BEFORE THE HEARING EXAMINER FOR THE CITY OF PORT TOWNSEND

Phil Olbrechts, Hearing Examiner

RE: Burgler Administrative Appeal Case No. ADM25-002	**FINDINGS OF FACT, CONCLUSIONS OF LAW AND FINAL DECISION**

I. SUMMARY

The City's approval of a critical areas permit for the proposed Burgler residence is sustained. Two conditions are added to the approval. One condition requires enhanced stormwater modelling and assessment. The second condition requires that, if the Applicant wishes to avoid shoreline review, the Applicant must establish that the entire development is located outside shoreline jurisdiction using the Ex. B19 ordinary high water mark delineation.

Resolution of this appeal largely depended upon assessing competing opinions from two credible licensed engineering geologists, Glen Wade for the Appellants and Dan McShane for the Applicant. The critical determination was whether the City didn't had enough information to find that the proposal would not jeopardize slope stability. The Applicant and City were quick to emphasize that deference is due the findings of the City in its permit review. However, that deference doesn't require that the Appellants prove that the project is unsafe. Rather it is sufficient that, with deference due to the City, the Appellants prove that critical information was missing on the impacts of the proposal to the marine bluff and inland slope. The Appellants didn't meet that objective.

The critical factual issues of this appeal involved the following: (1) estimated slide rate; (2) impact of excavations on slope stability; and (3) potential for "Sackangen" slope failures. Mr. McShane estimated horizontal landslide loss of the top of the marine buffer to be three inches per year for a combined 38.75-foot buffer designed to protect the proposed house for at least 100 years. The landslide rate was based upon Mr. McShane's assessment of surviving tree age along the face of the bluff, the geology of the bluff and historical slide activity. Mr. McShane noted that slides along that bluff may only happen every 50 years or so and rarely take out more than five feet of horizontal distance. Mr. Wade asserted that Mr. McShane's analysis failed to include a sufficiently detailed evaluation of historical landslides, in particular a review of aerial photographs and LIDAR images. Mr. McShane did in fact identify that he had reviewed historical photographs in his report. His reports didn't provide any more detail than that.

Mr. Wade filled one of his reports with the photographic and LIDAR evidence he believed should have been in Mr. McShane's report. He presented several photographs and LIDAR images from the past several decades. He established that the lower elevations of the Burgler marine bluff had sloughed off several landslides over the last several decades. This did more to validate Mr. McShane's findings than discredit them. Mr. McShane readily recognized in his reports that the lower elevations are prone to landslides. Much more critical was Mr. McShane's finding that the top of the

bluff was not generating landslides since it is largely composed of hardened glacial till. Unfortunately, Mr. Wade was not very clear in his photographic assessment as to whether any of the slides he referenced involved the top of the bluff except for one on the adjoining Rinn property. As far as could be ascertained, Mr. Wade's detailed work validated Mr. McShane's findings. That work supplied the photographic and LIDAR analysis that Mr. Wade claims should have been in Mr. McShane's review.

One of the more unsubstantiated theories advocated by Mr. Wade was that the proposed deep excavations necessary for the project would "*reduce the cohesive connection and thickness of aquitard layer*." Mr. Wade presented an annotated cross section of the building site that showed a seepage path extending from a storm pond and the excavations of the site to the face of the marine bluff. If the proposal did create such a hydrological impact, it's undisputed that this could destabilize the slope. However, Mr. Wade provided no explanation as to how the proposed excavations would cause such a result. Mr. Wade provided no examples of other places such an impact had occurred. He cited to no studies that supported such a conclusion. Mr. McShane testified that he had never heard of a geologist using terminology such as "cohesive connection." Mr. McShane could not think of any reason why such a result would occur. As testified by Mr. McShane, there is no seepage occurring on the face of the bluff now. According to Mr. McShane, the soils of the site also show that stormwaters will infiltrate vertically, rather than across to the bluff face. If stormwater currently doesn't seep through the porous soils of the infiltration sites to the marine bluff, it's unclear why the excavations would create such a path. The only evidence supporting Mr. Wade's hypothesis is the drawing he prepared showing a seepage path to the bluff face. Significantly, after Mr. McShane pointed out the glaring lack of evidence supporting Mr. Wade's drawing, Mr. Wade didn't address Mr. McShane's comments in the Appellants' rebuttal. A hand drawn picture depicting a seepage path is nothing more than an unsubstantiated assertion, even if presented by an expert in geology.

Mr. Wade also asserted that the site has potential for "Sackangen" slope failures. These are large rotational landslides that can substantially exceed the five-foot maximum slides postulated by Mr. McShane. Mr. Wade's reports identify that studies have shown the presence of sliding surfaces connecting a low place roughly at the bottom of an inland steep slope with a bluff slope. Mr. McShane testified that Sackangen slides only occur with slopes involving deeply eroded valleys where mountainside bedrock slowly weakens until the mountain collapses. He noted that those types of slides occur in deep valley areas such as the Alps, New Zealand and Northwest Washington in the High Cascades. He testified that none have occurred along the Salish Sea. He further identified that they also wouldn't occur at the project site because of the absence of any fractured soils that cause such large slides. Mr. McShane testified that professional geologists would never opine that Sackangen failures could occur at the project site. Mr. Wade rebutted none of this testimony. He didn't identify any areas similar to the project site where Sackangen failures have occurred. He didn't dispute the necessity for fractured soils to support his theory. The historical slope failures of the site as demonstrated in Mr. Wade's reports are consistent with Mr. McShane's testimony. The only large scale slope failure in the vicinity, at Root street, is attributable to a bluff face with multiple seeps. No other slides of the magnitude involved in a Sackangen failure are evident. For these reasons, Mr. McShane's uncontested statements regarding the inapplicability of Sackangen failures are taken as verities.

II. TESTIMONY

The four day hearing testimony is detailed in computer generated transcripts. This decision used Rev.com for transcription of Days 1 and 4 to produce one transcript. Separate transcripts for Days 3 and 4 were produced by the virtual hearing application, Zoom. References to page numbers in the Rev.com transcript are made by "Tr. X." References to the Zoom transcript are made by hearing date and paragraph number, i.e. "5.13 X." Since the transcripts are computer generated, they are only roughly accurate. Speaker names in the Rev.com transcripts are often inaccurate. Technical terms are often inaccurately referenced as well.

III. EXHIBITS

On the first day of hearing, the following exhibits were admitted into the record:

Exhibits AX-1 through AX-43 of the April 21, 2026 Appellants' exhibit list and April 28, 2026 of Appellants' rebuttal exhibit list.

Exhibits B1-B21 of the April 28, 2026 Applicants' rebuttal exhibit list along with documents identified in the May 1, 2026 Applicant errata additions to exhibit list.

Exhibits CX001-CX047 of the City's April 20, 2026 exhibit list were admitted during the first day of hearing.

The following exhibits were also admitted in the course of the hearing:

B22 – McShane 2021 geological report
B23 – McShane Auger Holes, annotated construction drawing 5/18/26

AX-44 LUP24-074 9/25/25 Letter of Record
AX-45 Vicinity Assessor map with annotated utility lines
AX-46 6/21/21 Burglar lot site plan
AX-47 Aerial vicinity photo annotated with property ownership.

The three closing arguments presented by the parties on Ma 29, 2026 are also admitted. The June 1, 2026 errata sheet is admitted except for revisions to Page 10-2. Mr. Ehrlichman's June 1, 2026 email is not admitted.

The Day 1 and 4 hearing transcript is admitted as Appendix A, Day 2 transcript Appendix B and Day 3 transcript Appendix C.

FINDINGS OF FACT

Procedural:

1. Applicant. Kevin and Gail Burgler, 405 Foster Street, Port Townsend, WA 98368.

2. Appellants. David and Laura Rinn and Mitch and Leslie Freeman. The Rinns reside at 111 S Street, Port Townsend, WA. The Freemans reside at 222 R Street, Port Townsend, WA.

3. Decision Appealed. The decision under appeal is a Type II Critical Areas Permit submitted by the Burglers. As pertinent, the application sought approval to construct a new 3-story single-family residence on a 0.23-acre parcel of property containing a marine bluff and a potential landslide hazard area. The decision approved construction of the home with the imposition of a 38.75-foot buffer/setback from the top of the marine bluff. The location of the proposed home is addressed as 102 R Street. The proposed home will overlook the Salish Sea from its vantage point on top of the marine bluff.

4. Appeal. The Rinns and Freemans filed their appeal on October 24, 2025. They amended the appeal on February 25, 2026. The Appeal asserts that the City erred in not requiring peer review, that it failed to adequately protect the critical areas on the project site, failed to implement adequate stormwater controls and that it improperly set shoreline jurisdiction.

5. Hearing. The appeal was held over four days from May 12, 2026 through May 16, 2026. The record was held open for simultaneous submission of closing briefs on May 29, 2026. The parties waived objection for a final decision to be issued on June 17, 2026.

Substantive:

5. Project Site Description. The project involves an extension of R Street for about a block to connect to a proposed residence to be located at the southern end of the Burgler property. The R street improvements involve the installation of retaining walls as does the foundation for the home.

The subject property is an approximately 50-foot wide by 200-foot long lot. The northern portion of the lot consists of a marine bluff . The southern portion of the lot is located on an upland that is located above the steep shoreline bluff. The steep shoreline bluff slopes to the east-northeast. The upland area slopes back away from the shoreline towards the west-northwest. Ex. B6, p. 4. The overall slope at the project site (backing away from the marine bluff and extending upwards from the proposed building site) is approximately 20 degrees (36 percent) but reaches a maximum slope of 28 degrees (53 percent). The slope is brush- and tree-covered with trees. This slope backing away from the top of the bluff is referenced as the "inland slope." The Applicant/City and Appellants differ as to whether the inland slope qualifies as a protected geologically hazardous area.

As previously noted, the project site fronts the Salish Sea to the east. The north end of the property sits atop a marine bluff 180 to 220 feet high. Ex. B6, p. 3. The marine bluff is generally composed of three layers: glacial till at the top of the bluff; a middle layer consisting of layered sand, silt, and gravel (interpreted as advance outwash with potentially older silt / clay at the bottom of this unit); and sand that extends down to sea level. Ex. AX-22, p. 2.

The top portion of the bluff is essentially vertical and underlain by compact glacial till. At the northernmost portion of the bluff on the subject property this vertical till section is approximately 15 feet high. To the south the vertical till section is approximately 40 feet high as the till is thicker and shoreline bluff intersects higher topography on the south. Ex. B6, p. 4.

The slope below the top till layer slopes down at an angle of approximately 40 degrees. This section of bluff is approximately 25 feet high. Much of this section of the slope is tree-covered with understory.

A portion of this slope failed in the winter of 2006-2007. The largest fir trees on this portion of the slope area are approximately 12 inches in diameter. This section of the slope is underlain by a slope colluvium consisting of the underlying compact sand and gravel and glacial till that has fallen onto the slope in the past. The slope steepens to 65 degrees for a height of approximately 20 feet. This section of steeper section of the slope is underlain by very compact hard clay (see Figure 2). A few trees are present on this section of the slope with thin patches of grass and brush.

There is a short section of slope that is now essentially vertical below the vegetated section of the bluff described above. This vertical section was not present in early 2006 during a previous field visit by Mr. McShane of this bluff area but is the result of shallow slab slop failures on the lower section of the bluff that were a result of erosion events at the toe of the bluff. The lower slope slopes down to the shoreline at an angle of approximately 30 degrees This lower slope is underlain by loose sand. Most of the lower slope is covered in grass, brush and small trees. However, there are patchy areas of exposed soil due to soil raveling of the sandy material and from shallow slab failures off the middle and lower portions of the bluff. Ex. B6, p. 4.

6. McShane and Wade Expertise. Both Mr. McShane and Mr. Wade have extensive expertise in slope stability and working with the project site.

Mr. Wade is an engineering geologist. He has been consulting on geological issues for 21 years. He did his first geological work for a Port Townsend project in 2013. He has written at least three reports regarding the impacts of development projects for the Burgler property starting in 2021. See Ex. AX-16, AX-17 and AX-22.

Mr. McShane has worked as a geologist since 1983. He became licensed as a engineering geologist in 1997 or 1998. He has a master's degree in geology. Assessing slope stability is about 70% of his work. He's written the geological hazardous sections of four critical area ordinances. He was hired as a consultant for the plaintiffs on the OSO slide. Mr. McShane has years of experience in assessing the Burgler site and an adjoining neighbor, the Rinns. He first put together a report on the adjoining Rinn parcel in 2004. Ex. B15. He made his first report for the Burgler property for a different development proposal in 2020. Ex. B22. He made additional reports for the Burgler site in 2022, 2024 and 2026. Ex. B5, B6 and B20. Follow up reports were also written up in response to peer review. Mr. McShane has written a total of seven reports on the Burgler and Rinn properties since 2020. He also wrote another 6 reports for a couple lots a few blocks north of the Burgler property along the same marine bluff. He's walked the beach in front of the Burger home 30 to 50 times. He's done about 500 reports in Jefferson County with about 100 in Port Townsend. 5.14 1856-2043.

7. Inland Slope Not Unstable. The inland slope is not found to be unstable due to loose or steep soils.

Mr. Wade asserts that the inland slope should be classified as erosion hazard. AX-7. He asserts that the slope qualifies as an erosion hazards because USDA soil map designations qualify the soils as erosion hazards as well as portions of the slope exceeding 40%. Mr. Wade notes that the USDA soil mapping erroneously fails to identify the project site as containing erosion hazard soils. The type of soils are properly identified but one component of erosion hazard soils is the grade of slope. The grade of slope was not factored into the USDA map designations. Mr. Wade also did some test pits of the right of way for the project and found that there is at least roughly 3-feet of loose, easily-eroded recessional outwash overlying the glacial till or advance outwash in the R Street right-of-way. Mr. Wade also asserts that average slopes were not correctly calculated. AX-17, par. 11. Mr. Wade

concluded that the loose soils of the area plus inaccurate USDA soil mapping support finding of erosion hazard. Tr. 41. He noted that the proposed removal of trees would destabilize the inland slope. The trees stabilize the slope and absorb stormwater. Tr. 50. DNR studies show that removal of trees increases runoff by 30%. Tr. 51. Mr. Wade testified that the excavations will destabilize the slope. Tr. 51.

Mr. McShane testified that the slopes were not an erosion hazard or landslide hazard even at the steep grades of the project site because the soils are well drained sandy soils. 5.14 2471-2477. Mr. McShane's 2024 report identified that the risk of landslide on the inland slope is "*essentially nonexistent*." Ex. B6, p. 2. The report finds that the inland slope is underlain by very compact glacial till that typically maintains slopes that are vertical for long periods of time. The inland slope is only slightly steeper than the angle of repose for loose soils and will not be subject to any landslide risk. Ex. B6, p. 2-3. There are no indications of previous, ongoing, or incipient slope movement anywhere on the inland slope.

Mr. McShane and Mr. Wade appear to agree that the inland slope is composed of loose soils underlain by glacial till. Mr. McShane and Mr. Wade differ as to how the loose soils affect the stability of the slope.

As is often the case with the conflicting opinions of Mr. Wade and Mr. McShane, Mr. McShane's opinion is found the most compelling because it stands uncontested. Mr. McShane provided three reasons why he found no material risk of slope failure (1) the soils are well drained; (2) the slope is underlain with glacial till, and (3) the slope is only slightly greater than the angle of repose for loose soils. On their face, all three of these reasons appear to provide a highly plausible reason for finding no material risk of slope failure. Mr. Wade didn't dispute any of those three points. Instead, Mr. Wade relied upon USDA mapping designations, the presence of loose soils and the presence of steep slopes. As identified in Conclusion of Law No. 4, the PTMC recognizes that steep slopes listed as landslide hazards can still qualify as stable slopes via individualized assessment. Mr. McShane provided a compelling individualized assessment and Mr. Wade largely didn't express disagreement with any of it. For these reasons, the inland slope is not found to be unstable or a hazard to the proposed development or any neighboring development.

8. Proposed Buffer Adequate. The 38.75-foot marine bluff buffer formulated by Mr. McShane is found adequate to protect the proposed development for 100 years.

Mr. McShane determined that a 38.75-foot buffer was necessary to protect the proposed development from landslide activity along the marine bluff. His calculation was based upon an estimated average 3 inch per year loss of horizontal marine bluff factored over a 75-year period (totaling 18.75 feet) and then doubled that with an additional 20-foot setback. Mr. McShane used 75 years as an initial benchmark since lots located within Shoreline Management Act jurisdiction and lots created in new subdivisions must provide marine bluff buffers that protect against 75 years of estimated slides. See PTMC 19.05.100F2 and 3. PTMC 19.05.100F doesn't specify adherence to the 75-year rule for existing lots located outside of SMA jurisdiction (i.e. the Burgler lot) if a special study "*concludes that doing so would not result in an increased risk to people or property or impacts to environmental processes*." PTMC 19.05.100F3. Mr. McShane went with the 75-year standard anyway and then ensured that the final buffer protected for up to 100 years. 5.14 2999.

Mr. McShane's three-inch recession rate was largely based upon an assessment of tree ages, historical photographs and his own years of experience assessing the slopes. He found that the recurrence rate of landslides was "*on the order of at least several decades*." Ex. B5, p. 9. He counted tree rings of recently trees along the face of the marine bluff to assess when slides may have occurred. He also estimated tree age based upon tree sizes. Mr. McShane found that slope failures in the two very steep slope sections (the glacial till at the top and the silt / clay in the middle) are indicated to be limited to "*shallow slab failures" "…on the order of at most five feet and most likely just a couple of feet*." AX-22, p. 2-3, 5.14 2120. Mr. McShane concluded that based upon the geology of the site, slides would generally extend into the top edge of the marine bluff on the order of 2 to 5 feet. Ex. B, p. 7. Mr. McShane found that aerial photographs showed no discernable retreat, suggesting that the retreat rate was less than three inches. Ex. B5, p. 9. He also noted that a big factor for this estimate was the lack of over consolidated silts and clays. Those types of soils can develop microfractures that trigger large scale slides. 5.14 2218-2223.

Mr. Wade questioned the rate calculated by Mr. McShane. AX-17, p 5. Mr. Wade opined that Mr. McShane's geological reports lacked sufficient detail to establish this rate. Mr. Wade identified that the bluff edge line of an unspecified 2022 survey appears questionable given references in a McShane report of slides in that area. AX-17, p. 6. He identified that the marine bluff adjacent to the site is mapped as "feeder bluff - exceptional" on the DOE Coastal Zone website (https://apps.ecology.wa.gov/coastalatlas/tools/Map.aspx), which indicates that very active erosion and land sliding of the bluff is the source of sediment for the alongshore drift (marine sediment transporting) from south to north. AX-32. He noted that in neighboring Clallam County, this feeder bluff designation resulted in a required 150-foot buffer from the top of the marine bluff slope. AX-17, p. 6. Mr. Wade also found the McShane retreat assessment deficient in that it didn't include discussion of historical photos, topography or lidar (although the 2020 report stated that a review of such documents was completed). AX-17, p. 7. Mr. Wade questioned the use of trees as an indication of slope failure. He questioned how diameter could be correlated with tree age and also the underlying presumption that trees couldn't survive a slope failure. Id. at p. 3. He noted that reference to a 45 year old tree located mid slope to the northwest of the project in a 2011 Stratum report wasn't very probative since that portion of the bluff was at a different height. AX-22 p. 4.

As identified above, Mr. McShane actually did review historical aerial photographs of the project site. He noted that he reviewed photographs as far back as 1940 and that his observations of slope failures along the bluff go back 20 years from personal experience. Ex. B6, p. 6. He didn't provide any detail on the results of that review in his reports. Mr. Wade's 2021 report provided the photographic detail missing from Ms. McShane's reports. That detail, however, validated Mr. McShane's assessment by failing to show any significant top of bluff failures except on modest failure on the neighboring Rinn property. Mr. Wade's 2021 report, Ex. AX-22, presented his review of historical documents. An 1856 topographical map shows topographical arcs of what appears to be two marine bluff landslides south of the project site. According to Mr. Wade each of those landslides would have been enough to take in the proposed Burglar residence along with the proposed buffer. He compared photographs from 1994, 2001, 2006 and 2016 to show some considerable slide activity below the top of the marine bluff in the project area. AX-22 p. 15. A 2016 photograph showed that a slide had occurred all the way up to the top of the adjoining Rinn Bluff, removing all the vegetation along the upper reaches of the top of the bluff. A 2009 Google Earth photograph according to Mr. Wade shows "[t]he top edge of the marine bluff on the subject property and Rinn property are much clearer due to recent slide activity extending to the top of the slope." A 2011 photograph "[t]he top of the bluff at the east edge of the

Rinn property appears to have had increased recession, with a very crisp arc-shaped top of bluff line visible." AX-22.

Unfortunately, Mr. Wade's descriptions of what he observed in the photographs and other documents he presented were not very clear as to what significant failures, if any, occurred at the top of the marine bluff. The only failure that could be clearly seen as a top slope failure since 1856 was a modest slide on the adjoining Rinn property. Mr. Wade did identify what he characterized as major slides in the oldest document of his presentation, the 1856 topographical map. However, there's no indication of when those slides occurred – at worst they occurred 170 years ago. Further, the accuracy of the handwritten document can be reasonably questioned given the lack of precise instruments of the time. Mr. McShane similarly was unable to find anything in Mr. Wade's presentation of historical documents that suggested any significant top bluff landslides. Ex. B6, p. 6.

One major historical bluff slide that exceeded the 5-foot slides anticipated by Mr. McShane occurred a few blocks south of the project site at Root Street. This slide wasn't explicitly addressed in Mr. Wade's analysis. That slide extended 100 feet back from the bluff edge. Mr. McShane distinguished this slide on the basis that the area had much more fine-grained material and significant groundwater seepage between the upper glacial till layer and the beach. The upland area was noted to slope downward towards the bluff edge in this area, subjecting it to surface runoff and near-surface groundwater from as far away as 600 feet on the top of Morgan Hill. AX-22, p. 3; 5.14 2234-43.

Ultimately, Mr. Wade's review of photographs, LIDAR and other historical documents simply validated Mr. McShane's findings. Mr. Wade, like Mr. McShane, found evidence of numerous mid and bottom bluff slides. Mr. Wade, like Mr. McShane, found no compelling evidence of significant top slope failures.

As previously noted, another reason why Mr. McShane found a relatively minor retreat rate was because of the "*geology of the site*." Ex. B, p. 7. Mr. McShane found that this geology would generally limit horizontal bluff loss to two to five feet. He based this conclusion in part upon the fact that the site isn't composed of over consolidated silts and clays – those soils develop microfractures that can trigger large scale slides. Mr. McShane found that the Burgler marine bluff doesn't have those soils. 5.14 2218-2223. Mr. Wade, on the other hand, postulated that the bluffs could be prone to large scale slides due to what's referenced as Sackangen landslides. As discussed Finding of Fact No. 10, however, the geology of the Port Townsend marine bluffs are not prone to Sackangen landslides. Mr. Wade did not dispute Mr. McShane's testimony that an important factor in assessing slope stability is the potential for microfractures and that the Burgler bluff doesn't have them. Overall, Mr. McShane's assessment of geological conditions as indicative of stable slopes is found the more compelling.

A final indicia of the reliability of Mr. McShane's retreat rate is that it was found reasonable in a peer review regarding a prior project for the Burgler site. HWA Geosciences, Inc. concluded as follows:

> *In our opinion the 38.75 foot setback was calculated as required using state-of-the-practice information for design in similar geologic settings. The information is not available, and cannot be reasonably developed, to be more precise at this site. Other government agencies have larger setbacks for similar conditions but their setbacks are not*

> *based on more accurate information for this site than Port Townsend's. In our opinion the setback is reasonable. There is always some risk involved in developing property near a bluff.*

Mr. Wade doesn't find the HWA conclusions to be compelling because they were written by geotechnical engineers and involved a project with shallower excavations. The expertise of geotechnical engineers on bluff landslide rates is unclear from the record. Given that geotechnical engineers must work with geological issues on a regular basis, it is reasonable to conclude that the engineers have working knowledge of how geologists assess slope stability and landslide rates. The HWA geotechnical engineer specifically found that the landslide hazard rate was derived by "*state-of-the-art*" practices. This suggests that the engineer was knowledgeable about the engineering practices involved in estimating landslide activity. As to the difference in excavations, as determined in Finding of Fact No. 9, there is no compelling evidence to suggest that the excavations of the proposal will have any impact on the stability of the bluff. The HWA confirmation of Mr. McShane's rate is found to be substantial evidence supporting the accuracy of Mr. McShane's assessment.

9. Excavations Won't Impact Slopes. The excavations proposed for the development are not found to adversely affect the inland slope or marine bluff.

Mr. Wade asserts that the excavations proposed for the project site will adversely affect slope stability. He is concerned about the excavations necessary for the retaining walls of R Street and those for the house foundation. Mr. Wade testified that the vertical part of the bluff is 50-60 feet high and the excavations are around 18 feet deep just 30 feet away. He finds that this proximity undermines the cohesion of the inland slope that is helping to provide tension and keep the bluff from having a major slab or rotational landslide. Tr. 28. Mr. Wade believes that the excavations will also introduce groundwater to the site, which further undermines the stability of the slope. Tr. 31. Mr. Wade's 2026 report presented an annotated cross section of the slope that depicts water seepage paths allegedly caused by the excavations. See Ex. AX-17, Figure 3. According to the 2026 report, the excavations will "*significantly reduce the cohesive connection and thickness of the aquitard layer from the site, decreasing the stability of the bluff slope and creating a potential seepage pathway*…"

Mr. Wade didn't identify why he concluded that the excavations would create a seepage path to the Burgler marine bluff. He did note that he anticipated infiltrating waters from the stormwater ditch and bioswale would filter down to an impermeable recessional outwash, which presumably extends east to the bluff. He found that these waters would seep along the outwash to the face of the Burgler bluff, thereby increasing landslide activity. AX-17, p. 6. Although this provides a plausible path for water seepage, it doesn't explain why the proposed excavations would create such a path. Mr. Wade doesn't contest Mr. McShane's findings that the Burgler bluff face has no seepage. If stormwaters now don't create any seepage, there's no immediately apparent reason the increased flows of the proposal would create such a pathway.

It is uncontested that the stability of the marine bluff will be compromised if the excavations cause bluff seepage as asserted by Mr. Wade. Mr. McShane attributes a major bluff slide south of the project at Root Street due to bluff face seepage. The HWA peer review from a prior project also conditions the proposal on directing stormwater away from the bluff.

Mr. McShane found the Figure 3 seepage path depicted in Mr. Wade's 2026 report completely invented. Tr. 126. Mr. McShane doesn't know how Mr. Wade came up with his altered hydrology theory. He has never heard of the "cohesive" theory Mr. Wade expounded in his 2026 report. Tr. 128-29. Mr. McShane doesn't agree with Mr. Wade's cohesive theory because of the lack of currently existing seepage. He also disagrees because water from the stormwater discharge sites will infiltrate vertically because there is no glacial till at those locations. Tr. 136-37.

Substantial evidence supports Mr. McShane's opinions on the impacts of excavation. Mr. McShane testified that he knew of no reason the proposed development would redirect seepage to the bluff wall. It is uncontested that no seepage goes in that direction currently. As conditioned, the stormwater controls of the project will be designed to direct stormwater to soils fully suitable for infiltration that currently don't migrate to the marine bluff. Despite these points made by Mr. McShane, Mr. Wade provided no rebuttal to explain the basis of this theory. No studies, examples or logical explanation was presented to explain Figure 3.

Mr. Wade also expressed concern that the proposed R street retaining walls will necessitate work and improvements to be done on neighboring property. He questioned whether there was sufficient space to protect the safety of construction workers as they installed the relatively high retaining walls. Mr. Wade is not an engineer. These are engineering issues that can be resolved as necessary during construction permit review. If any work necessitates encroachment into adjoining property, the design will have to be slightly modified or something will have to be worked out with the adjoining property owner. Section 105.2 of the International Building Code requires building permits for retaining walls over four feet in height. The engineering issues identified by Mr. Wade will be assessed during that review. As concluded above, the proposed excavations will not affect slope stability. Consequently, the only geotechnical issues involve ensuring that the retaining walls will be stable and that worker safety won't be compromised during construction. Those are construction permit issues that will be addressed during construction permit review.

10. Bluff Not Prone to Sackangen Slides. The project site is not prone to Sackangen slides.

Mr. Wade's 2021 report asserts the Burgler site has the potential for Sackangen slope failures. For marine bluffs backed by inland steep slopes, studies have shown the presence of sliding surfaces connecting a low place roughly at the bottom of the inland steep slope with the bluff slope. AX-22, p. 35. Mr. Wade apparently believes that Sackangen slides can result in slides much larger than the 5-foot slides postulated by Mr. McShane.

Mr. McShane testified that Sackangen only applies to deeply eroded valleys with where mountainside bedrock slowly weakens and mountain collapses. 5.14 3420. He noted that the slides have never been applied to the glacial sediments of the Salish Sea. 5.14. 3426. He noted that Sackangen slides only occur in areas such as the Alps, New Zealand and Northwest Washington in the High Cascades. Tr. 122. Mr. McShane testified there's "zero evidence" of Sackangen failures at Salish Sea bluffs. Id. Mr. McShane noted that Sackangen doesn't apply at the project site because there are no fractured soils forming the steep slope as asserted by Mr. Wade in his 2021 report at AX-22, p. 35. Tr. 124. Mr. McShane testified that the type of soil units in the area contain no such fractures. Tr. 163-64. Mr. McShane identified that there is no evidence of large rotational failures anywhere in Port Townsend

bluffs like the Sackangen slope failures[1]. Tr. 145. McShane has never seen any geological report in Port Townsend identifying a risk of large rotational failures "in this Port Townsend area." Tr. 146.

Mr. Wade's position on Sackangen slides again suffers from a failure to rebut Mr. McShane's analysis of that issue. Mr. Wade identifies in his 2021 report that the Sackangen slides are based upon slides from the Alps and New Zealand. He doesn't explain how he came to the conclusion that this effect could apply to the project site. Mr. McShane described the slides as applying in areas with "deeply eroded valleys." That description certainly applies to the Alps and likely New Zealand. It doesn't account for the topography of the project site. Given Mr. McShane's extensive knowledge and work along the Port Townsend bluffs, his comments about no studies applying Sackangen to the Salish Sea bluffs is found to be accurate. The project site is not found susceptible to Sackangen slides because of (1) Mr. McShane's opinions that Sackangen doesn't apply, (2) the absence of any evidence of such slides occurring at the Port Townsend bluffs, and (3) the lack of "state of the practice" methodology in asserting such a phenomenon when other practitioners do not for this area.

11. Earthquake. The McShane reports adequately address earthquakes.

Mr. Wade asserts that the McShane reports fail to adequately slope impacts caused by earthquakes. He testified that they did not include any mention of the active fault that's capable of a 7.4 surface rupture earthquake that's within a mile of the site. Tr. 52.

Mr. McShane's 2022 report identified that the Burgler bluff is not underlain by potentially liquefiable soils and that compact glacial till is not typically susceptible to earthquake induced mass movement. Ex. B6, p. 5. Mr. McShane testified that seismic hazard area can result from one of two features – 1), shaking that can cause large slides, or 2) underlying soils losing their ability to support foundation due to shaking (settlement or soil liquification). 5.14 2813-18. Mr. McShane identified that there are places in Port Townsend where that's problematic but not at the Burgler site. There are no soils subject to liquefaction as shown in the Liquefaction Susceptibility Map of Jefferson County. 5.14 2821-30, Ex. B20-C. Further, no earthquake faults cut through property. 5.14 2855. In Mr. McShane's opinion, seismic events may lead to a failure of 2 to 5 feet of upper edge of the bluff. 5.14 2857.

Mr. Wade did not elaborate much on his concerns for lack of earthquake assessment. There is no evidence of any mapped earthquake hazard areas for the project site. Mr. McShane provided a compelling site specific basis for concluding that the Burgler bluffs are not vulnerable to large landslides due to earthquakes. Substantial evidence is found to support Mr. McShane's findings that the project site is not vulnerable to large slides due to earthquakes.

12. Tsunami. The McShane reports adequately address Tsunami impacts.

Mr. Wade asserts that the McShane reports don't adequately address Tsunami impacts. He notes in this 2026 report that Tsunamis will generate 20 feet of inundation at the Burgler bluff. AX-17, p. 6-7.

[1] It is recognized that the amphitheater slide located at Root street was a large scale slide. As best as can be surmised, the Root street slide was not a "rotational" slide and thus not pertinent to the issue of Sackangen slides.

The 2024 McShane report identifies that the top of the Burgler bluff is eight feet above the inundation level. The Tsunami map presented by the Applicant, Ex. B20A, shows that the inundation level is below the top of the bluff.

The record is unclear, but it doesn't appear that Mr. Wade asserts that the inundation level will exceed the height of the Burgler bluff. It appears that Mr. Wade and Mr. McShane just disagree about how high Tsunami levels may be. Beyond this Mr. Wade notes that a Tsunami could hit the bluff with multiple waves and currents up to 9 knots. Ex. AX-17, p. 7. Mr. Wade doesn't identify whether and how this would destabilize the slope. Mr. Wade did testify that the landslide rate estimated by Mr. McShane doesn't include a proper assessment of ordinary hazard and it "certainly excludes any extraordinary hazard." Tr. 41. If Mr. Wade considers the Tsunamis to be an extraordinary hazard that could increase landslide risk, he didn't explain how the inundation and wave action would further destabilize the slope.

Of course, the added wave action of a Tsunami can result in more slide activity in the directly affected lower reaches of the Burgler bluff. However, the dispositive issue is whether any increased lower slide activity caused by the rare occurrence of Tsunamis could create enough lower bluff slide activity to materially affect the slides at the glacial till top of the bluff. As noted in Mr. McShane's 2022 report, the recurrence rate of earthquake faults that could cause major tsunamis is rare. The interval of Cascadia magnitude 8.0 earthquakes is estimated to be 500 years. A magnitude 9.0 quake has an even lower frequency. Ex. B6, p. 5.

Overall, Mr. McShane's opinion that Tsunamis will not have any material impact on the risks of slope failure are found more persuasive given the apparent low incidence of such events coupled with the unlikely prospect that even if a once in a 500 year tsunami were to hit, the sturdy glacial till of the bluff top along would prevent any major slides from occurring. The issue of acceptable risk was not addressed in any quantifiable fashion in this appeal. The evidence that is in the record establishes that the risk of any major slide caused by a Tsunami in the next 100 years is immaterially small.

13. Drainage. The proposed development is not found to create any drainage impacts that would adversely affect neighboring properties.

Mr. Wade asserted several times in his testimony and reports that stormwater would be redirected to and adversely affect neighboring properties. He also questioned the capacity of the cistern to retain stormwater. Mr. Wade notes that the City's stormwater analysis ignored the impacts of R street impervious surface. That surface is six times the building footprint for a total of 8,474 square feet of new impervious surface. AX-1020; CX-46; AX-44; AX-12.1. Mr. Wade believes that stormwater will infiltrate from ditches and from the cistern down to the Ren and Freeman properties. Tr. 44.

The Applicant's preliminary stormwater report identifies that all runoff from the proposed impervious surfaces will be collected in the roadside ditches along R street and flow west into a proposed bioretention swale. Ex. AX-10, p. 5. To mitigate the roof runoff, an irrigation cistern will be provided and located adjacent to the residence. The overflow discharge pipe will be routed from the cistern to the swale located along the north side of proposed R Street and flow west to the proposed bioretention swale. Id. Mr. McShane's 2024 report recommends that stormwater be directed away from the bluff to the west. Ex. B5, p. 10.

As conditioned by this decision, the City's stormwater regulations are found sufficient to address stormwater impacts. Mr. Wade is not a stormwater engineer. Tr. 114. He is not qualified to second guess the adequacy of stormwater design or of the City's stormwater standards to prevent off-site stormwater impacts. The City's stormwater standards are designed to fully address off-site stormwater impacts. That manual incorporates stringent water quality control and stormwater flow measures as required by DOE that incorporates all known, available and reasonable methods of stormwater prevention, control and treatment (AKART) that applied at the time the manual was released in 2012[2]. See RCW 90.52.040 and RCW 90.48.010.

Although the City's stormwater manual adopts stringent flow control standards, they potentially could be more rigorous for a sensitive site such as the Burgler property. As testified by Ms. Bolin, the City's planning director, the stormwater manual has engineering design standards to prevent any increase in off-site flow rates beyond those generated by the forested, predeveloped condition of the project site. 5.13 1006. However, those engineering standards are only "assumed" to meet that flow standard. Id. Larger projects require stormwater facilities modelled to meet the flow condition. A major reason why Mr. McShane's opinions have prevailed over those of Mr. Wade's in this appeal is because there substantial evidence establishes that the proposal will not result in any seepage through the marine bluff. As acknowledged by Mr. McShane, the reason for the large amphitheater slide at Root Street is because of seepage through the bluff. To assure that the most accurate flow controls are designed as reasonably available, a condition has been added by this decision requiring that flow control bmps and design be used for larger projects that trigger hydrologic modelling, if the modelling programs available can model projects of the Burgler size.

The recommendations of the HWA peer report are additionally illuminating on the stormwater design necessary for the project. The Report provided as follows on that issue:

> *When water is concentrated from impermeable surfaces or footing drains it is no longer running off or through the system as it did before. ldeally the collected water would be carried off the site to a natural drainage or be tightlined to the lower slope. If that is not done, the water should be distributed as closely as practical to the way it was naturally. Basically that means having a retention system approximating the water recharge rate of the vegetated slope and slowly releasing the water on the downslope side of the property to wherever it would have gone without construction on this site. This will require subsurface exploration and engineering design. It could result in something as simple as a discharge gallery to release the water to the ground surface across the low side of the lot or it may mean that some or all of the water should be discharged into an infiltration trench or dry wells.*

[2] The City's adopted edition of the DOE manual is dated, since the manual has since been updated in 2019 and 2024. The applicable AKART standards thus only apply as of 2012. However, the City's adoption of the 2012 manual is an indication of a legislative finding that the 2012 Manual sets an acceptable level of stormwater controls. In the absence of any evidence that more current standards would be more effective in addressing the stormwater impacts of the proposal, the City's stormwater standards are found sufficient to mitigate stormwater impacts.

The proposed stormwater plan appears to direct all the flows off-site as suggested by HWA above. Mr. Wade cites to this section for the proposition that subsurface explorations are necessary to determine the location of the recessional outwash he believes creates the seepage path he asserts in Finding of Fact No. 8 above. Ex. AX-22, p. 6. However, the subsurface work recommended above is only required if the stormwater flows aren't directed off-site. In case the stormwater plan doesn't provide for the direction of all flows off-site, a condition requires that be the case or in the alternative that the recommendation above be followed for subsurface exploration.

14. Shoreline Jurisdiction. The proposal is located more than 200 feet of the ordinary high water mark (OHWM) of the Salish Sea.

In response to shoreline jurisdictional issues raised by Mr. Wade, the Applicant had the ordinary high water mark delineated by a senior marine biologist in Ex. B19. Mr. Wade doesn't dispute the accuracy of Ex. B19. Tr. 64. Mr. Wade also agreed that the proposed building footprint is located more than 200 feet from the OHWM. Tr. 101. He hesitated somewhat on whether the cantilevered portions of the building are located more than 200 feet from the OHMW, but appeared to agree to that as well. Tr. 102.

The Ex. B19 OHWM determination appears to run the OHWM along the toe of the Burglar bluff. Ex. CX034 runs the OHWM along the toe of the bluff and depicts all portions of the proposed residence including its cantilevered sections, as more than 200 feet from the toe of the bluff. Overall, the proposal appears to be more than 200 feet from the OHWM. However, no precise comparison of the Ex. B19 delineation with the proposed building design has been made. A condition of approval resolves any potential encroachments by requiring that all portions of the proposed development be located more than 200 feet from the Ex. B19 OHWM delineation.

CONCLUSIONS OF LAW

Procedural:

1. Authority of Hearing Examiner. PTMC 20.01.040 Table 1 classifies critical area permits as Class II applications. PTMC 20.01.040 Table 2 authorizes the hearing examiner to hold public hearings and issue final decisions on appeals of Class II applications.

2. Burden of Proof. PTMC 1.14.040 requires that Appellants have the burden of proof in Type II appeals. PTMC 1.14.040 further provides that in reviewing discretionary decisions and issues of code interpretation and application, the hearing examiner shall accord substantial deference to the special expertise of the director as an official charged with administering city plans, ordinances and codes.

As further noted in PTMC 1.14.040, the standard of review is clearly erroneous and/or contrary to law. In this regard, this appeal is a review of the City's decision that the Applicant has established conformance to the review criteria for approval of a critical areas permit. As noted in the Summary section of this decision, this doesn't mean that the Appellants must prove that the proposal is unsafe. The Appellants could prove their case by establishing that the City staff determination that the Applicant provided enough information to establish approval was clearly erroneous. In this regard the

Appellant's strategy of identifying deficiencies in the Applicant's submittal is a valid means of challenging a permit approval.

Substantive:

3. Erosion Hazard. The inland slope does not qualify as an erosion hazard.

The PTMC includes conflicting definitions of an erosion hazard as designated by PTMC 19.05.100C1 and PTMC 19.05.020. The two conflicting definitions provide as follows:

> **PTMC 19.05.020:** *"Erosion hazard area" means those areas containing soils that, according to the USDA National Resource Conservation Service, have a "severe" rill and inter-rill erosion hazard.*
>
> **PTMC 19.05.100C1:** *Erosion Hazard Areas. Erosion hazard areas include areas likely to become unstable, such as steep slopes, and areas with unconsolidated soils. Any area containing soil or soil complexes described or mapped within the United States Department of Agriculture/Soil Conservation Service Soil Survey for Jefferson County as having a severe to very severe erosion hazard potential.*

It is significant that both definitions automatically designate soils a erosion hazards if they're mapped by the USDA as severe erosion hazards. As outlined in Finding of Fact No. 7, the USDA maps currently do not designate the soils as severe erosion hazards. As further noted in the finding, Mr. Wade claims that the USDA maps are in error and that they do in fact qualify as severe erosion hazards under USDA standards. Mr. McShane doesn't directly address whether he believes the USDA map to be in error. However, he did successfully argue that the soils are not in fact unstable. Given that the USDA maps currently don't designate the inland soils as severe erosion hazards and the Finding of Fact No. 7 determination that the soils are not unstable, it is determined that the inland slope doesn't qualify as an erosion hazard under PTMC 19.05.020 and PTMC 19.05.100C1.

4. Landslide Hazard. The inland slope does not qualify as a landslide hazard.

PTMC 19.05.100C2e defines a landslide Hazard as including any slope of 40% or steeper that exceeds a vertical height of 10 feet over a 25-foot horizon. The inland slope apparently includes such slopes. However, PTMC 19.05.100C2e waives the designation if a qualified consultant submits a letter report conclusively demonstrating that the slope doesn't present a hazard. Mr. McShane's analysis met this standard as outlined in Finding of Fact No. 7. For this reason the inland slope does not qualify as a landslide hazard.

5. Permit Review Criteria. The review criteria for critical area permits are set by PTMC 19.05.050A4. The criteria are quoted below and applied to the appeal issues raised by the Appellants.

PTMC 19.05.050A4: *Review Criteria. The director may approve with conditions, or deny, any development proposal or regulated alteration in order to comply with the requirements and carry out the requirements of this chapter based on the following criteria:*

a. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;

6. Criterion met. The criterion is met. As conditioned the proposal will not be adversely affected or pose a threat to surrounding properties due to impacts to the stability of the inland slope or marine bluff.

Mr. McShane's Ex. B5 2024 report for the project concludes that with his recommended 38.75 foot setback, the proposed home "*will not be at risk from landslides or shoreline bluff retreat for at least 100 years*." He also concluded that the home and associated R street improvements will not increase the risk of landslides or erosion on or off the site.

Mr. Wade raised numerous disagreements with Mr. McShane's analysis. All of the material issues he raised are addressed in the findings of fact above. None of those issues are found to discredit Mr. McShane's conclusions. As detailed in the findings, Mr. McShane's conclusions are based upon extensive expertise and evaluation of the project site and his conclusions are fully supported by the record. For these reasons, it is found that the Appellants have not met their burden of proof in establishing that the proposal poses any threat to slope stability and hence the public health, safety or welfare.

PTMC 19.05.050A4b: *The proposal minimizes the impact on critical areas in accordance with mitigation sequencing in PTMC 19.05.060(A);*

7. Criterion met. The criterion is met. None of the project site is proposed within a critical area or its buffer.

As noted in the Conclusions of Law above, the proposed development does not encroach into an erosion hazard or a landslide hazard area. As determined in Finding of Fact No. 8, the 38.75 bluff setback formulated by Mr. McShane will adequately protect the proposed home from bluff landslides for at least 100 years.

Mr. Wade argues that the bluff should have been rounded up to 40 feet because Mr. McShane uses a single digit yearly rate of buffer retreat of 3 inches. That probably is correct under standard scientific research practices. However, Mr. McShane has established that his buffer is sufficient to protect the proposed home from slides for over 100 years. A difference of 1.25 feet does not change that conclusion.

As noted in the Findings of Fact, the proposal will not adversely affect the marine bluff for any of the reasons cited by Mr. Wade. The proposal is also located outside the buffer of the marine bluff and the proposal is not located within any other geologically hazardous area or its buffer. For these reasons, the proposal is found to minimize impacts to critical areas since it has no material impact upon them.

PTMC 19.05.050A4c: *Any alterations permitted to the critical area are mitigated in accordance with mitigation requirements in PTMC 19.05.060(B);*

8. Criterion met. The criterion is met. The proposal doesn't involve any alterations to critical areas.

PTMC 19.05.050A4d: *The proposal is consistent with best available science and results in no net loss of critical area functions and values; and*

9. Criterion met. The criterion is met. Mr. Wade and Mr. McShane were both well qualified experts who based many of their opinions upon the standards of their practice and credible scientific studies. However, both experts did not thoroughly cite to those studies in their reports. They instead based most of their opinions upon general references to studies without providing citations that could be used to actually find and evaluate them. Those shortcomings notwithstanding, the opinions of Mr. Wade and Mr. McShane enabled a comprehensive credible science-based evaluation of slope impacts that likely would not have materially changed with a more rigorous citation to applicable studies.

PTMC 19.05.050A4e: *The proposal meets the criteria in other applicable regulations and standards.*

10. Criterion met. Building permit and construction permit review will ensure conformance to all other development standards outside of the critical areas ordinance. Nonetheless the parties did address shoreline jurisdiction in this proceeding. Shoreline jurisdiction is pertinent to this review since it can alter the location of the proposed home if the applicant is intent on avoiding shoreline jurisdiction review. As determined in Finding of Fact No. 14, as part of this process the applicant prepared an ordinary high water mark delineation that accurately that can be used to accurately set the boundaries for shoreline jurisdiction. The Applicant has altered the location of their proposal in response to this delineation. See Ex. B17. As a result the proposal is slightly different in location than that approved by the Type II permit under review. The changes in location are minor and should not be construed as rendering the Type II approval inapplicable. A condition of approval will address this issue.

11. Geotechnical Reports. A geotechnical report was not necessary for the project. The Appellants asserted a geotechnical report should have been prepared for the proposal. PTMC 19.05.100G3 requires a geotechnical report when a project is located within 200 feet of a geologically hazardous area and "*will require engineering design recommendations or other mitigation measures necessary in order to construct or develop within the geologically hazardous area*." As identified in Finding of Fact No. 9, the proposed excavations of the site won't affect the stability of the marine bluff. There is no other evidence to suggest that the proposal will adversely affect slope stability. Mr. McShane's opinion that no geotechnical report was necessary is found appropriate for this project.

DECISION

Appeal ADM25-002 is denied for the reasons identified in the findings of fact and conclusions of law of this decision. The October 9, 2025 Burgler Type II Critical Areas Permit File No. LUP24-075 is sustained subject to the two following conditions:

1. All stormwater from the new impermeable surfaces of the site shall be directed off the site to a natural drainage or be tightlined to the lower slope. If that is done the stormwater design shall employ the hydrological modelling required of projects with over 10,000 square feet in surface area to establish that the proposed stormwater facilities will not increase flow rates beyond those of forested, pre-developed conditions. This modelling shall not be required if the modelling programs approved by DOE cannot be used for projects of the proposed size. In lieu of directing stormwater off-site, the

Applicant shall employ the alternative stormwater design authorized by the Ex. B7 HWA peer review, p. 3.

2. If the Applicant wishes to avoid shoreline permit review, it shall ensure that all portions of th project site are located outside of shoreline jurisdiction using the Ex. B19 delineation of the project site ordinary high water mark. Minor displacements of a couple feet from the currently approved location shall not be considered significant enough to necessitate an amendment to the project's critical areas permit.

Dated this 17th day of June 2026.

Phil Olbrechts

Phil Olbrechts
City of Port Townsend Hearing Examiner

Appeal Right and Valuation Notices

This land use decision is final and subject to appeal to superior court as governed by Chapter 36.70C RCW. Appeal deadlines are short and procedures strictly construed. Anyone wishing to file a judicial appeal of this decision should consult with an attorney to ensure that all procedural requirements are satisfied.

Affected property owners may request a change in valuation for property tax purposes notwithstanding any program of revaluation.