



Martha's Vineyard Commission

DRI # 699 Tisbury Marine Terminal Expansion MVC Staff Report – 2021-1-8

1. DESCRIPTION

- 1.1 **Applicant:** Ralph Packer, Tisbury Marine Terminal LLC
- 1.2 **Owner:** Ralph Packer
- 1.3 **Designer:** Foth Infrastructure and Environmental, LLC
- 1.4 **Project Location:** 190 Beach Road, Tisbury, Map 10, Lot A-1
- 1.5 **Proposal:** Repairs and alterations to existing marine infrastructure, and construction of an operations and maintenance facility to support offshore wind developments.
- 1.6 **Zoning:** Waterfront/Commercial
- 1.7 **Local Permits:** Tisbury Planning Board (Special Permit and Site Plan Review), Tisbury Conservation Commission (Notice of Intent – Order of Conditions)
- 1.8 **State and Federal permits:** MA Environmental Protection Agency (Certificate of the Secretary), MA Dept. of Environmental Protection (Combined 401 Water Quality and Chapter 91 Waterways License), MA Coastal Zone Management (Federal Consistency Certification), US Army Corps of Engineers (Individual Permit Section 10/404), Massachusetts Department of Transportation (MassDOT) Access Permits, Department of Public Works permit for dredging
- 1.9 **Surrounding Land Uses:** Other waterfront and commercial uses in the Beach Road corridor, including MV Shipyard, Gannon and Benjamin Marine Railway, and Vineyard Haven Marina; Vineyard Haven Harbor and Lagoon Pond, including shellfish areas and residential and commercial docks; Steamship Authority Terminal to the northwest. The project site is in both the Coastal and Vineyard Haven Harbor Districts of Critical Planning Concern.
- 1.10 **Project History:** Tisbury Marine Terminal (TMT) has operated since the late 1800s, and its barge facility currently handles the equivalent of about 6,600 one-way truck trips to the Island. The project location was chosen in part for its relative proximity to the proposed wind farms south of the Island, which are likely to be constructed in the coming years. The project would be part of a network of facilities on the east coast intended to service the offshore wind industry. Vineyard Power, the Island's energy cooperative, has partnered with TMT in promoting the community benefits associated with the project, including the creation of year-round jobs. The Tisbury Conservation Commission referred the TMT project to the MVC in November 2020.
- 1.11 **Project Summary:** Expansion and alteration of the Tisbury Marine Terminal to accommodate an operations and maintenance facility to service future offshore wind developments, and to improve access for existing terminal operations. The southern section of the site will continue to serve TMT operations, including a marine terminal with transfer and storage facilities. The northern section will serve as the offshore wind operations and maintenance facility. (See site plan, attached.)

Southern Section

Replacement and realignment of existing solid-filled pier (1): The existing solid-filled pier will be replaced by a 3,330 ft² steel sheet pile structure and concrete deck perpendicular to the shoreline. This represents a 222 ft² increase compared to the existing pier.

Barge access and berthing areas (2): Two new 800 ft² barge ramps will replace the one existing barge ramp and allow for simultaneous loading and unloading. It has not been determined whether the new ramps will be mostly landward of the bulkhead, or extend over the water on guide piles. Foth has stated that it will seek permits for both options.

Steel bulkhead improvements (3): An existing 209 ft bulkhead will be reinforced with steel sheet piles supported by grouted soil anchors. In addition, a new 70 ft bulkhead with 35 ft return will extend from the northeast corner of the new pier to stabilize the berthing area.

Northern Section

Facility berthing area (4): Three new berths (one 70 ft wide and two about 57 feet wide) will be created side-by-side for operations and maintenance vessels. The two smaller berths will be separated by a 1,704 ft² floating dock supported by steel piles that also acts as a wave attenuator. The larger berth will be separated from the smaller ones by three dolphin clusters. A 202 ft sheet pile wave fence (embedded in the existing substrate) will be constructed to the northeast of the larger berth. The wave fence will include a 6 ft catwalk for access to the larger vessels, and would reduce the need for maintenance dredging in the berthing area.

New bulkhead and fender system (5): A new 200 ft steel sheet pile bulkhead will be constructed along the landward side of the berthing areas. The bulkhead will have an integral fender system and about 70 ft of “environmental windows” along the bottom, which would allow water to circulate underneath the proposed pier deck (see below), reducing the need for intertidal and maintenance dredging.

New pile-supported pier deck and bulkhead (6): A new 30,577 ft² pile-supported pier deck will be constructed landward of the berthing area, and connect to the existing shoreline. As part of that structure, a 35-ft-wide concrete deck will be constructed along the berthing areas to support heavy equipment and materials. The rest of the platform would have either timber or concrete decking and be used for storage and TMT parking (32 spaces). The pier deck would be supported by 156 piles. Timber decking could be constructed with 12-inch timber piles, while concrete decking would require 20-inch concrete piles. The total impact area of the 20-inch piles would be about 340 ft². A new 283 ft steel bulkhead would run along the southern edge of the pier deck. The applicant has stated that if the deck is made of concrete, it will be porous.

Marine support building and access way (7): A new 9,511 ft² support building along Beach Road would be used for storage related to wind farm operations and maintenance, along with crew facilities and offices. Vehicles would access the new building, pier deck, and berthing areas from Beach Road via a gated driveway between the building and the pier deck.

Public lookout (8): The project will include an 800 ft² public lookout platform just east of the pier deck along Beach Road. Plans for the platform are still preliminary, but it would likely be supported by 15 12-inch timber piles and include an ADA-compliant landing.

Dredging

An area of about 42,609 ft², extending across the southern and northern sections of the site, would be dredged to provide adequate water depths for the operations and maintenance vessels. Dredging in those areas is proposed to an elevation of -18.4 ft NAVD88, with an allowable 1 ft overdredge, and would remove about 14,759 cubic yards of sediment. Additional dredging of about 5,923 cubic yards (down to -14 ft NAVD88 with an allowable 1 ft overdredge) would be done in the existing TMT operations area. The applicant has proposed reusing the sediment from this and subsequent dredging for beach renourishment or other purposes, as outlined in the Notice of Intent.

The applicant has highlighted the following primary goals for the project:

- Provide a centralized control facility for offshore wind operations and maintenance
- Reduce greenhouse gas emissions by supporting offshore wind
- Support economic growth and job creation
- Maintain and improve TMT infrastructure
- Enhance public access to the shoreline

The applicant has provided an analysis of alternative locations and infrastructure, which concludes that the TMT site is the only viable alternative because 1) it is an existing marine industrial property, 2) it lies in relative proximity to the future wind farms, and 3) it has access to navigable waters deep enough for the vessels. Foth also argues that it would have the least environmental impact of the alternatives, and would improve the aesthetics of the working waterfront.

The applicant has worked with the firm GPI to coordinate landscaping, drainage, and other aspects of the project with work related to the Beach Road project.

2. ADMINISTRATIVE SUMMARY

2.1 DRI Referral: Tisbury Conservation Commission

2.2 DRI Trigger: 5.1a (Development in Harbors), 5.2 (Change in Intensity of Use of Commercial Pier), 5.3a (New Commercial Facilities on Pier), 5.3b (Expansion of Commercial Facilities on Pier), 5.3c (Change in Intensity of Use of Pier), 9.2e (Wind Energy Facilities – Other)

2.3 LUPC: Jan. 11, 2021

2.4 Site Visit: A virtual site visit was conducted on May 1, 2020.

2.5 Public Hearing: Not yet scheduled

3. PLANNING CONCERNS

3.1 Key issues

- Impact on coastal resource areas
- Climate change resilience
- Traffic and parking

- Affordable housing

3.2 Environment

The project site includes the following coastal resource areas, which are regulated under the Wetlands Protection Act (310 CMR 10) and Tisbury Wetland Regulations:

- Coastal Beach
- Barrier Beach
- Land Under the Ocean
- Coastal Dune
- Land Subject to Coastal Storm Flowage (LSCS)
- Land Containing Shellfish
- Habitats of Rare Wildlife (mapped by NHESP)

Estimated Impact of Project Elements on Coastal Resource Areas, in Square Feet (adapted from Notice of Intent)

	Coastal Beach	Land Under Ocean	Coastal Dune	LSCS	Land Containing Shellfish	NHESP
TMT bulkhead and return	175	350	0	175	525	0
TMT dolphin piles (1 cluster outside dredge area)	0	15	0	0	15	0
TMT barge ramp winches	837	0	1,856	2,693	2,693	0
Solid-filled pier (reconstruction; impacts are calculated as net change from previously constructed)*	0	3,300	0	0	-222	0
Offshore wind O&M bulkhead along berth area	0.2	8.1	0	0.2	8.1	0
Offshore wind O&M bulkhead (along beach with existing riprap)	12.2	0	0	12.2	12.2	0
Offshore wind O&M access road	3,112	0	4,338	7,450	4,950	0
Offshore wind O&M – wave fence	0	9	0	0	9	7
Public lookout (12” timber piles)	11.8	0	0	11.8	11.8	0
Timber or concrete O&M pile-supported deck (156 20” piles)	129	212	0	129	341	0
Concrete O&M pile-supported deck (48 piles)	15	98	0	15	15	0
O&M facility building (136 piles)	0	0	136	136	0	0
Sediment fill on lot to elevation +6 ft NAVD88	0	0	23,110	23,110	0	0
TMT/Packer dredging	2,068	26,073	0	2,068	28,141	0
O&M dredging	216	42,393	0	216	42,609	0
*The solid-filled pier is being reduced in overall size by 252 ft ² which is within Land Under Ocean. The area will be dredged to -14’ NAVD88 where being removed, then fill placed to top of solid-filled pier elevation, +6’ NAVD88.						

The proposal aims to mitigate the impact to the above resource areas, within the constraints of the project site. Section XII of the Notice of Intent, “Assessment of Resource Area Impacts,” defines each

resource area, assesses the potential impact from the project, discusses how the project meets specified performance standards, and proposes various mitigations. The Notice of Intent also discusses how the project aligns with policies of the MA Office of Coastal Zone Management, and outlines mitigation measures related to dredging and construction.

The Department of Environmental Protection has designated the TMT property an Activity and Use Limitation (AUL) area, since there are four buried fuel tanks that previously contained petroleum hydrocarbons. The DEP inspected the site in 2013 and did not find any contaminants in the area surrounding the AUL.

3.3 Resilience

The site lies within the Coastal DCPC, Tisbury shore zone, and FEMA VE and AE zones, and is vulnerable to storms and sea-level rise. The site has an average upland elevation of 6 ft NAVD88.

The proposed steel bulkheads are designed to withstand waves and flooding from a 50-year storm event. The applicant has stated that designing for the more severe 100-year storm is not feasible since it would require elevating the site to connect to existing infrastructure, including Beach Road. The proposed wave fence and pile-supported breakwater, which would help protect the vessel berths, are also designed to the 50-year storm.

The proposed warehouse building would be raised 10 feet above the base flood elevation. (The building will be all-electric, with additional power provided by onsite solar panels.) Foth has proposed that all structures be designed to accommodate a 2 ft rise in sea level.

The project would support the development of offshore wind, which would in turn reduce greenhouse gas emissions and help mitigate the effects of climate change. The applicant has stated that supporting offshore wind is the single biggest step we can take to mitigate the effects of climate change, including sea-level rise and other effects on the Island.

3.4 Stormwater

The applicant has submitted a Stormwater Management System Report by Field Engineering. The town had inquired about a storm drain that currently flows into Lagoon Pond, and whether it could be redirected into Vineyard Haven Harbor. Foth is currently working with the town and the Beach Road project engineers (GPI) to accommodate the redirected drain.

3.5 Wastewater

The project will connect to the town sewer.

3.6 Economy

The project would support a variety of year-round jobs related to the construction, operation, and maintenance of offshore wind projects, including jobs that would be needed for as long as the life of a wind farm, or about 25 years. This would include skilled technical jobs that would help diversity the

Island economy. Vineyard Power estimates about 40 full-time jobs associated with the project, equating to about a \$2.8 million annual benefit to the Island economy. TMT has set a goal that within five years all of the new employees be Island residents. Further details about projected daily operations and economic impacts has also been submitted.

3.7 Traffic and parking

Tighe and Bond reviewed the potential traffic trip generation and impacts to Beach Road, and concluded that the project does not trigger local traffic review. However, the project is located in a heavily traveled commercial corridor between the 5 Corners intersection and the drawbridge, where traffic is often backed up during the summer. Tighe and Bond noted that the MVC review process may require a Traffic Impact Assessment.

According to documents provided to Tighe and Bond, up to 56 employees could be working at the site at times when crews are unable to go offshore. The Tighe and Bond report states that daily employee trips to and from the site would range from 50 to 112. Based on comparable land uses in the ITE Trip Generation Manual, Tighe and Bond estimates the site would generate a total of 143 daily trips, or about 1% of the 13,500 daily vehicles on Beach Road, as estimated by MassDOT.

Operations and maintenance vessels would typically leave their berths in the morning and return in the evening, but would occasionally stay offshore for longer periods. The applicant has stated that most equipment would be delivered to the site by vessels rather than vehicles. During major storms the vessels will be sheltered offsite.

3.8 Affordable housing

The applicant has not submitted a formal affordable housing offer, but has proposed that either Vineyard Wind or General Electric (potential employers) would rent out rooms for seasonal workers, and in the case of GE, workers who relocate to the Island would receive additional benefits for a period of time after they relocate.

TMT worked with Rockland Trust and Martha's Vineyard Island-Wide Realty to estimate what type of housing future offshore wind technicians at TMT could potentially afford. In developing the estimates, TMT assumed 40 employees with an average salary of \$70,000. Using the general assumption that affordable housing should cost no more than 1/3 of your salary, and also the common requirement of landlords that a tenant's income be at least 40 times the monthly rent, TMT identified a target monthly rent of \$1,330–\$1,750 for individual employees, and \$2,280–\$3,000 for employee households (assuming their spouses make \$50,000/year). It was determined that an employee making \$70,000/year would not qualify for a loan to buy a 3–4 bedroom house for \$700,000 on the Vineyard, but could potentially qualify if they also rent out two bedrooms. An offshore wind technician with a spouse making \$50,000/year could borrow enough to buy a \$975,000 home on the Vineyard.