

KENT HILLS 3: KENT HILLS WIND FARM EXPANSION PHASE 3

Appendix I NB Museum Report

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New Brunswick Museum - Palaeontology Report 17-04

Prepared for: Mike Rooney

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July 28, 2017

NEW BRUNSWICK
MUSEUM



MUSÉE DU
NOUVEAU-BRUNSWICK

New Brunswick Museum Palaeontology Report 17-04

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NEW BRUNSWICK
MUSEUM



MUSÉE DU
NOUVEAU-BRUNSWICK

New Brunswick Museum - Palaeontology Report 17-04

Topic: Fossil Occurrences, EIA for the Kent Hills Wind Farm expansion project (phase 3)

Locality: Kent Hills Area, Albert County (21 H/10 and 21 H/15)

Job Number: 121812342

Submitted by: Mike Rooney

Archaeologist

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Summary: A review of published maps and reports indicates the study area is located entirely on bedrock of Precambrian (Middle Neoproterozoic ca. 620-600 Ma), igneous, metamorphic and (meta) sedimentary rocks. There are no fossils known from these rocks and unlikely that any would be found.

Geology and Age: The bedrock geology of the study area is mix of five rock units, all Precambrian (Middle Neoproterozoic ca. 620-600 Ma) rocks of igneous, metamorphic and sedimentary origin. The proposed primary and alternate turbines (Figure 1; T1 to T9) are all located on rocks that do not contain fossils. The rock units as shown on Figure 2 (compiled from St. Peter, Barr, White and Johnson, 2005 and St. Peter, Johnson, Barr and White, 2005) are (from oldest to youngest):

Crooked Creek Formation ZCKvs (turbines T3 and T4);

Teahans Corner Formation ZTCvs (turbines T7 and T9);

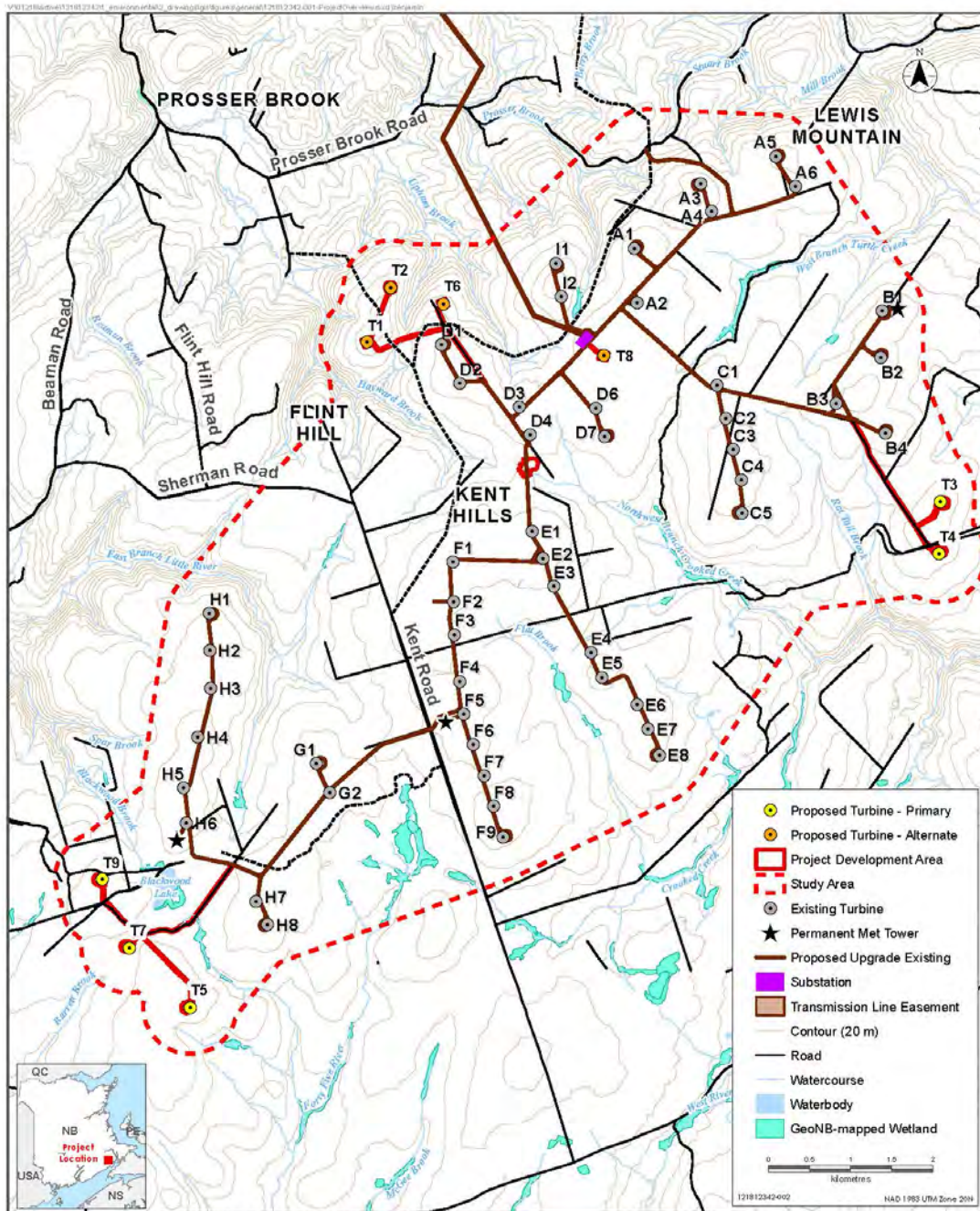
Pine Brook Formation ZPBmc (turbine T8);

Hayward Brook Formation ZHAMt (turbines T1 and T2);

Kent Hills Granodiorite ZKHii (turbines T5 and T6).

Details of the bedrock formations and the granodiorite unit can be found on the lexicon database of the New Brunswick Geological Survey Branch.

http://dnr-mrn.gnb.ca/Lexicon/Lexicon/Lexicon_View.aspx.



Project Overview

Figure 1

Figure 1. Kent Hills proposed wind turbines.

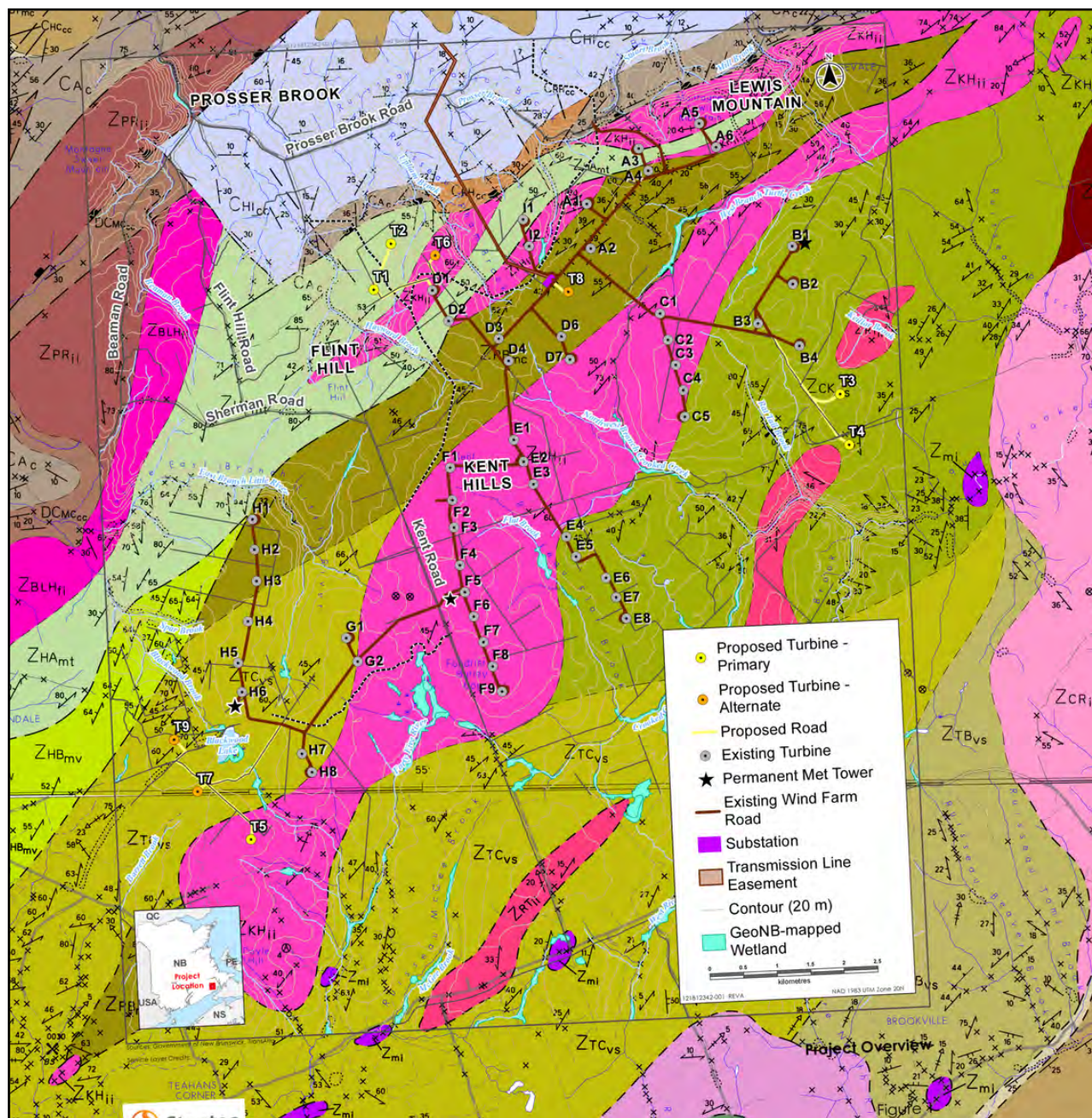


Figure 2. Detail of New Brunswick Geological Surveys Branch geology Map Plates 2005-43 and 2005-48, with an overlay of the proposed wind turbines. Rock units underlying the proposed and alternate turbines are the Crooked Creek Formation ZCKvs, Teahans Corner Formation ZTCvs, Pine Brook Formation ZPBmc, Hayward Brook Formation ZHAMt, and Kent Hills Granodiorite ZKHii.

Overview of palaeontology in the study area: No fossil localities are reported or expected, in the study area. Fossils of rare soft-bodied animals are known from younger Precambrian (Neoproterozoic) volcanic/sedimentary rocks dating from about 600 million to 545 million years old at Mistaken Point, Newfoundland. No similar fossils are known from New Brunswick.

Maps Examined for Report:

St. Peter, C.J., Barr, S.M., White, C.E. and Johnson, S.C., 2005. Bedrock geology of the Alma area (NTS 21 H/10). Albert county, New Brunswick. New Brunswick Department of Natural Resources, Minerals, Policy and Planning Division. Plate 2005-43.

St. Peter, C.J., Johnson, S.C., Barr, S.M. and White, C.E. 2005. Bedrock geology of the Hillsborough map area (NTS 21 H/15). Albert and Westmorland counties, New Brunswick. New Brunswick Department of Natural Resources, Minerals, Policy and Planning Division. Plate 2005-48.

New Brunswick - Palaeontological Field Research

The importance of our palaeontological record is officially recognized in the *Heritage Conservation Act*. Formally asserting provincial ownership of all palaeontological objects, it stipulates that any fossils discovered in the Province must not be destroyed or removed from sites where they are found, without the required permit.

http://www.gnb.ca/0131/HeritageConservationAct/Palaeontological_field_research.asp

Note: This report is a summary based on a literature survey, consultation of geological maps and a search of the New Brunswick Museum Palaeontology collection and files. It is related to this request for information, it is not a field study.

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