## About Nova Innovation

Nova Innovation (www.novainnovation.com) is a world-leading tidal energy company. We design, build, and operate tidal energy devices, and develop tidal energy sites in harmony with the environment.

In 2016, we installed the world's first offshore tidal energy array in the Bluemull Sound, Shetland, Scotland. Our strategy of focusing on small-scale devices enabled us to reach this world-leading milestone just six years after the company was founded.

In 2018, we integrated energy storage into our array, in collaboration with Tesla. Over the last year, we have been providing baseload tidal energy to the Shetland grid.

Our technology is based on four guiding design principles: safety, reliability, sustainability and minimum lifetime cost of energy. The 100 kW Nova M100 device (Figure 1) is robust, scalable and suitable for deployment in a wide range of locations, including deep water, shallow water, estuarine and river environments. The relatively small-scale device sits securely on the seabed, generating clean, reliable and predictable power – with no visual impact.


*Figure 1 The Nova M100 Tidal Turbine sitting dockside before deployment in Shetland, UK*

## Our Project: The Nova Tidal Array

Nova Innovation has applied for a Demonstration Permit to construct a 1.5 MW tidal energy array in Petit Passage: The Nova Tidal Array.

The proposed location of the Nova Tidal Array is in the Petit Passage Marine Renewable Energy Area. The location of the site search area and indicative layout of the first phase of the array can be seen in the project map presented in Figure 4 at the end of this document.

## Phased Deployment

The array would be developed in three 0.5 MW phases. Turbines will be deployed gradually within each phase, so that environmental effects can be carefully monitored.

The first 0.5 MW will be further split into two phases to enable deployment and environmental monitoring of a single turbine first (Phase 1a), before the next four turbines are added to the array (Phase 1b).

Each phase of the project will be monitored to build an understanding of any environmental effects of the turbines before the next phase proceeds.

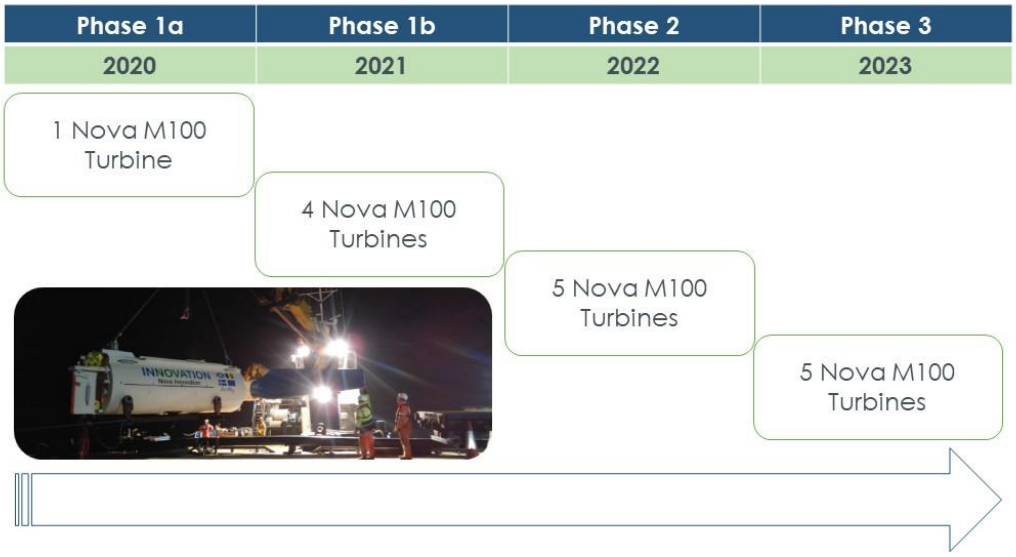


*Figure 2 Nova Tidal Array Phased Deployment*

Nova has used this carefully managed, phased approach for our project in Shetland, Scotland. It has helped to demonstrate the reliability and performance of our turbines and build confidence in tidal energy.

Nova is currently discussing the best approach to phasing with the Nova Scotia and Federal Government, First Nation Communities, the fishing community and local residents. Significant work will be carried out to gather information on the marine environment in Petit Passage before Nova deploys the first turbine.

## The Nova M100-D tidal turbine

The array will use the Nova M100-D (100 kW) turbine (Figure 3). This consists of a two-bladed rotor, with a watertight steel cover enclosing the drivetrain, supported securely on a steel gravity base frame. The Nova M100-D sits on the seabed and provides ample draft clearance for marine traffic. Use of a gravity base frame means no seabed drilling or additional site works are required and decommissioning is straightforward.

Nova's technology is designed to minimize any impact on the environment. In over three years of operation of the Shetland Tidal Array, no negative environmental impacts have been observed. Nova Innovation will build upon this experience in developing the Nova Tidal Array, ensuring any potential environmental effects are carefully monitored and assessed, working with governments and wider stakeholders to build public confidence in the sector.

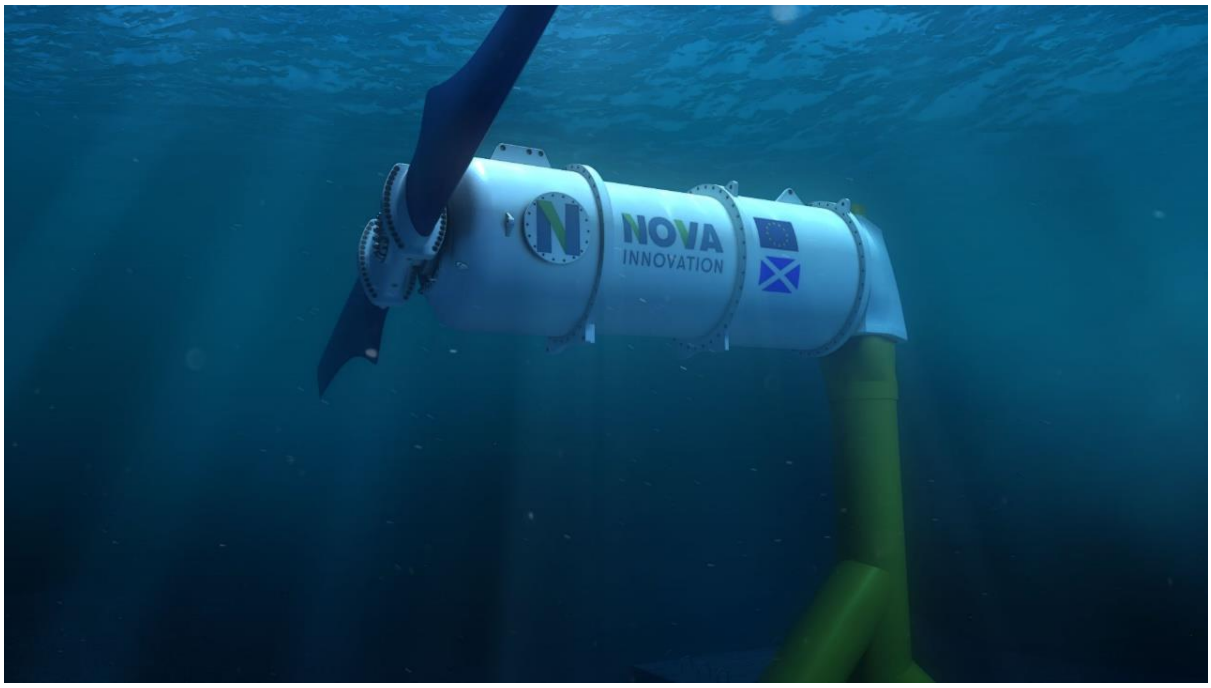


*Figure 3 Image of the Nova M100-D Turbine*

**The Nova Tidal Array – Project Benefits**

In developing the Nova Tidal Array, Nova Innovation will:

- Successfully deliver a world-leading tidal energy array in the Petit Passage
- Work in partnership with local stakeholders to boost local economic development and regeneration
- Set up a North American manufacturing hub
- Carefully monitor and manage the environmental effects of the project to ensure it doesn't harm marine wildlife in the Petit Passage
- Create skilled local jobs
- Reduce greenhouse gas emissions by providing clean, reliable, tidal energy to the Nova Scotia grid
- Deliver technology innovation in collaboration with leading Nova Scotia organizations
- Support the creation of a global centre of excellence for tidal energy technology in Nova Scotia.

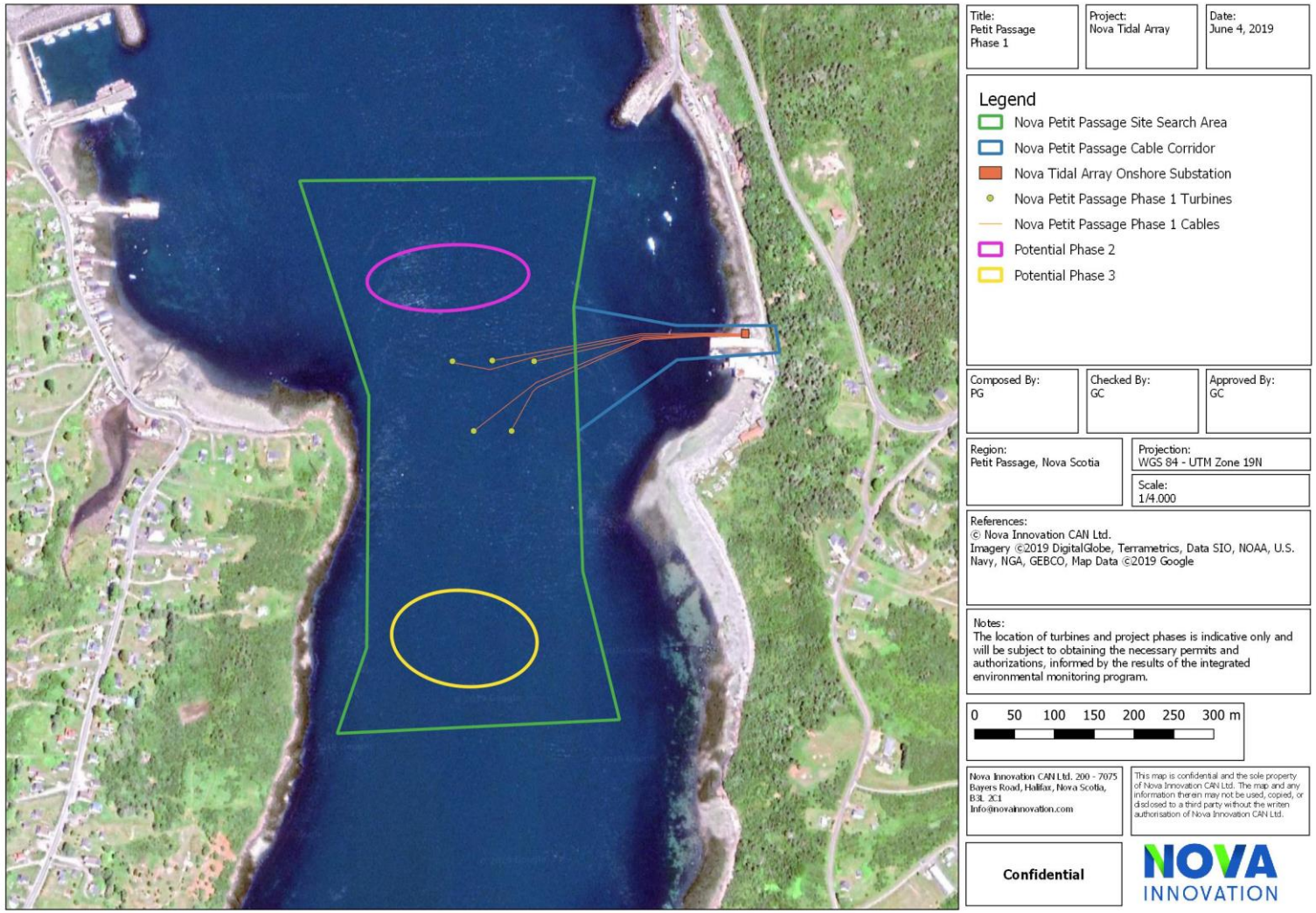


*Figure 4 Nova Tidal Array Phase 1 Project Layout. The circles show the potential location of Phase 2 and Phase 3.*