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RE: NWB 2BE – PCD – DeBeers Canada Inc. – Prince of Wales, Chartrand Lake, Devon Island Projects

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act,* and the *Species at Risk Act*.

DeBeers Canada Inc. is proposing to establish a number of fly camps to support sampling programs on Prince of Wales Island, Chartrand Lake, Boothia Pennisula, and Devon Island. The camps will support prospecting, geological mapping and geophysical surveys.

Environment Canada recommends that the following conditions be applied throughout all stages of the proposed projects:

- The proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes or sediment into any water body. According to the Fisheries Act, Section 36(3), the deposition of deleterious substances of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter any such water, is prohibited.
- All fuel caches shall be located above the high water mark of any water body. Further, EC recommends the use of secondary containment, such as self-supporting insta-berms, when storing barreled fuel on location rather than relying on natural depressions.
- Any sumps, including those created for the disposal of camp greywater and sewage shall be located above the high water mark of any water body and in such a manner as to prevent the contents from entering any water body frequented by fish. Further, all sumps shall be backfilled upon completion of the field season and contoured to match the surrounding landscape.
- **All spills** shall be documented and reported to the NWT 24 hour Spill Line at (867) 920-8130.
- DeBeers Canada Inc. should note that the contact number for the Environment Canada 24 hour pager is incorrectly noted in document RCD 064. The correct number is (867) 920-5131.

The Canadian Wildlife Service (CWS) of Environment Canada has reviewed the above-mentioned submission and makes the following comments and recommendations pursuant to the *Migratory Birds Convention Act* (the *Act*) and *Migratory Birds Regulations* (the *Regulations)*, and the *Species at Risk Act* (SARA).

- Section 6 (a) of the Migratory Birds Regulations states that no one shall disturb or destroy the nests or eggs of migratory birds. Therefore, Environment Canada recommends that all activities be conducted outside the migratory bird breeding season, which extends from approximately May 15 to July 31. These dates are approximate, and if active nests (i.e. nests containing eggs or young) are encountered outside of these dates the proponent should avoid the area until nesting is complete (i.e. the young have left the vicinity of the nest).
- If activities are permitted to occur during the breeding season, Environment Canada recommends that the proponent confirm there are no active nests (i.e. nests containing eggs or young) in the vicinity of their operations before activities commence. If active nests of migratory birds are discovered, the proponent should halt all activities in the area until nesting is completed (i.e. the young have left the vicinity of the nest).
- In order to reduce disturbance to nesting birds, Environment Canada recommends that aircraft used in conducting project activities maintain a flight altitude of at least 610 m during horizontal (point to point) flight during the nesting season. Environment Canada acknowledges that lower flight altitudes may be required for the purpose of conducting airborne geophysical surveys during the Chartrand Lake program.
- In order to reduce disturbance to resting, feeding, or moulting birds, Environment Canada recommends that aircraft used in conducting project activities maintain a vertical distance of 1000 m and minimum horizontal distance of 1500 m from any observed concentrations (flocks / groups) of birds.
- The proponent has indicated that some of the Devon Island project activities will occur at the Surface Rights of GF66. **This area is approximately 10-20 km northwest of an area identified as a Key Migratory Bird Site** (See attached page on Skruis Point from Latour, P.B., Leger, J., Hines, J.E., Mallory, M.L., Gilchrist, H.G., Smith, P.A., and Dickson, D.L. 2006. Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut 3rd edition. Canadian Wildlife Service Occasional Paper. In press.). This area is an important seabird colony. Seabirds are sensitive to disturbance during the breeding season. The proponent should avoid any activities in the area identified as the Key Migratory Bird Site. This includes not flying near or over this area.
- Environment Canada recommends that camp waste be made inaccessible to wildlife at all times. Camp waste can attract predators of migratory birds (e.g., foxes and ravens) to an area if not disposed of properly. Incineration of camp waste is a recommended option.
- Section 35 of the *Migratory Birds Regulations* states that no person shall deposit or permit to be deposited, oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds.
- All mitigation measures identified by the proponent, and the additional measures suggested herein, should be strictly adhered to in conducting project activities. This will require awareness on the part of the proponents' representatives (including contractors) conducting operations in the field. Environment Canada recommends that all field operations staff be made aware of the proponents' commitments to these mitigation measures and provided with appropriate advice / training on how to implement these measures.
- Implementation of these measures may help to reduce or eliminate some effects of the project on migratory birds, but will not necessarily ensure that the proponent remains in compliance with the *Migratory Birds Convention Act* (the *Act*) and *Migratory Birds Regulations (*the *Regulations)*. The proponent must ensure they remain in compliance with the *Act* and *Regulations* during all phases and in all undertakings related to the project.

The following comments are pursuant to the Species at Risk Act (SARA), which came into full effect on June 1, 2004. Section 79 (2) of SARA, states that during an assessment of effects of a project, the adverse effects of the project on listed wildlife species and its critical habitat must be identified, that measures are taken to avoid or lessen those effects, and that the effects need to be monitored. This section applies to all species listed on Schedule 1 of SARA. However, as a matter of best practice, Environment Canada asks that species listed on other Schedules of SARA and under consideration for listing also be included in this type of assessment.

Species at Risk that may be encountered	Category of Concern	Schedule of SARA	Government Organization with Expertise on Species
Ivory Gulls	Endangered[1]	Schedule 1	Environment Canada
Peary Caribou (High Arctic Population)[2]	Endangered	Schedule 2	Government of Nunavut
Peary Caribou (Low Arctic Population)[2]	Threatened	Schedule 2	Government of Nunavut
Peregrine Falcon (subspecies tundrius)	Special Concern	Schedule 3	Government of Nunavut
Polar Bear	Special Concern	Pending	Government of Nunavut, Environment Canada
Wolverine	Special Concern	Pending	Government of Nunavut

[1] Designated as Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in April 2006 and it is expected that the category of concern in SARA will also be changed from Special Concern to Endangered.

[2] The range of the High Arctic Population includes Devon Island and the range of the Low Arctic Population includes the Prince of Wales Island and the Boothia Peninsula

Impacts could be disturbance and attraction to operations.

Environment Canada recommends:

- Species at Risk that could be encountered should be identified and any potential adverse effects noted. Refer to the Species at Risk registry at www.sararegistry.gc.ca for information on specific species.
- If Species at Risk are encountered, the primary mitigation measure should be avoidance. The proponent should avoid contact with or disturbance to each species.
- The proponent should consult with Environment Canada, the Government of the Nunavut and appropriate status reports, recovery strategies, action plans, and management plans to identify other appropriate mitigation measures to minimize effects to these species from the project.
- The proponent should record the locations and frequency of any observations of Species at Risk and note any actions taken to avoid contact or disturbance to the species. The proponent has indicated that if caribou are seen during project activities, the geologists are instructed to note how many animals are present, record their location, and to leave the area immediately. This practice should also be extended to all Species at Risk.

Specific Recommendations for Ivory Gulls:

The proponent has indicated that some of the Devon Island project activities will occur at Surface Rights of RB12, RB15, RB16, and RB18, which are located on Cornwallis Island. Recent surveys by the Canadian Wildlife Service have confirmed that Ivory Gulls nest on Cornwallis Island at 75º05'N, 94º15'W and 75º48'N, 90º49'W. Breeding colonies on Cornwallis Island were on flat gravel plateaus.

Ivory Gull are also known to nest on Eastern Devon Island. Although the project activities are occurring on the western portion of Devon Island, it is possible that other colonies exist on Devon Island that have not yet been noted. On Devon Island, Ivory Gulls have been found nesting on the steep granite cliffs of mountains protruding from glaciers.

In addition to being a listed species under SARA, Ivory Gulls also are protected by the *Migratory Birds Convention Act* and *Regulations*. Section 6 (a) of the Migratory Birds Regulations states that no one shall disturb or destroy the nests or eggs of migratory birds.

Ivory Gull colonies may be susceptible to disturbance during the breeding season. Aircraft or human interferences could seriously jeopardize the breeding success of Ivory Gulls.

For Ivory Gulls, Environment Canada recommends:

- The primary mitigation measure should be avoidance. Any aircraft used in conducting project activities should maintain a horizontal distance of 2 km and a vertical distance of 610 m from known colony locations and any other observed groups (colonies) of Ivory Gulls.
- The proponent should record the locations and frequency of any observations of Ivory Gulls and note any actions taken to avoid contact or disturbance to the species. Any observations should be forwarded to Mark Mallory (Seabird Biologist, Canadian Wildlife Service, Environment Canada, Box 1714, Qimugjuk Bldg. 969, Iqaluit, NU, X0A 0H0, Ph: (867) 975.4637 or mark.mallory@ec.gc.ca)
- Refer to the Species at Risk registry at www.sararegistry.gc.ca for more information on this species. The attached Fact Sheet also provides information regarding this species.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 975-4639 or by email at colette.spagnuolo@ec.gc.ca.

Yours truly,

Original signed by

Colette Spagnuolo
Environmental Assessment / Contaminated Sites Specialist

cc: (Stephen Harbicht, Head, EA North, Environment Canada, Yellowknife)
(Mark Mallory, Seabird Biologist, Canadian Wildlife Service, Environment Canada, Iqaluit)
(Grant Gilchrist, Research Scientist, Canadian Wildlife Service, Environment Canada, Ottawa)
(Myra Robertson, EA Coordinator, Canadian Wildlife Service, Environment Canada, Yellowknife)

Location: 75°40'N, 88°43'W

Size: 25 km²

Description: Skruis Point lies midway along the north coast of Devon Island, on the southern part of Jones Sound, and is southeast of the Hell Gate–Cardigan Strait polynya. The sedimentary rock of this part of Devon Island is Paleozoic sandstone, limestone, and dolomite (de Kemp 1999). The key site lies on either side of Thomas Lee Inlet, where cliffs range up to 150 m in height.

Although the polynya to the north is open most of the year, ice usually remains in southern Jones Sound for longer, although some leads may appear in May (Smith and Rigby 1981).

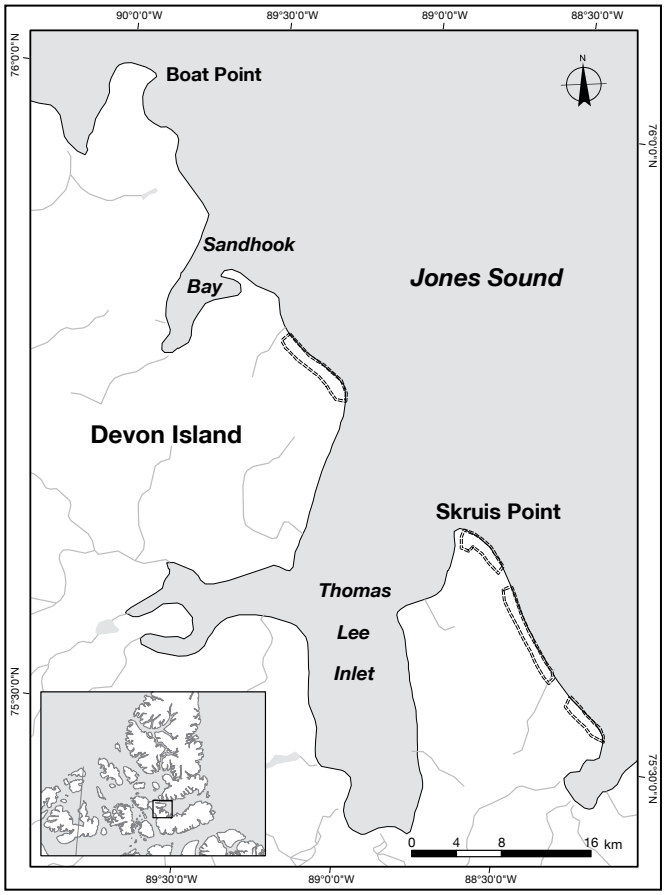
Biological value: Skruis Point was reported to have Canada's largest colony of Black Guillemots, estimated at up to 10 000 pairs based on a 1973 survey (Nettleship 1974), or approximately 10% of the Canadian population. In the early 1900s, Sverdrup (1904) had reported "thousands upon thousands" of guillemots nesting near Boat Point, northwest of Skruis Point. Surveys in the mid-1980s found 1585 and 700 birds in two different years, representing at best 1% of the Canadian population (Alexander et al. 1991). Prach and Smith (1992) interpreted these differences (and the distribution of guillemots in this part of Jones Sound) as representing the influence of annual ice conditions. The typical number of birds breeding along the Skruis Point / Boat Point region clearly requires further survey work to provide a reliable estimate.

The area, and particularly the polynya, supports many other marine species, including ringed seal, bearded seal, narwhal, beluga, polar bear, and walrus (Stirling and Cleator 1981; Riewe 1992).

Sensitivities: Seabirds are heavily dependent upon ice edge habitats for feeding and resting. Accordingly, they are sensitive to disturbance or the pollution of these sites.

Potential conflicts: None.

Status: Skruis Point is an International Biological Programme Site (Site 2-17; Nettleship 1980), an Important Bird Area in Canada (NU054; IBA Canada 2004), and a Key Marine Habitat Site in Nunavut (Site 5; Mallory and Fontaine 2004).



Fact Sheet

Ivory Gulls (*Pagophila eburnea*)

Figure 1. Ivory gulls at an island breeding colony. Ivory gulls are identified by their pure white plumage and black legs (other gulls have gray wings and yellow or orange legs). Note birds sitting on nests constructed of moss.

Natural History:

The ivory gull is a small, white seabird which spends most of its life near ice (Fig. 1). It breeds on snow and windswept plateaus, ice-choked islands or nunataks surrounded by glaciers, and winters in pack ice. It feeds along floe edges and polynyas, and is often observed standing on elevated icebergs.

Ivory gulls feed on zooplankton and fish, and are well-known for their habit of scavenging from polar bear or Inuit kills of marine mammals.

Gulls arrive in the Arctic in late April, and begin to move to open water and south in September, although some may be seen in the Arctic much later. Birds arrive at breeding colonies in June, and remain there into August. Nests are constructed of available vegetation, and 1-3 eggs are laid.

Estimated Population Size:

1980s 1800 birds counted; 2400 birds suspected
2002-2005 maximum 400 birds counted (approx. 80% decline)

The species is currently listed as Special Concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). However, surveys at breeding colonies, at sea, and on the wintering grounds, as well as Inuit traditional knowledge, all suggest that populations are declining.

Breeding Locations:

Ivory Gulls breed on Ellesmere, Devon, Seymour, Cornwallis and north Baffin islands (black dots on Fig. 2). Colonies are generally small, about 20 pairs of birds, but may get up to 200 pairs in some locations.

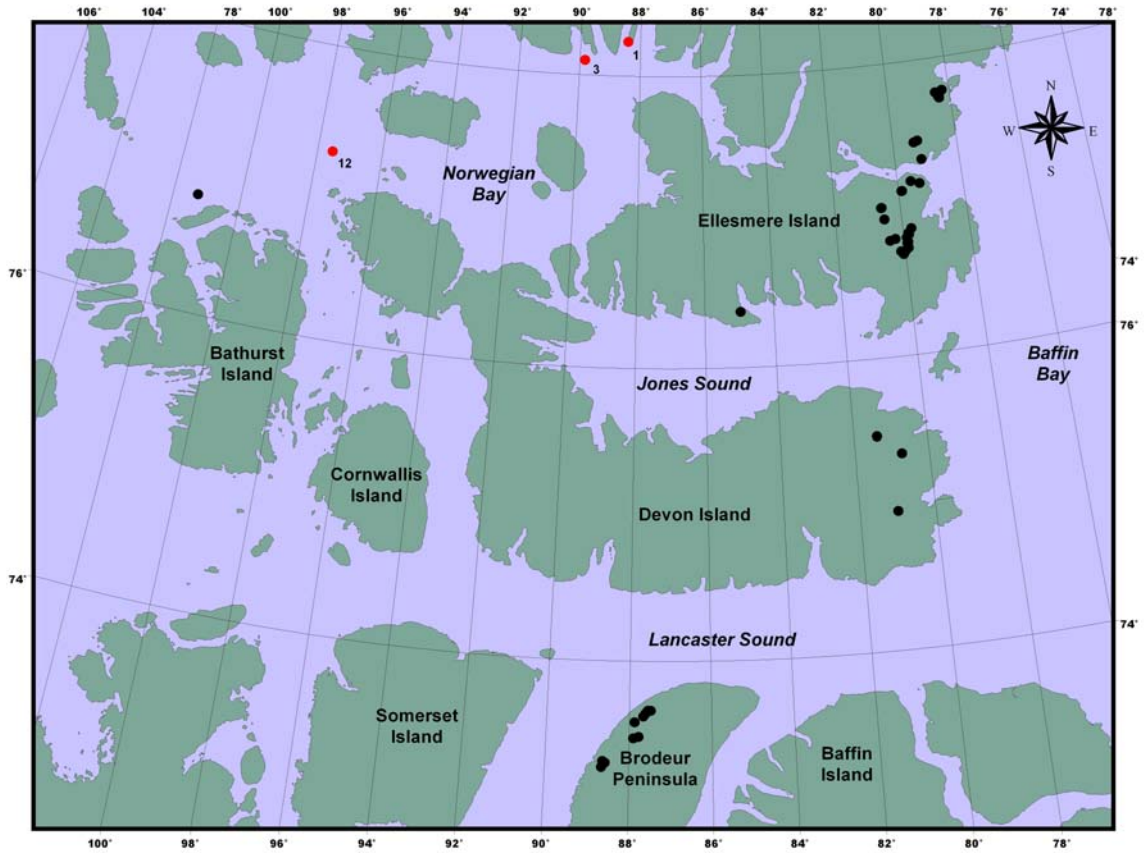


Figure 2. Breeding locations of ivory gulls in Nunavut, denoted by black dots (red dots are recent observations at sea).

Since the 1980s, many former colonies have been abandoned (Fig. 3), and recent colonies generally support fewer birds than colonies from 20+ years ago.

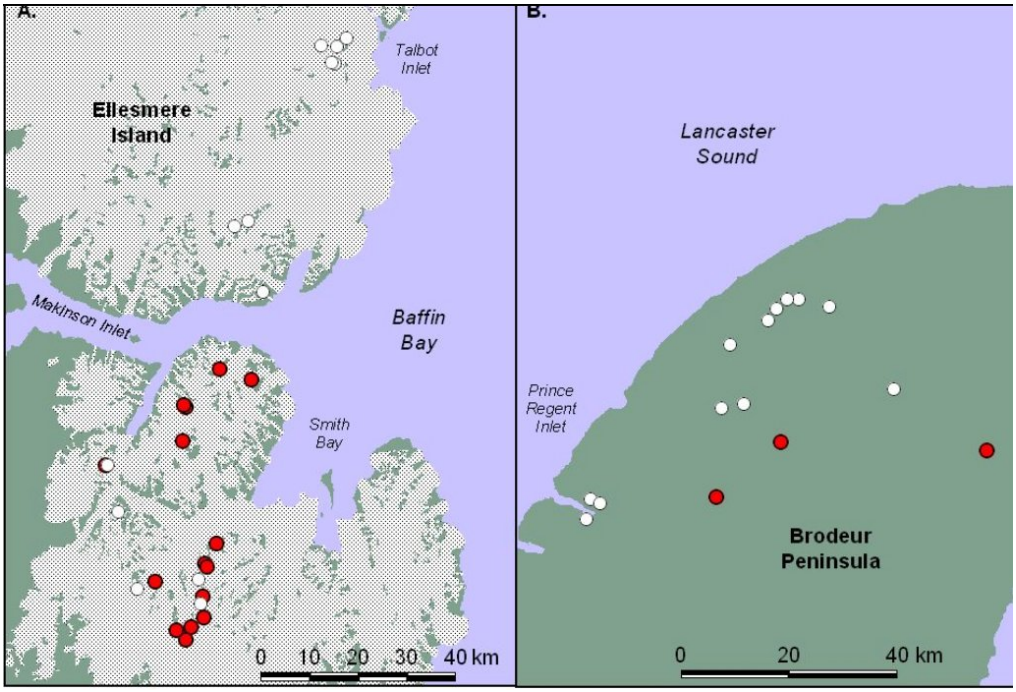


Figure 3. Former (white dots) and recent (red dots) colonies of ivory gulls on eastern Ellesmere Island (left panel) and the Brodeur Peninsula, Baffin Island (right panel).

On the Brodeur Peninsula, ivory gulls nest on flat ground (Fig. 4) but will generally jump into the air and circle their colony at the approach of an aircraft or predator. There are few if any other birds in this area, so white birds observed are undoubtedly ivory gulls.

Figure 4. Ivory gulls nesting on flat ground.

Wintering Locations:

Canadian ivory gulls are thought to spend the winter in the pack ice in Davis Strait, off of Labrador and Newfoundland. Some birds are observed near shore occasionally.

Threats:

Like many breeding seabirds, ivory gulls are susceptible to disturbance when at the breeding colony. As migratory birds, they are protected during the breeding season by the *Migratory Birds Convention Act* and *Migratory Birds Regulations*, which prohibit disturbance or destruction of nests and eggs. Some researchers have suggested that they are particularly vulnerable to disturbance from aircraft, although other scientists have suggested that they can tolerate minor or very infrequent disturbance.

At sea, these gulls are susceptible to pollution and disturbance at feeding areas, and they are also harvested in Greenland.

Future Considerations:

Ivory gull population size and trends are perilously low, and it is very likely that this species will be uplisted to *Threatened* or *Endangered* pursuant to the *Species At Risk Act* in the near future. That action will be associated with some restrictions on activities that can have a negative effect on the birds near ivory gull colonies. For that reason, it is essential that colonies be identified and avoided for the protection of the birds. Industrial activities near nesting areas should not proceed.

If a colony is spotted, we strongly recommend that the aircraft maintain a vertical distance of 610 m and a horizontal distance of 2 km from the location.

If ivory gulls are observed, please record the location and contact us:

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