

NOVA SCOTIA AQUACULTURE REVIEW BOARD

IN THE MATTER OF: *Fisheries and Coastal Resources Act, SNS 1996, c 25*

- and -

IN THE MATTER OF: An Application by KELLY COVE SALMON LTD. for a boundary amendment and two new finfish aquaculture licenses and leases for the cultivation of Atlantic salmon (*Salmo salar*) - AQ#1205x, AQ#1432, AQ#1433, in Liverpool Bay, Queens County (the “**Application**”)

Affidavit of Eric MacIntosh affirmed on January 18, 2024

I affirm and give evidence as follows:

1. I am Eric MacIntosh of Shelburne, Nova Scotia.
2. I have personal knowledge of the evidence affirmed in this affidavit except where otherwise stated to be based on information and belief.
3. I state, in this affidavit, the source of any information that is not based on my own personal knowledge, and I state my belief of the source.
4. I have been retained by Kelly Cove Salmon Limited (“**KCS**”) to provide my independent expert opinion to the Nova Scotia Aquaculture Review Board in connection with KCS’s Application to expand its Atlantic salmon operations at Coffin Island (AQ#1205X) and for two new Atlantic salmon aquaculture farms at Mersey Point (AQ#1433) and Brooklyn Point (AQ#1432).
5. In particular, I have been asked for my independent expert opinion with respect to the effect of the KCS’s proposed expansion of its Atlantic salmon aquaculture operations in Liverpool Bay on:
 - (a) the other users of the public waters surrounding the proposed aquacultural operations; and
 - (b) the public right of navigation.

6. My independent opinion on the effects of the proposed expansion upon other users of the public waters and the public right of navigation is set out in my report for the Nova Scotia Aquaculture Review Board attached as **Exhibit A**.
7. My CV is attached as **Exhibit B**.

AFFIRMED before me in Shelburne, Nova Scotia on January 18, 2024.



A Barrister of the Nova Scotia Supreme Court

CELIA J. MELANSON
A BARRISTER OF THE SUPREME
COURT OF NOVA SCOTIA




Eric MacIntosh

TAB A

**KCS' Application re AQ#1205X, AQ#1432,
AQ#1433 in Liverpool Bay, Queens County**

This is Exhibit A referred to in the Affidavit
of Eric MacIntosh, affirmed before me
on January 18, 2024.




A Barrister of the Nova Scotia Supreme Court

CELIA J. MELANSON
A BARRISTER OF THE SUPREME
COURT OF NOVA SCOTIA

Report for the Nova Scotia Aquaculture Review Board

With respect to the Application filed by Kelly Cove Salmon Limited for a boundary amendment and two new finfish aquaculture licenses and leases for the cultivation of Atlantic salmon (*Salmo salar*), Coffin Island AQ#1205x, Brooklyn Point AQ#1432, and Mersey Point AQ#1433, in Liverpool Bay, Queens County

Eric MacIntosh

January 17, 2024

INTRODUCTION

1. I have been asked by Kelly Cove Salmon Limited (“**KCS**”) to provide my independent opinion on the effect of its applications in Liverpool Bay upon other users of the public waters surrounding the proposed aquaculture operations and on the public right of navigation.
2. To prepare my report, I have familiarized myself with Volumes 1 and 2 of the Application Package filed by the Department of Fisheries and Aquaculture (“**DFA**”) with the Nova Scotia Aquaculture Review Board with respect to KCS’ application for a boundary amendment and two new finfish aquaculture licenses and leases for the cultivation of Atlantic salmon (*Salmo salar*), Coffin Island AQ#1205x, Brooklyn Point AQ#1432, and Mersey Point AQ#1433, in Liverpool Bay, Queens County (the “**Application**”).
3. I have reviewed and considered the locations of the proposed sites in Liverpool Bay, the nature and extent of other uses of Liverpool Bay, and factors that may affect the public right of navigation in Liverpool Bay, which is a body of water with which I am very familiar as I have visited it frequently throughout my lifetime for both professional reasons, as a commercial fisherman and later in the course of my employment as a fisheries officer for the federal Department of Fisheries and Oceans and for pleasure in sailing and motor vessels.

4. Figures 1, 41, 42 and 43 in Volume 1 of the Application Package show the proposed lease boundaries and the basic seafloor topography of each of the proposed sites.¹
5. I have also familiarized myself with the public navigation charts for the public waters surrounding the areas of the proposed sites, and the prevailing wind patterns of Liverpool Bay. I attach as **Tab 1** to this report copies of the nautical charts maintained by the Canadian Hydrographic Service for Liverpool Bay and Shelburne Harbour.²

RELEVANT EXPERIENCE ON VESSELS OF ALL TYPES

6. I have been sailing inshore and offshore around Nova Scotia and the northeast coast of the United States for over 50 years. I have sailed single handed, as well as a navigator mate, crew and skipper of my own boats.
7. I have been playing, operating and working onboard large and small vessels inshore and offshore for 57 years.
8. My experience includes navigating 98-foot to 208-foot ships offshore, and small power craft in many inshore and offshore waters of Nova Scotia, Newfoundland and Labrador and New Brunswick.
9. I have been sailing since I was 16 years old. My first sailboat was a plywood punt I rebuilt to be a center board gaff-rigged sloop. I sewed orange tarpaulins together to make its sails. I have owned nine sailboats in my life so far. I have sailed extensively around the coast and harbours of Nova Scotia.
10. I have sailed many sailboats as captain and helmsman along the coast of Nova Scotia from Halifax to Yarmouth, including 12-foot to 16-foot dinghies, 23-foot Hunter keelboat, 24-foot C&C keelboat, 24-foot Paceship, West Wind, 26-foot Tanzer keelboat, 33-foot Soverel racing sloops, and 37-foot Kirby custom IOR racer and a 33-foot Columbia racer.
11. I have sailed as crew on 27-foot Tanzer keelboat, 38-foot C&C racing keelboat, 40-foot J-120 keelboat, 42-foot IMS keel boat, the replica of John Cabot's "MATTHEW", and many

¹ Application Package, Volume 1, at pages 75 and 161-163. See also: Survey Plans for each site at Application Package, Volume 2, pages 787-792 (Coffin Island #1205), pages 801-806 (Mersey Point #1433) and pages 815-818(Brooklyn Point #1432).

² Canadian Hydrographic Service, Navigation software – NAVIONICS (Garmin), Charts CHS CA476202 (Cape Lahave to Liverpool Bay), and CHS CA576039 (Shelburne Harbour) ("**Navigation Charts**").

more sailing boats, from Boston to the coast, harbours and bays of Nova Scotia, from Halifax to Yarmouth.

12. I have sailed and motored in and out of Liverpool Bay and its harbour on 42-foot sailboats, 24-foot sailboats, 30-foot inflatable zodiac fast patrol boats, 65-foot long-liners and 208-foot ships.
13. I have sailed my 37-foot Kirby 37, IOR sloop "KALKARA" into the harbour and waters adjacent to Liverpool Bay on four occasions. While delivering and returning from Chester Race Week, I sailed my 24-foot Abbot 24 sloop "SAIL BORNE" into the Mersey dock for repairs while delivering her from Chester to Lockeport single handed. I sailed into Liverpool harbour while single-handedly delivering my 24-foot C&C 24 "Bathsheba" to Shelburne. I sailed into and moored overnight in Brooklyn during a delivery from Chester to Liverpool onboard the 40-foot, J 120 "High Energy".

SAILING AND AQUACULTURE IN SHELBURNE HARBOUR

14. I have been sailing and racing sailboats around the aquaculture sites in Shelburne Harbour since they were first put in place.
15. The Shelburne Harbour Yacht Club sailing members race in Shelburne Harbour every Thursday and second Saturday from June to the end of September. We have many special event races and a four-day Founders Days regatta every season. Our race courses are set around the Shelburne Harbour and its approaches. We place mark buoys around the harbour and use navigation buoys as our race marks.
16. In Shelburne, many of our marks are within 100 feet of the aquaculture cages. We sail on both sides of the cages (inside near shore, between them and outside in the main channel). We also sail between the cages where there are gaps. We use the cages as a "pick" when racing. By getting ahead of and leeward of an opponent while sailing as high to the wind as possible (40 degrees), it is possible to force your opponent to tack away from the cages and sail around the cages which is a longer distance, and two tacks is slower.
17. It is possible to sail within 20 feet of the cage anchors and mooring lines. The outer buoys mark the anchors and act as boundary warning. The lines on these buoys go straight down

or on a slight angle and are difficult to get snarled up in if you stay 20 feet away. The cages are not an issue for sailing or boating.

18. We have never had any issues with the cages in the Shelburne area. If anything, they add an element of enhancement to the racing experience. They are far from any impediment to any aspect of boating, recreational sailing or sailboat racing for a novice or advance racer.
19. In many cases, the aquaculture employees have assisted sailors and boaters when they are in need. There are staff coming and going from the cages all hours of the day and any boaters in need can rely on them to assist. Disabled boats can easily raft up to the cages to prevent drifting to sea or to shore in unfavourable shore conditions.

NAVIGATION IN LIVERPOOL BAY

20. Liverpool Bay is very open and very easily sailed by anybody.
21. Liverpool Bay and its approaches are open water areas with at least a kilometre of clear channel. The depth of water in the area where KCS' proposed cages will go is 36 to 80 feet of water at low tide datum.³ The open bay is 36 to 102 feet deep, and has no obstructions until you reach the Brooklyn Breakwater.⁴
22. Obstructions or hazards to navigation are marked with navigation buoys. Currently in Liverpool Bay, there are only two navigation buoys located near the shore of the bay area:⁵
 - (a) a starboard hand red buoy "UM50" located along the eastern shore of Brooklyn, which has 46 feet of water around it; and
 - (b) a port hand green buoy "UB1", which is much further out at Moose Point and has 51 feet of water around it.
23. In comparison, Shelburne Harbour has 15 navigation buoys marking obstructions. The water in the harbour is nine feet to 32 feet deep. In Shelburne Harbour, there is one kilometre between the cages and the eastern shore and 0.3 kilometres between western shore and cages. We frequently race between the western shore and cages.

³ Navigation Charts, Tab 1, and Application Package, Volume 2, pages 784, 798, and 812.

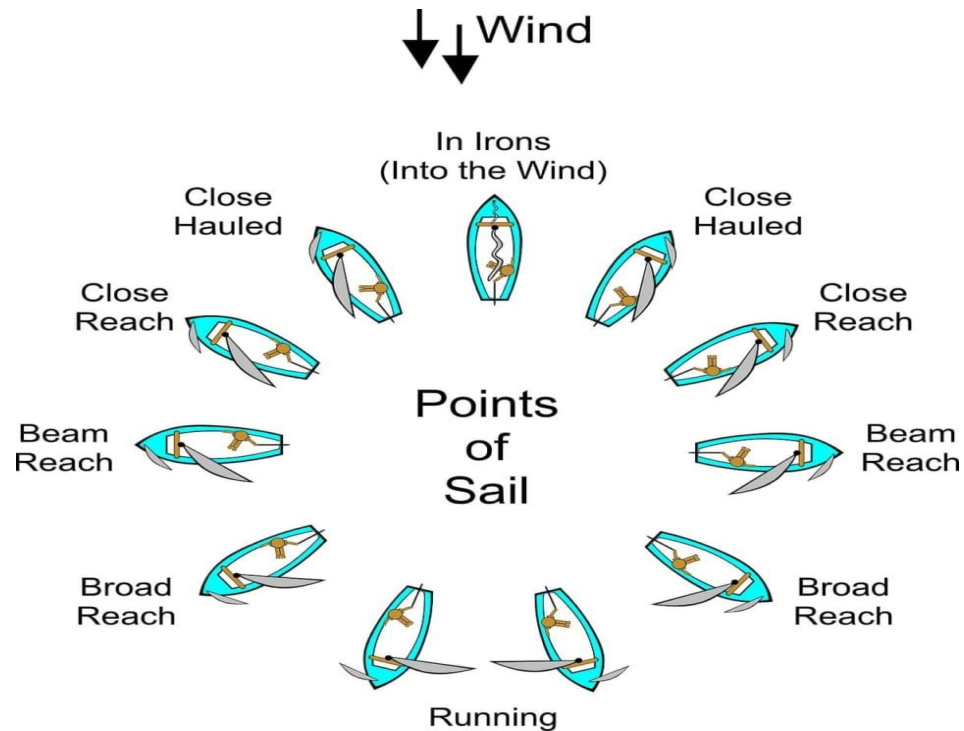
⁴ Navigation Charts, Tab 1.

⁵ Navigation Charts, Tab 1.

24. The winds along the coast of Nova Scotia are predominantly south or southwest in the summer with localized land and sea breezes making for variable winds in afternoons and evenings in fine weather. Weather patterns can and do affect the coastal wind patterns, so winds from any angles can be expected, but most sailors stay at home in bad weather for good reason.
25. While reading Volume 1 of the Application Package, I noted statistics with respect to the predominant winds. There are detailed wind reports in the Application Package.⁶
26. Liverpool Bay is oriented south easterly leaving Liverpool and north westerly returning.
27. Sailing into the wind is called “close-hauled” and is the most demanding point of sailing. When close-hauled sailing, it is necessary to tack, which is to change orientation of the boat to the wind by moving the bow of boat through the wind. The sailing vessel can only sail within 40 to 45 degrees of the direction the wind is coming from.
28. Vessels sail close-hauled to one side of where the wind is blowing, then tack to the other side of the wind, to make head way in a zig-zag course over ground and into the wind. This is how sailboats move forward when wind is coming from where you want to go. It is an essential skill for sailing.
29. Sailing close-hauled is not a restriction on sailors. It can easily be done by any sailor. It is the only way to sail to an upwind destination. It is more work than reaching and running.
30. “Reaching” is the point of sail where the wind is coming from forward or aft of the beam. Reaching can be “close” reaching which is 50 to 70 degrees off the wind, “beam” reaching which is 70 to 100 degrees off the wind, and “broad” reaching which is 100 to 160 degrees off the wind. Reaching is the most comfortable point of sail and the easiest point of sail. Because the predominant winds are south west and Liverpool Bay is orientated northwest and southeast, a sailor can reach in and out of the harbour easily.
31. Broad reaching sailing is the easiest point of sail with sails relaxed and wind blowing from just forward of beam to just aft of beam.

⁶ Application Package, Volume 1, pages 135-140 (Section 4.1.1).

32. The following image illustrates the sailing craft's direction of travel in relation to the wind direction:



33. In Liverpool Bay, the main bay is oriented northwest and southeast. The orientation of the bay allows for broad reaching sailing on fine weather predominant wind sailing days (i.e. southwest to south, up to 10-15 knots wind).
34. On days or occasions where close-hauled sailing is necessary, one-half-mile tacks across the bay are an easy and relaxed tacking distance. The distance between the proposed cages in Liverpool Bay would allow any vessel to comfortably tack into or out of Liverpool Bay.
35. The openness of the bay means vessels approaching, departing or sailing are exposed to real world sea conditions. This area is very open and not monitored. Vessels in peril can easily be overlooked in these open sea areas. The frequency of aquaculture personnel coming and going to the sites, as well as the cages as potential emergency landing spots, provide security to anybody in peril.

KCS' PROPOSED SITES

36. KCS' proposed sites are described as lease boundaries, having within them 20 100-meter circular cages each. The boundaries are marked with four private outer corner buoys for safety. These buoys are fairway in context and navigation around them is possible. The actual cages are well within the boundaries.
37. Where the proposed expanded Coffin Island site (#1205) will be situated, the east side boundary will be 230 meters from Coffin Island.⁷ This is without considering sailing inside of the corner buoys boundary. Between the lease boundary and the cages, there is another +/-50 meters of navigable water, if need be. The proposed expansion will not impede navigation.
38. We sail inside these buoys in Shelburne. The barges and vessels working on the cages are navigating over-top of these lines all the time. The lines from the anchors to the cages are coming from bottom at shallow angles which give sufficient depth of water to sail or motor.⁸
39. The proposed Mersey Point and Brooklyn Point sites will not impede navigation into and/or out of Liverpool Bay.
40. I would like to note that with regards to commercial and recreational fishing, the cages in Shelburne have marine wild species inhabiting the waters near the cages. I have fished mackerel and bass next to aquaculture cages in Shelburne. I have observed lobster fishers in Shelburne fish all along the cages and have average catches. I have also observed mackerel schooling around the cages and locals sport fishing near the cages.

THE EFFECTS OF THE PROPOSALS ON OTHER USERS OF THE PUBLIC WATERS IN LIVERPOOL BAY

41. I can see no serious restrictions to navigating, sailing and motoring in and around the proposed cages.
42. The depths of water around the cages' perimeters, as shown on navigation charts for the area, are more than adequate to sail and navigate without issue.⁹

⁷ Application Package, Volume 2, page 789.

⁸ Application Package, Volume 2, pages 789-790.

⁹ Navigation Charts, Tab 1.

43. Liverpool Bay is very open and very sailable. KCS' proposed locations for the cages will not impede anyone from sailing or boating this open area. The cages are two kilometres from the Brooklyn Breakwater's starboard hand navigation buoy "UM52". The waters of this area out to where the cages will be are 25- to 50-feet deep, with close to a kilometre of water between the cages and shore. The mouth of the Brooklyn Harbour area is only 0.29 kilometres wide, but still more than wide enough to sail into and out of.
44. Between Coffin Island and the Coffin Island farm, the sailing angles are still comfortable for anybody who has knowledge and experience sailing. There would be over 230 meters of over 20 feet of water at the tightest point, between the cages and the mainland.¹⁰ This is more than enough room to tack back and forth at 45-degree angles, if needed. However, many days when the wind is south or southwest, it would be a straight run through.
45. In comparison, there is only 224 meters between the Brooklyn Public Wharf and the old Bowater Mersey's dock where boats must pass to reach the Brooklyn Marina.
46. The cages that are proposed by KCS for Liverpool Bay are very similar to those in Shelburne Harbour. The cages in Shelburne Harbour are very well marked and the buoys are anchored so as to allow sailing near and around them. The cages at the Coffin Island site are well marked with very visible, private navigation buoys, and are well lit and visible to all.¹¹
47. The proposals as stated in the Application Package are very similar to Shelburne's present layout. Shelburne Harbour has aquaculture cages on both sides of the harbour and at the outer approaches to the inner harbour just as in this case. Sailors have no issues with the cages in and around Shelburne.
48. In Shelburne Harbour, we have very large cruise ships anchoring within a few hundred feet of the cages. I have watched very large vessels coming and going along side the cages in Shelburne Harbour in all weather all year round without issues.
49. In 2023, Shelburne Harbour had six cruise ships anchor in the harbour a few hundred feet from the aquaculture cages. If these large vessels are comfortable near the cages, then

¹⁰ Application Package, Volume 2, page 789.

¹¹ Application Package, Volume 2, page 789-790.

every other type of craft should be as well. The Liverpool Bay sites would impose no more restrictions than those in Shelburne and the Shelburne aquaculture cages do not impede anybody.

50. As I have stated, we sail and race between the cages and along side of them. I have never been tangled in the cages and have never seen anybody else become tangled. Similarly, small recreational fishing boats fish around and in between the cages for mackerel with no issues. Lobster fishers also fish along side the cages.
51. The Shelburne Harbour has been visited by large sailing vessels for international Tall Ships events. These vessels sail around the harbour and are as large as 200 feet without being affected by the cages. Canada/Nova Scotia's last two "Bluenose" replicas have sailed in and out and around Shelburne Harbour in close proximity to the cages without incident. Shelburne has conducted Schooner races inside the harbour near the cages without incident.
52. In my opinion, the effects of KCS' Application on recreational users or commercial users of Liverpool Bay is small. The waters of Liverpool Bay are much more open and exposed than those of Shelburne and would see far less traffic than the sheltered Shelburne Harbour where we have no issues with cages.
53. If the Application is approved, there should be no detrimental effect on anyone navigating the Liverpool Bay area. Anyone competent to venture outside the shelter of the Liverpool Harbour and the Brooklyn Marina will be more than capable of sailing or motoring around the cages.
54. The boaters of Liverpool Bay capable of venturing outside the harbour would have sufficient knowledge to navigate around the cages. Those who do not have sufficient knowledge will benefit from knowing they can raft up to the cages if in trouble, and most likely receive assistance from the personnel working there daily. These cages are permanently situated and will become landmarks for navigation once navigators get accustomed to them.

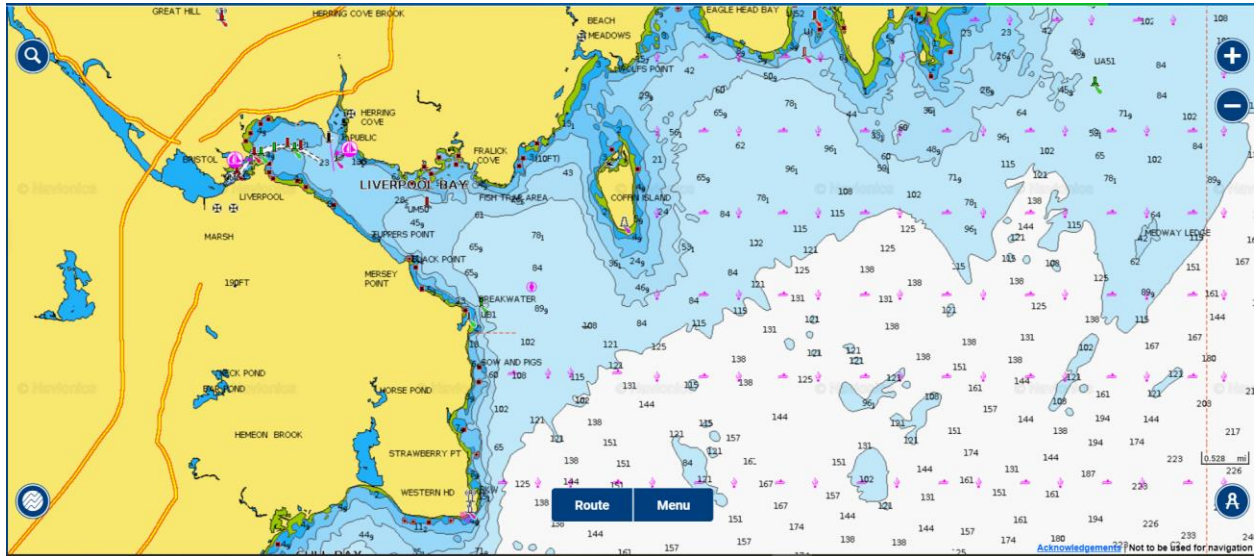
CONCLUSION

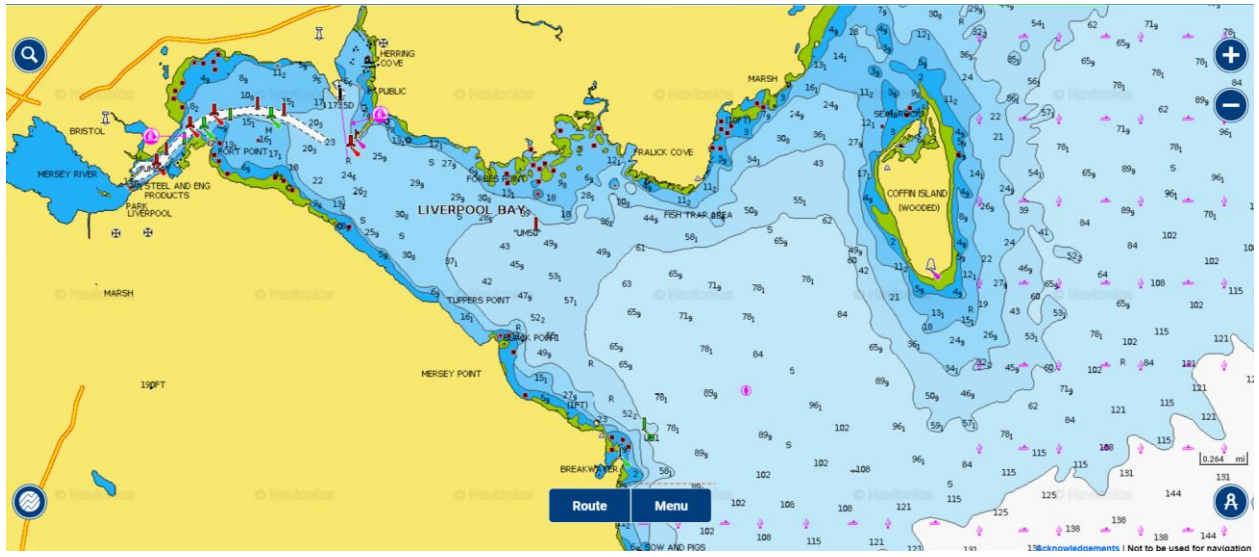
55. I can and have motored and sailed around the aquaculture cages in Shelburne Harbour for many years and can confidently say that I will be able to navigate and sail around the proposed cages in Liverpool Bay.
56. In my opinion, any person who is reasonably competent and experienced in handling a vessel should be capable to sail comfortably into and out of Liverpool Bay by KCS' proposed cages with a 30-foot buffer. The cages are anchored in such a way that the mooring line securing the cages to the anchors allow vessels to pass near by safely without risk.
57. The presence of these cages in an open ocean environment may well increase recreational boating in this area. The cages locations will likely provide a sense of security to anybody leisurely sailing or navigating in these open areas. The knowledge of the personnel working on these sites will make pleasure craft owners more comfortable with navigating the area. The cages may have a positive impact on boating in this area.
58. Sailing is a pleasure and a challenge all at once and no sailor capable of getting their boat away from a marina or mooring and to open water should be inhibited by KCS' proposed aquaculture cages in Liverpool Bay.

TAB 1

LIVERPOOL BAY

Canadian Hydrographic Service CA476202 - Cape Lahave to Liverpool Bay Progressively Zoomed-In





SHELburnE HARBOUR

Canadian Hydrographic Service - CA576039 Shelburne Harbour

Progressively Zoomed-In

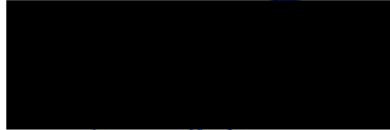




TAB B

**KCS' Application re AQ#1205X, AQ#1432,
AQ#1433 in Liverpool Bay, Queens County**

This is Exhibit B referred to in the Affidavit
of Eric MacIntosh, affirmed before me
on January 18, 2024.



A Barrister of the Nova Scotia Supreme Court

CELIA J. MELANSON
A BARRISTER OF THE SUPREME
COURT OF NOVA SCOTIA

ERIC C. MACINTOSH

[REDACTED], Nova Scotia

CURRICULUM VITAE

Work History

- Offshore commercial fisherman out of Shelburne County (1979 - 1984)
- Deckhand and Relieving 2nd and 3rd Navigation Officer, Department of Fisheries and Oceans (DFO) Offshore Surveillance (1984-1989)
- Designated Fishery Officer, DFO Offshore Surveillance (1984 - 1989)
- Armed Boarding Team Member, DFO Offshore Surveillance (1987 - 1989)
- Owner/Manager, Lock Island Enterprises boat builder (1985 - 1987)
- Fishery Officer, Shelburne DFO Detachment (1989 - 2005)
- Chair, Maritimes Region Fishery Officer Association (1994 to 1996)
- Acting Detachment Supervisor, Shelburne DFO Detachment (1998)
- Committee Member, DFO Dockside Monitoring Program (1994 - 1998)
- DFO Fishery Officer/Computer Forensic Examiner, Maritimes Region (2005 - 2013)
- Manager, Shelburne/Maritime Region Computer forensics laboratory (2005 - 2013)
- Volunteer President/Manager, "TRACEME.CA", 3279012 NS Limited (2014 - 2018)

Volunteer Work

- Committee Member of the Lockeport July 1st Entertainment Committee (1975 - 1976)
- Chairman and Founder of the Lockeport Youth Drop In Center (1975)
- President and Founder of the Commissary Accessibility Marina Park Society (CAMPS)

Relevant Experience

- Race Committee Chair, Shelburne Harbour Yacht Club (1996-1998)
- Bar Manager, Shelburne Harbour Yacht Club (1998 - 2005)
- Marina Association Member, Shelburne Harbour Yacht Club (2001 - 2005)
- Vice Commodore, Shelburne Harbour Yacht Club (2013 - 2014)
- Commodore, Shelburne Harbour Yacht Club (2015)
- Sailing inshore and offshore around Nova Scotia and U.S. Northeast coast for over 50 years
- Operating and working onboard large and small vessels inshore and offshore for 57 years
- Qualified as an expert to give opinion evidence in respect of navigation, navigation and tides, navigation and plotting, fishing procedures and techniques, fish processing and handling techniques, and computer forensics in Nova Scotia courts

Awards and Accomplishments

- Peace Officer Exemplary Medal, 2010
- Distinction Award, 2007
- Deputy Ministers Accommodation, 2000
- Immediate Award Portuguese Lady CF case, 2014
- Recipient of plaque for outstanding work on TRUCKAIR case, Sydney Detachment, 2012

Certifications

- Watchkeeping Mate Certificate, N.S. Nautical Institute 1984, 84-0625,
- Radio Operators Restricted Certification, Upgrade 2009, N.S. Fisheries School, Cert # 096300060
- Marine Emergencies Duties Certification, N.S. Nautical Institute 1984, H- 84-13486
- Twine Hand (Rigger) Certificate, N.S. Fisheries School 1979
- Small Vessel Operators Certificate, CERT # 0250010578
- DFO Fast Patrol Vessel Training
- Access Data Certified Examiner, (ACE), completed June 2009
- Access Data Certified Examiner maintenance examination, (ACE), completed June 2010
- Mobile Phone Seizure Certification (MPSC), completed May 2011
- Certified Computer Examiner (CCE), January 2010, CERT #1-6-2012
- Certified Computer Examiner (CCE) Recertification, January 2012, CERT #1-6-2012
- Encase Certified Examiner (EnCE), July 2009, Cert #15-0709-3122
- Encase Certified Examiner (EnCE) Recertification, March 2012, Cert #15-0709-3122
- COMPTIA, A+ self study, training and certification COMP001006832596, 2008
- COMPTIA, Network + self study, training and certification COMP001006832596, 2008
- COMPTIA, Security + self study, training and certification COMP001006832596, 2008