



June 2021

Enlighten CleanSeas Demonstration Plant

Enlighten Innovations Inc. (Enlighten) and its division Field Upgrading is converting our existing 10 bbl/day DSU pilot plant to a 100 bbl/day demonstration plant (the Plant). Provided below is a summary of our proposed updates to the Plant.

Plant Purpose:

The primary purpose of the Plant is to further develop and demonstrate Enlighten's proprietary DSU technology that removes sulphur and other impurities from heavy oil while improving viscosity. The DSU process provides a low cost, clean solution for marine fuel production; creating a low sulphur fuel to help ships meet global sulphur limits and reduce pollution. Low sulphur marine fuel is a new value-added finished product that will open and diversify new markets for Alberta oil. The Plant will allow Enlighten to continue the research and development to finalize the design parameters for a future commercial facility while allowing Enlighten to showcase the DSU process.

Plant Lands:

The Plant will continue to be located entirely within the existing pilot site developed area, which is currently cleared, graded, and graveled (approximately 2.2 ha). This land is zoned for heavy industrial use according to the City of Fort Saskatchewan Land Use Bylaw.

Plant Changes:

As the Plant is an expansion of the existing pilot plant, it will maximize the use of the existing equipment and infrastructure. Some of the equipment will remain in its original location, some will be reconfigured, and new equipment will be integrated as necessary. The main processing equipment will continue to be skid mounted and located within the Process Building.

A simplified plot plan that outlines the existing infrastructure that will remain in place, existing infrastructure that will be relocated, and new infrastructure as part of the Plant is enclosed with this information package.

Regulatory Requirements:

Enlighten is applying to the Alberta Energy Regulator (AER) for an Experimental Scheme Approval amendment (Approval No. 12329) under Directive 023, and an approval under the *Environmental Protection and enhancement Act* (EPEA). The Plant will be classified under EPEA *Activities Designation Regulation* as an Oil Sands Processing Plant (Schedule 1, Division 2) because heavy oil, including bitumen, may be used as a feedstock.

The Plant will also be applying for a Development Permit from the City of Fort Saskatchewan.



Milestones:

Below is the current tentative Project schedule.

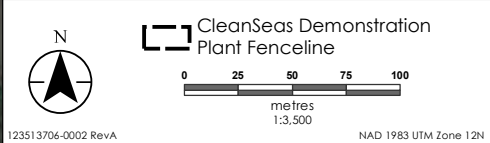
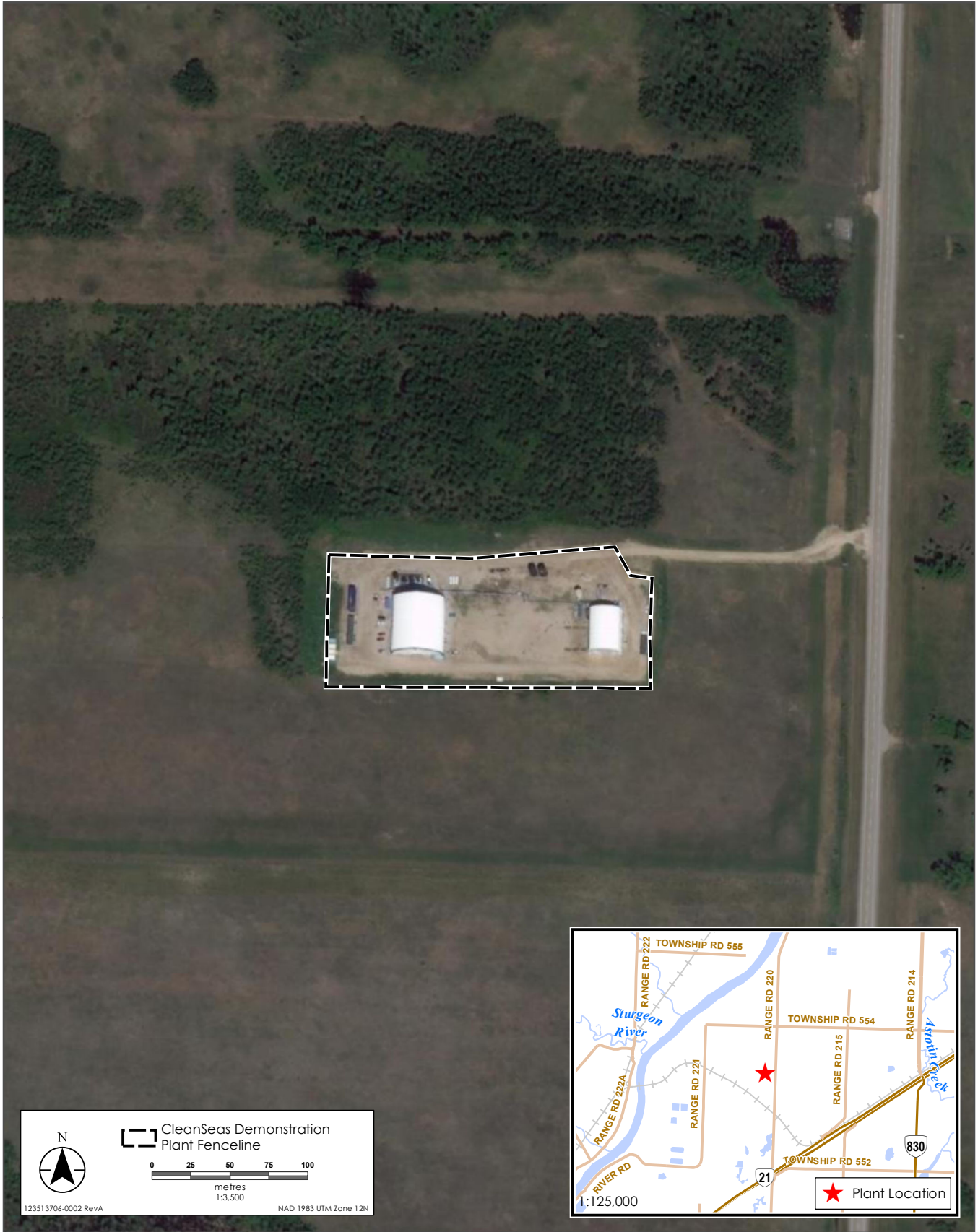
Milestone	Date
Submission of Regulatory Applications	Q2 2021
Plant Construction	Q3 2021- Q1 2022
Commissioning and Operation	Q1 2022

The Plant is not expected to operate 24/7 and likely less than 50% of the time. Similar to the pilot plant, the Plant it will only be operated for test campaigns such as feedstock trials for ourselves or customers.

The Plant will also serve as a showcase of our DSU technology. If interested, please contact us and we would be happy to give you a tour of the plant.

Enclosures:

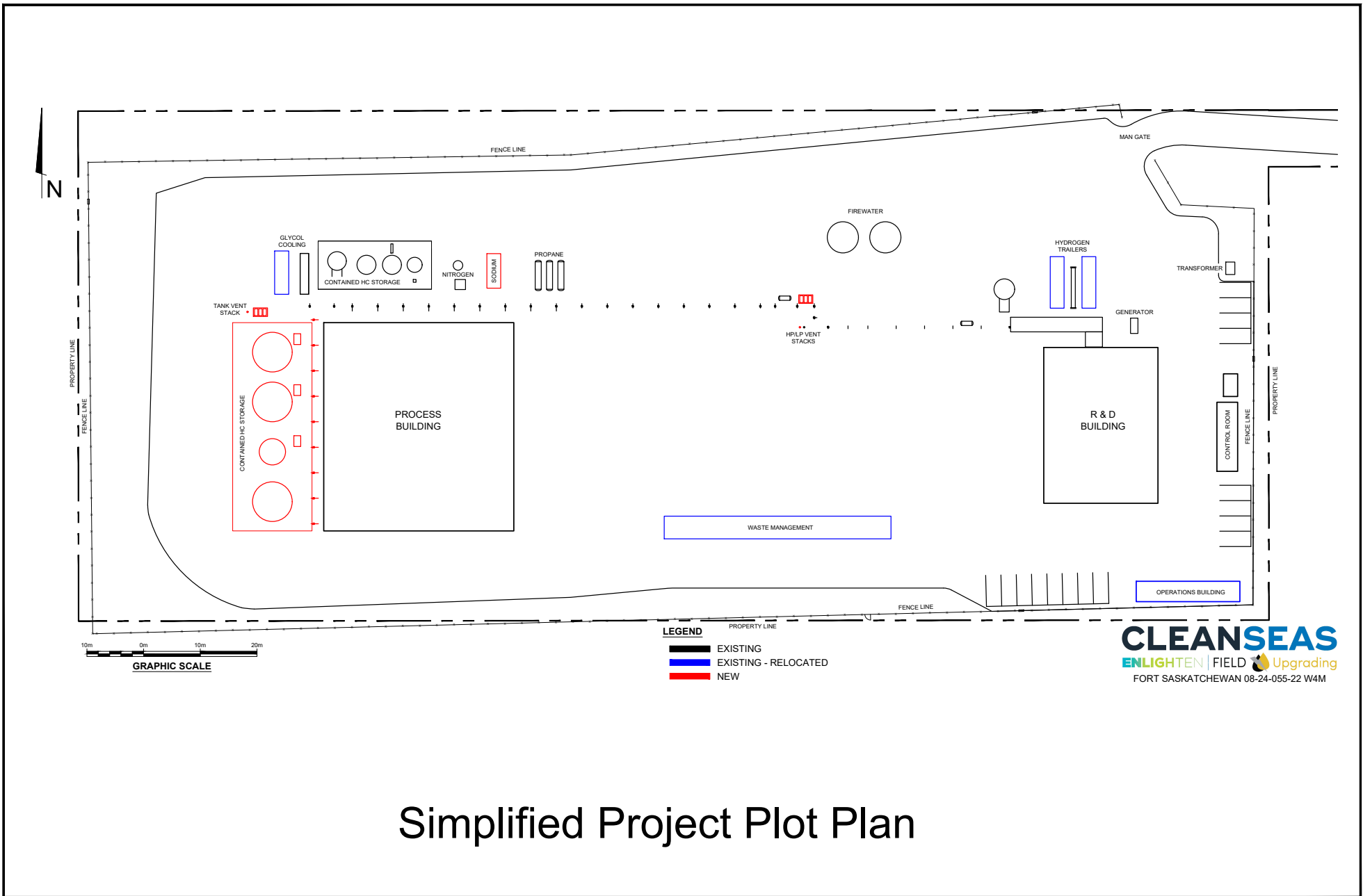
- Plant Location Map
- Simplified Plot Plan of the Plant



Sources: Base Data - Governments of Canada and Alberta
 Project Data: Enlighten Innovations Inc., Stantec
 Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and

Disclaimer: This map is for illustrative purposes to support this Stantec project; questions can be directed to the issuing agency.

**Project Development Area
 CleanSeas Demonstration Plant**



Simplified Project Plot Plan