any permanent survey pins located on the Petterson lands are disturbed or damaged during construction, replacing these during the legal survey completed at the end of construction
- Installing construction fencing along the north boundary of the windrowed topsoil pile to create a barrier to prevent access by children to the pipeline right-of-way during construction;
- Reclaiming the lands to a stable condition as well as implementing special reclamation measures such as tree replacement;
- Fully restore the right-of-way back to its pre-construction grade and profile, and if it could not, to inform the landowner and work with him to develop a plan to ensure slopes are replaced to a stable condition; and
- Working with Mr. Petterson to optimize the workspace location on his lands to: meet constructability needs; minimize impacts, including the amount of tree clearing required for construction; and, as stated by Trans Mountain, to hopefully reach a mutually beneficial solution to the issues on the property.

3. Board Decision for Detailed Route Hearing MH-019-2017

The Board appreciates the time spent by Mr. Petterson and Trans Mountain in discussing their concerns during this detailed route hearing and acknowledges the time that Mr. Petterson took to prepare his opening statement and evidence, including the information he gathered about the trees on his property.

The Board notes that both Mr. Petterson and Trans Mountain identified the live issues in the detailed route hearing as clearly being in relation to methods of construction and not the route of the pipeline or timing of construction.

In the Board's view, the routing of the new TMEP pipeline on the Petterson lands is consistent with Trans Mountain's criteria, to route its new TMEP pipeline within or adjacent to the existing TMPL easement.

The Board is of the view that Mr. Petterson's opposition relates to the proposed method of construction, and the resulting amount of proposed extra temporary workspace (1.08 acres) and tree loss. The Board is also of the view that any method of construction should minimize damages where possible.

While the Board understands that there are various phases in a constructability review of a pipeline and that temporary workspace requirements may change as this review proceeds, the evidence filed by Trans Mountain regarding extra temporary workspace differed in each filing, and seemed to be changing up until the hearing date, which in the Board's view, caused difficulties for Mr. Petterson to properly respond to this evidence even at the hearing. However, Mr. Petterson did offer a number of options as to where the extra temporary workspace could be relocated. The Board notes that Trans Mountain indicated that it could consider these options. The Board notes the proposed mitigations raised in the hearing that could potentially address the loss of trees, including horizontal directional drilling, extending the horizontal drill bore, and seeking alternate locations for soil storage.

The Board acknowledges the submissions by Trans Mountain that horizontal directional drilling, would be more complex, more disruptive, and take longer than a horizontal drill bore crossing of Range Road 20. The Board notes Trans Mountain's commitment to preserve the planted shelter belt of trees on Mr. Petterson's lands to the west of Range Road 20 by using a horizontal drill bore. However, the Board is of the opinion this will only address a small portion of the tree loss.

Trans Mountain has committed to working with Mr. Petterson to try to reach a mutually beneficial solution for these issues.

The Board also notes that Mr. Petterson filed in evidence the easement agreement made between Trans Mountain and the previous landowner which Mr. Petterson is now subject to. In section 4.2 of the easement agreement it clearly states that the temporary workspace as outlined in the agreement may be changed by the company to facilitate the construction of the pipeline and that the Landowner will not unreasonably refuse such a request. The easement agreement also provides for compensation should a request for extra temporary workspace be made.

Having considered all of the evidence filed on the record by Mr. Petterson and Trans Mountain, the representations made at the oral portion of the hearing, and the matters described above, the Board finds that it requires further information before a decision can be made in respect of the proposed methods of construction. For greater clarity, the proposed route is not at issue and neither is the easement agreement which is binding on Mr. Petterson and already included an original 1.56 acres of temporary workspace. The further information which the Board seeks is to better ascertain potential options that would reduce the extra temporary workspace that is proposed over and above the original amount of temporary workspace.

The Board therefore directs Trans Mountain to conduct further study and evaluation to determine the feasibility of other methods of construction with respect to the amount of extra temporary workspace required that would reduce the loss of trees along the southern boundary of Mr. Petterson's lands, including the extension of the horizontal drill bore further west. Trans Mountain is also directed to include in this study and evaluation, the feasibility of moving the soil storage areas to other locations including those noted by Mr. Petterson.

The Board further directs Trans Mountain to obtain as much input as possible from Mr. Petterson in conducting and finalizing this study and evaluation. Unless the Board otherwise directs, Trans Mountain must file this study and evaluation with the Board no later than **5 April 2018** and serve a copy on Mr. Petterson on the same day.

The Board reminds Trans Mountain of its commitment to work with Mr. Petterson. The Board strongly encourages Mr. Petterson and Trans Mountain to continue their discussions and reiterates that ADR services are available through the NEB to assist in their discussions.

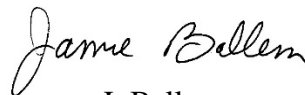
The Board reserves its decision for MH-019-2017 pending the filing and examination of the further study and evaluation as directed by the Board. The Board will establish a procedure for the examination of this study and evaluation when it is filed, and will advise Mr. Petterson and Trans Mountain accordingly.



L. Mercier
Presiding Member



S. Parrish
Member



J. Ballem
Member

Appendix I – Map of the Petterson Property

This map was created by the NEB for illustrative purposes only.

