Newbury Street: Dune Walkway Profile

Site Assessments: March 5, 2024 and July 25, 2024

Structure Conditions and Observations	
Road to Beach	238 ft
Boardwalk Length	102 ft
End of boardwalk to beach	136 ft
Walkway Width	4 ft
Boardwalk Material	• Asphalt apron • pressure treated wood connected by galvanized cable
Attached pathways	2
Benches	3
Additional Features	• Light fixtures installed on landward side of walkway • Seasonal Mobi Mat installed to extend wooden walkway over sand to beach
**Human-made pathways connected to the municipal walkway*	

Ecological Conditions and Observations			
Community Types Present	**Rare Species**	**Other Native Species of interest**	**Species of Concern**
• Beachgrass grassland	• Tall wormwood (*Artermesia campestrus*)[S1]	• Beachgrass (Ammophila breviligulata) • Seaside goldenrod (*Solidago sempervirens*) • Beach pea (*Lathyrus japonicus*) • Seabeach pinweed (*Lechea maritima*)	• Asiatic bittersweet (*Celastrus orbiculatus*)[P] • Beach Rose (*Rosa rugosa*)[W]
S1 = endangered in NH, P = prohibited species in NH, W = NH invasive watch list			

Walkway Entrance

Landward Side

Seaward Side

Walkway Observations

Landward Side of Dune

- The walkway planks are oriented parallel to the direction of travel, which differs from the typical perpendicular installation observed on other walkways (Figure 1).
- The walkway appears to have been recently replaced, suggesting recent maintenance or improvement work.
- Unvegetated areas are present along the landward side of the dunes, with human footprints through the areas (Figure 1).
- Two benches are installed along this section - one near the beginning and one near the midpoint - both aligned parallel to the walkway (Figure 4).
- A large stand of beach rose (*Rosa rugosa*) is present to the north of the walkway, and along the road (Figure 2).
- Wooly beach heather (*Hudsonia tomentosa*) is not growing adjacent to the walkway thus is not listed above; a few sparse patches were observed further to the north.
- A paved road runs along the landward end of the dune. Tire tracks were present along the edge of the dune, as well as unvegetated areas and areas with vegetation more typical of roadsides than high functioning dunes systems.

Figure 1. Foot traffic along walkway edges impacting vegetation

Figure 2. Large stands of beach

Dune Crest

- One bench is located on the north side of the crest, oriented parallel to the walkway (Figure 4).

Seaward Side of Dune

- Two benches are positioned at the end of the walkway, each set at approximately a 45-degree angle relative to the path, providing a diagonal orientation for beach viewing (Figure 4).
- Wooly beach heather (*Hudsonia tomentosa*) is not growing adjacent to the walkway thus is not listed above; a few sparse patches were observed to the north.
- Unvegetated, or sparsely vegetated areas, were observed with dead roots of beachgrass remaining in the sand, suggesting that these are areas of dune die-off (Figure 3).

Figure 3. Unvegetated areas suggesting dune die-off

Figure 4. Three different bench orientations to the walkways, parallel, angled and offset (left to right)

Potential Action Items

- Limit people walking through the dune system
- Revegetate areas of bare sand and sparse vegetation with native sand dune species with a focus on the large, disturbed areas
- Consider the pros and cons of removing the large stand of beach rose and replanting the area with native dune species.
- Consider installing a barrier (e.g. fencing, shrubs_ between the landward edge of the dune and the road to limit vehicle impacts to the dune system. Ensure that snow is not plowed into the dune in winter.
- Benches placed at an angle (~45°) generally appear to have less impact on the surrounding dune than benches placed perpendicular to the walkway. Consider positioning benches at a 45° angle to the walkway when practicable and revegetating the areas around them, other than directly in front.
- Unvegetated areas at this site appear to be due to two primary causes: beachgrass die-off and human use. In areas where human use is the primary driver, redirect people to walkways and ensure vehicles stay on the pavement.
- Revegetate these areas with native species. Where die-off appears to be the cause, consider planting native dune species other than beachgrass and/or treating the area with lime and fertilizer (see die-off area planting suggestions).

Additional Information

Beach profiling: Monitoring of beach erosion and accretion along NH's coast began in 2018 through the NH Volunteer Beach Profile Monitoring Program. A monitoring station (SB05) exists to the south of the Newbury St walkway – the two blue dots on the photo at the start of this report indicate the location of the station markers. If you'd like to explore the NH Volunteer Beach Profile Monitoring data, you can access the interactive data portal and read a summary report specific to Seabrook Beach monitoring stations.

Resources

- GoBotany – Native Plant Trust: https://gobotany.nativeplanttrust.org
- NH Comprehensive Invasive Plant list: https://www.agriculture.nh.gov/publications-forms/documents/nh-invasive-plant-list.pdf
- NH Guide to Upland Invasive Species: https://www.agriculture.nh.gov/publications-forms/documents/upland-invasive-species.pdf
- NH Sea Grant - Dune Die-Off Factsheet (See Appendix IV)
- Planting Guide for Tidal Shoreline Erosion Management in New Hampshire (beach and dune sections): https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/tidal-erosion-planting-guide.pdf
- UNH Extension resources on invasive species: https://extension.unh.edu/natural-resources/forests-trees/invasive-species