

Hardwick Development Review Board
Conditional Use & Flood Hazard Review Request
Applicants and landowners: Brian Stilwell and Leigh Kalbacker
2599 Craftsbury Road, Hardwick
Zoning District: Forest Reserve
Overlay Districts: Flood Hazard Area Overlay – Zone A
Application #2023-053
October 4, 2023 - Hybrid

To consider a Conditional Use and Flood Hazard Review request by Brian Stilwell and Leigh Kalbacker for replacement of an existing footbridge that was swept to one bank during the July 2023 flooding. Bridge placement will be in the Forest Reserve and Flood Hazard Area Overlay at 2599 Craftsbury Road, Hardwick, VT. Site is in Zone A in the Flood Hazard Area Overlay.

The application requires a review under the following sections of the Hardwick Unified Development Bylaws: Table 2.7 Forest Reserve District; Table 2.8 Flood Hazard Area Overlay; 3.11 Performance Standards; 3.12 Protection of Water Resources; 5.2 Conditional Use Review and 5.3 Flood Hazard Review.

Warnings were posted on Tuesday, September 12, 2023 at the Hardwick Memorial Building, the Hardwick Post Office and the East Hardwick Post Office. The warning was sent to the following neighboring property owners: Jeudevine Forest Corporation; Heartbeat Lifesharing Corporation; Bryan Palilonis; Lynne Gedanken on Thursday, September 14, 2023. It was also published in News and Citizen on Thursday, September 14 and 21, 2023.

Development Review Board members present: Kate Brooke; John Mandeville, Chair; Kole; and Ruth Gaillard.

Development Review Board members absent: Helm Nottermann

Others present: Kristen Leahy, Zoning Administrator (acting clerk); Brian Stilwell, Applicant; and George McWilliam, Neighbor.

During the course of the hearing and prior to the hearing the following exhibits were submitted:

- Email letter from Sacha Pealer, Floodplain Manager dated September 21, 2023.
- Email response from Brian Stilwell (applicant) dated September 26, 2023.
- Email response from Brian Stilwell (applicant) dated October 1, 2023.

Summary of Discussion

Chair John Mandeville began the hearing at 7:30 pm. He noted that the hearing was quasi-judicial, explained the hearing procedure, asked board members for any disclosures of conflict of interest, and swore in all those who wished to speak at the hearing.

Mr. Mandeville invited the applicant to present the proposal. Brian Stilwell owns an off-the-grid cabin/camp on Craftsbury Road (Route 14). A footbridge over Alder Brook provides access to the camp. The footbridge washed down the stream during the July 10-11, 2023 flooding event. When examining the restoration of the bridge, it was discovered that no permits (Wetland and/or Floodplain) were obtained from the State of Vermont and the Town of Hardwick. This application is an effort to restore the access to the cabin while preventing future flood damage to the footbridge.

The hearing ended at 7:50 pm. Kate Brooke made the motion to enter into deliberative session after the hearing and Ruth Gaillard seconded. All members were in favor.

Findings of Fact:

Based on the application and testimony, the Development Review Board makes the following findings:

Table 2.7 Forest Reserve District – bridges are not specifically identified in Table 2.7 for the Forest Reserve district. Current bylaws would view a footbridge as an accessory structure less than 500 square feet (permitted use).

Table 2.8 Flood Hazard Area Overlay District – Bridges are listed as Conditional Uses in the Flood Hazard Area Overlay. According to the FEMA Flood Insurance Maps for the Town of Hardwick, the project is located in the Special Flood Hazard Area – Zone A of Alder Brook. The following three primary issues were identified by the Floodplain Manager Review (Exhibit #1):

- All development shall be: a. reasonably safe from flooding; b. designed, operated, maintained, modified, and adequately anchored to prevent flotation, collapse, or lateral movement of the structure; c. constructed with materials resistant to flood damage; d. constructed by methods and practices that minimize flood damage. **The footbridge will be anchored and fastened by a design created after the Wetlands review is finalized (See Condition #3)**
- The bridge could become flood debris again and contribute to damages downstream (ie. to roads). **See above.**
- Emergency egress from the cabin appears to be very limited. **If flooding conditions are imminent, the owners will evacuate the property prior to the flooding (and will advise guests to do the same). If the owners or guests are unable to evacuate safely over the bridge, there is a 0.5 mile hike to Tucker Brook Road that can be utilized (See Exhibit #3).**

3.11 Performance Standards – Review was made of the performance standards by the DRB. **No adverse aspects were identified.**

3.12 Protection of Water Resources – the project is located in the 25 feet buffer strip but is allowed to accommodate road, driveway, and utility crossings and bicycle and pedestrian paths and trails, in accordance with applicable state and federal regulations. Reasonable provisions must be made for the protection of water quality such as stormwater management provisions to collect and disperse stormwater away from the stream or river.” **There are no concerns about the impact on the water quality of the Alder Brook.**

Section 5.2 Conditional Use Review

E) General Review Standards

The proposed conditional use will/ will not result in an undue adverse effect on any of the following:

1. **The capacity of existing or planned community facilities and services.** The proposed use will not impact existing or planned community facilities and services.
2. **Character of the area affected.** The footbridge is in keeping with the Forest Reserve zoning district.
3. **Traffic on roads and highways in the vicinity.** The footbridge replacement will not impact traffic on Craftsbury Road (VT Route 14 North)
4. **Bylaws in effect.** N/A
5. **The utilization of renewable energy resources.** N/A

F) Specific Review Standards shall include:

1. **Siting & Dimensional Standards.** All conditional uses shall meet minimum applicable dimensional and density standards as specified for the district in which the use is located (Article 2), the particular use (Article 4), and for the protection of surface waters (Section 3.12). **All standards are met.**
2. **Performance Standards.** All conditional uses shall meet performance standards as specified in Section 3.11. **Previously discussed.**
3. **Access & Circulation Standards.** All conditional uses shall meet applicable access management standards as specified in Section 6.6. **Standards are not applicable.**
4. **Landscaping & Screening Standards.** The Board may require landscaping, fencing, screening or site grading as necessary to maintain the character of the area, or to screen unsightly or incompatible uses from town highways, other public rights-of-way, or adjoining properties. **Landscaping was not indicated as necessary.**
5. **Stormwater Management & Erosion Control Standards.** All conditional uses shall incorporate accepted stormwater management and erosion control practices as appropriate for the setting, scale and intensity of the existing and planned development. **The State of Vermont has provided written confirmation that the proposal does not meet the threshold of requiring a Stream Alteration permit.**

Section 5.2 Flood Hazard Review

All development shall be: a. reasonably safe from flooding; b. designed, operated, maintained, modified, and adequately anchored to prevent flotation, collapse, or lateral movement of the structure; c. constructed with materials resistant to flood damage; d. constructed by methods and practices that minimize flood damage. **See Condition #3.**

G(12) Bridges and culverts, which by their nature must be placed in or over the stream, must have a stream alteration permit from the Agency of Natural Resources where applicable. **The Agency of Natural Resources has provided text confirmation that the project does not meet the threshold of requiring a stream alteration permit.**

Decision and Conditions

Based upon these findings, the Development Review Board voted 4-0 to approve the Stilwell and Kalbacker conditional use and flood hazard review application as presented and amended with the following conditions:

Conditions:

1. Any and all necessary state and federal permits must be in place before development can commence.
2. The Applicant will adhere to the Performance Standards as detailed in the Hardwick Unified Development Bylaws, Section 3.11 (Attached).
3. The size of the foundations and the elevations of the bridge and the anchoring of the footbridge will be contingent upon consideration of the wetlands review. An updated description will be submitted for approval by the Zoning Administrator prior to construction/installation of the permanent footbridge.

Signed:

 _____, Chair
John Mandeville, DRB Chair

Date 10/10/23

 _____, acting clerk
Kristen Leahy, Zoning Administrator

Date 10/16/23

NOTICE:

This decision may be appealed to the Vermont Environmental Court by an interested person who participated in the proceeding (in person or in writing) before the Development Review Board. Such appeal must be made within 30 days of the date of this decision, pursuant to 24 V.S.A. #4471 and Rule 5(b) of the Vermont Rules for Environmental Court Proceedings.

Hardwick Unified Development Standards

Section 3.11 Performance Standards

- (A) The following performance standards must be met and maintained for all Conditional Uses and Home Occupation uses in all districts, except for agriculture and forestry, as measured at the property line. In determining ongoing compliance, the burden of proof shall fall on the applicant, property owner, and/or all successors and assigns; in the case of appeals to the Zoning Administrator alleging a violation of one or more of the following standards, the burden of proof shall rest with the appellant. No Conditional Uses or Home Occupation uses, under normal conditions, shall cause, create or result in:
- (1) **regularly occurring noise**, which:
 - i. represents a significant increase in noise levels in the vicinity of the use so as to be incompatible with the surrounding area; or
 - ii. in excess of 65 decibels, or 70 decibels within the Industrial District.
 - (2) **releases of heat, cold, moisture, mist, fog** or condensation which are detrimental to neighboring properties and uses, or the public health, safety, and welfare;
 - (3) **any electromagnetic disturbances or electronic transmissions or signals** which will repeatedly and substantially interfere with the reception of radio, television, or other electronic signals, or which are otherwise detrimental to public health, safety and welfare (except from telecommunications facilities which are specifically licensed and regulated through the Federal Communications Commission);
 - (4) **glare, lumen, light or reflection** which constitutes a nuisance to other property owners or tenants, which impairs the vision of motor vehicle operators, or which is otherwise detrimental to public health safety and welfare;
 - (5) **liquid or solid waste or refuse** in excess of available capacities for proper disposal which cannot be disposed of by available existing methods without undue burden to municipal or public disposal facilities; which pollute surface or ground waters; or which is otherwise detrimental to public health, safety and welfare;
 - (6) **undue fire, safety, explosive, radioactive emission or other hazard** which endangers the public, public facilities, or neighboring properties; or which results in a significantly increased burden on municipal facilities and services.
 - (7) **clearly apparent vibration** which, when transmitted through the ground, is discernable at property lines without the aid of instruments; or
 - (8) **smoke, dust, noxious gases, or other forms of air pollution** which constitute a nuisance or threat to neighboring landowners, businesses or residents; which endanger or adversely affect public health, safety or welfare; which cause damage to property or vegetation; or which are offensive and uncharacteristic of the affected area;



Kristen Leahy <zoning.administrator@hardwickvt.gov>

Flood Hazard Review - footbridge at 2599 Craftsbury Road

1 message

Pealer, Sacha <Sacha.Pealer@vermont.gov>
To: Kristen Leahy <zoning.administrator@hardwickvt.gov>

Thu, Sep 21, 2023 at 3:24 PM

Hi Kristen,

Thanks for sending the permit application for the replacement footbridge at 2599 Craftsbury Road. Along with the application you sent 9/8/23, I also received the information you sent about the state Stream Alteration Permit not being required. Thank you. I offer the following comments relating to Hardwick's flood hazard regulations (Unified Development Bylaws).

This reach of Alder Brook is mapped as a Special Flood Hazard Area (SFHA) as shown on the effective FEMA Flood Insurance Rate Map for the Town of Hardwick. At this location, the SFHA is designated as an approximate Zone A and thus published base (100yr or 1% annual chance) flood elevations and floodways do not exist.

In Hardwick's flood hazard regulations, all development must adhere to the standards in 5.3 (G)(1). In particular, these standards are relevant for a bridge: "(1) All development shall be: a. reasonably safe from flooding; b. designed, operated, maintained, modified, and adequately anchored to prevent flotation, collapse, or lateral movement of the structure; c. constructed with materials resistant to flood damage; d. constructed by methods and practices that minimize flood damage." I suggest the permit review include conditions or specifications that cover each of these standards.

I understand the footbridge does not support vehicular traffic, but it does provide primary access to a small camp/ cabin. A previous footbridge at this location washed out during July 2023 flooding.

The primary concerns for a new bridge are as follows:

1. The bridge could become flood debris again and contribute to damages downstream (e.g. to roads).
2. Emergency egress from the cabin appears very limited.

For concern 1 above, the question becomes is the bridge adequately anchored? Although the bridge is going to be fastened to a concrete foundation of some sort, it is unclear how big that foundation is going to be and if it is appropriate for the bank and flow conditions at this site. The fasteners are also not specified. I suggest the town get a little more information and confirm that the foundations and approaches do not represent fill that builds up the surrounding ground elevation (prohibited by D in Table 2.8). Although Hardwick bylaws do not specifically require an engineer design in Zone A, it may still be helpful to request some level of review from an engineer or professional familiar with bridge design. For concern 2, how will the camp guests evacuate in the event the bridge is overtopped or swept away by flood? The town may want to ask for a little more information on the applicant's plan for egress and/or be sure they understand the risks.

Please accept this email as my commentary on the project in accordance with 24 VSA, Section 4424. Please do not hesitate to call me with any questions.

Best wishes,



Sacha Pealer (she, her), CFM|Northeastern River Scientist & Floodplain Manager

Vermont Agency of Natural Resources | Department of Environmental Conservation

Watershed Management Division, Rivers Program

1 National Life Drive, Davis 3 | Montpelier, VT 05620-3522



Kristen Leahy <zoning.administrator@hardwickvt.gov>

Flood Hazard Review - footbridge at 2599 Craftsbury Road

Brian Stilwell <briandstilwell@gmail.com>

Tue, Sep 26, 2023 at 11:52 AM

To: Kristen Leahy <zoning.administrator@hardwickvt.gov>

Hi Kristen,

Sorry for my delay to all your communications -- last week was a busy one!

Wanted to let you know that the excavator (Adam Allen) came yesterday and successfully restored the footbridge (just placing it across the stream without foundations/fasteners as previously discussed), so the cabin is accessible again, which is fantastic! Thanks again for enabling us to move that piece before all the permits are issued -- it'll be so nice to have access this Fall!

I've in touch with Michael (the Wetlands Consultant) and he's still planning to come in early October (but his schedule is busy, so I'm still waiting on final dates there).

In terms of the recommendations from the Floodplain Coordinator:

1) Details about the Bridge Foundations/Fasteners - I'm working with a local contractor (Adam Allen) and we were operating on the assumption that we'd wait to get the permits and hear all the requirements, then work together to come up with a design and scope of work that could meet the permit requirements and our budget. As such, we haven't gotten into the precise details of the foundation and fasteners yet. Should I try to hop on the phone with him to get more specifics before the hearing next week? If so, what level of detail would we be required to present? (My sense is that he's not someone who typically draws up a lot of plans on paper, more someone who talks things through and then does them based on his experience...but I could try to get something a little more formal outlined if needed...).

2) Emergency Egress - It's true that other than the bridge, there isn't another easy way to exit the property. Our primary plan to address egress would be to not use the cabin (or have guests use the cabin) if there is a risk of flooding. In the worst case of scenarios, the cabin is quite elevated (so shouldn't be impacted by flooding directly), and someone could hike up the tall hill behind the cabin to Tucker Brook or Hines Roads if it was impossible to safely cross Alder Brook. Not quite sure how else to address this concern unfortunately. Is this plan sufficient? Any other thoughts from you on how we might best manage this?

Thanks so much Kristen! You've been so supportive throughout the entire process and I appreciate your additional support in navigating these next pieces.

-Brian

[Quoted text hidden]

The bridge as it exists today (10/1/23):



Footbridge Foundation & Fastening Plan

- The contractor we are working with was unable to provide a detailed written plan in the timeframe provided to us to supply more details. However, he was able to talk me through his proposed plan which is outlined below. *(If a more detailed plan is desired, we can supply that at a later date).*
- Pour concrete forms on either side of the footbridge as headwalls. (The headwalls would be semi-buried and armored with crushed stone). Affix steel H-Beams to the concrete headwalls using metal bolts. Use hemlock as decking and railings that are affixed to the H beams.
- The footbridge would be ~36 feet long, ~3 feet wide (with the concrete headwalls/foundations proportional).

Evacuation / Egress Plan:

- If flooding conditions are imminent we will evacuate the property before the flooding occurs (and we will tell any guests to do the same).
- In the event we are unable to evacuate across the bridge (because flooding is already dangerous), we would hike the ~0.5 miles (*indicated by the red line in the image below*) to Tucker Brook Rd. and then follow Tucker Brook Rd. to Rt. 14 to get help.



